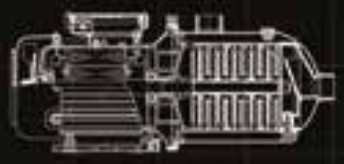
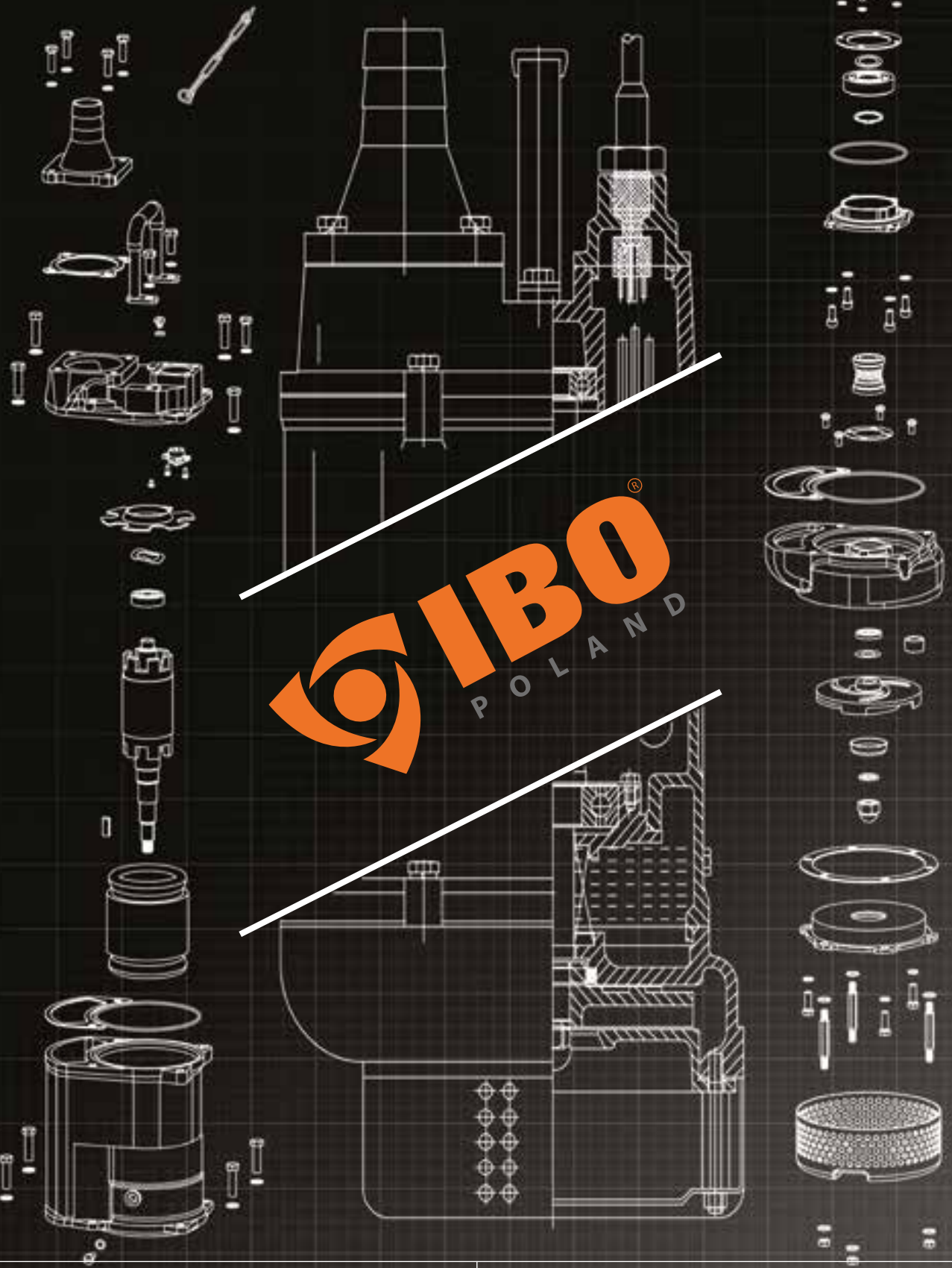
PRODUCT **CATALOGUE**

PUMPS, MOTORS, BOOSTER SETS, INVERTERS, CONTROLLERS





IBO® POLAND

WWW.DAMBAT.PL WWW.IBOITALY.PL

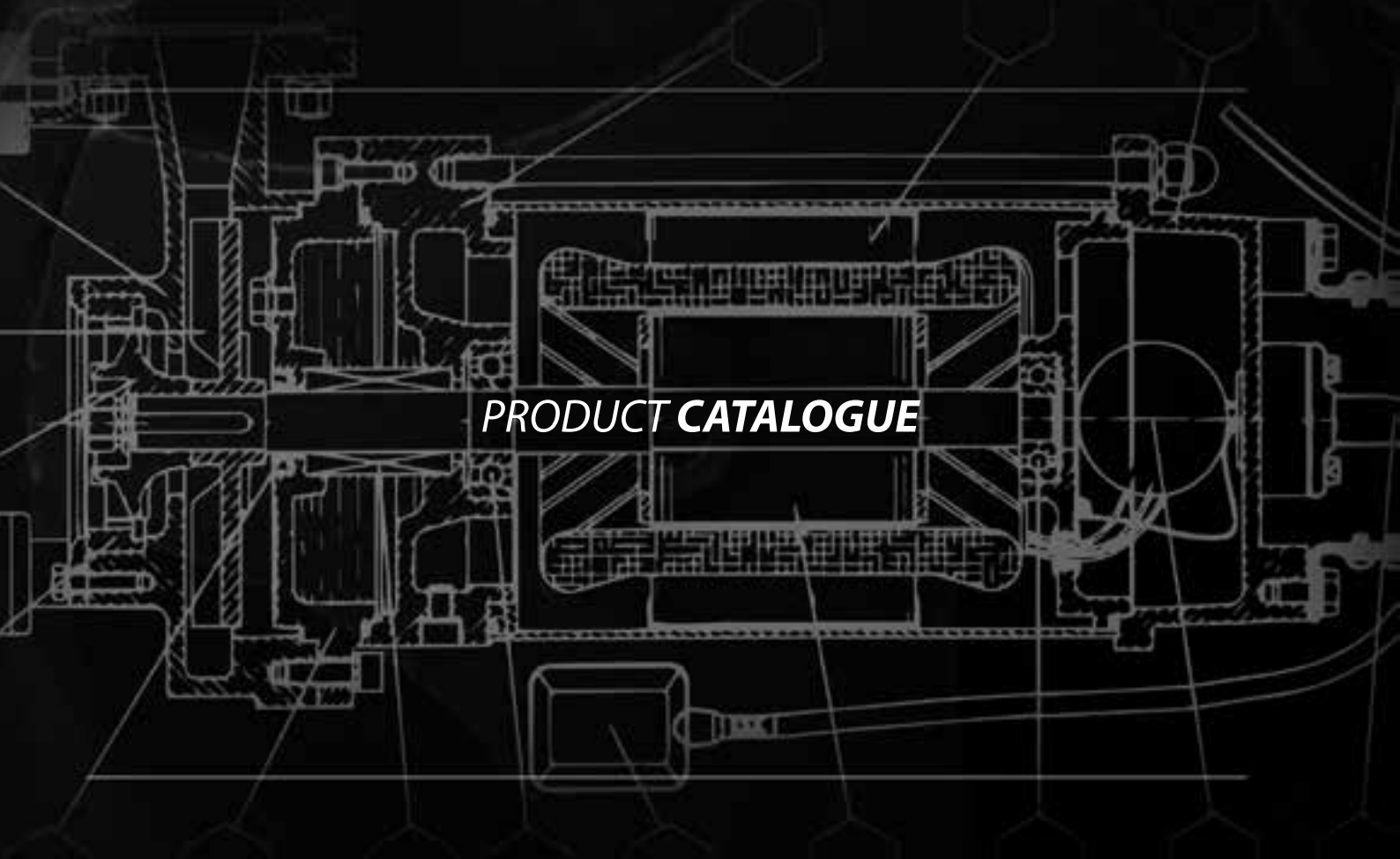
DAMBAT IS A DYNAMICALLY DEVELOPING POLISH MANUFACTURER OF WATER PUMPS AND FITTINGS SOLD UNDER IBO BRAND.

The company started its activities in 1999 and from the very beginning it based its development on understanding clients' needs providing them with high quality products. With experience and knowledge of qualified personnel and regular product development, Dambat became a significant manufacturer of water pumps in the European market.

In order to continue constant development, we cooperate with world-renowned manufacturers of water devices and equipment, while making our offer more attractive. In 2015 and 2016 we commenced cooperation with Italian factories, which resulted in introduction of a new IBO Italy brand into the market.

In cooperation with our Italian partners, we sell top quality tanks, pumps and deep well motors under this brand. Benefiting from the latest technology and high-quality materials, IBO and IBO ITALY products ensure long-lasting, safe and faultless operation. The range of products with such features and individual approach enabled us to acquire distributors of our devices in the majority of European countries and beyond.

With the experience gained over the years in line with knowledge and understanding of the importance of reliability, Dambat delivers top quality products to all customers who decide to choose our offer.



PRODUCT ***CATALOGUE***

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www.dambat.com

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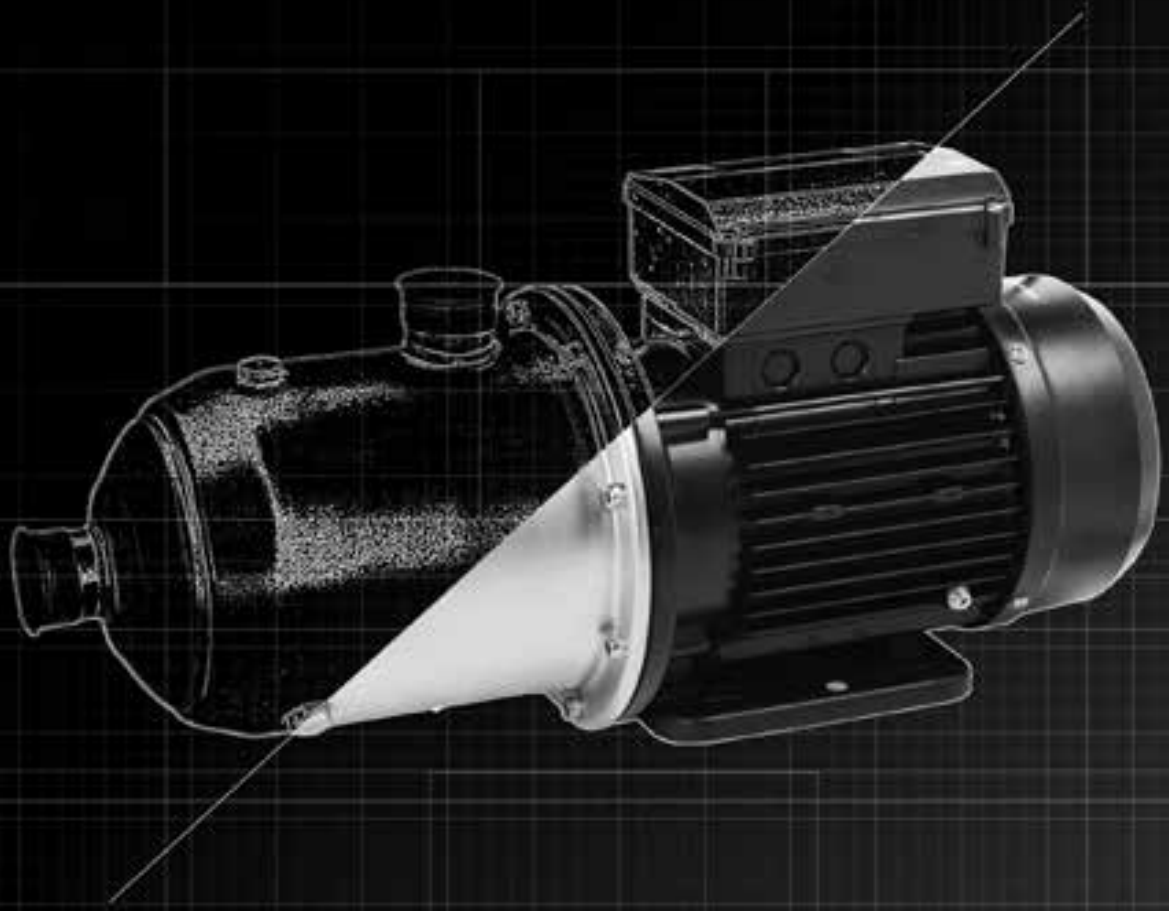


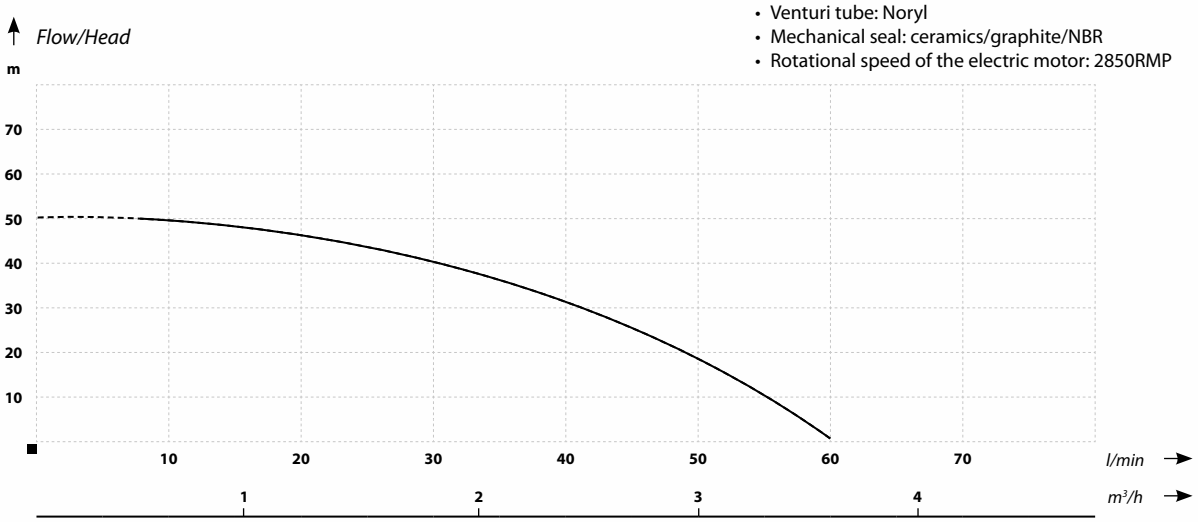
AJ 50/60

Single-stage self-priming centrifugal surface pump equipped with the Venturi tube system for increased suction capacity, designed for pumping of clean cold water from own intakes and for increasing pressure. Sections of pump body and shaft that come in contact with water are made of stainless steel (INOX design). The pump has a power cable with a plug. The pump motor is provided with thermal protection.

APPLICATION:
Supply of water to houses, holiday houses, allotments and gardens.
When combined with pressure tanks, the pumps can be used in single- and multi-family residential housing, in industrial applications and for irrigation purposes.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44

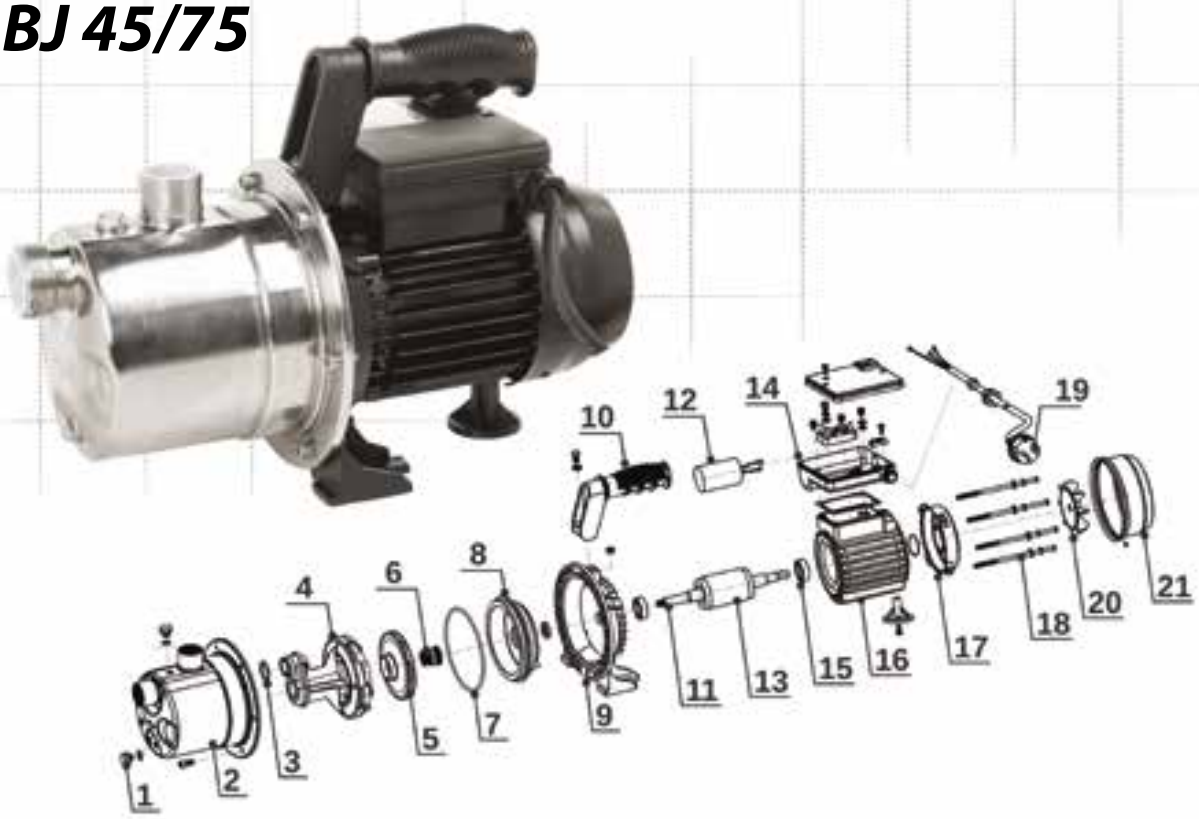
MATERIALS:
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl (stainless steel AISI 304)
- Frame: cast iron
- Pump end plate: stainless steel AISI 304
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
AJ 50/60	50	60	1100	230	8	3,2	1 x 1	37/21/20	10,5

BJ 45/75

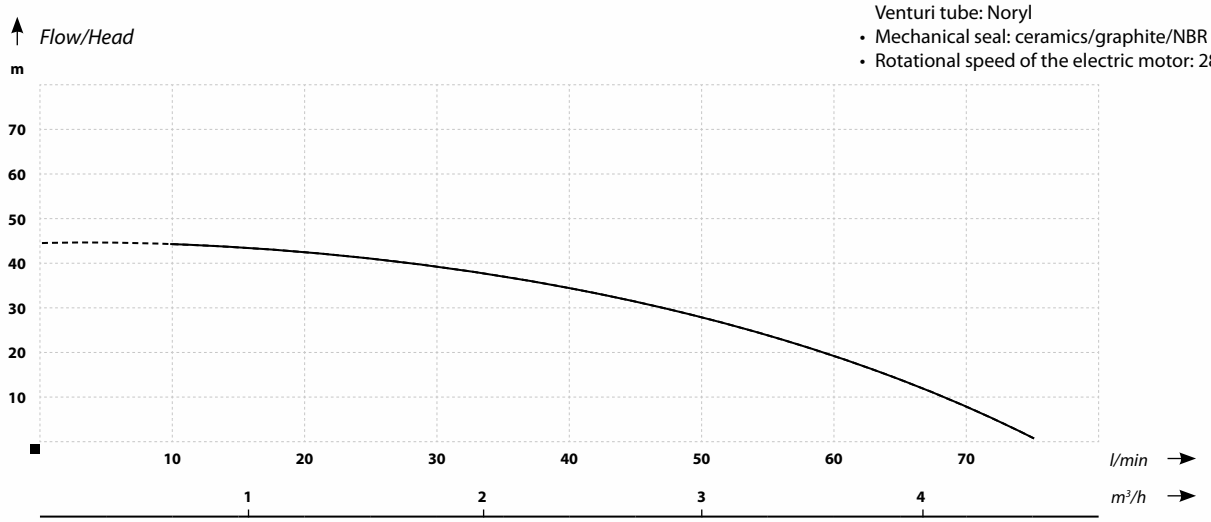


The pump for pumping of clean cold water from own intakes and for increasing pressure. BJ 45/75 is a single-stage self-priming centrifugal surface pump equipped with the Venturi tube system for increased suction capacity. Sections of pump body
and shaft coming in contact with water are made of stainless steel (INOX design). The pump is manufactured to the highest quality standards in terms of the design and materials used. The pump has a power cable with a plug, and the pump motor is provided with thermal protection.

APPLICATION:
Supply of water to houses, holiday houses, allotments and gardens. When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing and in industrial applications.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C Maximum ambient temperature 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44

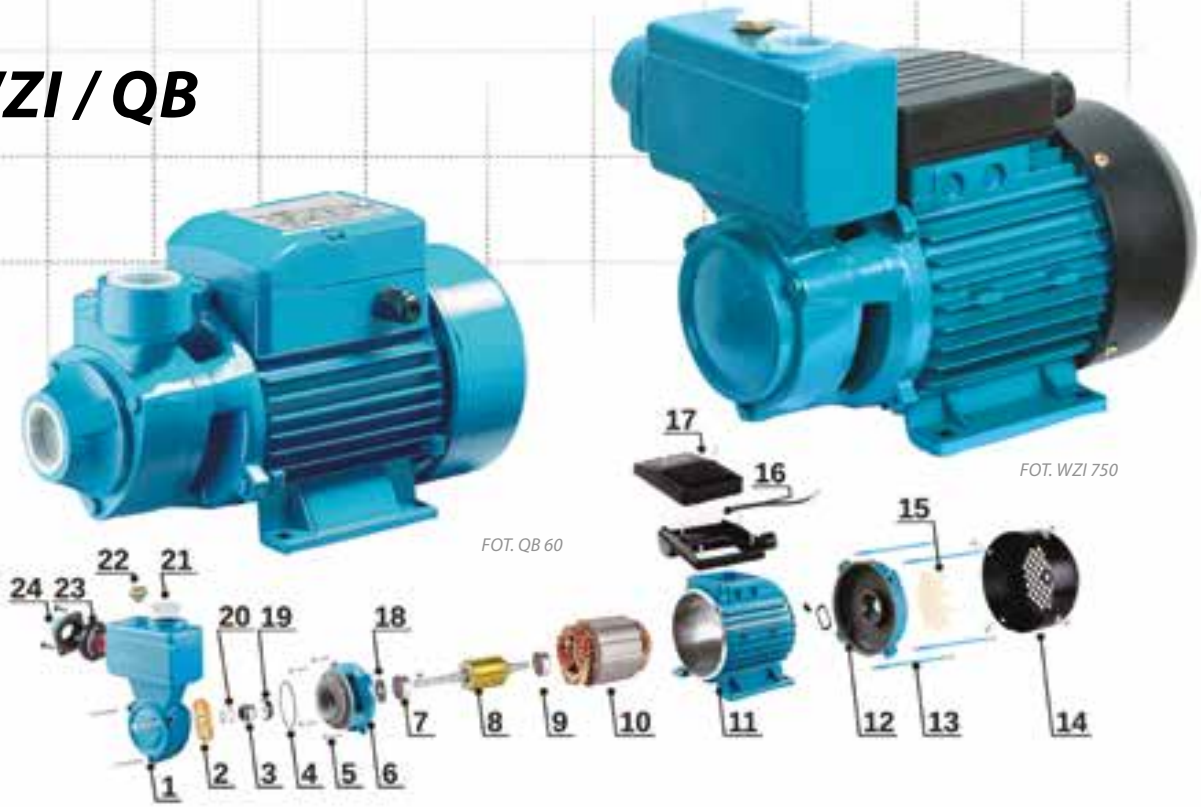
MATERIALS:
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Pump end plate / Frame:
- stainless steel AISI 304/cast iron/aluminium Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
BJ 45/75	45	75	1100	230	8	3,9	1¼ x 1	36/25/18	8,5

WZI / QB

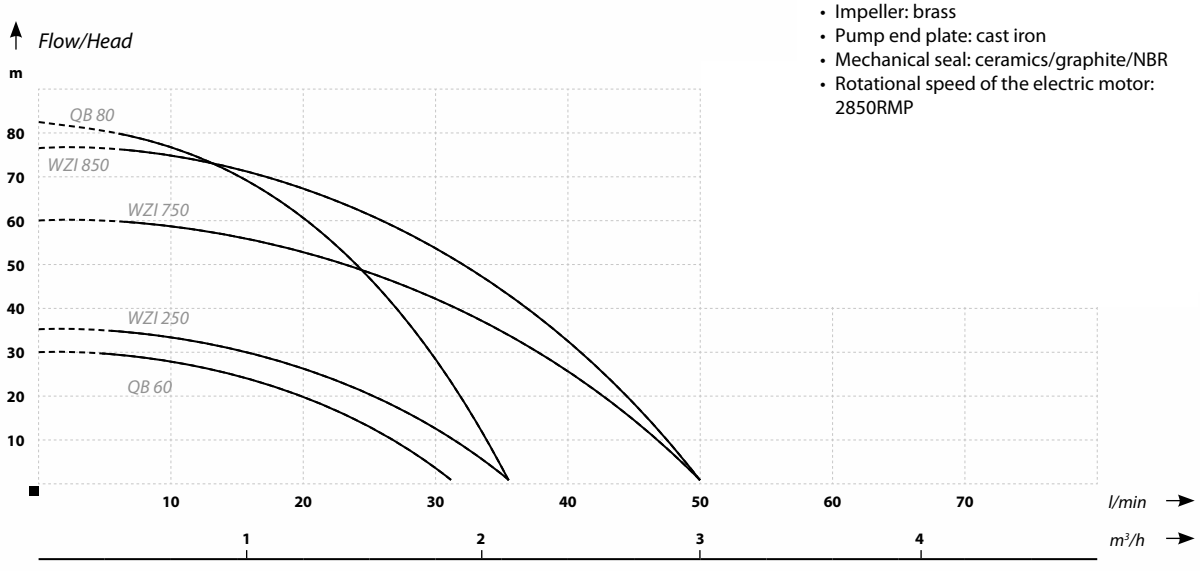


Single-stage self-priming peripheral surface pumps for pumping of clean cold water from own intakes and for increasing pressure. Pump impellers are made of brass. The pump body is made of durable cast iron with the built-in non-return valve. The pump motor is provided with thermal protection. The pumps have a power cable with a plug.

APPLICATION:
Supply of water to holiday houses, allotments and gardens. When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing, in industrial applications and for irrigation purposes.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C Class B Insulation
- Operating mode - continuous
- Protection - IP44

MATERIALS:
- Housing: cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: brass
- Pump end plate: cast iron
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP



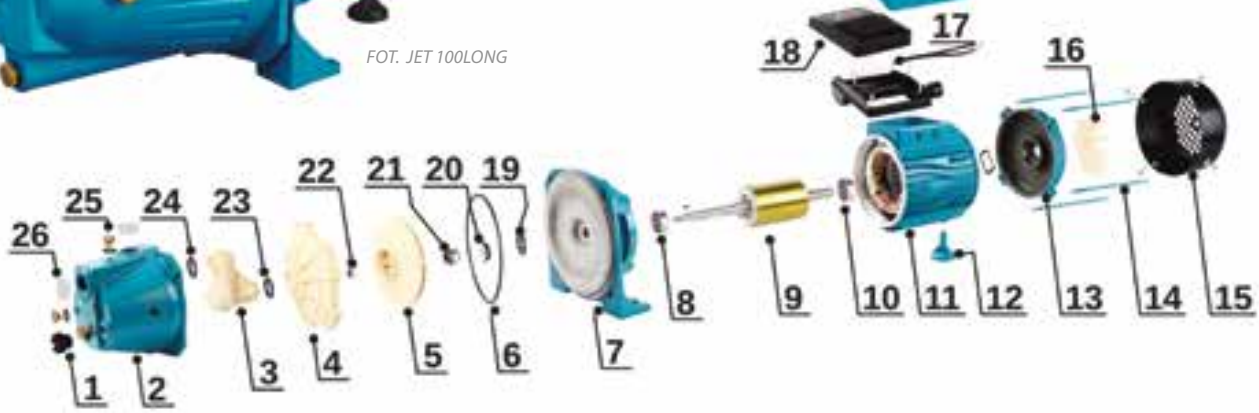
PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
QB 60	30	32	370	230	6	2,8	1 x 1	21/17/17	4
QB 80	83	35	750	230	8	4	1 x 1	27/20/18	9,8
WZI 250	35	35	250	230	8	1,6	1 x 1	25/21/16	7,5
WZI 750	60	50	750	230	8	5	1 x 1	26/21/18	9,3
WZI 850	78	50	850	230	8	4	1 x 1	28/23/19	10,8

JET 100A / JET 100L

FOT. JET 100LONG

FOT. JET 100A



Single-stage self-priming centrifugal surface pump equipped with the Venturi tube system for increased suction capacity, designed for pumping of clean cold water from own intakes and for increasing pressure. The pump body is made of durable cast iron, and the pump motor is provided with thermal protection. The pump has a power cable with a plug. The pump is available with accessories or in the booster set.

APPLICATION:

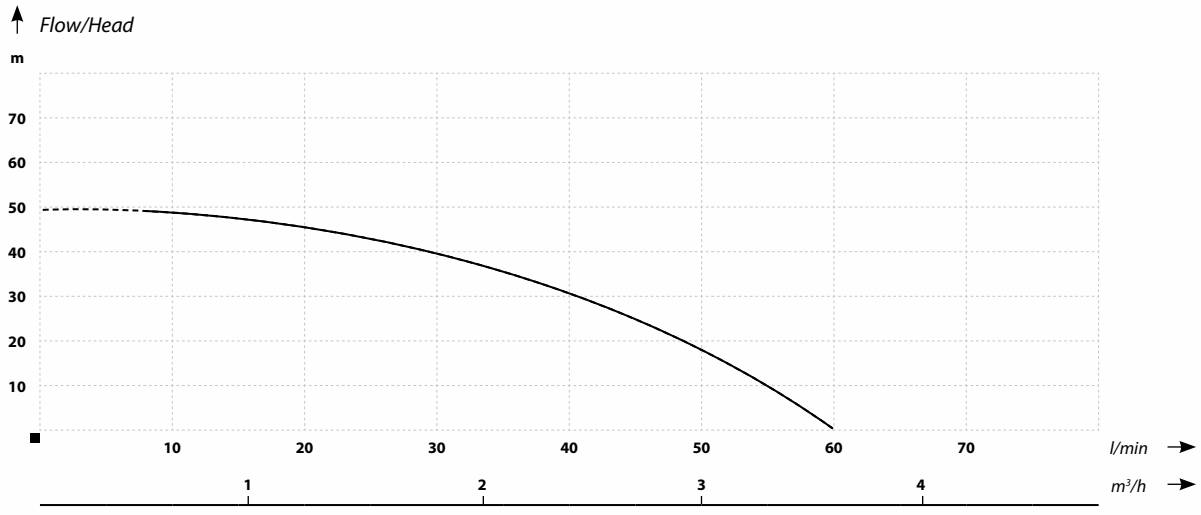
- Supply of water to houses, holiday houses, allotments and gardens. When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing, in industrial applications and for irrigation purposes.

OPERATING CONDITIONS:

- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44

MATERIALS:

- Housing: cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Pump end plate / Frame: cast iron
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP



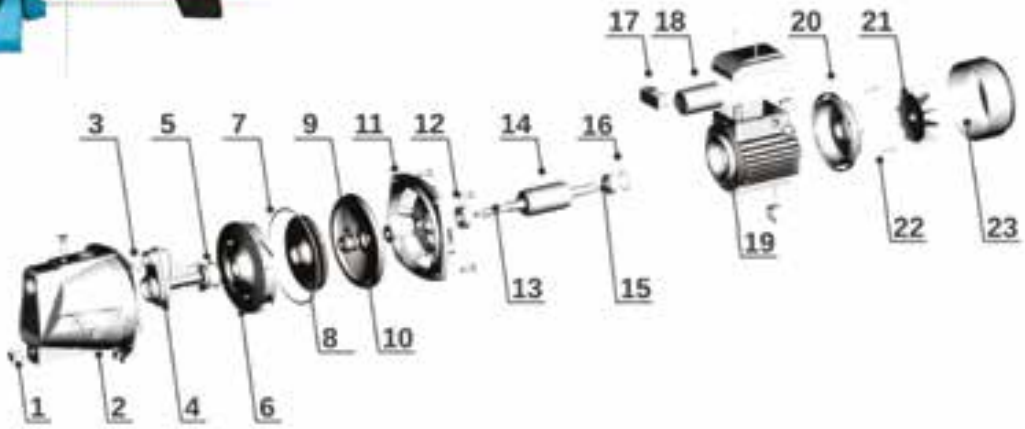
PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
JET 100A	50	60	1100	230	8	3,2	1x1	39/20/18	11,5
JET 100A LONG	50	60	1100	230	8	3,6	1x1	44/21/18	12,5

JSW

JSW 100

JSW 150



Single-stage self-priming centrifugal pumps equipped with the Venturi tube system for increased suction capacity, designed for pumping of clean cold water from own intakes and for increasing pressure. The JSW pumps are very efficient and additionally provide exceptionally good water suction capacity. JSW 200 pumps have a brass impeller. All JSW pumps are equipped with thermal protection mounted in the motor winding.

APPLICATION:

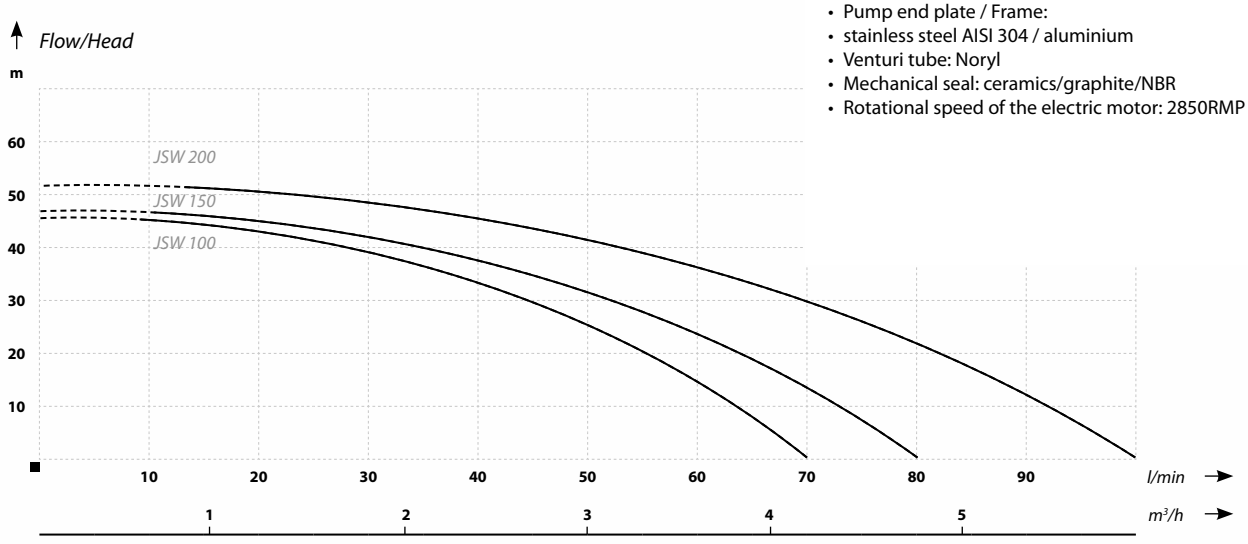
- Supply of water to houses and agricultural holdings, as well as for irrigation of gardens. When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing, in industrial applications and for irrigation purposes.

OPERATING CONDITIONS:

- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C Class B Insulation
- Operating mode - continuous
- Protection - IP44

MATERIALS:

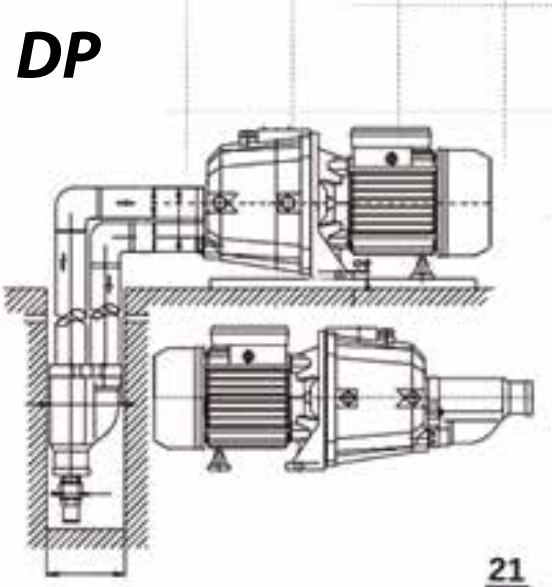
- Housing: cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl / brass
- Pump end plate / Frame:
- stainless steel AISI 304 / aluminium
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP



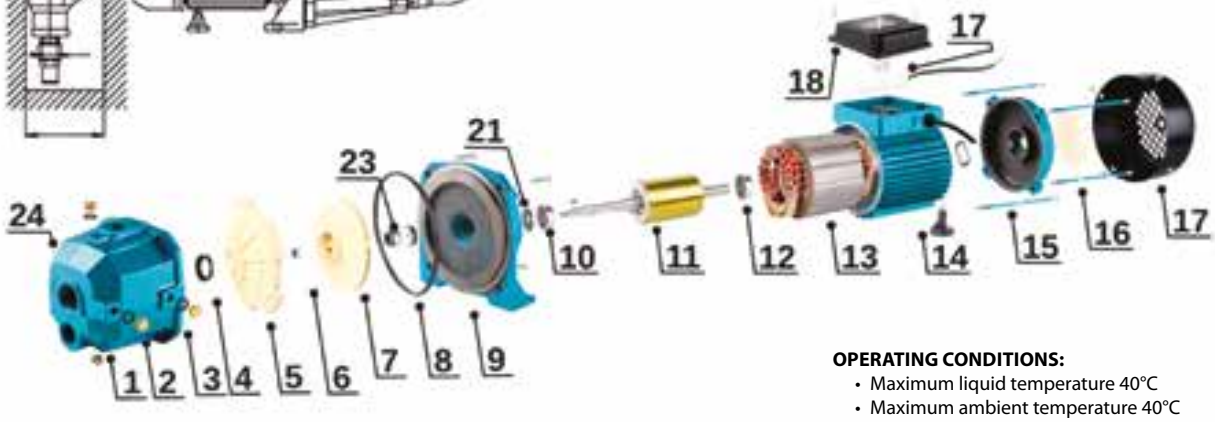
PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
JSW 100	45	70	1100	230	8	3,2	1x1	39/21/19	11
JSW 150	46	80	1500	230	8	5,6	1x1	41/21/19	11,5
JSW 200	53	100	1800	230	8	8,2	1x1¼	52/25/22	17

DP



FOT. DP370



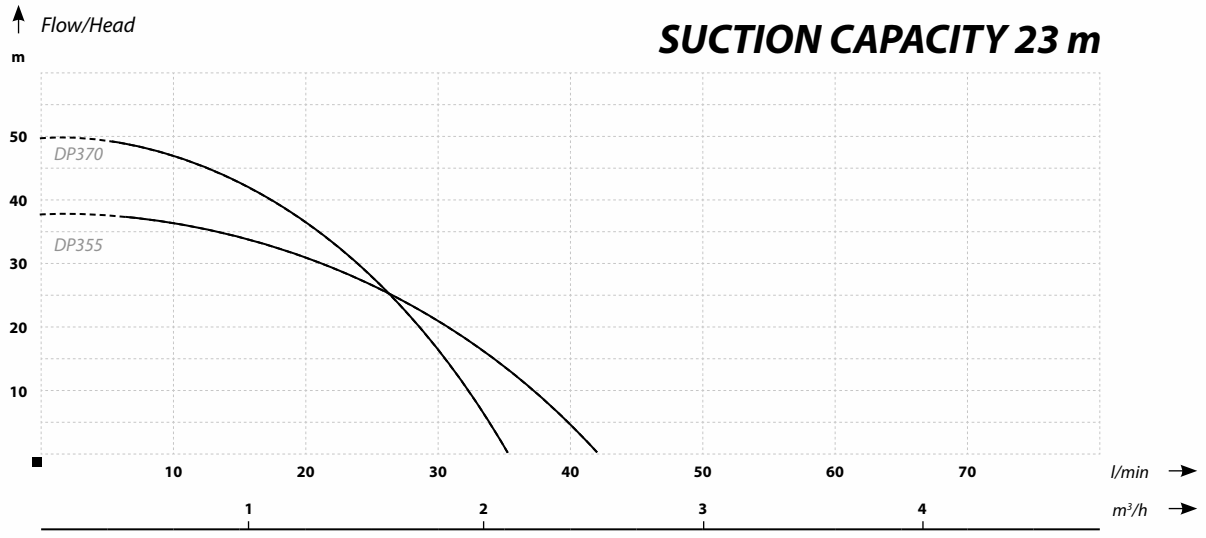
The pump for pumping of clean cold water from own intakes and for increasing pressure. DP355 is a single-stage self-priming centrifugal surface pump equipped with the Venturi tube system immersed directly into a well for increased suction capacity. DP355 is one of the few pumps that has a suction capacity of 23 m when using the Venturi tube system immersed into the well. Due to the high suction capacity, the pump can replace a submersible pump. The pump body is made of durable cast iron, and the pump motor is provided with thermal protection. The pump has a power cable with a plug.

APPLICATION:
Supply of water to houses, holiday houses, allotments and gardens. When combined with pressure tanks, they can be used for single- and multi-family residential buildings, in industrial applications and for irrigation purposes.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44

MATERIALS:
- Housing: cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Pump end plate / Frame: cast iron
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP

SUCTION CAPACITY 23 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
DP355	38	42	1100	230	23	3,2	1 x 1	40/18/18	14,5
DP370	50	35	1100	230	23	3,6	1 x 1	39/21/19	15

PJ 65/45 GARDEN

PJ 65-45

GARDEN

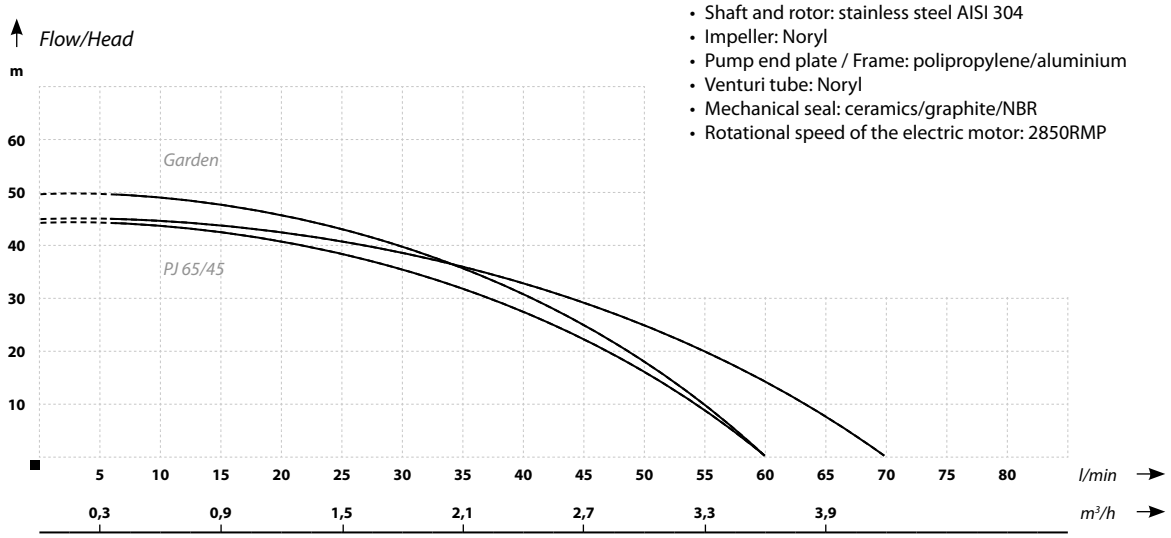
JSW 150 GARDEN

Self-priming centrifugal garden pumps equipped with the Venturi tube system for increased suction capacity. The pump body is made of a high quality material. Pumps are equipped with a switch integrated into the housing and a carrying handle. The pump motor is provided with thermal protection. The pump is available with fittings, booster sets and intelligent pump controllers.

APPLICATION:
Supply of water to houses, holiday houses, allotments and gardens, as well as for irrigation purposes. When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing, agricultural holdings and in industrial applications.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C Class B Insulation
- Operating mode - continuous
- Protection - IP44

MATERIALS:
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Pump end plate / Frame: polipropylene/aluminium
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
PJ 65/45	45	60	1100	230	8	3,6	1x1	39/25/18	9,5
Garden	50	60	1100	230	8	3,8	1x1	39/27/19	10
JSW 150 Garden	46	70	1500	230	8	5,6	1x1	41/21/19	9,5

MULTI1300 INOX
MULTI-GARDEN

MULTI1300 INOX

FILTR

IMAGE: COMPLETE MULTI-GARDEN BOOSTER SET

Self-priming centrifugal pump with the built-in screen filter, equipped with the Venturi tube system for increased suction capacity.
The pump body is made of a high quality material and stainless steel. The pump is equipped with a switch integrated into the housing and a carrying handle. The pump motor is provided with thermal protection. The pump is available with fittings, booster sets and intelligent pump controllers.

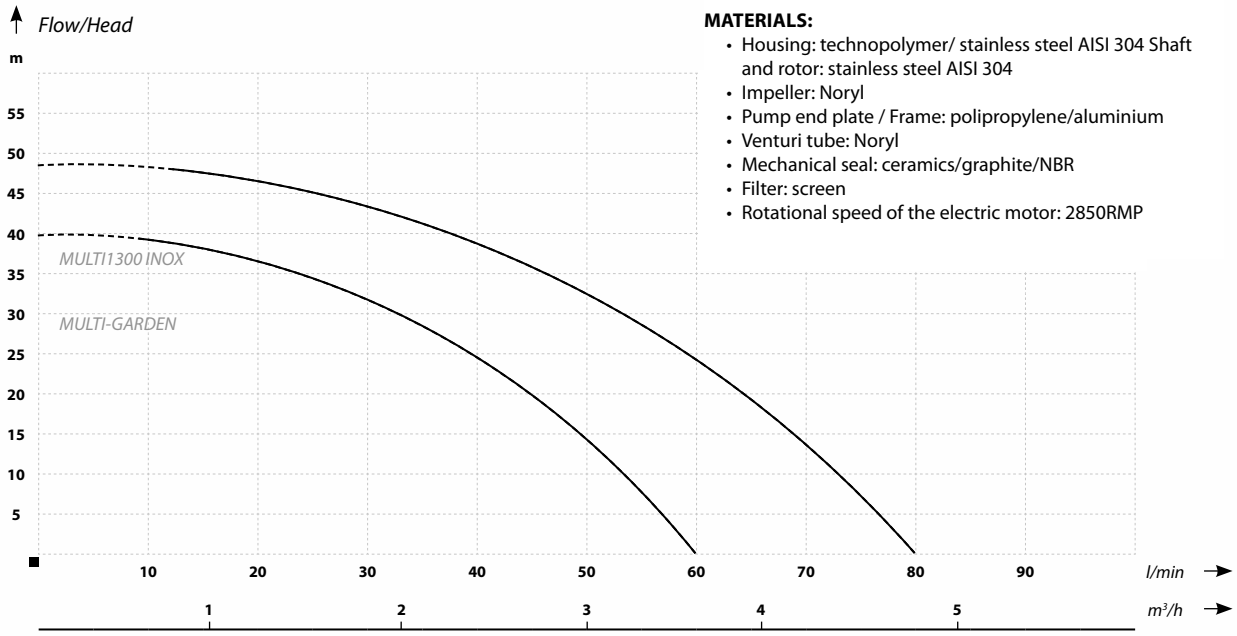
APPLICATION:
Supply of water to houses, holiday houses, allotments and gardens, as well as for irrigation purposes. When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing, agricultural holdings and in industrial applications

OPERATING CONDITIONS

- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44

MATERIALS:

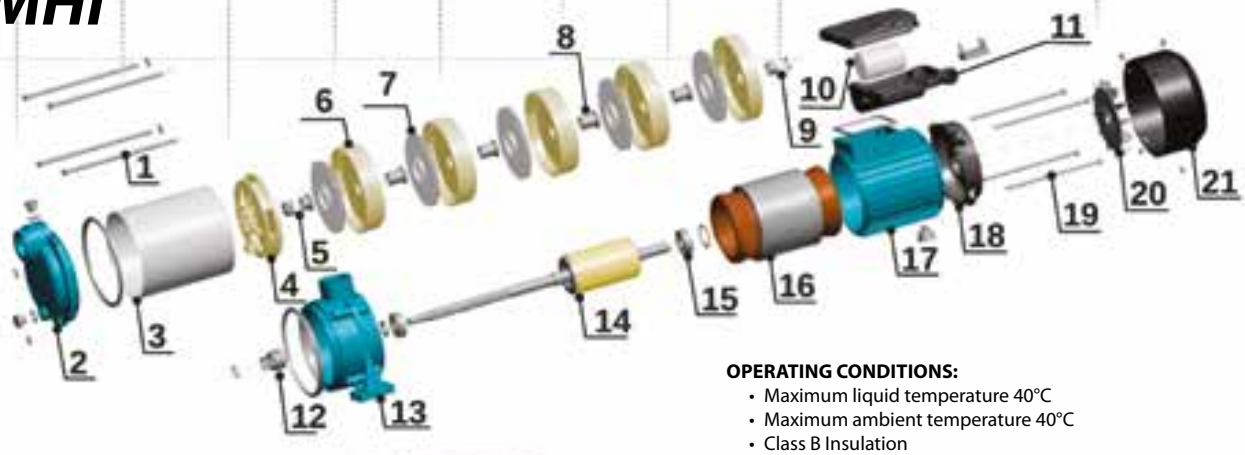
- Housing: technopolymer/ stainless steel AISI 304 Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Pump end plate / Frame: polipropylene/aluminium
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Filter: screen
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
MULTI1300 INOX	48	80	1300	230	8	6	1x1	44/28/23	11
MULTI-GARDEN	40	60	1100	230	8	3	1 x 1	65/55/30	19

MHI



MHI 1800

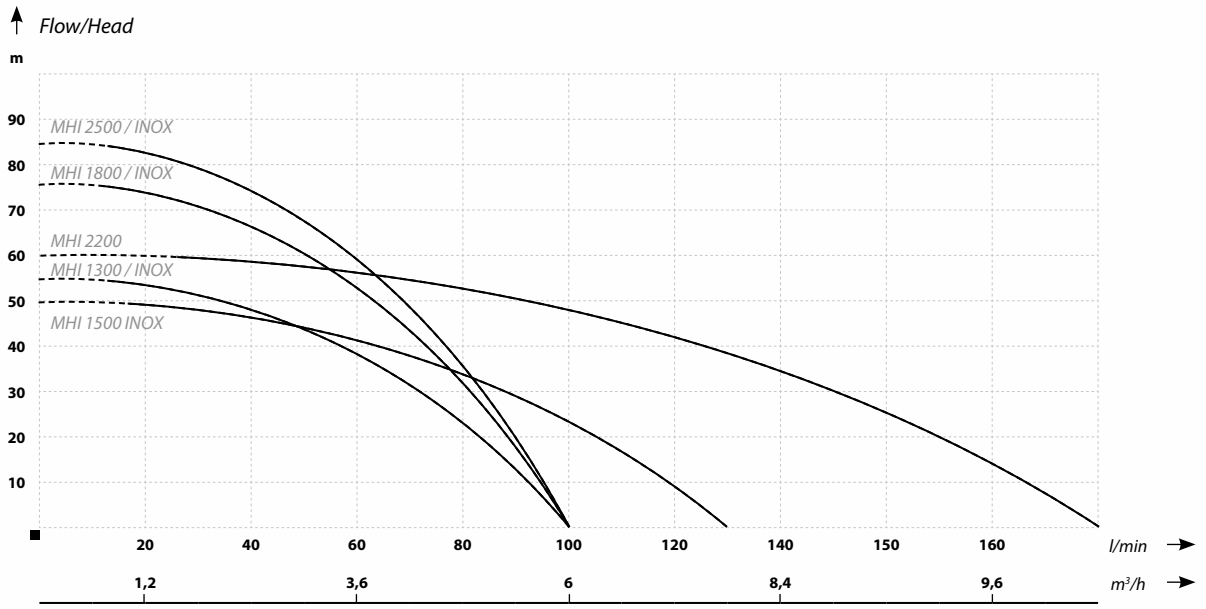
OPERATING CONDITIONS:

- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44

MATERIALS:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Impeller: AISI 304 (INOX design)
- Pump end plate / Frame: cast iron
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP

Group of multi-stage self-priming centrifugal pumps designed for pumping of clean cold water from own intakes and for increasing pressure. The pumps are equipped with the Venturi tube system for increased suction capacity. MHI pumps are available in two variants: with stainless steel impellers (INOX design) or with noryl impellers. All pumps have a stainless steel body. Due to low-noise operation, the pumps can be installed inside the houses. The pumps are equipped with thermal protection mounted in the motor winding.



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
MHI 1300 / INOX	55	100	1300	230	8	7	1x1	42/15/19	13,5
MHI 1500 INOX	50	130	1500	230	8	7,5	1x1	44/16/20	15
MHI 1800 / INOX	76	100	1800	230	8	8,8	1x1	48/18/20	17
MHI 2200	60	180	2200	230	8	10,5	1x1¼	46/18/21	18,5
MHI 2500 / INOX	85	100	2500	230	8	11	1x1	55/21/18	24

MH

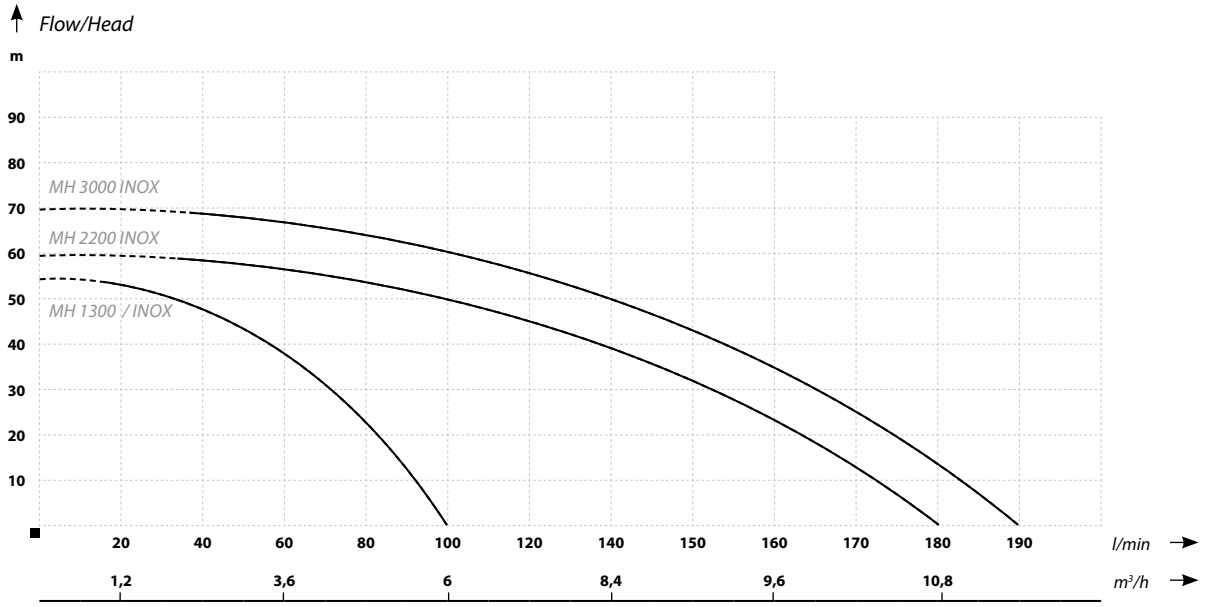
OPERATING CONDITIONS:

- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44

MATERIALS:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Impeller: AISI 304 (INOX design)
- Pump end plate / Frame: cast iron
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP

Group of multi-stage self-priming centrifugal pumps designed for pumping of clean cold water from own intakes and for increasing pressure. The pumps are equipped with the Venturi tube system for increased suction capacity. MH pumps are available in two variants: with stainless steel impellers (INOX design) or with noryl impellers. All pumps have a stainless steel body. Due to their high performance, efficiency and parameters, the pumps are often used to supply water to houses and agricultural holdings. Due to low-noise operation, the pumps can be installed inside the houses. The pumps are equipped with thermal protection mounted in the motor winding. All MH pumps are available in 230 V ~ / 50 Hz version. MH 1300 / INOX and MH 2200 INOX pumps are additionally available in the 400 V ~ 3/50 Hz version. MH pumps are also available with booster sets and with PC intelligent pump controllers (PC15, PC16, PC10P, PC59).



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
MH 1300 / INOX	55	100	1300	230/400	8	6	1x1	43/15/18	13,5
MH 2200 INOX	60	180	2200	230/400	8	10	1x1¼	46/18/21	20
MH 3000 INOX	70	190	3000	230	8	12,5	1x1¼	47/19/22	26

CPM INOX

Single-stage non-self-priming centrifugal pumps designed for pumping non-aggressive liquids with non-abrasive and non-absorbent solids content of 0.27 kg/m^3. The maximum temperature of the pumped liquid is up to 60°C. The pump motor is provided with thermal protection mounted in the motor winding. Hydraulic parts that come in contact with water are made entirely of stainless steel.

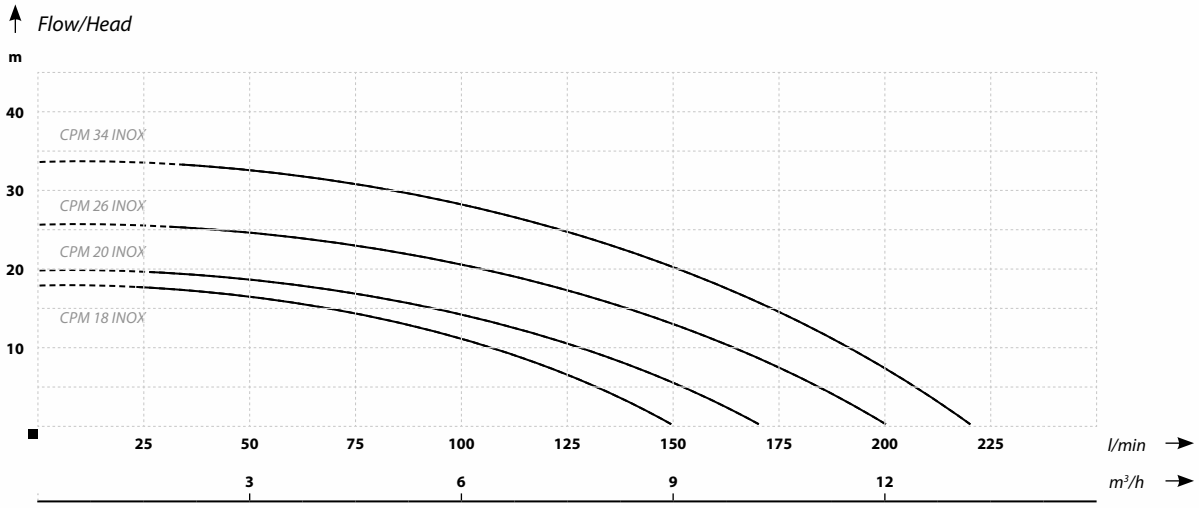
APPLICATION:
Agriculture: irrigation, drainage, water supply, pumping liquid fertilizers (not corrosive to AISI 304 steel). Industrial applications: supply of water, pumping liquids that are not corrosive to AISI 304 steel and non-explosive liquids, jest washing.
Air conditioning: heating, cooling. Household applications: supply of water, increasing pressure. The pumps is designed for continuous operation.

OPERATING CONDITIONS

- Maximum liquid temperature 60°C
- Maximum ambient temperature 50°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44

MATERIALS:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Pump end plate: stainless steel AISI 304
- Frame: Aluminium
- Mechanical seal: carbon/ceramics/NBR
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
CPM 18 INOX	18	150	550	230	7	2,5	1 x 1¼	31/23/21	9,1
CPM 20 INOX	20	170	800	230	7	3,8	1 x 1¼	31/23/21	9,8
CPM 26 INOX	26	200	1100	230	7	5,2	1 x 1¼	31/23/21	10,9
CPM 34 INOX	34	220	1500	230	7	7	1 x 1¼	36/25/24	16.4

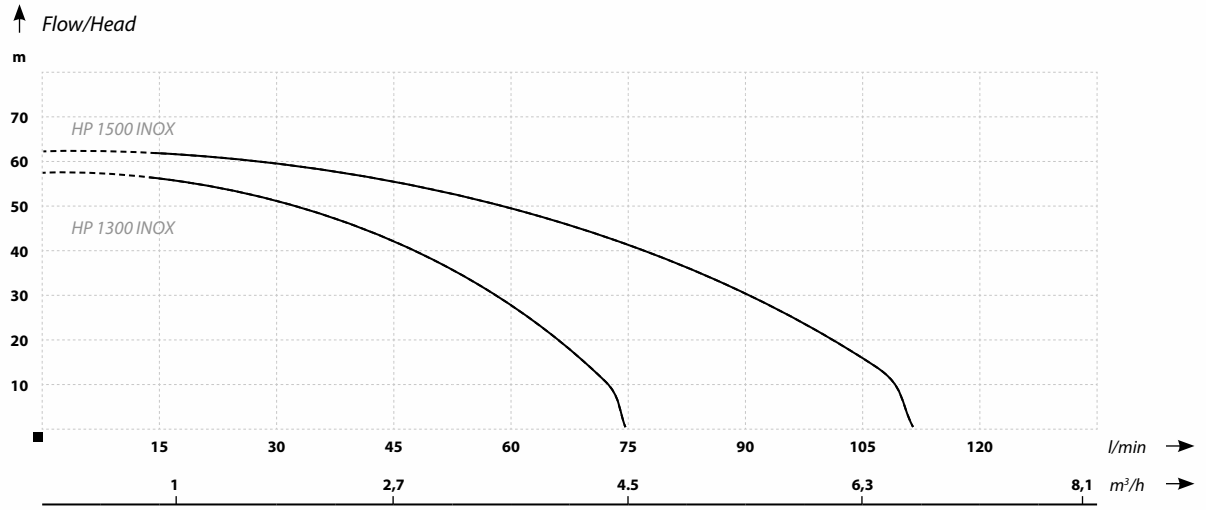
HP INOX

The pump for pumping of clean cold water from own intakes and for increasing pressure. HP Series are multi-stage self-priming centrifugal surface pumps equipped with the Venturi tube system for increased suction capacity. Sections of pump body and shaft that come in contact with water are made of stainless steel (INOX). The pump is manufactured to the highest quality standards in terms of the design and materials used. The pump has a power cable with a plug, and the pump motor is provided with thermal protection.

APPLICATION:
Supply of water to houses, gardens, industrial washing facilities, air conditioning and cooling systems. When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing and in industrial applications.

OPERATING CONDITIONS:
- Maximum liquid temperature 70°C
- Maximum ambient temperature 50°C
- Class F Insulation
- Operating mode - continuous
- Protection - IP55

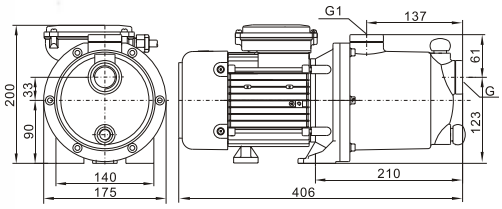
MATERIALS:
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Pump end plate: stainless steel AISI 304
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP

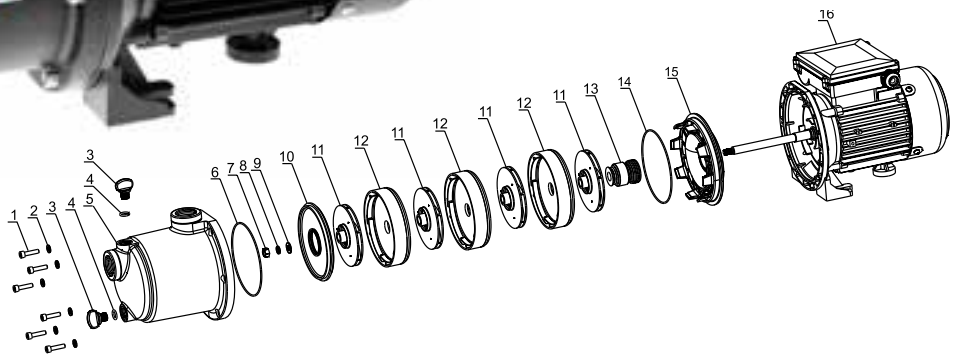


PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
HP 1300 INOX	58	75	1300	230	8	6,2	1x1	47/27/20	13,1
HP 1500 INOX	62	110	1500	230	8	9,6	1x1	48/20/23	15,5

E-HP 1300



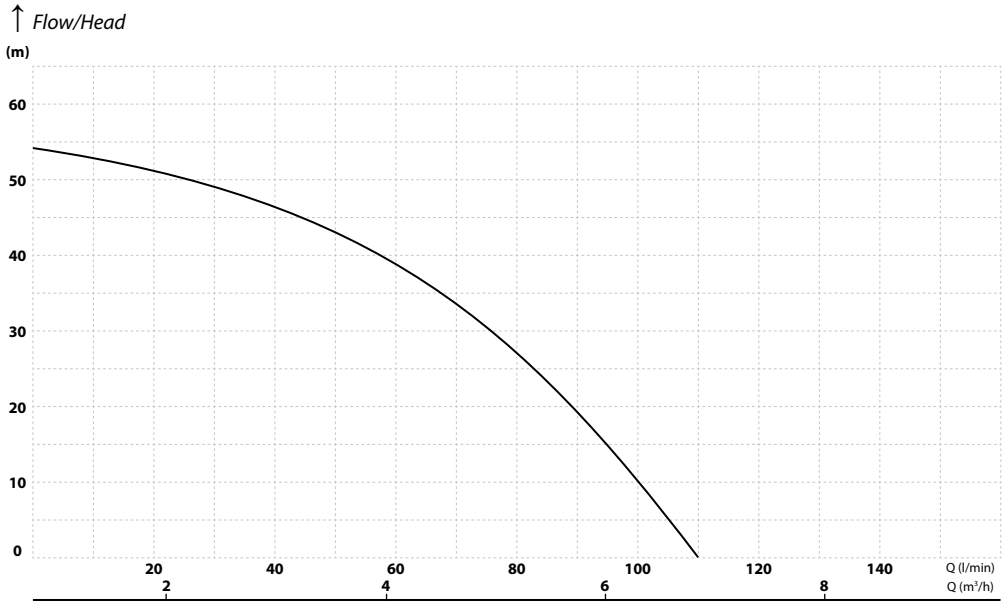


The pump used for clean, cold water from own intakes and for pressure boosting. The HP pumps are multistage, self-sucking surface pumps with increased suction capacity provided by a Venturi tube. The pump shaft is made of stainless steel (INOX). The pump is top quality in terms of workmanship and materials. It features a power cable with a plug, and the motor has integrated thermal protection.

APPLICATION:
Water supply to homes and gardens. In combination with membrane tanks can be used for single- and multi-family houses and in industry.

OPERATING CONDITIONS:
- Maximum liquid temperature 50°C
- Maximum ambient temperature 50°C
- Insulation class F
- Operation mode – continuous
- Degree of protection - IP55

MATERIALS:
- Housing: AISI 304
- Shaft and rotor: AISI 304
- Impeller: Noryl
- Diffuser: Noryl
- Partition: AISI 304
- Mechanical gland: ceramic/ graphite/NBR
- Motor speed: 2850RMP

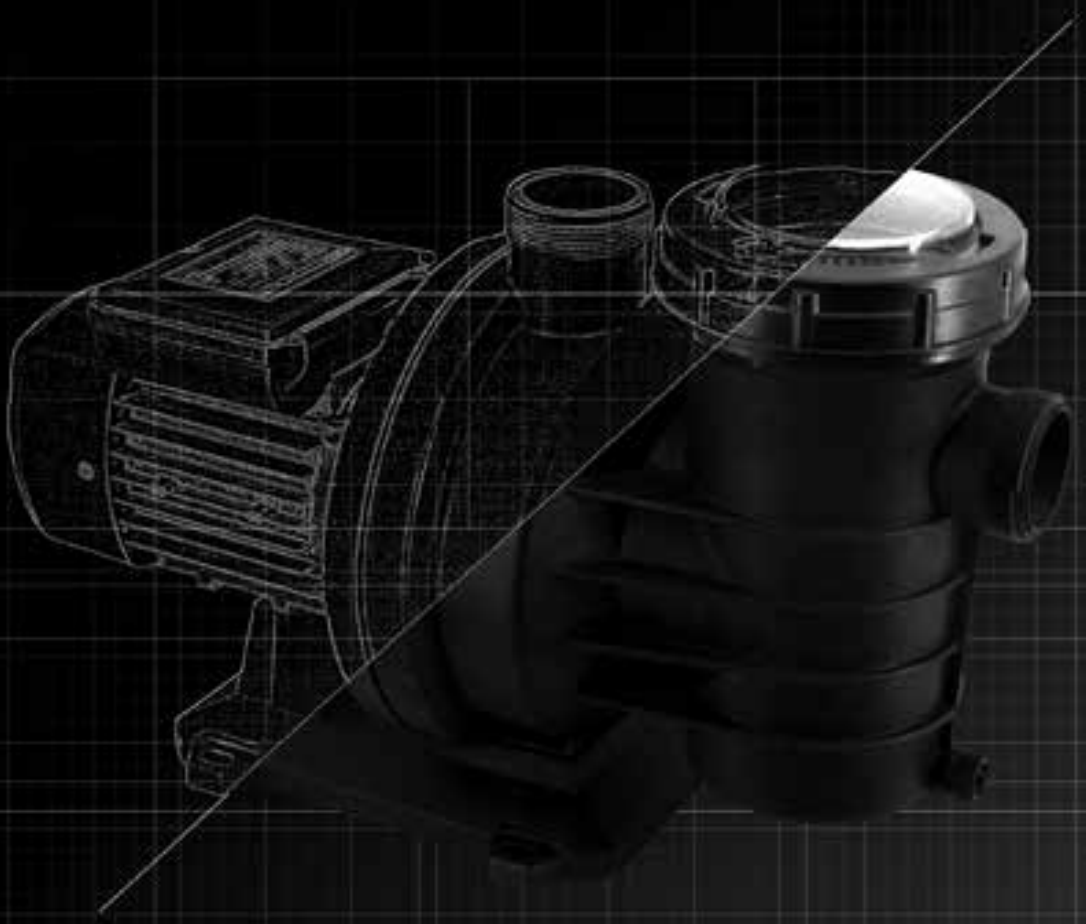


PARAMETERS

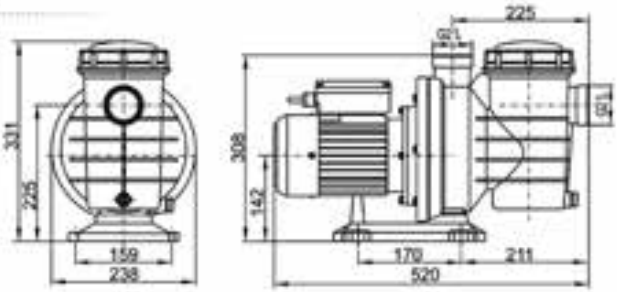
Model	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
E-HP 1300	54	110	1300	230	8	6,2	1 x 1	41/20/18	11,1

SWIMMING POOL PUMPS

SWIM
JA 50
FON



SWIM

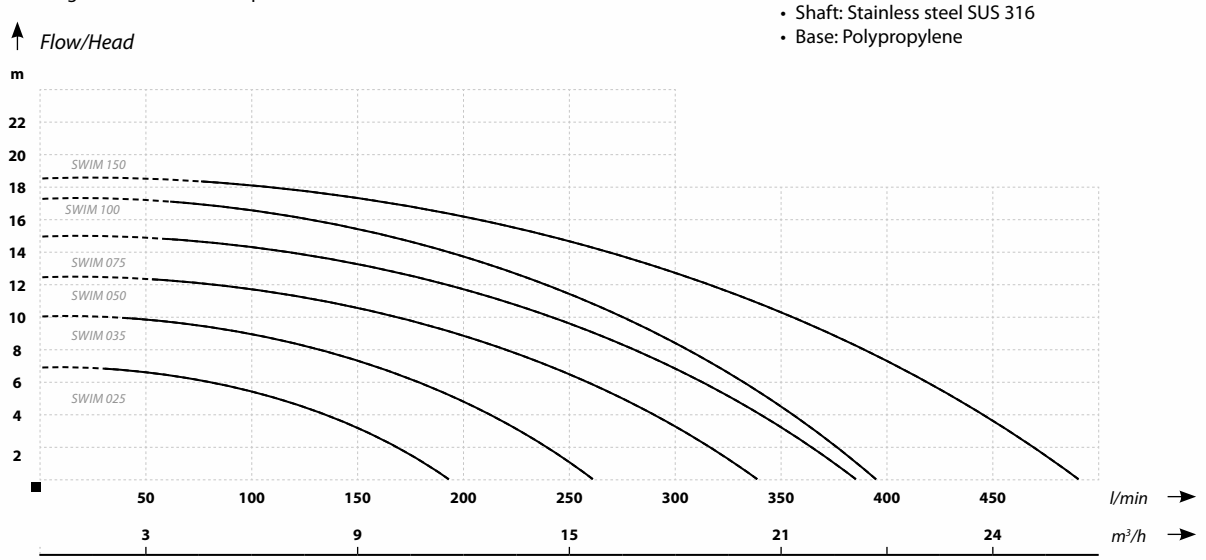


Self-priming swimming pool pump with pre-filter.
Designed for maximum efficiency of filtration and circulation of water with chlorine content. It can operate with sea water. The pump is made of plastic materials, with a catcher for leaves and larger impurities, including fibrous ones. Available with Ø 50 mm or Ø 48.5 mm inlets/outlets.

MOTOR
- Asynchronous squirrel-cage with external ventilation
- Supply voltage 220-240 V/ 50 Hz.
- IP55 Ingress Protection
- Insulation Class F
- Single-phase motor with built-in capacitor and thermal protection
- Self-lubricating ball bearings
- Rotational speed 2850 rpm
- Designed for continuous operation

OPERATING CONDITIONS:
- Water temperature: 5-50°C
- Ambient temperature: max. 50°C
- Max. working pressure: 0.3 MPa

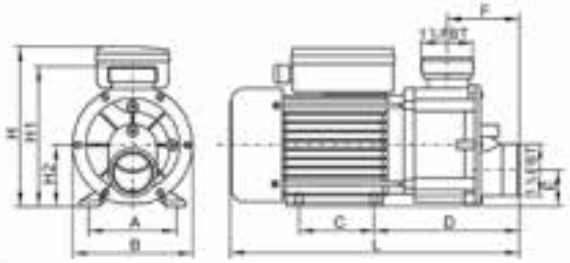
MATERIALS:
- Pump housing: ABS
- Pre-filter: ABS
- Inlet/outlet: ABS/PVC
- Access plate: Polyethylene HD
- Impeller: Glass fibre reinforced LEXAN (resistant to abrasion by sand)
- Venturi tube: Glass fibre reinforced LEXAN (resistant to abrasion by sand)
- Mechanical seal: SiC/C
- Shaft: Stainless steel SUS 316
- Base: Polypropylene



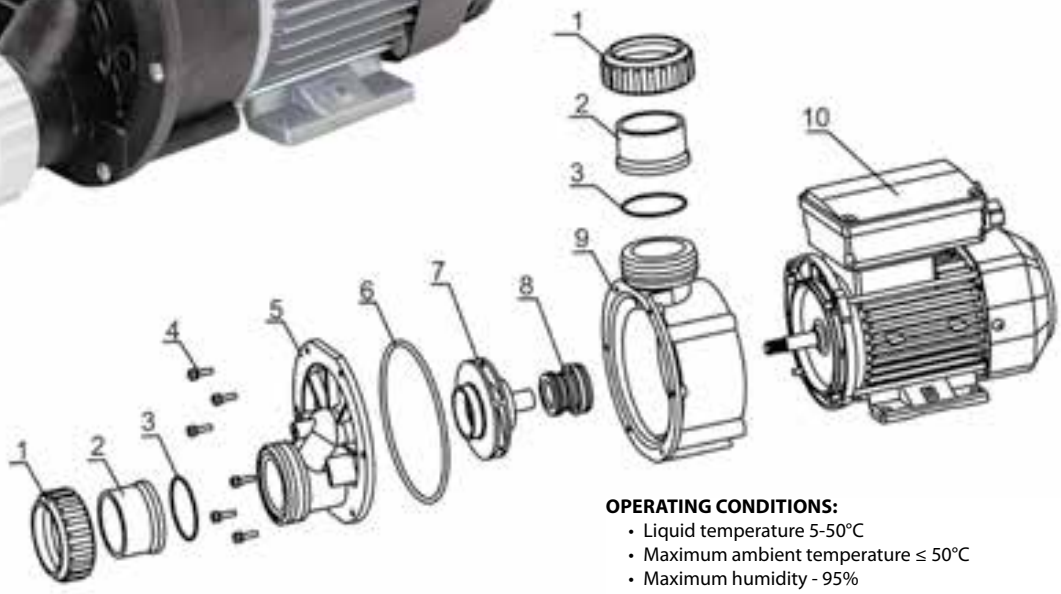
PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power		Amperage (A)	Weight (kg)
			(kW)	(HP)		
SWIM 025	7	195	0,37	0,50	1,9	9,3
SWIM 035	10	255	0,50	0,75	2,7	9,5
SWIM 050	12,5	340	0,75	1,0	3,8	9,7
SWIM 075	15	370	0,9	1,2	4,6	10,5
SWIM 100	17,5	390	1,1	1,5	5,8	10,9
SWIM 150	18,5	470	1,5	2,0	7,0	11,5

JA50



Name	Dimensions (mm)									
	A	B	C	D	E	F	G	H	H1	H2
JA50	100	153	80	164	33	89	317	191	168	63



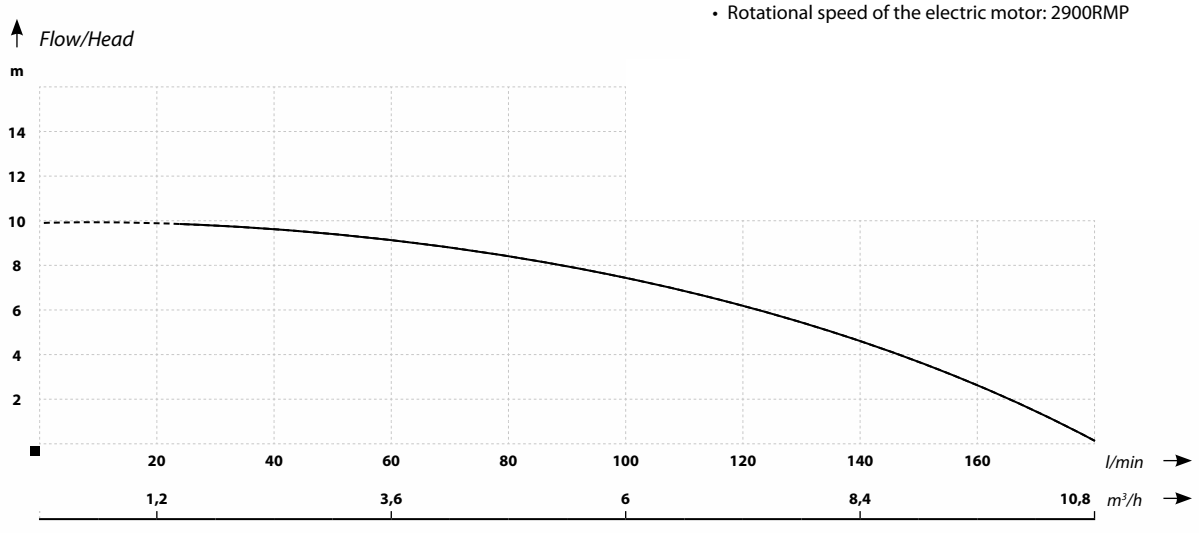
The SPA pump is designed for circulation or filtration of swimming pools, spas, whirlpool bathtubs and hot tub spas. The JA pump can also be used in pools containing sea water, e.g. fish farms. The pump motor is equipped with thermal protection and provides exceptionally low-noise operation and low vibrations. The JA50 pumps are widely used by SPA manufacturers.

OPERATING CONDITIONS:

- Liquid temperature 5-50°C
- Maximum ambient temperature ≤ 50°C
- Maximum humidity - 95%
- Class F Insulation
- Operating mode - continuous
- Protection - IP55

MATERIALS:

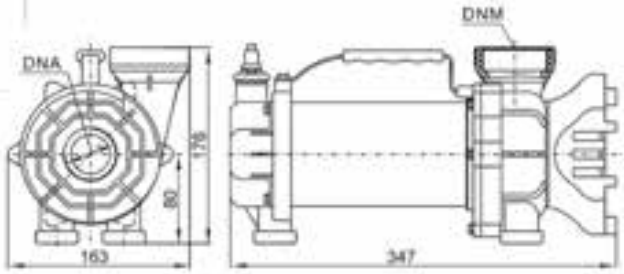
- Housing: plastic
- Shaft and rotor: stainless steel AISI 304
- Impeller: plastic
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2900RMP

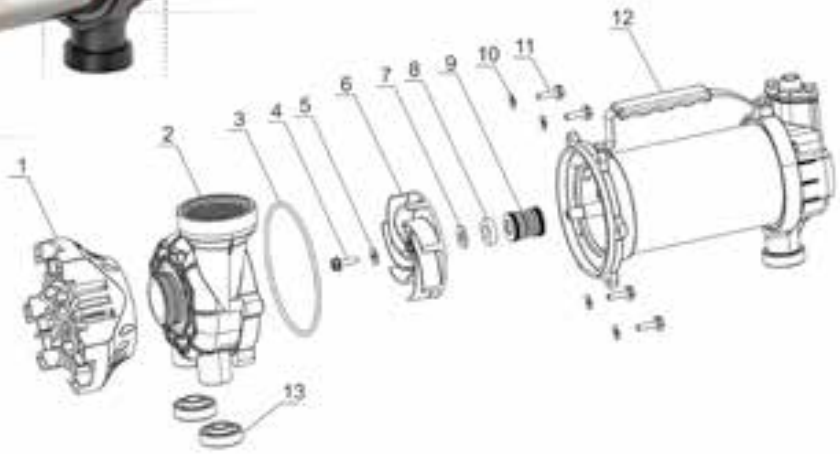


PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Amperage (A)	Inlet/outlet (mm)	Dimensions L/H/W (cm)	Weight (kg)
JA50	10	180	370	230	8	2	48,5 or 50	34/24/16	6

FON





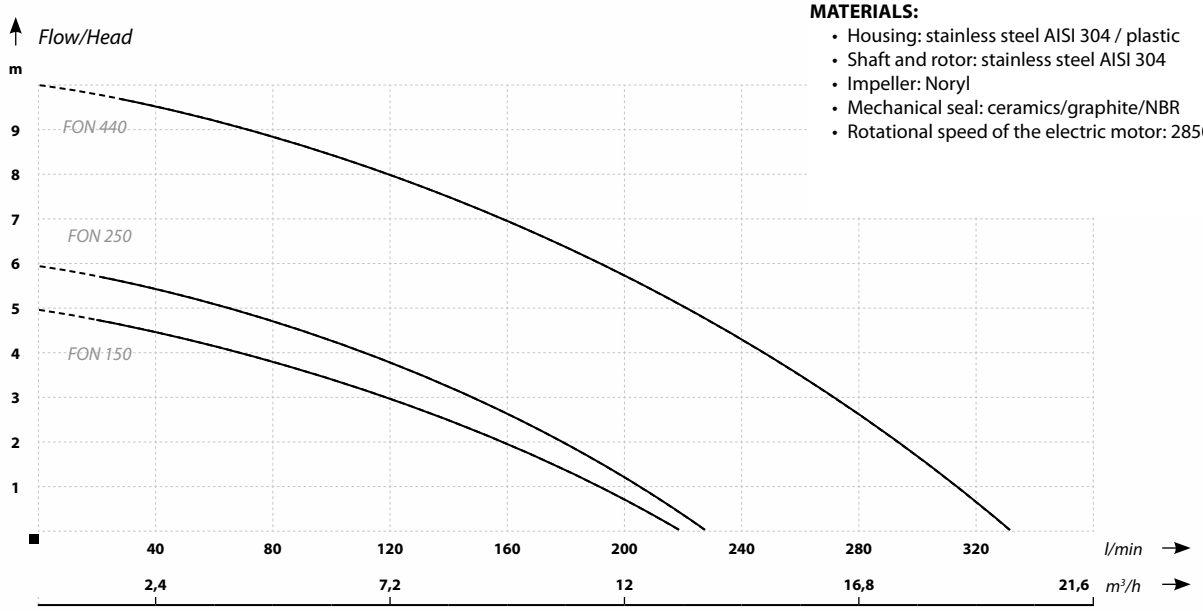
Submersible fountain pumps.
The pumps are used to supply water to fountains, waterfalls, streams, ponds, decorative parts and features that using the effect of flowing water, as well as
in food processing plants and agricultural production for draining ponds and fields. The pumps have a high efficiency motor and built-in thermal protection.

OPERATING CONDITIONS:

- Maximum liquid temperature 40°C
- Liquid type: water with small amount of sand
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Immersion depth - ≤5m

MATERIALS:

- Housing: stainless steel AISI 304 / plastic
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Max. diameter of impurities (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
FON 150	5	220	150	230	20	1,6	1½ x 1	35/18/22	7
FON 250	6	230	250	230	20	2,4	1½ x 1	35/18/22	7,5
FON 400	10	330	400	230	20	3,5	1½ x 1	35/18/22	8

BOOSTER SETS

AJ 50/60 – PC-59
AJ 50/60 – 24 c.w.
AJ 50/60 – 24
WZCH with fittings
WZI 750/750 – 24
JET 100 – 24 c.w.
JET 100 – 24
DP 355
JSW 150 ITALY – 50
JSW 150 ITALY – 24
JET 100 LONG – 50L
GARDEN
PJ
MULTI 1300
MULTIGARDEN
BJ75/45 – 50
HP1500 INOX – 80
IWH2-03 – 24
MH 1300

BOOSTER SETS

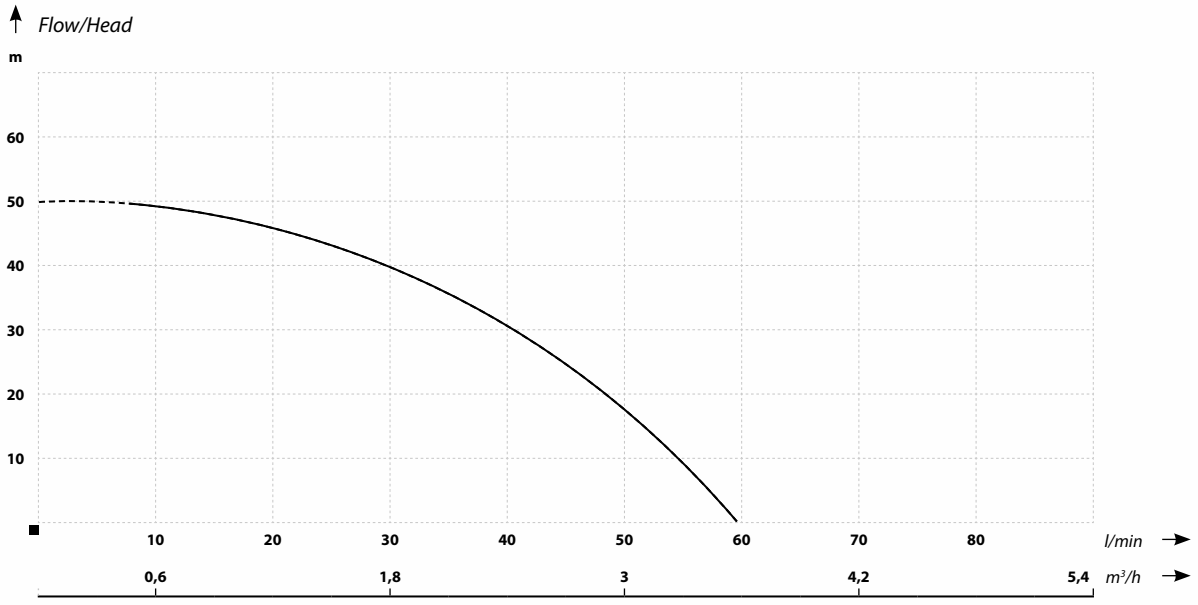
The booster set s a proven solution for automatic supply of water to households. Each of the IBO surface pumps can be combined in any booster set. The size of the tank is selected according to individual needs and requirements of clients.
In addition to the classic sets of pump + tank, it is possible to configure the pump with intelligent controllers such as: PC (PC-10P/ PC-13 / PC-15/PC-16/PC-59), SK(SK15) and IVR-02 frequency converters. The controllers are equipped with an additional dry-running protection. The set's operation is fully automatic - it starts the pump when the water is turned on and stops it when the water is turned off. TANKS THAT CAN BE SELECTED: IBO POZIOM / IPO PION POZIOM / IBO INOX / IBO ITALY / IBO ITALY FIX.

The set includes:
- pump,
- pressure tank,
- pressure switch,
- pressure gauge,
- five-way delivery outlet
- anti-vibration hose with elbow

IMAGE: PUMP AJ50/60 WITH FITTINGS

IMAGE: PUMP AJ50/60 WITH FITTINGS + TANK 24

IMAGE: PUMP AJ50/60 WITH FITTINGS + TANK 24



PARAMETERS

Name	RECOMMENDED TANK MODEL	RECOMMENDED INTELLIGENT CONTROLLER MODEL
AJ 50/60	24 / 50 / 80 / 100L/ 150	PC15 / PC16 / PC59 / PC10P

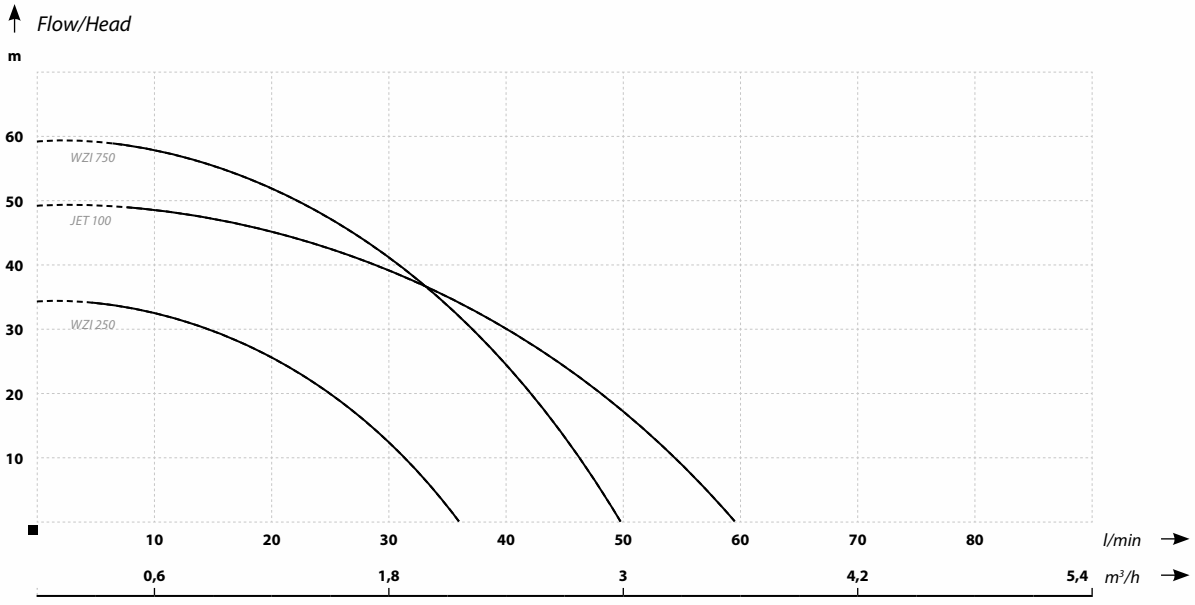
BOOSTER SETS

IMAGE: WZCH 250/750 PUMP WITH FITTINGS

IMAGE: WZI 750/750 PUMP WITH FITTINGS + TANK 24

IMAGE: JET 100 PUMP WITH FITTINGS + TANK 24

IMAGE: JET 100 PUMP WITH FITTINGS + TANK 24



PARAMETERS

Name	RECOMMENDED TANK MODEL	RECOMMENDED INTELLIGENT CONTROLLER MODEL
JET 100	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P
WZI 250	2 / 24 / 50 / 80 / 100	PC15 / PC16 / PC59 / PC10P
WZI 750	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P

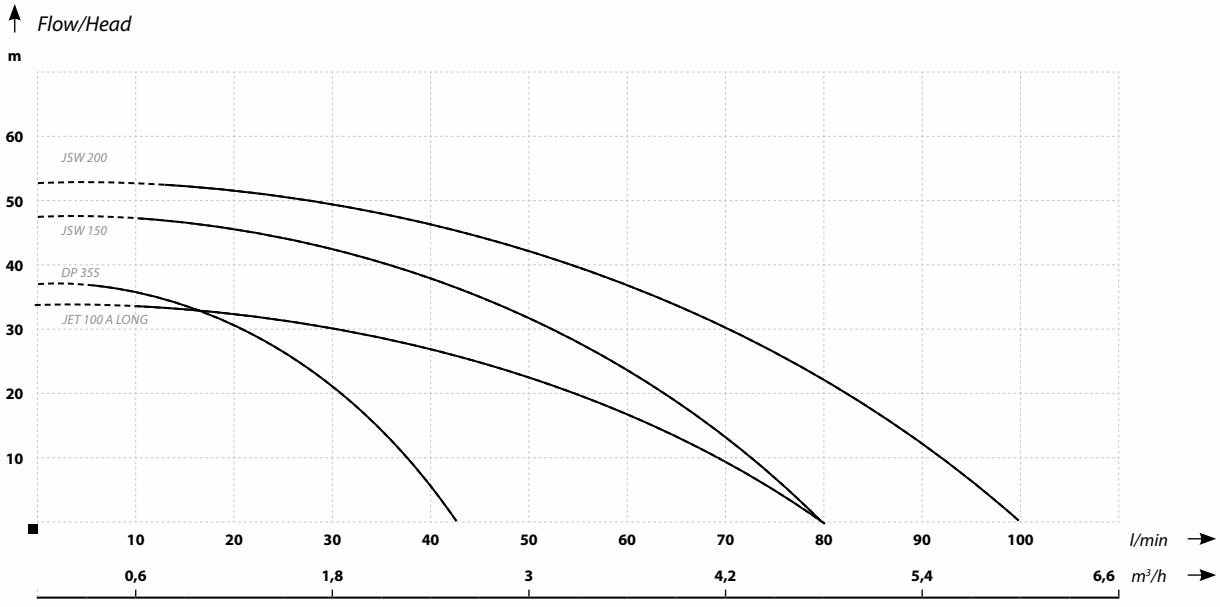
BOOSTER SETS

IMAGE: DP 355 PUMP WITH FITTINGS

IMAGE: : JSW 150 ITALY PUMP WITH FITTINGS + TANK 50

IMAGE: JSW 150 ITALY PUMP WITH FITTINGS + TANK 24

IMAGE: JET 100 LONG PUMP WITH FITTINGS + TANK 50



PARAMETERS

Name	RECOMMENDED TANK MODEL	RECOMMENDED INTELLIGENT CONTROLLER MODEL
DP 355	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P
JSW 150	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P
JSW 200	50 / 80 / 100 / 150	PC16 / PC20P
JET 100 A LONG	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P

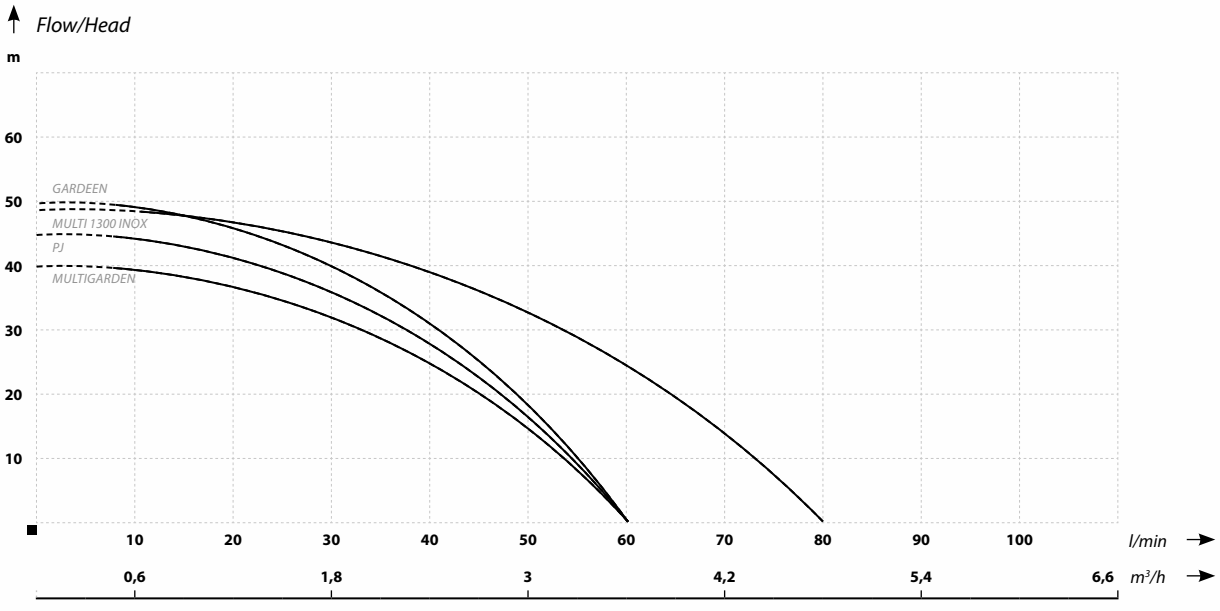
BOOSTER SETS

IMAGE: GARDEN PUMP WITH FITTINGS

IMAGE: PJ PUMP WITH FITTINGS

IMAGE: MULTI 1300 PUMP WITH FITTINGS

IMAGE: MULTIGARDEN PUMP WITH FITTINGS



PARAMETERS

Name	RECOMMENDED TANK MODEL	RECOMMENDED INTELLIGENT CONTROLLER MODEL
GARDEN	24 /50	PC15 / PC59 / PC13
MULTI 1300 INOX	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P
MULTIGARDEN	-	-
PJ	24 /50	PC15 / PC59 / PC13

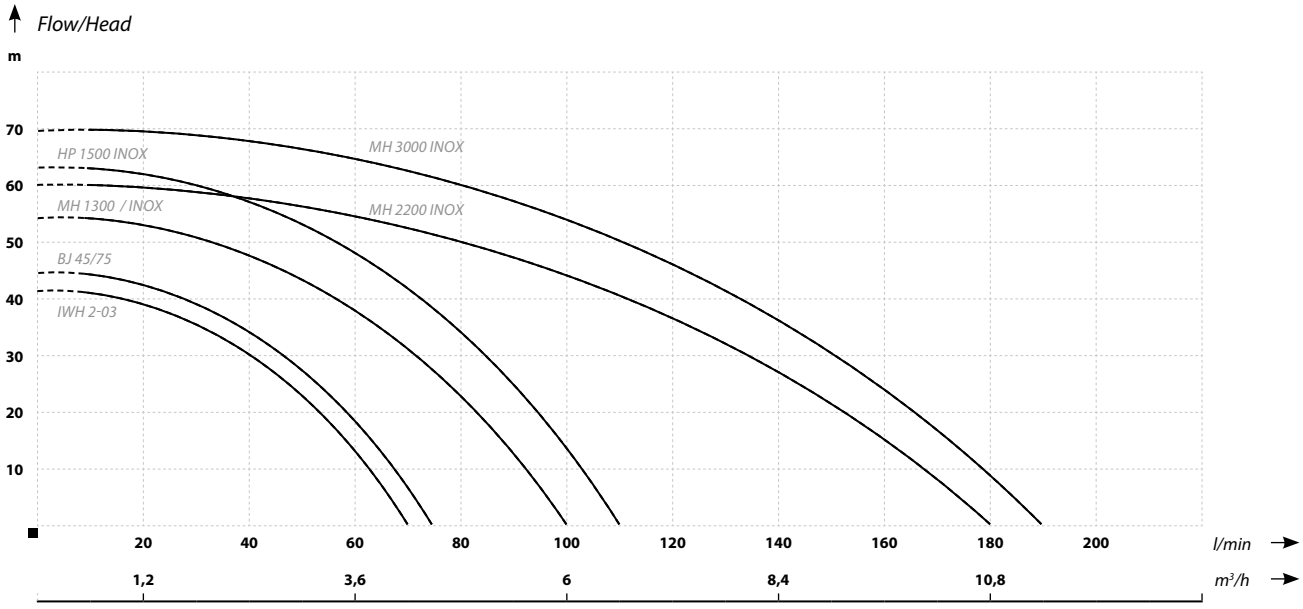
BOOSTER SETS

BJ 75/45 WITH IBO TANK TYPE: 50

HP1500INOX WITH IBO TANK TYPE: 80

EHP 1300 WITH TANK 24

MH 1300 WITH FITTINGS + TANK 24



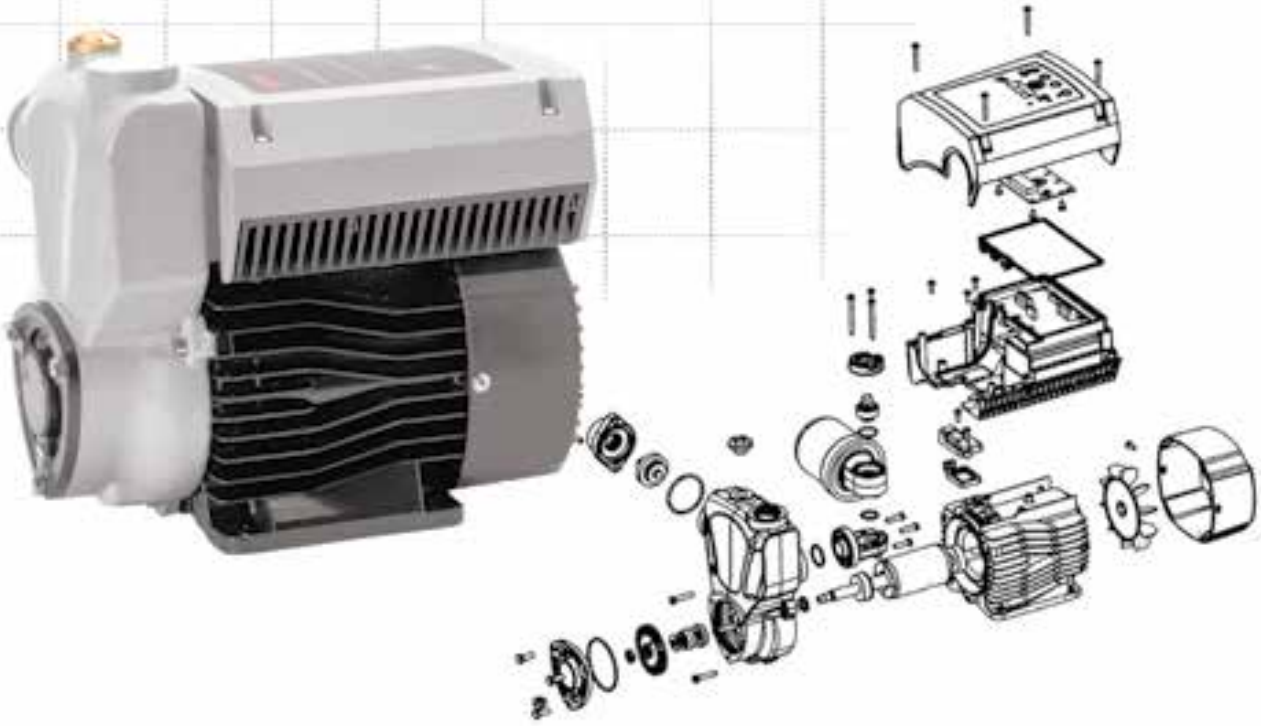
PARAMETERS

Name	RECOMMENDED TANK MODEL	RECOMMENDED INTELLIGENT CONTROLLER MODEL
HP1500 INOX	50 / 80 / 100/ 150	PC-16 / PC-59 / PC-10P
BJ 45/75	24 / 50 / 80 / 100/ 150	PC-16 / PC-59 / PC-10P /PC-13 / SK-15
IWH 2-03	24 / 50 / 80 / 100/ 150	PC-16 / PC-59 / PC-10P /PC-13 / SK-15
MH/MHI1300	50 / 80 / 100/ 150	PC-16 / PC-59 / PC-10P /PC-13 / SK-15
MH/MHI1500	50 / 80 / 100/ 150	PC-16 / PC-59 / PC-10P /PC-20P / SK-15
MH/MHI1800	50 / 80 / 100/ 150	PC-16 / PC-59 / PC-10P /PC-20P / SK-15
MH/MHI2200	50 / 80 / 100/ 150	PC-10P/PC-20P
MH/MHI2500	50 / 80 / 100/ 150	PC-10P/PC-20P
MH3000	50 / 80 / 100/ 150	PC-16 / PC-59 / PC-10P /PC-13 / SK-15
EHP	50 / 80 / 100/ 150	PC-16 / PC-59 / PC-10P /PC-13 / SK-15

INVERTERS

AUTOIBO
WZI-AUTO 900
HOME 1
IQ-AUTO 750
MAGNET-AUTO 750
MCI 4 AUTO
INVERTER SYSTEM – IVR-02
INVERTER SYSTEM – IV-03
INVERTER SYSTEM – IVR-05
INVERTER SYSTEM – IVR-10 S/T
INVERTER SYSTEM – IVR-20/30/40
INVERTER SYSTEM – IVR-09T
INVERTER SYSTEM – IVR-09T
MULTI SET IVR-09

AUTOIBO

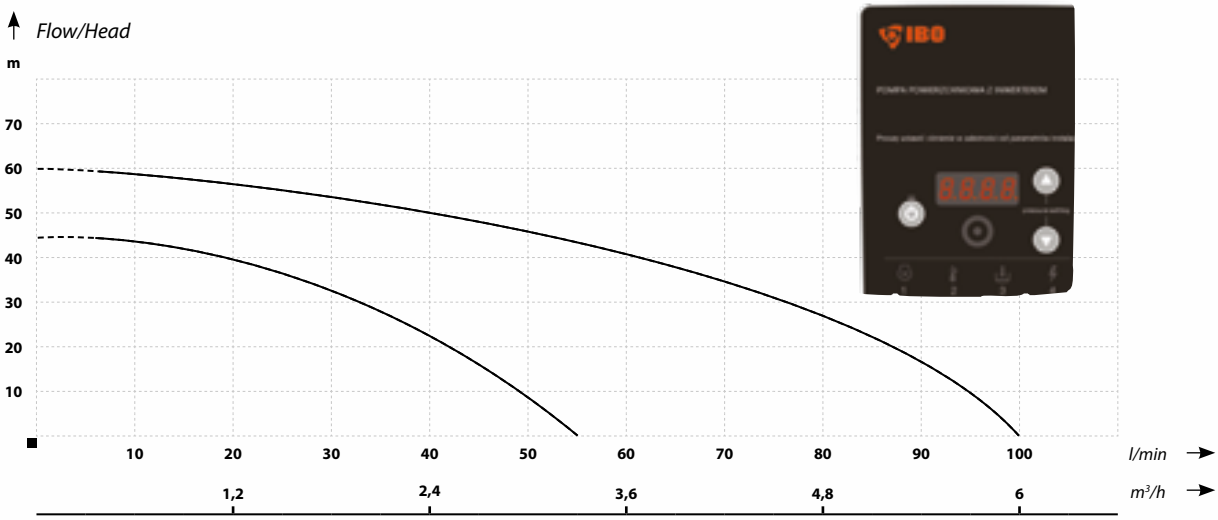


The AUTOIBO series pumps are equipped with a high performance frequency converter. Pumps equipped with frequency converters create seamless system to keep water supply system pressure constant regardless of the water demand. The frequency converter integrated into the pump will allow to reduce electricity consumption. Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves up to 60% of energy. The pump motor speed is adjusted to the various operating conditions of the water supply system.

A pump with an inverter is an easy-to-use control and protection device that maintains a constant, set water pressure by changing the rotational speed of the pump motor.

ADVANTAGES:

1. Low-noise operation: can be installed in the house.
2. Simple operation: easy to use, all functions can be terminated by pressing a button.
3. Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer.
4. Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Suction capacity (m.)	Rotational speed range (rpm)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
AUTOIBO	45	55	800	230	3,6	8	0-3450	1 x 1	31,5 x 21 x 30,5	14
AUTOIBO 2	60	100	1500	230	10	8	0-3450	1 1/2 x 1 1/2	34,5 x 24 x 32	26

WZI-AUTO 900

WZI-AUTO 900 is a compact device designed to provide households with clean water from their own water intakes (wells) or to increase pressure from the water supply network. The pumps are equipped with a frequency inverter that guarantees constant pressure in all water taps, soft starts of the motor and lower current consumption compared to classical pressure boosting plants. The pumps with an integrated frequency inverter are state-of-the-art and energy efficient devices characterised by their silent operation, ease of installation and use, integrated protection against dry running, water hammer, pressure decrease or increase, or motor overload.
A very important characteristic of the IBO pumps with an integrated frequency inverter is their ease of use. Starting up and configuring the pump does not require the presence of an automation specialist - the user only has to set the operating pressure of the device using two buttons (+ and –).

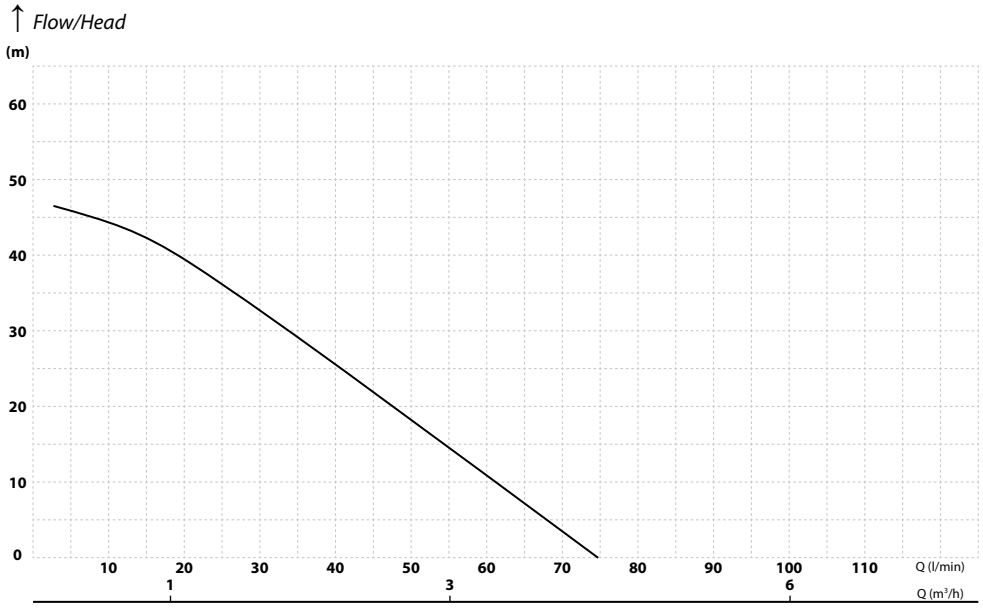
Despite utilising a small 900W motor, the WZI-AUTO 900 pump achieves very good parameters: flow rate of 75l/min and head of 43m. These parameters are sufficient to satisfy the needs of a single-family home or commercial premises. Additionally, the device is classified as S1, which means it has been designed for continuous duty.

ADVANTAGES:

- High efficiency despite utilising a small 900W motor
- Silent operation allowing the device to be installed even in usable rooms
- Ease of use and convenient operation
- Lower motor and hydraulic part wear thanks to an integrated "motor soft start"
- Constant pressure guarantee
- Protective functions: against dry running, overload, overvoltage/undervoltage, motor overload, water hammer

MATERIALS:

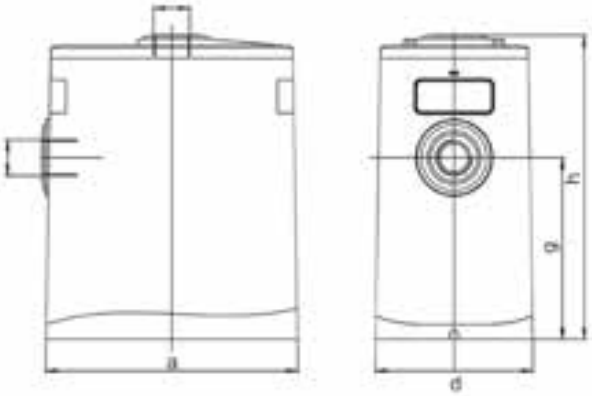
- Housing: plastic
- Impeller: Brass
- Diffuser: Cast iron
- Shaft and rotor: stainless steel AISI 304
- Inverter display: LED
- Mechanical sealing: Ceramics/graphite
- Motor rotational speed: 0-4000RPM
- Frequency range: 30-50Hz



PARAMETERS

Model	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Rotational speed range (rpm)	Dimensions L/H/W (cm)	Weight (kg)
WZI 900	43	75	900	230	8	4,8/7,5	4000	26/23/25	10,1

HOME 1

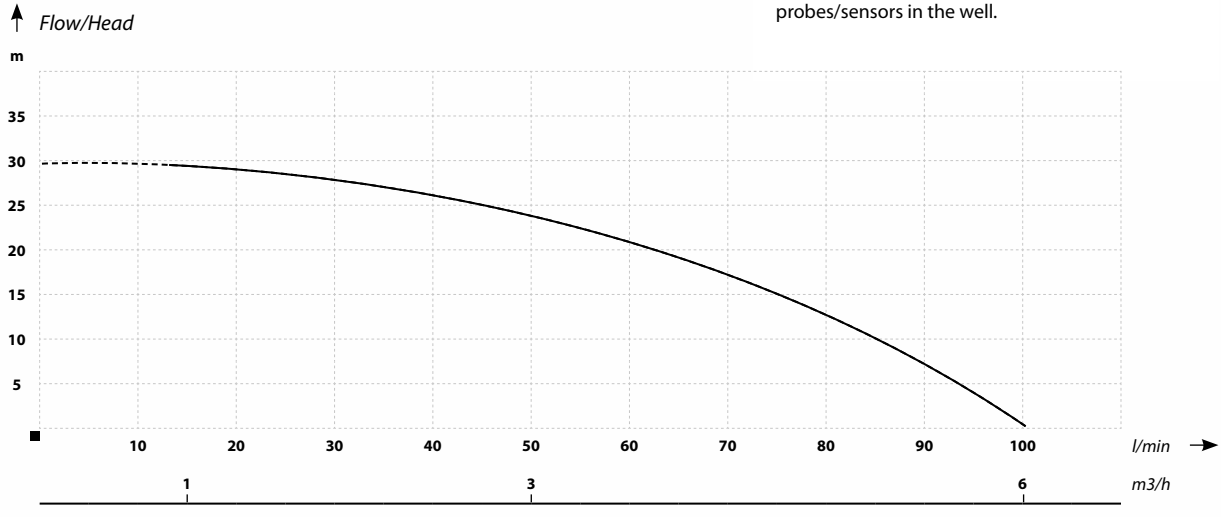


The HOME 1 series pumps are equipped with a high performance frequency converter. Pumps equipped with frequency converters create seamless system to keep water supply system pressure constant regardless of the water demand. The frequency converter integrated into the pump will allow to reduce electricity consumption. Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves up to 60% of energy. The pump motor speed is adjusted to the various operating conditions of the water supply system.

A pump with an inverter is an easy-to-use control and protection device that maintains a constant, set water pressure by changing the rotational speed of the pump motor.

ADVANTAGES:

1. Low-noise operation: can be installed in the house.
2. Simple operation: easy to use, all functions can be terminated by pressing a button.
3. Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer.
4. Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Rotational speed range (rpm)	Inlet/outlet (inch)	Dimensions (mm)				Weight (kg)
								a	d	h	h	
HOME 1	30	100	750	230	8	0-3000	1 x 1	230	144	166	278	7

IQ-AUTO 750

IQ-AUTO 750 is a compact device designed to provide households with clean water from their own water intakes (wells) or to increase pressure from the water supply network. The pumps are equipped with a frequency inverter that guarantees constant pressure in all water taps, soft starts of the motor and lower current consumption compared to classical pressure boosting plants. The pumps with an integrated frequency inverter are state-of-the-art and energy efficient devices characterised by their silent operation, ease of installation and use, integrated protection against dry running, water hammer, pressure decrease or increase, or motor overload.
A very important characteristic of the IBO pumps with an integrated frequency inverter is their ease of use. Starting up and configuring the pump does not require the presence of an automation specialist - the user only has to set the operating pressure of the device using two buttons (+ and –).

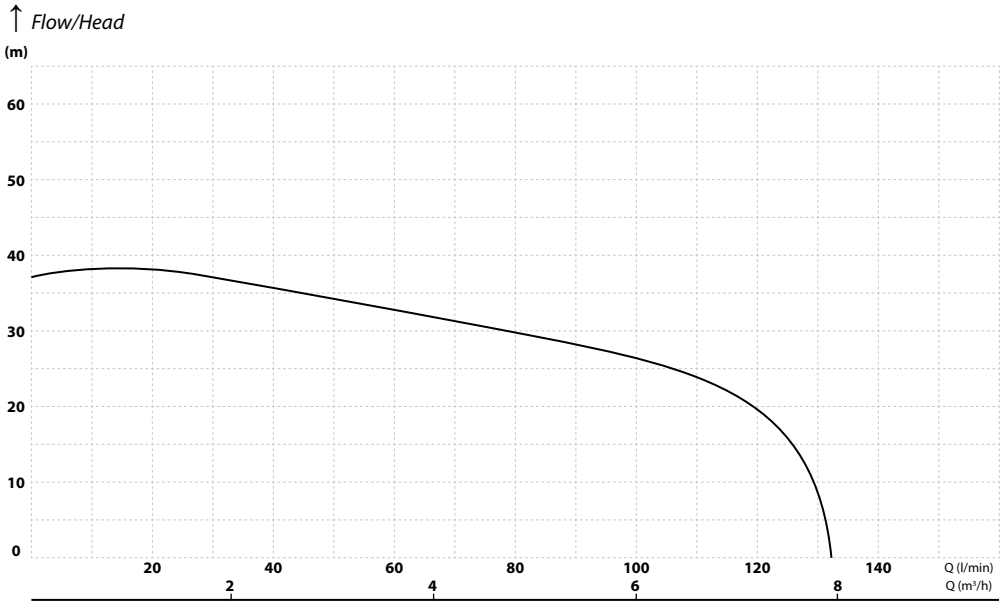
Despite utilising a small 750W motor, the IQ-AUTO 750 pump achieves a very high maximum flow rate of up to 130l /min. These parameters are sufficient to satisfy the needs of a large single-family home, including garden watering or of several commercial premises. Additionally, the device is classified as S1, which means it has been designed for continuous duty.

ADVANTAGES:

- Very high efficiency despite utilising a small 750W motor
- Silent operation allowing the device to be installed even in usable rooms
- Ease of use and convenient operation
- Lower motor and hydraulic part wear thanks to an integrated 'motor soft start"
- Constant pressure guarantee
- Protective functions: against dry running, overload, overvoltage/ undervoltage, motor overload, water hammer

MATERIALS:

- Housing: plastic
- Impeller: Stainless steel AISI 304
- Diffuser: Stainless steel AISI 304
- Shaft and rotor: AISI 304 stainless steel
- Inverter display: LED
- Mechanical sealing: Ceramics/graphite
- Motor rotational speed: 0-4000 RPM
- Frequency range: 30-50Hz



PARAMETERS

Model	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Rotational speed range (rpm)	Dimensions L/H/W (cm)	Weight (kg)
IQ-AUTO 750	37	130	750	230	8	5/8	4000	47/27/28	10,9

MAGNET-AUTO 750

MAGNET-AUTO 750 is a compact device designed to provide households with clean water from their own water intakes (wells) or to increase pressure from the water supply network. The pumps are equipped with a frequency inverter that guarantees constant pressure in all water taps, soft starts of the motor and lower current consumption compared to classical pressure boosting plants. The pumps with an integrated frequency inverter are state-of-the-art and energy efficient devices characterised by their silent operation, ease of installation and use, integrated protection against dry running, water hammer, pressure decrease or increase, or motor overload.
A very important characteristic of the IBO pumps with an integrated frequency inverter is their ease of use. Starting up and configuring the pump does not require the presence of an automation specialist - the user only has to set the operating pressure of the device using two buttons (+ and –)

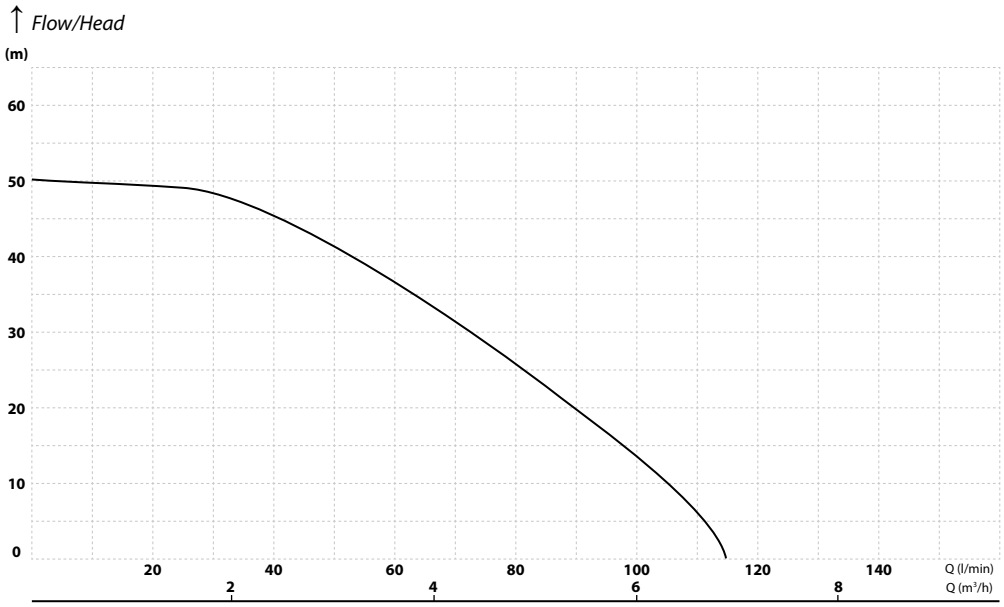
Despite utilising a small 750W motor, the MAGNET-AUTO 750 pump achieves a very high maximum flow rate of up to 115l/min. These parameters are sufficient to satisfy the needs of a large single-family home, including garden watering or of several commercial premises. Additionally, the device is classified as S1, which means it has been designed for continuous duty.

ADVANTAGES:

- Very high efficiency despite utilising a small 750W motor
- Silent operation allowing the device to be installed even in usable rooms
- Ease of use and convenient operation
- Lower motor and hydraulic part wear thanks to an integrated "motor soft start"
- Constant pressure guarantee
- Protective functions: against dry running, overload, overvoltage/undervoltage, motor overload, water hammer

MATERIALS:

- Housing: plastic
- Impeller: PPO
- Diffuser: PPO
- Shaft and rotor: stainless steel AISI 304
- Inverter display: ?LED
- Mechanical sealing: Ceramics/graphite
- Motor rotational speed: 0-4000RPM
- Frequency range: 30-50Hz



PARAMETERS

Model	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Rotational speed range (rpm)	Dimensions L/H/W (cm)	Weight (kg)
MAGNET-AUTO 750	48	115	750	230	8	5/8	4000	42/22/28	10

MCI 4 AUTO

MCI series pumps are characterized by high quality of workmanship, additionally the AUTO version is equipped with a high-efficiency frequency converter. Pumps equipped with frequency converters form a well-tuned system that allows the system pressure to be kept at a constant level, regardless of the water demand. A frequency converter integrated with the pump will reduce electricity consumption. Compared to the traditional water supply, the constant pressure water supply system with frequency converter saves energy up to 60%. The speed of the pump motor is adapted to the different operating conditions of the installation. In order to maintain smooth operation, the pump is equipped with a diaphragm vessel.

The pump equipped with an inverter is an easy-to-use control and safety device, maintaining a constant set water pressure. Support the change of the pump motor rotational speed.

ADVANTAGES:

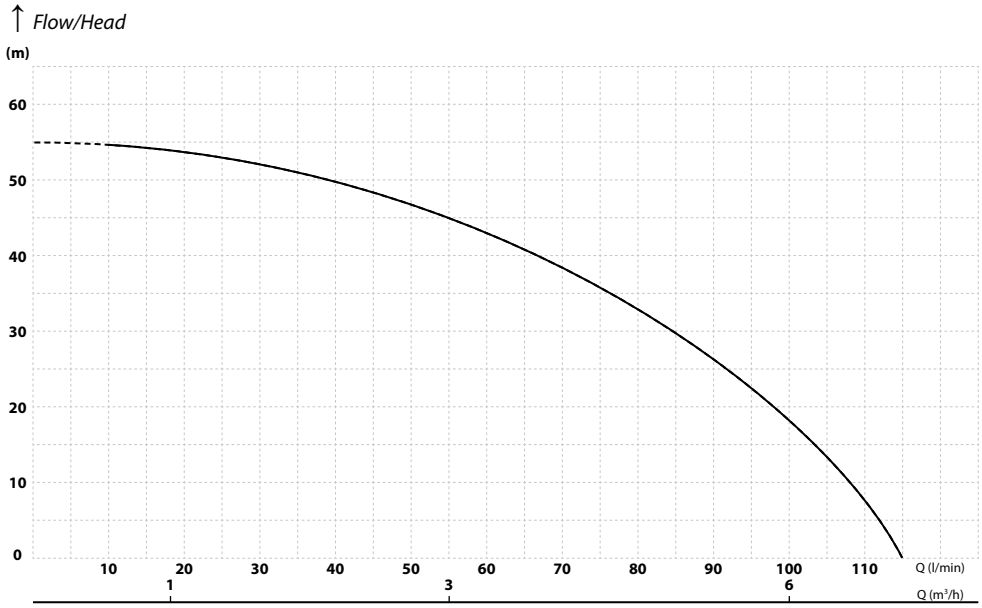
1. Quiet operation: can be installed at home
2. Simple operation: easy operation, all functions can be finished by pressing a button.
3. Reliability for many years of associated pumps: the average torque and the shaft abrasion are reduced due to the decrease in the average speed, which ensures a longer service life of the pump. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer.
4. Comprehensive protection: the system has the most comprehensive protection technology of overcurrent, overvoltage, undervoltage, short circuit, locked rotors, the ability to protect the pump against dry running without the need to install probes / sensors in the well.
5. The kit is equipped with a check valve
6. Economical: by using an inverter, the pump consumes much less electricity compared to sets without an inverter.

WORKING CONDITIONS:

- Liquid temperature: ≤70 ° C
- Ambient temperature: ≤50 ° C
- Maximum pressure in the installation: up to 10 bar
- Degree of protection: IP55
- Insulation class: F

MATERIALS:

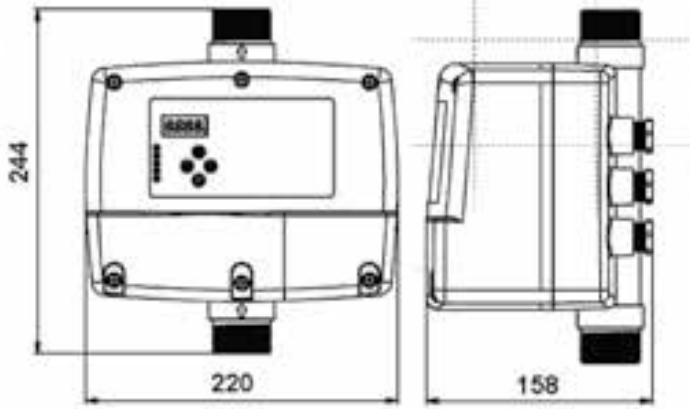
- Body - AISI 304 stainless steel.
- Shaft - AISI 304 stainless steel.
- Mechanical stuffing box - SIC / SIC / EPDM
- Connectors: stainless AISI 304
- Impellers, diffusers, diffuser covers - AISI 304 stainless steel.
- Inter-wall: AISI 304 stainless steel
- Base: Steel
- Motor: closed-frame asynchronous cage motor, aluminum housing, external ventilation.



PARAMETERS

Model	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Range of RPM	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
MCI AUTO	54	115	1200	230	8	0-3500	1¼ x 1	350/430/165	15,5

INVERTER SYSTEM – IVR–02



IVR-02M Intelligent Pump Controller is an easy-to-use control and protection device for direct connection of 0.75 KW to 1.5 KW (from 1 HP to 2 HP) single-phase submersible pumps, surface pumps, deep well pumps, etc., maintaining a constant, set water pressure by changing the rotational speed of the pump motor.

The IVR-02M model provides many operating modes by adapting to various electrical systems.

SYSTEM ADVANTAGES

- Energy efficiency: Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves up to 30%-60% of energy.
- Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
- Simple operation: easy to use, all functions can be terminated by pressing a button, without the need to hire programming specialists.
- Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer (the water hammer is a sudden pressure increase that occurs at rapid stopping or starting of liquid flow.) The ability to control the operation of two pumps supplying the system.

APPLICATION:

IVR-02M can be used in all applications where maintaining a constant water pressure in the system and control and protection of a pump or a set of two pumps is required.

IVR-02M controls automatic switching on and off, and adapts the motor speed to the requirements of the water supply system.

TYPICAL APPLICATION:

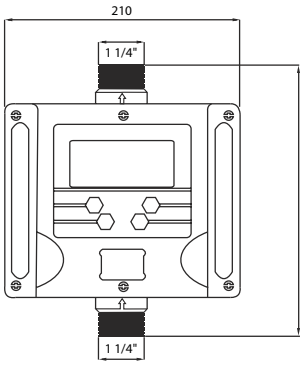
- houses
- apartments
- holiday houses
- agricultural holdings
- supply of water from the well
- irrigation of growing houses, gardens, agricultural land
- collecting and using rainwater

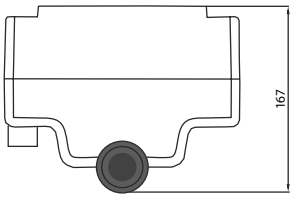
Installation data	
Permissible ambient temperature	–10°C – +40°C
Permissible ambient humidity	20% – 90% RH
Permissible liquid temperature	0°C – +50°C
Ingress Protection	IP55
Mounting orientation	Vertical
Unit dimensions (L/W/H)	244/220/158 mm
Inlet/outlet	G 1 ¼" / G 1 ¼"
Minimum capacity of pressure tank	2L

INVERTER SYSTEM – IVR–02

Main Technical Data	
Rated output power	0,37 KW – 1,5 KW (0,5 HP – 2 HP)
Rated input voltage	AC160-250V/50-60HZ (single-phase)
Pump max. amp rating	12A
Rated output voltage	AC 230V / 20-60 Hz (single-phase)
Additional pump rated output voltage	AC 230V / 50 Hz (single-phase)
Response time under overload condition	5 s – 5 min.
Pressure setting range	1 – 9 bar
Response time under open phase condition	<5 s
Response time under short-circuit condition	<0,1 s
Response time under overvoltage/undervoltage condition	<5 s.
Response time under dry-run condition	6 s
Time to activation after overload condition	30 min.
Time to activation after overvoltage/undervoltage condition	5 min.
Time to self-activation after dry-run condition	8s, 1 min, 10 min, 30 min, 1 h, 2 h ...
Deactivation limit at overvoltage	270V
Deactivation limit at undervoltage	100V
Horizontal distance	≤1000 m
Protections	Dry-run Short-circuit Overload Pump overloaded Voltage spike Undervoltage Overvoltage
Main Technical Specification	
Control specification	double flow control
	pressure control
Control method	Manual / Automatic
Liquid flow control specification	probe electrode pulse and flow switch
Pressure control specification	Pressure sensor 24 V, 4–20 mA

INVERTER SYSTEM – IVR–03





CAN BE ARRANGED IN PUMP GROUPS

IVR-03 Intelligent Pump Controller is an easy-to-use control and protection device for direct connection of deep-well pumps, surface pumps, submersible pumps, etc., maintaining a constant, preset water pressure by varying the pump motor speed. The IVR-03 inverter utilises SPWM (sinusoidal pulse width modulation) technology and high efficiency space vector technology, with V/F VVVF (variable speed, variable frequency) control.
With real-time pressure analysis, the inverter adjusts the pump speed to the current system demand. Variable speed pump stabilizes pressure and saves water and electricity.

Important features that distinguish IVR–03 from popular on/off control devices:

1. Energy efficiency. The water supply system with frequency converter saves 30%-60% of energy compared to a traditional set-up.
2. Simple operation: easy to use, all functions can be terminated by pressing a button without the need to hire programming specialists.
3. Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer (the water hammer means a sudden pressure increase that occurs at rapid stopping or starting of liquid flow.)
4. Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
5. Ability to control the operation of several pumps supplying the system.

APPLICATION

IVR-03 can be used to increase the water pressure in various installations such as residential, commercial, industrial, water treatment plants, agriculture, etc.

- Ease of installation and operation. No need to hire a qualified service technician to connect the unit
- Advanced technology, PID algorithm control, technology addressed for pump drive control
- Reliable and fail-safe. The unit has various built-in protections. Dry-running protection, short-circuit protection, overload protection, under-voltage protection, over-voltage protection, rotor lockout protection, etc.
- Energy-saving. The controller effectively saves between 30% and 60% of electrical energy.
- Complies with CE product safety requirements, and meets environmental protection requirements
- The device improves the quality of life

PARAMETERS

Model	1,1 KW	1,1 KW	1,5 KW	1,5 KW	2,2 KW	2,2 KW
Max. admissible motor current consumption	230V - 9A	400V - 4,5A	230V - 11A	400V - 5,5A	230V - 12A	400V - 7A
Input power	Single-phase or three-phase power supply					
Input voltage	230V or 400V					
Allowed range voltage supply	160V–260V (230V) or 300V–450V (400V)					
Current frequency power	50Hz					
Output voltage	1~AC 230V or 3~AC 400V					
Controlled device	Pump					
frequency range output	20~50Hz					
Pressure sensor	24V,4÷20mA					
Pressure range	0.5 ÷ 9.0bar					
Installation required – pressure vessel	Tank with a volume of not less than 2L					
Ambient temperature range	0~+40°C					
Medium	Clean water at a temperature of 0 to +100°C					
Pressure required for automatic start	0.3 bar lower than the set operating pressure, but not lower than 0.5 bar					
Electric installation	Absolutely effectively grounded					
Control characteristics	Dual flow control					
Fluid flow control characteristics	Sampler electrode pulse and flow switch					

INVERTER SYSTEM – IVR–05

Our Intelligent Pump Controller, IVR-05 model, is an easy-to-use control and protection device for direct connection of deep-well pumps, surface pumps, submersible pumps, etc., maintaining a constant, set water pressure by changing the rotational speed of the pump motor. The IVR-05 inverter utilises the SPWM technology (sinusoidal pulse width modulation) and a highly-efficient spatial vector, using V/F VVVF control (variable velocity, variable frequency).

APPLICATION:

- The IVR-05 can be used to increase water pressure in various systems such as residential houses, commercial premises, industry, water treatment stations, agriculture etc.
- Ease of installation and use. No need to have the device connected by a qualified service technician
- Advanced technology, PID algorithm control, technology dedicated to pump drive control
- Trustworthy and reliable. The device has various integrated protection features. Protection against dry running, short-circuit, overload, undervoltage, overvoltage, impeller blocking etc.
- Energy efficient. The controller effectively saves 20% - 60% of electric energy.
- It meets the requirements regarding CE product safety and fulfils the environmental protection requirements.

Thanks to real-time pressure analysis, the inverter adjusts the rotational speed of a pump to system's demand at a given time. Variable rotational speed of the pump stabilises pressure, thus reducing water and current consumption.

Its important feature that distinguishes the controller from popular on/off control devices is:

- Energy efficiency. Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves 30%-60% of energy.
- Simple operation: easy to use, all functions can be terminated by pressing a button without the need to hire programming specialists.
- Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer (the water hammer is a sudden pressure increase that occurs at rapid stopping or starting of liquid flow.)
- Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
- Possibility of controlling several pumps supplying the system.

PARAMETERS

Model	*Motor power (W)*	*Input voltage Frequency (V/Hz)*	*Output load (A)*	*Output voltage (V)*	*Output freq. (Hz)*
IVR-05	750-2200	1 faza 230 V 50/60 Hz	10,5	3 fazy 3x230 V	20-50 Hz

INVERTER SYSTEM – IVR –10 S/T

IVR-10 S/T Intelligent Pump Controller is an easy-to-use control and protection device for direct connection of 1.1 KW do 2.2 KW (from 1.5 HP to 2.5 HP) single-phase (IVR-10S) or 3-phase (IVR-10T) deep well pumps, surface pumps, submersible pumps, etc., maintaining a constant, set water pressure by changing the rotational speed of the pump motor. The IVR-10 S/T model provides many operating modes by adapting to various electrical systems.
Its important feature that distinguishes it from popular on/off control devices is:

1. Energy efficiency. Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves up to 30%-60% of energy.
2. Simple operation: easy to use, all functions can be terminated by pressing a button, without the need to hire programming specialists.
3. Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer (the water hammer is a sudden pressure increase that occurs at rapid stopping or starting of liquid flow.)
4. Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
5. The controllers can be combined into pump groups of up to 6 pumps. The group is controlled by one main controller selected by the user while other controllers adjust the operation to the system requirements. The set is very easily programmable and does not require the assistance of the programmer.

CAN BE ARRANGED IN PUMP GROUPS

APPLICATION:
IVR-10S/T can be used in all applications where maintaining a constant water pressure in the system, as well as control and protection of a single pump that controls automatic switching on and off by various electrical systems is required.

TYPICAL APPLICATION:
- houses / apartments / holiday houses,
- agricultural holdings,
- supply of water from the well,
- irrigation of growing houses, gardens, agricultural land,
- collecting and using rainwater,
- industrial equipment.

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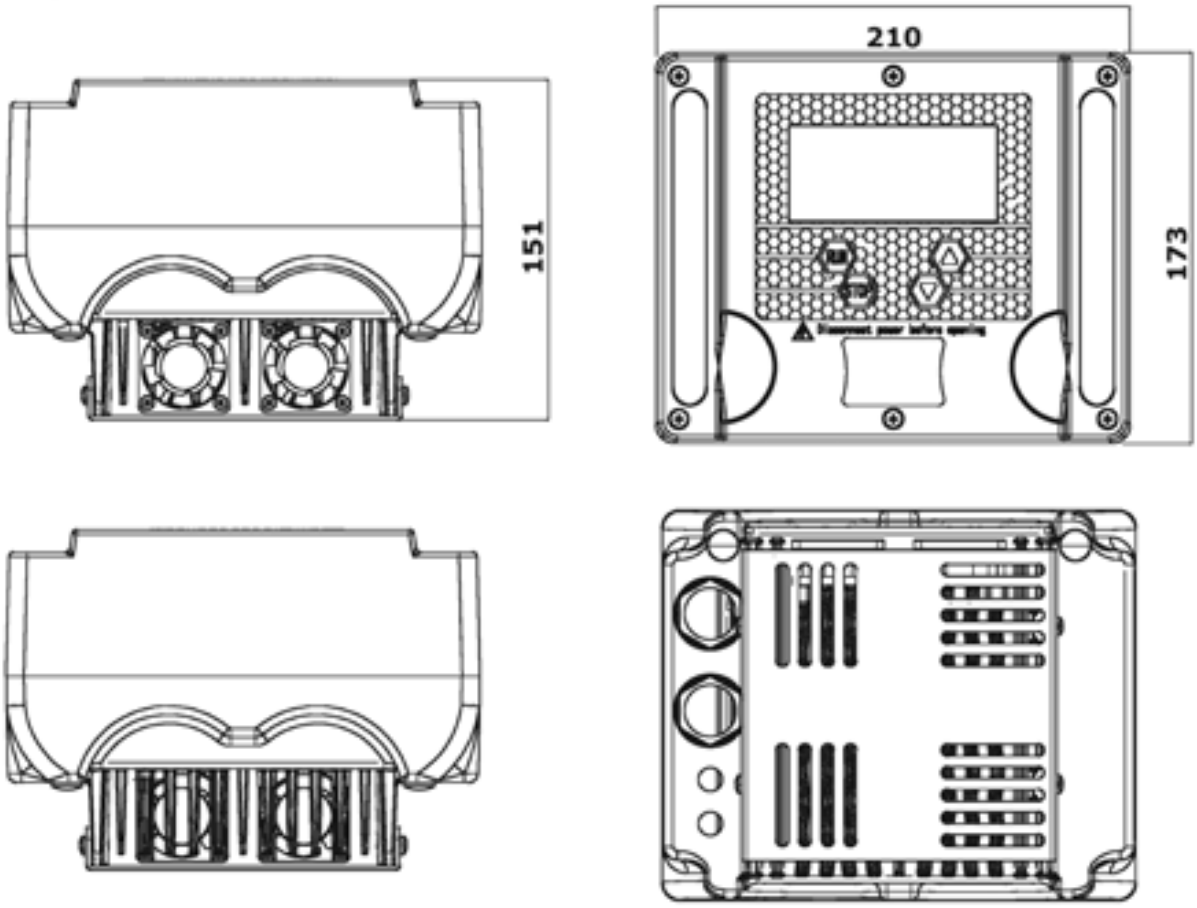
INVERTER SYSTEM – IVR–20/30/40



PARAMETERS

Name	Pump power (kW)	Dimensions (mm)	Pressure setting range (bar)	Operating current (A)	Input voltage (V)	Output voltage (V)	Input voltage frequency (Hz)	Output voltage frequency (Hz)	Pressure sensor
IVR-10S	1,1 kW	210 x 173 x 124 mm	0,5-9 bar	9A	1 x 230V (Permissible range 160-260V)	1 x 230V	50/60 Hz	20-50/60Hz	4÷20 mA +24V 10 bar
	1,5 kW			11A					
	2,2 kW			12A					
IVR-10T	2,2 kW			7A	3 x 400V (Permissible range 320-450V)	3 x 400V			
	3/4 kW			10A					
	5,5/7,5 kW			18A					

INVERTER SYSTEM – IVR–09T

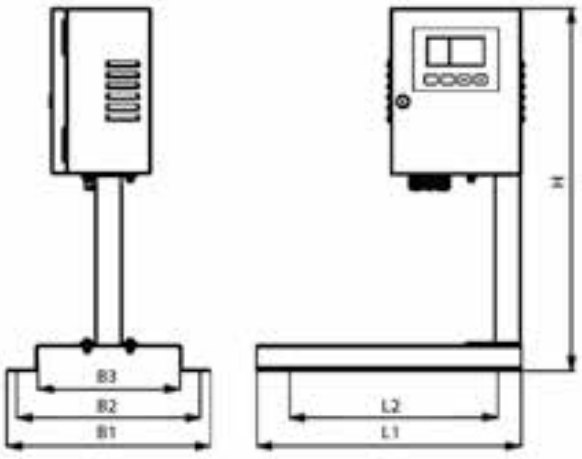
CAN BE ARRANGED IN PUMP GROUPS

IVR-09T Intelligent Pump Controller is an easy-to-use control and protection device for direct connection of 0.75 KW to 7.5 KW (from 1 HP to 10 HP) 3-phase deep well pumps, surface pumps, submersible pumps, etc., maintaining a constant, set water pressure by changing the rotational speed of the pump motor. The IVR-09T model provides many operating modes by adapting to various electrical systems. The IVR-09 series controllers can be used in pump groups of up to 6 pumps. Its important feature that distinguishes it from popular on/off control devices is:

1. Energy efficiency. Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves up to 30%-60% of energy.
2. Simple operation: easy to use, all functions can be terminated by pressing a button, without the need to hire programming specialists.
3. Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer. (the water hammer is a sudden pressure increase that occurs at rapid stopping or starting of liquid flow.)
4. Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
5. The controllers can be combined into pump groups of up to 6 pumps. The group is controlled by one main controller selected by the user while other controllers adjust the operation to the system requirements. The set is very easily programmable and does not require the assistance of the programmer.

APPLICATION:
IVR-09t can be used in all applications where maintaining a constant water pressure in the system and control and protection of a pump or a set of two pumps is required.
Typical application:

- houses / apartments / holiday houses
- agricultural holdings
- supply of water from the well
- irrigation of growing houses, gardens, agricultural land
- collecting and using rainwater
- industrial equipment



Motor power	Dimensions (mm)					
	B1	B2	B3	L1	L2	H
1.1 kW i mniej	306	276	214	400	314	546
1.5 kW do 2,2 kW	306	276	214	430	314	576
4 kW do 7.5 kW	360	320	270	520	350	710

INVERTER SYSTEM – IVR–09T

Main Technical Data	
Rated output power	0,37 KW – 7,5 KW (0,5 HP – 10 HP)
Rated input voltage	AC~3x400V/50-60HZ (3-phase)
Rated output voltage	AC ~3x400V / 20-60 Hz (3-phase)
Response time under overload condition	5 s – 5 min.
Pressure setting range	1 – 9 bar
Response time under open phase condition	<5 s
Response time under short-circuit condition	<0,1 s
Response time under overvoltage/undervoltage condition	<5 s.
Response time under dry-run condition	6 s
Time to activation after overload condition	30 min.
Time to activation after overvoltage/undervoltage condition	5 min.
Time to self-activation after dry-run condition	8s, 1 min, 10 min, 30 min, 1 h, 2 h ...
Deactivation limit at overvoltage	418V
Deactivation limit at undervoltage	324V
Horizontal distance	≤1000 m
Protections	Dry-run Short-circuit Overload Pump overloaded Voltage spike Undervoltage Overvoltage

Main Technical Specification	
Control specification	double flow control
	pressure control
Control method	Manual / Automatic
Liquid flow control specification	probe electrode pulse and flow switch
Pressure control specification	Pressure sensor 24 V, 4–20 mA
Installation Conditions	
Permissible ambient temperature	–10°C – +40°C
Permissible ambient humidity	20% – 90% RH
Permissible liquid temperature	0°C – +100°C
Ingress Protection	IP54
Mounting orientation	Vertical
Minimum pressure tank capacity	4L
Motor power	**Max. Motor Current**
0,75-1.5 kW / 1-2 HP	4.3A
2.2 kW / 3 HP	6.1A
3.0-4.0 kW / 4-5,5 HP	9.7A
5.5 kW / 7.5 HP	14A
7.5 kW / 10 HP	18A

MULTI SET IVR–02

The set is equipped with the IVR-02 (230V) frequency converter and the set of HP 1500 INOX or MH 1300 INOX pumps. Multi-Set is an easy-to-use device designed for pumping of clean water in order to increase pressure in water supply systems, maintaining a constant, set water pressure by changing the rotational speed of the pump motor, with additional control and protection features.

ADVANTAGES:

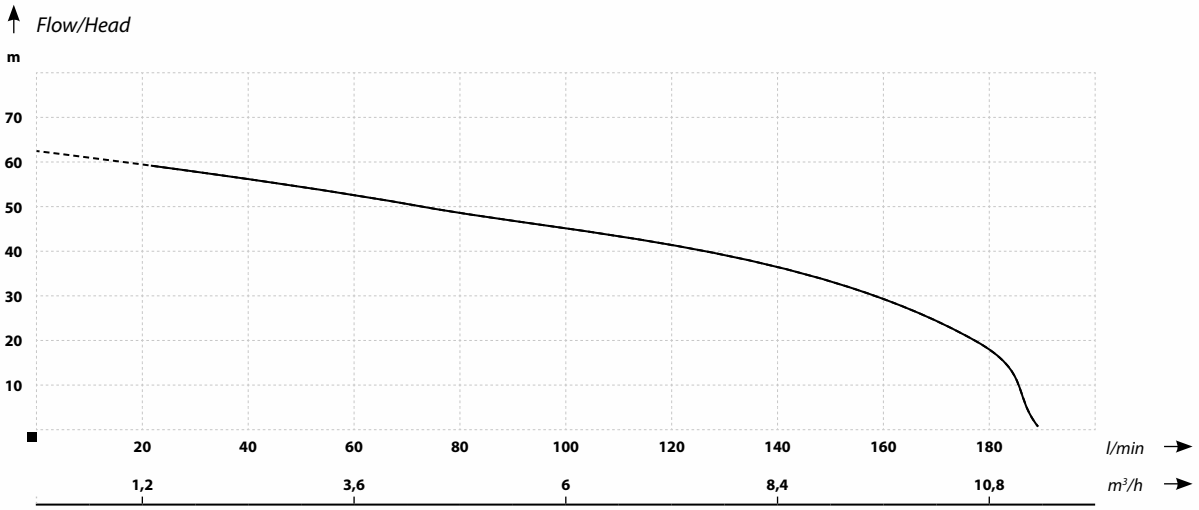
- Energy efficiency: reduction of energy consumption by 30%–60%..
- Simple operation: all functions can be terminated by pressing a button.
- Reliability: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime.
- Due to the built-in soft start and stop function, the device allows to eliminate the water hammer.
- Fully protected: the system incorporates the overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
- The ability to control the operation of two pumps that supply the system.
- Low-noise operation.

DESIGN

- Pumps x 2 - HP 1500INOX (MH 13000INOX)
- Frequency converter - IVR-02 (230V)
- IBO ITALY steel fittings
- Check and water stop valves and fittings
- 8L IBO ITALY pressure vessel

APPLICATION

- Houses
- Apartments
- Holiday houses
- Agricultural holdings
- Supply of water from the well
- Irrigation of growing houses, gardens, agricultural land
- Collecting and using rainwater
- Industrial equipment



PARAMETERS

Name	Head (m)	Flow (l/min)	Pressure (bar)	Water temp. (°C)	Ambient temp. (°C)	Inlet (mm)	Outlet (mm)
MULTI SET IVR-02/HP	62(*55)	190 (*160)	9	+50	+40	40	40

*Details for MH pumps

MULTI SET IVR–09

The set is equipped with the IVR-09 (400V) / IVR-11(400V) frequency converter and the CV series pump/pumps. Multi-Set is an easy-to-use device designed for pumping of clean water in order to increase pressure in water supply systems, maintaining a constant, set water pressure by changing the rotational speed of the pump motor,
with additional control and protection features.

ADVANTAGES:

- Energy efficiency: reduction of energy consumption by 30%–60%..
- Simple operation: all functions can be terminated by pressing a button.
- Reliability: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer.
- Fully protected: the system incorporates the overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
- The ability to control the operation of two pumps that supply the system.
- Low-noise operation.

DESIGN

- Pumps x 1/x 2/x 3/x 4/x 5/x 6 - (CV3 – Cv15)
- Frequency converter - IVR-09 (400V) / IVR-11 (400V)
- IBO ITALY steel fittings
- Check and water stop valves and fittings
- IBO ITALY pressure vessel

APPLICATION

- Houses
- Apartments
- Holiday houses
- Agricultural holdings
- Supply of water from the well
- Irrigation of growing houses, gardens, agricultural land
- Collecting and using rainwater

FOT. MULTI SET IVR-09

PARAMETERS

Name	Head (m)	Flow (m3/h)	Pressure (bar)	Water temp. (°C)	Ambient temp. (°C)	Inlet (mm)	Outlet (mm)
MULTI SET IVR-09	220	5 - 84	16	+90	+40	40 - 50	40 - 50

SUBMERSIBLE PUMPS

IP
IPE
IPK
IPC 550
FLOW LOW
NEMO/ VM60
MULTI IP 800 INOX
MULTI IP AUTO
MULTI IP INOX 1000/1200
MULTI IP 1000 AUTO
MULTI IP 1200 AUTO
MULTI IP 1200 AUTO RAIN
H-SWQ
SWQ / F-SWQ
75-FAXIAL-0,25 INOX
WQX
MAGNUM
WQF
SN-450
SWQ SEPTIC
BIG
SWQ PRO
WQ PRO
WQ PROFESSIONAL
75-FWQ-1,5 INOX
WQ-65-1,5
WQ-80-3 / WQ-65-4
VX-80-1,5 / VX-80-2,2
50-KBFU-0,40 INOX
50-KBFU-0,75 INOX
25-KBFU-0,45
50-KBFU-0,45
50-KBFU-0,80
50-KBFU-0,55
KBFU 230V/400V
80-KBFU-4,0-4P
KBFU-CFA
IBX CFA
7 IBX

IP


IP INOX


IP


IP 400 MINI


IP RAIN

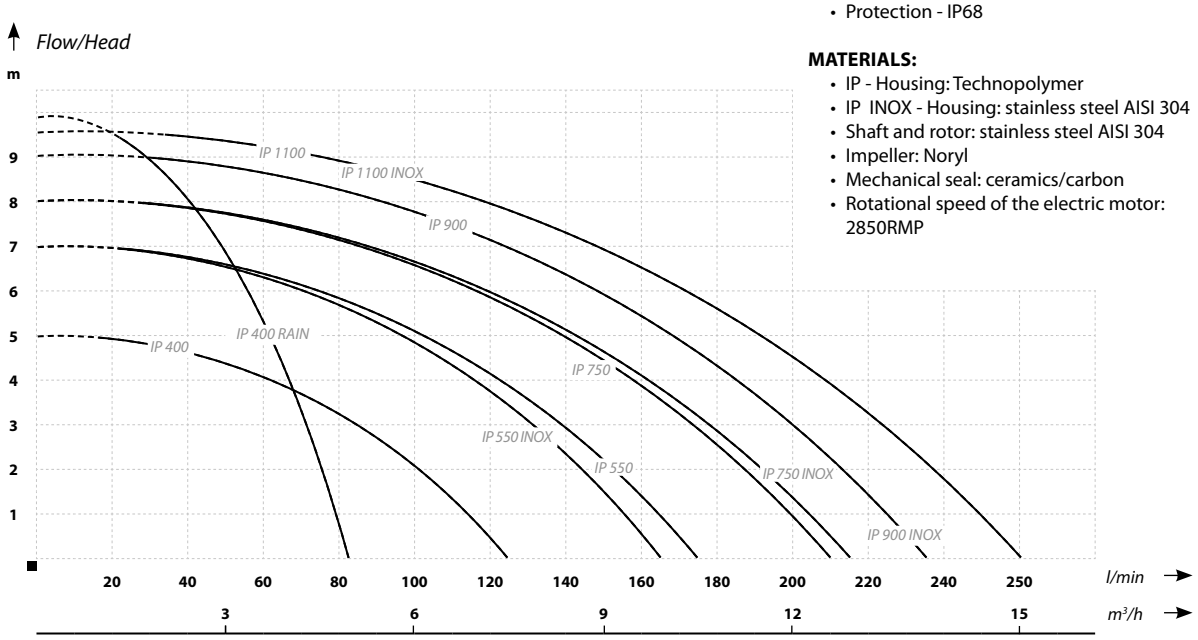
IP submersible plastic pumps designed for pumping clean and slightly contaminated water. The pumps have an outlet connection to which discharge hoses of different diameters can be connected depending on the user's requirements. Small size and light weight make the pumps exceptionally easy to operate and maintain. The pumps are equipped with float switches for automatic pump control. All pumps are supplied with thermal protection mounted in the motor winding.

IP INOX pumps have a similar design to IP pumps but their housing is made of high quality AISI 304 stainless steel.

APPLICATION:
Draining flooded rooms, swimming pools, wells. The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level. The pumps can also be used for pumping rainwater.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- IP - Housing: Technopolymer
- IP INOX - Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
IP 400	5	125	400	230	30	1,25	1 - 1½	23/31	3,8
IP 400 RAIN	10	83	400	230	1	1,30	0,75-1	17/28 no connector	4,1
IP 550	7	175	550	230	30	1,6	1 - 1½	23/31	4
IP 750	8	210	750	230	30	2,15	1 - 1½	23/33	4,3
IP 900	9	235	900	230	30	2,5	1 - 1½	23/34	4,6
IP 1100	9,5	250	1100	230	30	2,75	1 - 1½	23/33	5
IP 550 INOX	7	165	550	230	30	1,6	1 - 1½	23/34	5,4
IP 750 INOX	8	215	750	230	30	2,15	1 - 1½	23/36	5,8
IP 900 INOX	9	235	900	230	30	2,5	1 - 1½	23/37	6,1
IP 1100 INOX	9,5	250	1100	230	30	2,75	1 - 1½	23/38	6,3

IPE
IPK

IPE 400

IPK 400

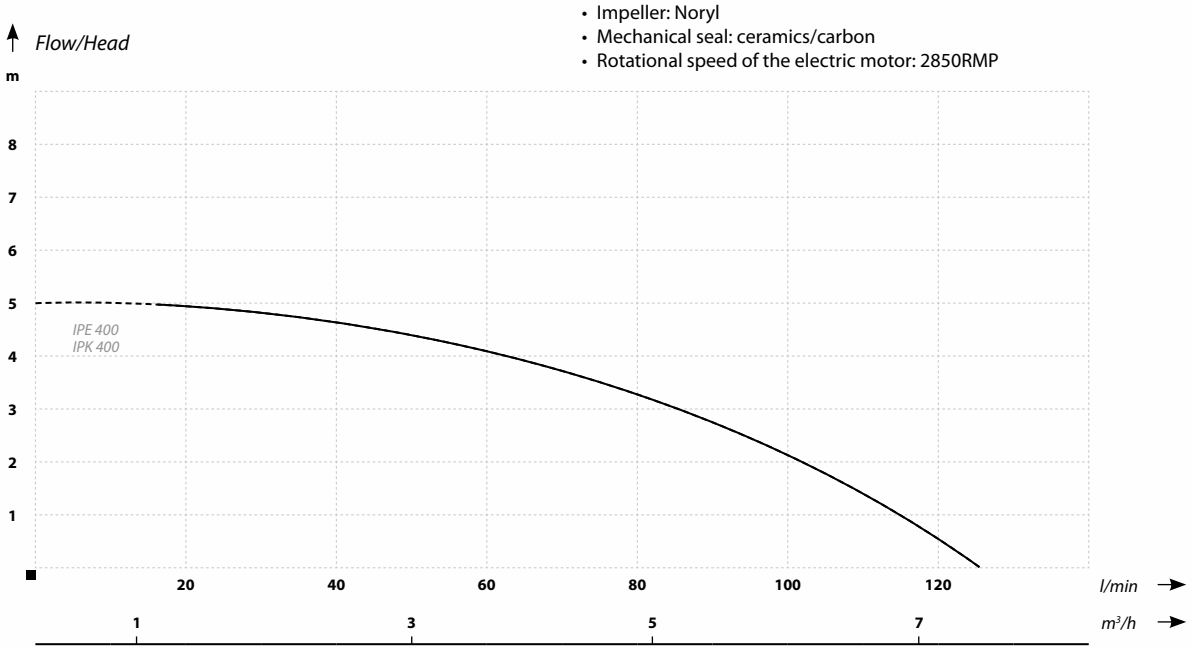
IPE 400 - a submersible plastic pump designed for pumping clean and slightly contaminated water. The pumps have an outlet connection to which discharge hoses of different diameters can be connected. IPE400 is equipped with an electronic float/probe so the pump can be used in narrow wells. Small size and light weight make the pumps exceptionally easy to operate and maintain. All pumps are supplied with thermal protection mounted in the motor winding.

IPK 400 - the pump has a similar design to IPE pumps but the switch is not based on the probes but on the float operating in a vertical position inside a special channel. Like IPE pump, it can be placed in a narrow well, which may not be possible with IP pumps due to a float switch connected with a 30 cm cable, which increases the diameter of the pump.

APPLICATION:
Draining flooded rooms, swimming pools, wells. The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level. The pumps can also be used for pumping rainwater.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- IPE / IPK
- Housing: Technopolymer
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
IPE 400	5	125	400	230	30	3	1 - 1½	23/39	4
IPK 400	5	125	400	230	30	3	1 - 1½	26/39	4,5

IPC 550

Adapter 1

Adapter 2

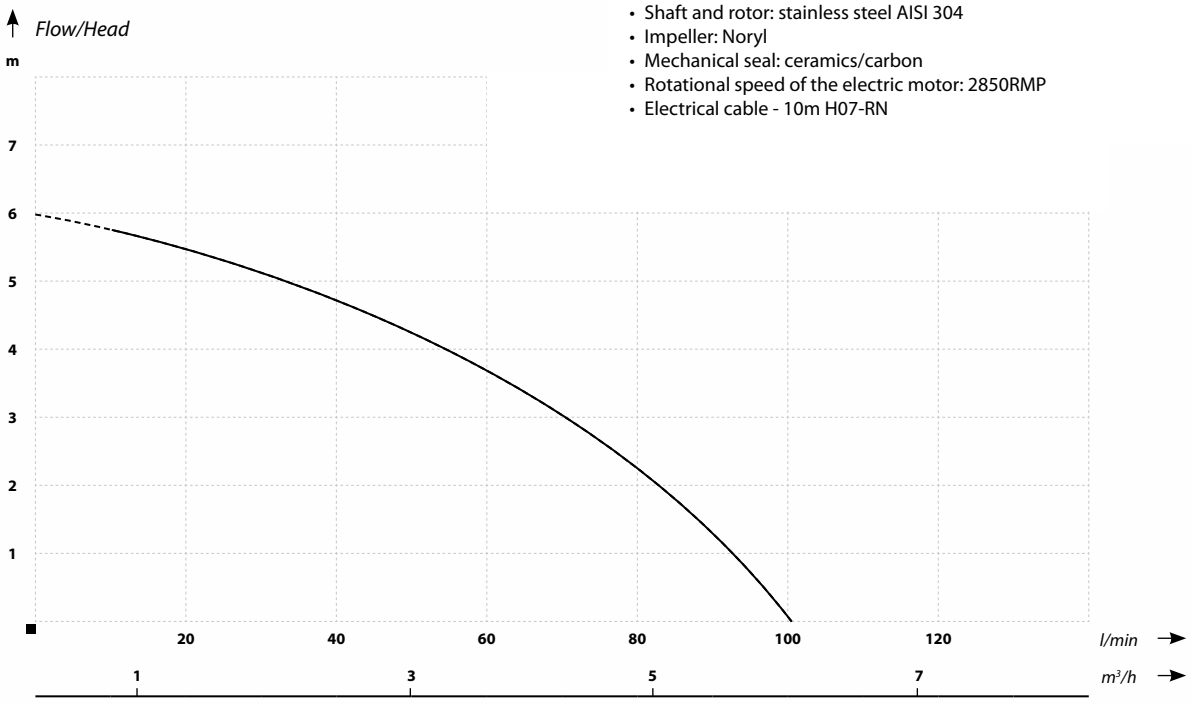
Adapter 3

A submersible plastic pump designed for pumping clean and slightly contaminated water. IPC 550 pump has a threaded outlet connection with a built-in non-return valve to which 3 different adapters can be attached in order to adapt the outlet diameter to individual requirements. The pumps have a cooling jacket so they do not have to be fully submerged. After removing the suction filter, water can be pumped-off down to 1 mm. Pumping can start at above 5 mm water level. Like IPE and IPK pumps, the IPC 550 pump is equipped with an integrated switch so it can be used in narrow wells. An additional advantage is the option to select the automatic or manual operating mode. Like IPE and IPK pumps, all pumps are supplied with thermal protection mounted in the motor winding.

APPLICATION:
Draining flooded rooms, swimming pools, wells. The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level. The pumps can also be used for pumping rainwater.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

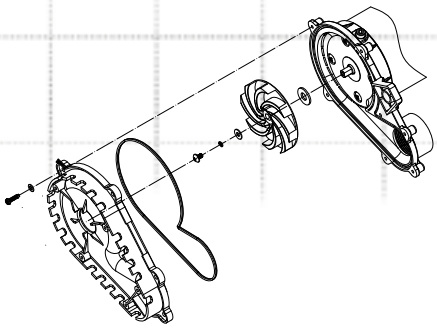
MATERIALS:
- IP - Housing: Technopolymer
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon
- Rotational speed of the electric motor: 2850RMP
- Electrical cable - 10m H07-RN



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
IPC 550	6	100	550	230	5	2.4	1½	20/31	4

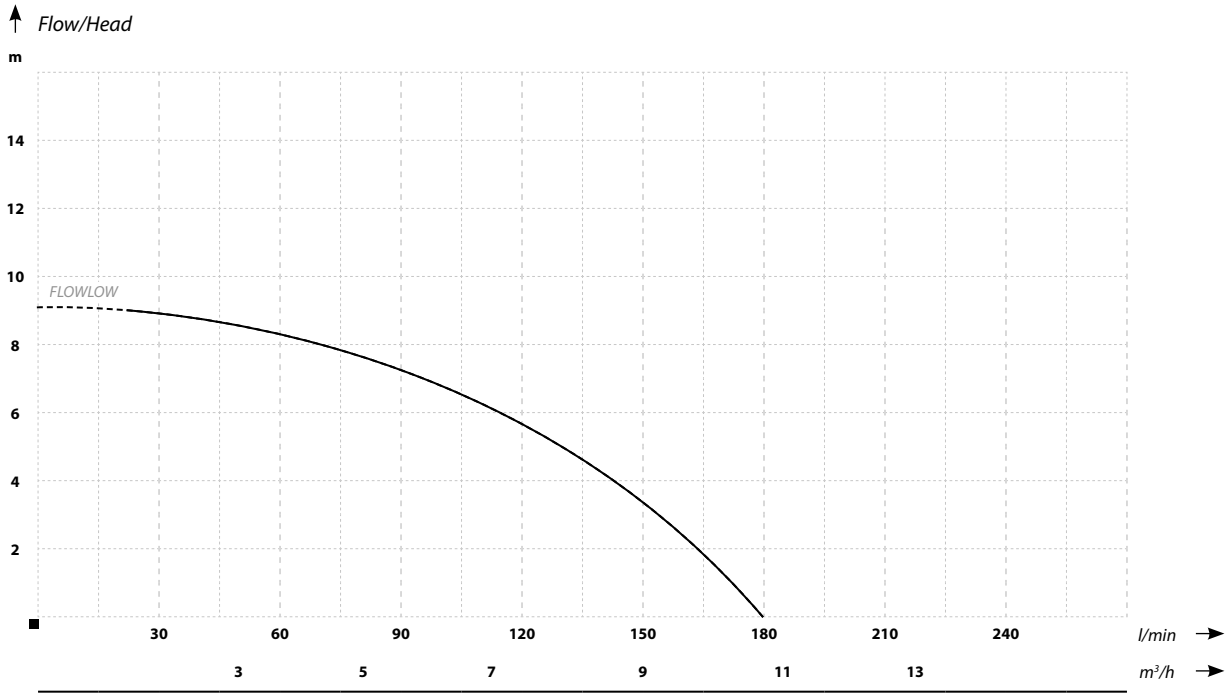
FLOW LOW



Flowlow - 0,25INOX series are designed for clean and slightly polluted water, where water must be pumped out to a low level. The pumps are used for draining flooded rooms, swimming pools and sumps. They can also pump water from ponds, rivers, reservoirs and shallow wells.

CHARACTERISTICS:

- The pump can pump out water to a level of about 5cm
- Pole float switch
- Threaded discharge port for easy connection of discharge hose using a hose clamp or quick release coupling
- Top quality materials
- Thermal protection built into the motor winding
- 24 months warranty
- Warranty and post-warranty service
- Impeller: Plastic



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
FLOW LOW 0,25	9	180	250	230	2	1,5"	25,1/30,3	6

NEMO/ VM60

VIBRATION PUMPS

VM60

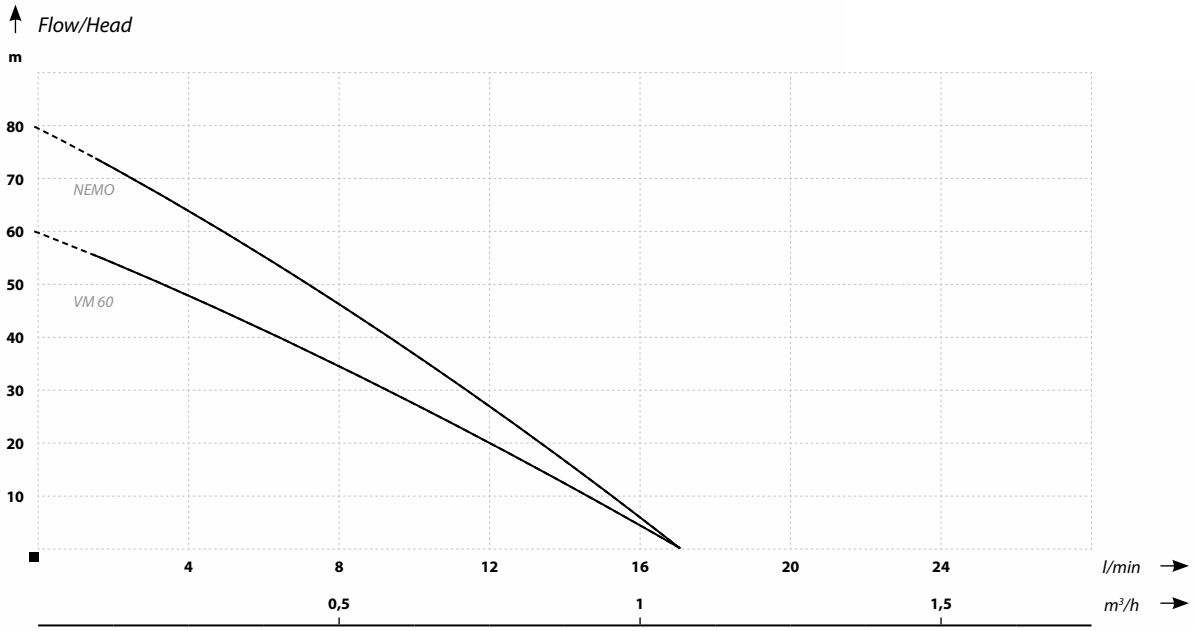
NEMO

105 mm diameter vibration pumps for irrigation. Due to their high efficiency, NEMO and VM60 submersible vibration pumps are perfect for irrigation with clean water. Despite the small size, the pump design based on solenoids allows creating high pressure required for irrigation. Due to their compact size and low weight, vibration pumps are very popular among allotment gardeners. Pumps are equipped with a 10 m power cable. Pump housing is made of aluminium. Compact-size Nemo and VM60 pumps can operate even in small wells. The minimum diameter of a drilled well in which the pump can be used is 120 mm.

APPLICATION:
Supply of water to small holiday houses and irrigation of gardens.

OPERATING CONDITIONS:

- Maximum liquid temperature 20°C
- Maximum ambient temperature 40°C
- Thermal protection: no
- Class B Insulation
- Operating mode - in 30 min. cycles
- Protection - IP68
- Rotational speed of the electric motor: 2850RMP
- Electrical cable - 10m H07-RNF



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
VM 60	60	17	250	230	3,5	3/8	105/180	4
NEMO	80	17	250	230	3,5	½	105/180	4

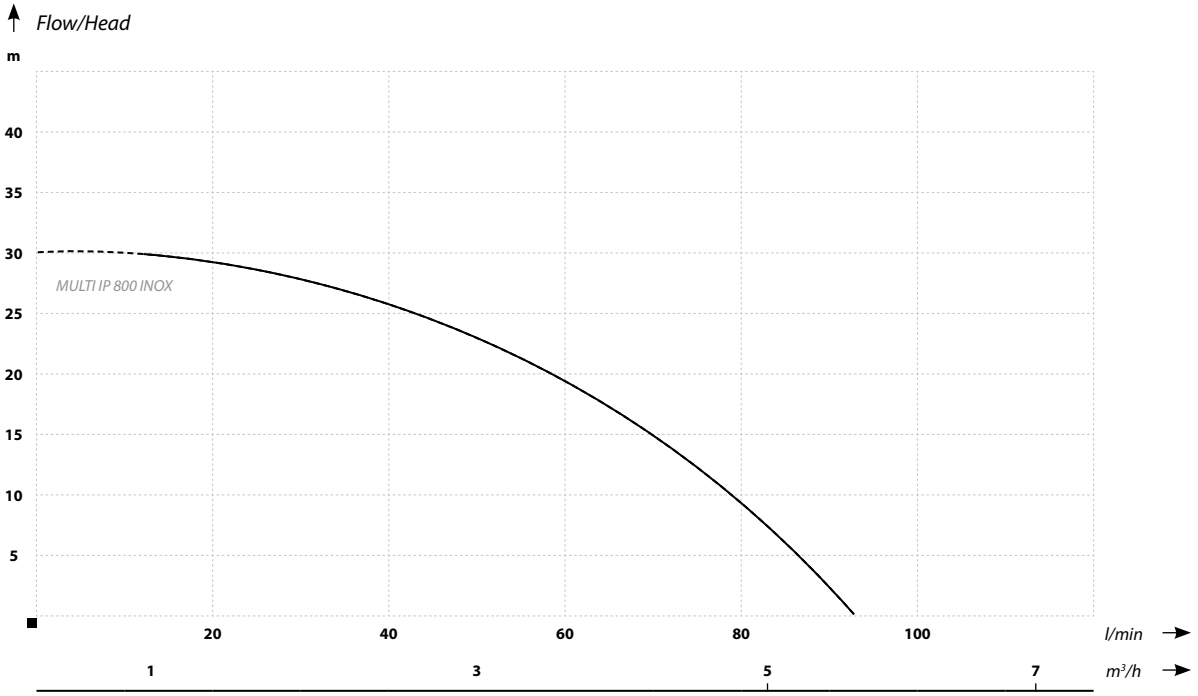
MULTI IP 800 INOX

Pumps with the same hydraulic components as Multi IP 800 INOX but with the the built-in pump operation controller instead of the float switch. When the outlet valve is closed, the pump is stopped and goes into standby mode maintaining a constant pressure in the system. When the outlet valve is opened, the pump will automatically start.

APPLICATION:
Supplying houses with water from ring wells and for garden irrigation systems. The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon/NBR
- Rotational speed of the electric motor: 2850RMP
- Electrical cable - 10m H07-RNF



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
MULTI IP 800 INOX	30	92	800	230	0,5	3,5	1 / 1 ½	17/36	8,25

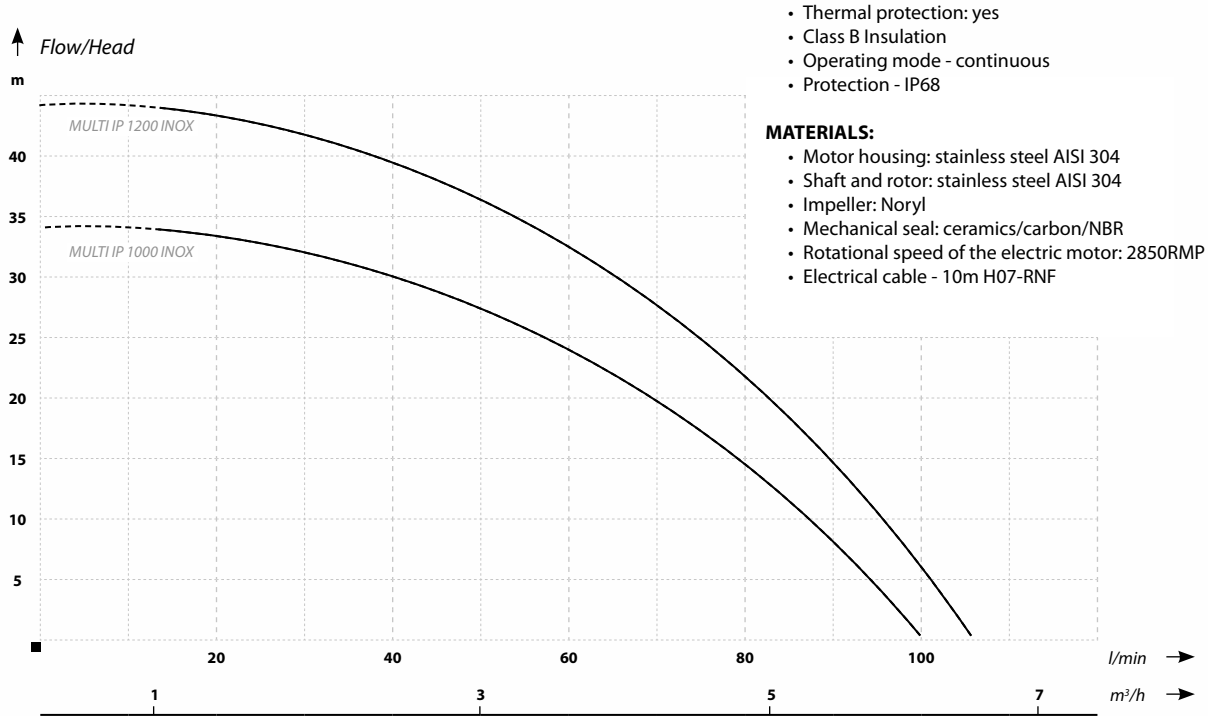
MULTI IP INOX 1000/1200

A series of high pressure submersible pumps for irrigation. The pumps have a stainless steel housing and multi-stage hydraulics. The pumps have a cooling jacket so that they do not have to be fully submerged. A filter screen fitted in the bottom of the pump allows water to be pumped down to 10 cm. Both Multi IP INOX pumps are equipped with a float switch for automatic pump control. Like IPE and IPK pumps, all pumps are supplied with thermal protection mounted in the motor winding.

APPLICATION:
Supplying houses with water from ring wells and for garden irrigation systems. The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon/NBR
- Rotational speed of the electric motor: 2850RMP
- Electrical cable - 10m H07-RNF



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
MULTI IP 1000 INOX	34	100	1000	230	0,5	3,7	1½	18/41	10
MULTI IP 1200 INOX	44	105	1200	230	0,5	4,8	1½	18/41	11

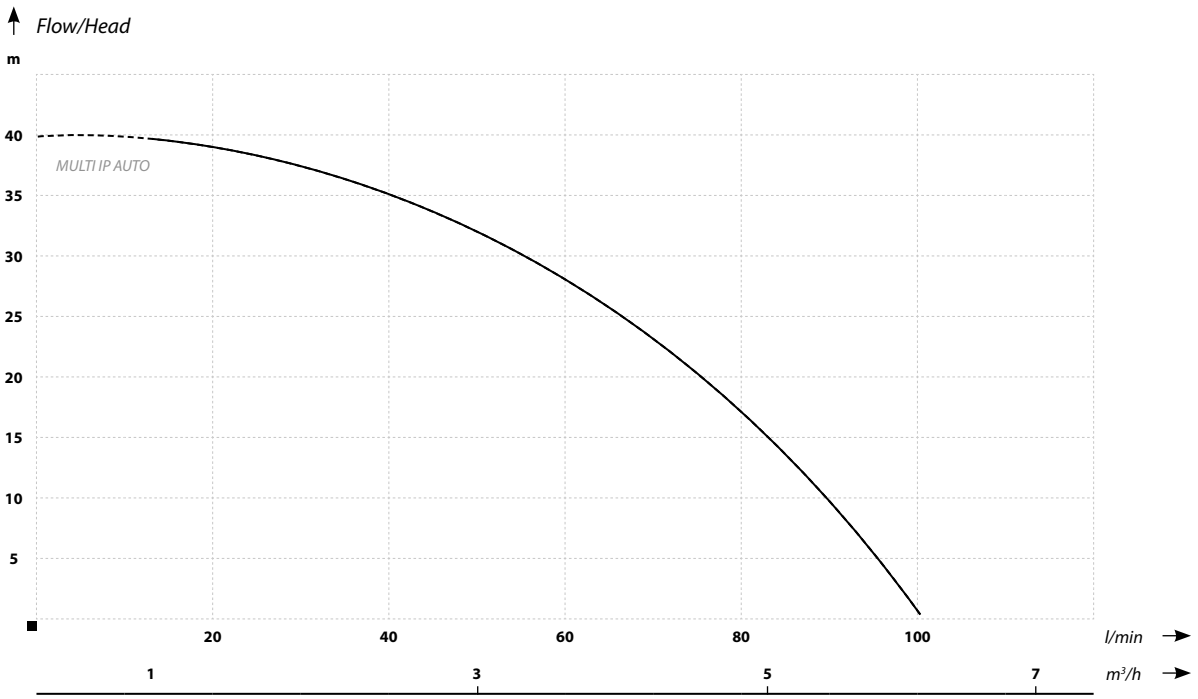
MULTI IP 1000 AUTO

Pumps with the same hydraulic components as Multi IP 800 INOX but with the the built-in pump operation controller instead of the float switch. When the outlet valve is closed, the pump is stopped and goes into standby mode maintaining a constant pressure in the system. When the outlet valve is opened, the pump will automatically start.

APPLICATION:
Supplying houses with water from ring wells and for garden irrigation systems.
The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon/NBR
- Rotational speed of the electric motor: 2850RMP
- Electrical cable - 10m H07-RNF



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
MULTI IP 1000 AUTO	40	100	1000	230	0,5	5,2	1 / 1 ½	17/53	10

MULTI IP 1200 AUTO
MULTI IP 1200 AUTO RAIN

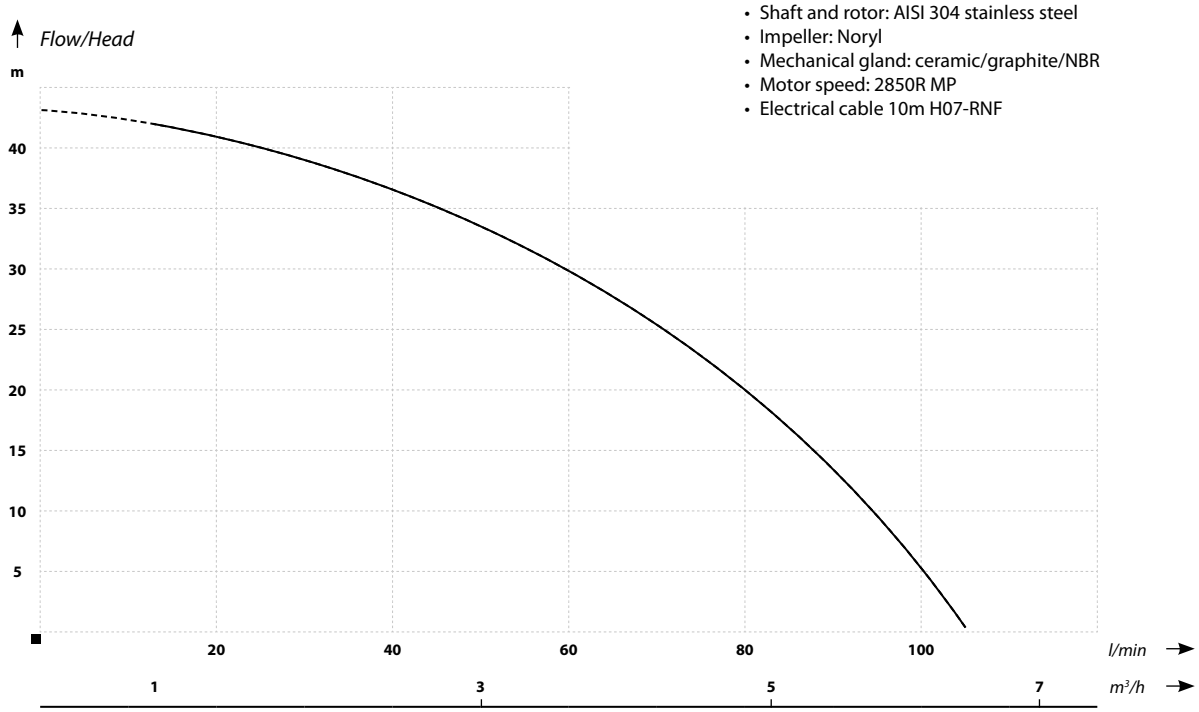
Multi IP 1200 AUTO
A range of high-pressure pumps for watering, featuring a built-in automation for controlling the pump operation. The pump starts when the valve or tap is opened, and when the valve or tap is closed the pump goes to the standby mode, keeping the constant pressure in the system. The pumps feature a cooling jacket so they do not have to be totally submersed. There is a filtering sieve in the base, so the pump can remove water to the level of 5 cm. All pumps have thermal protection in the motor winding.

Multi IP 1200 RAIN
A range of high-pressure pumps for watering, similar to Multi IP 1200 AUTO, but with a different water intake system. Instead of the filtering mesh, the pumps feature 1" suction port to which the hose with a check valve is connected. The advantage of this solution is the pump protection in case of settling of impurities on the tank bottom, because the pump does not suck water from the tank bottom but through a 1-m long hose. The RAIN pumps have thermal protection in the motor winding.

APPLICATION:
In rainwater tanks for watering gardens. Water supply to homes from wells and garden watering systems. The pumps can be used in ornamental ponds and for taking water from springs in which the water level is near the surface.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Insulation class B
- Operation mode – continuous
- Degree of protection - IP68

MATERIALS:
- Motor housing: AISI 304 stainless steel
- Shaft and rotor: AISI 304 stainless steel
- Impeller: Noryl
- Mechanical gland: ceramic/graphite/NBR
- Motor speed: 2850R MP
- Electrical cable 10m H07-RNF



PARAMETERS

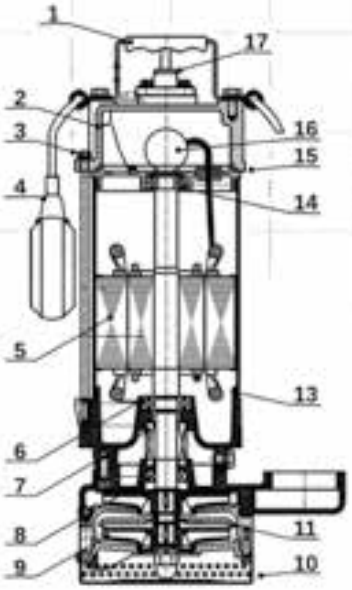
Model	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Passage through Impeller (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
MULTI IP 1200 AUTO	44	105	1200	230	9	3,5	1 x 1½	18/45	11
MULTI IP 1200 RAIN	44	105	1200	230	9	5,2	1 x 1½	20/45	11,5

H-SWQ

H-SWQ 1500

H-SWQ 2200

H-SWQ 1800



H-SWQ 1800

High-pressure submersible pumps for pumping clean and slightly polluted water containing no abrasive particles (e.g. sand). Due to their high lifting height, they are used in agriculture for irrigation and drainage, domestic and agricultural water supply from wells, lakes and rivers. They can also be used for draining flooded rooms, garages and premises.

FEATURES:

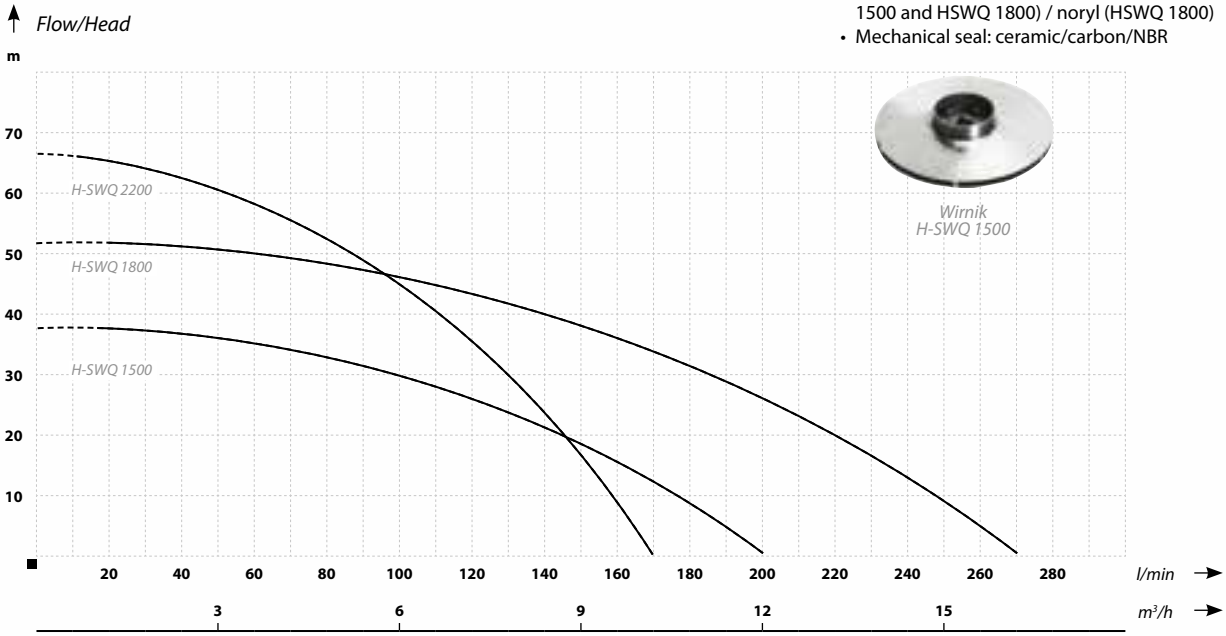
- Produce high water pressure, needed for watering
- With a float switch controlling the pump operation and protecting it against running dry
- The design incorporates a cooling jacket so that the pumps do not have to be completely submerged
- 8 m power cable with plug
- Thermal protection built into the motor winding
- Warranty 24 months
- Warranty and post-warranty service

TECHNICAL DATA:

- Maximum liquid temperature: 35ºC
- Maximum ambient temperature: 40ºC
- Power supply: 230 V
- Insulation class: B (F - HSWQ 1800)
- Operating mode: continuous
- Safety: IP68
- Power supply cable length: 8 m
- Working position: vertical
- Motor speed: 2850 RPM

MATERIAL:

- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304 (HSWQ 1500 and HSWQ 1800) / noryl (HSWQ 1800)
- Mechanical seal: ceramic/carbon/NBR



Wirnik
H-SWQ 1500

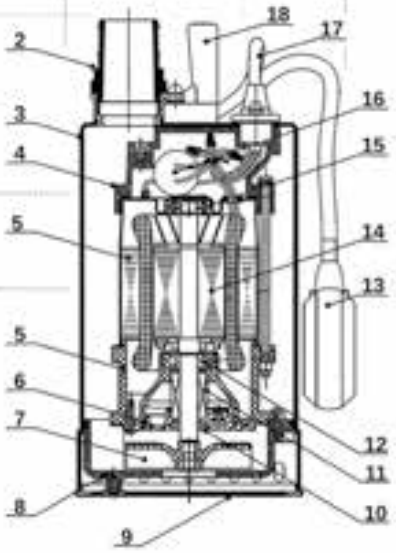
PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
H-SWQ 1500	38	200	1500	230	5	7,7	1½	18/47	15,5
H-SWQ 1800	53	270	1800	230	2	12	2	27/66	27
H-SWQ 2200	66	170	2200	230	2	15,5	2	19,5/74	29

SWQ / F-SWQ

SWQ

F-SWQ

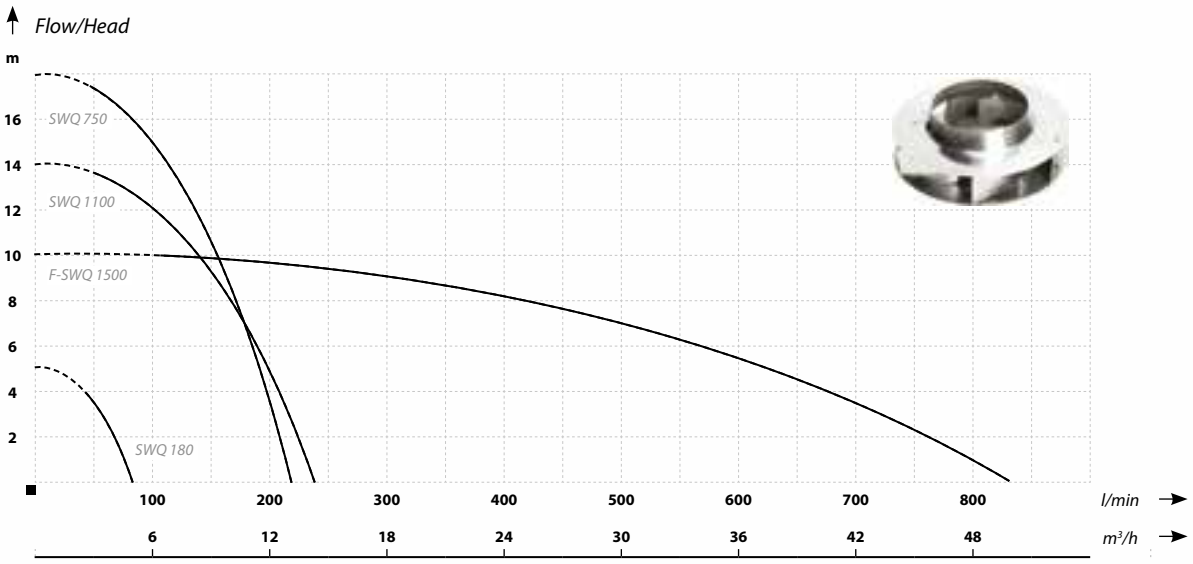


Submersible pumps designed for pumping clean and slightly contaminated water. Due to the top quality stainless steel design, the pumps ensure long-term and reliable operation. The motor is equipped with thermal protection mounted in the winding. The pumps have a cooling jacket so that they do not have to be fully submerged. Compared to other SWQ pumps, the F marked pump provides a very high flow of up to 830 l/min. All pumps except the SWQ180 have impellers made of stainless steel and are equipped with float switches for operation control. Due to small size (12 cm diameter), the SWQ180 pumps can be used to extract water from small, narrow wells. The pumps do not have a float.

APPLICATION:
Pumping rainwater and surface water from ponds, lakes and rivers, supply of water to waterholes. Draining flooded rooms, houses, garages and premises, management of fish farms.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 4-10

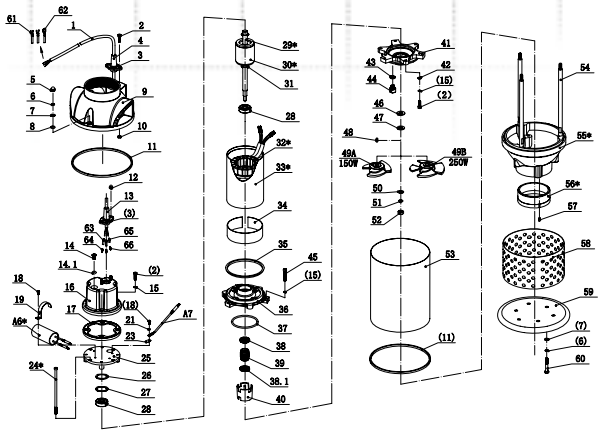
MATERIALS:
- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Mechanical seal: ceramics/carbon/NBR
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
SWQ 180	5,5	70	180	230	2	0,7	¾	12/16	3,5
SWQ 750	18	220	750	230	5	4,6	2	18/38	12,5
SWQ 1100	14	235	1100	230	5	6	2	17/40	13
F-SWQ 1500	10	830	1500	230	5	7,7	2	19/41	15

75-FAXIAL-0,25 INOX



75-FAXIAL-0,25 series pumps are designed for pumping clean cold water.
Due to their high performance, they can be applied in aeration of fishing ponds and in irrigation for transporting large volumes of water.

FEATURES:

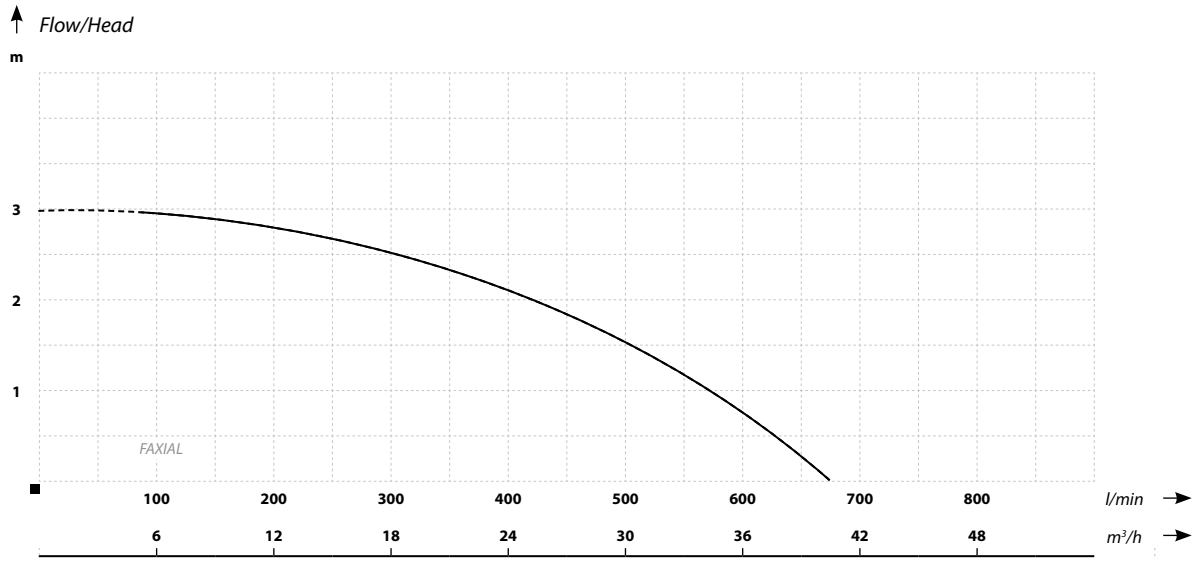
- High efficiency
- High performance with low current consumption
- Compact dimensions
- Top quality materials
- Thermal protection built into the motor winding
- 24 months warranty
- Warranty and post-warranty service

TECHNICAL SPECIFICATIONS:

- Maximum liquid temperature: 35ºC
- Maximum ambient temperature: 40ºC
- Power supply: 230V
- Insulation class: B
- Operating mode: continuous
- Safety: IP68
- Power cable length: 8 m terminated with a plug
- Working position: vertical
- Motor speed: 2850 RMP

MATERIALS:

- Motor housing: AISI 316 stainless steel
- Rotor housing: AISI 316 stainless steel
- Rotor: AISI 316
- Shaft and rotor: AISI 316 stainless steel
- Mechanical gland: Double: ceramics/carbon/NBR (ITALY)



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
FAXIAL	3,3	670	250	230	2,3	3"	19,4/42	11,2

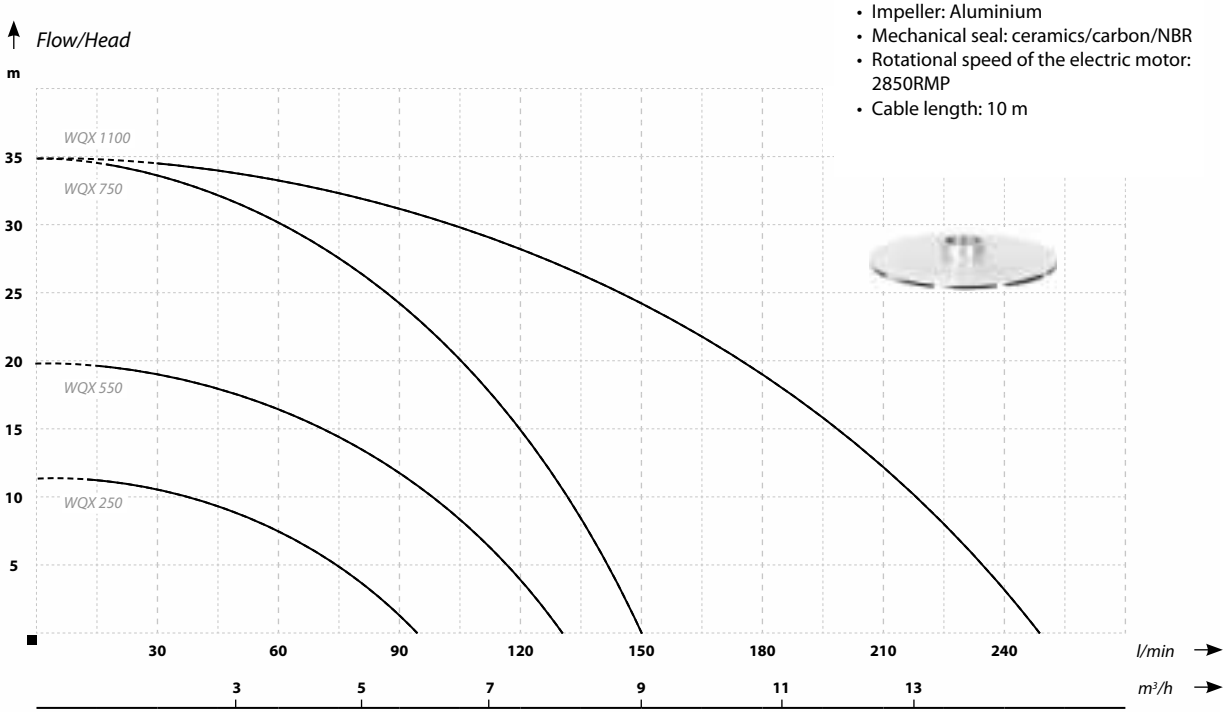
WQX

Submersible pumps designed for pumping clean and slightly contaminated water. The motor housing is made of aluminium and the motor is equipped with thermal protection mounted in the winding. High pressure is a special feature of the WQX series pumps. Pump operation is controlled by a float switch. The WQX 250 are available with and without the float switch.

APPLICATION:
Pumping rainwater and surface water from ponds, lakes and rivers, supply of water to waterholes. Draining flooded rooms, houses, garages and premises.

OPERATING CONDITIONS:
- Maximum liquid temperature 30°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 5-8

MATERIALS:
- Motor housing: Aluminium
- Shaft and rotor: stainless steel AISI 304
- Impeller: Aluminium
- Mechanical seal: ceramics/carbon/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQX 250	12	100	250	230	3	2	1	19/38	6
WQX 550	20	130	550	230	3	3,8	1	20/40	8,5
WQX 750	35	150	750	230	3	5,2	1	24/40	10
WQX 1100	35	250	1100	230	3	6,4	1½	26/45	13

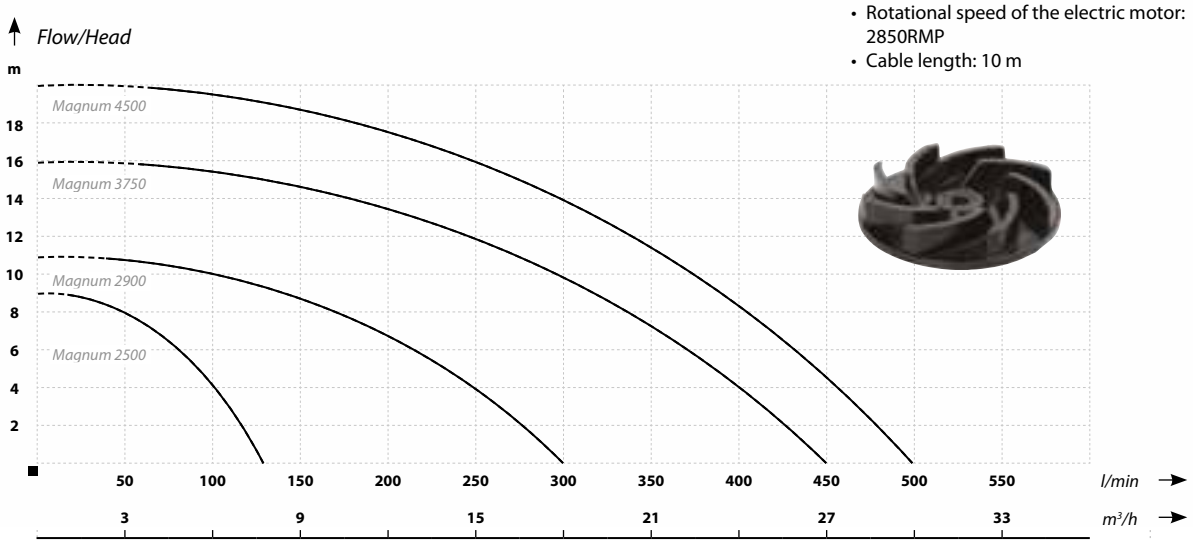
MAGNUM

Submersible pumps designed for pumping sewage and water from flooded premises. The pump is available with a float switch for automatic operation control or without the float switch. Threaded outlet connection and a set of adapters provide connection of the discharge hose with a hose clamp or fast-connection coupling. Magnum pumps are equipped with thermal protection mounted in the motor winding. The motor housing is made of aluminium and the impeller is made of cast iron. Magnum 2500 and 2900 pumps are available with and without the float switch.

APPLICATION:
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 5-8

MATERIALS:
- Motor housing: Aluminium
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
Magnum 2500	9	135	250	230	30	3,0	1½	23/36	6
Magnum 2900	11	300	550	230	35	4,2	2	26/40	12
Magnum 3750	16	450	750	230	35	6,1	2	26/41	14
Magnum 4500	20	500	1500	230	40	10	2	26/47	18

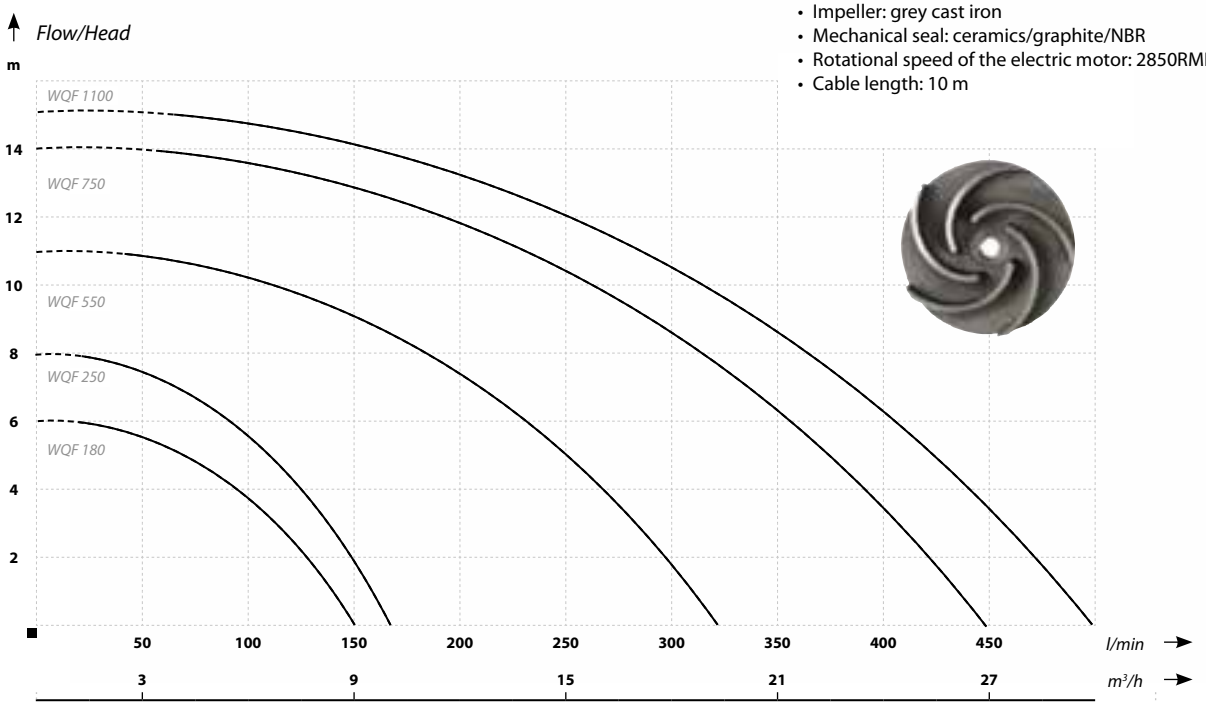
WQF

Submersible pumps designed for pumping sewage, dirty water, and water from flooded premises. The pumps are equipped with float switches for automatic pump control. Threaded outlet connection and a set of adapters provide connection of the discharge hose with a hose clamp or fast-connection coupling. WQF pumps are equipped with thermal protection mounted in the motor winding. The motor housing is made of AISI304 stainless steel, and the impeller is made of grey cast iron.

APPLICATION:
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 5-9

MATERIALS:
- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQF 180	6	150	180	230	20	1,75	1	17/37	8
WQF 250	8	170	250	230	20	2,6	1	17/39	9
WQF 550	11	320	550	230	35	4,6	2	25/45	15
WQF 750	14	450	750	230	35	6,7	2	25/47	18,1
WQF 1100	15	500	1100	230	35	9,1	2	26/48	21

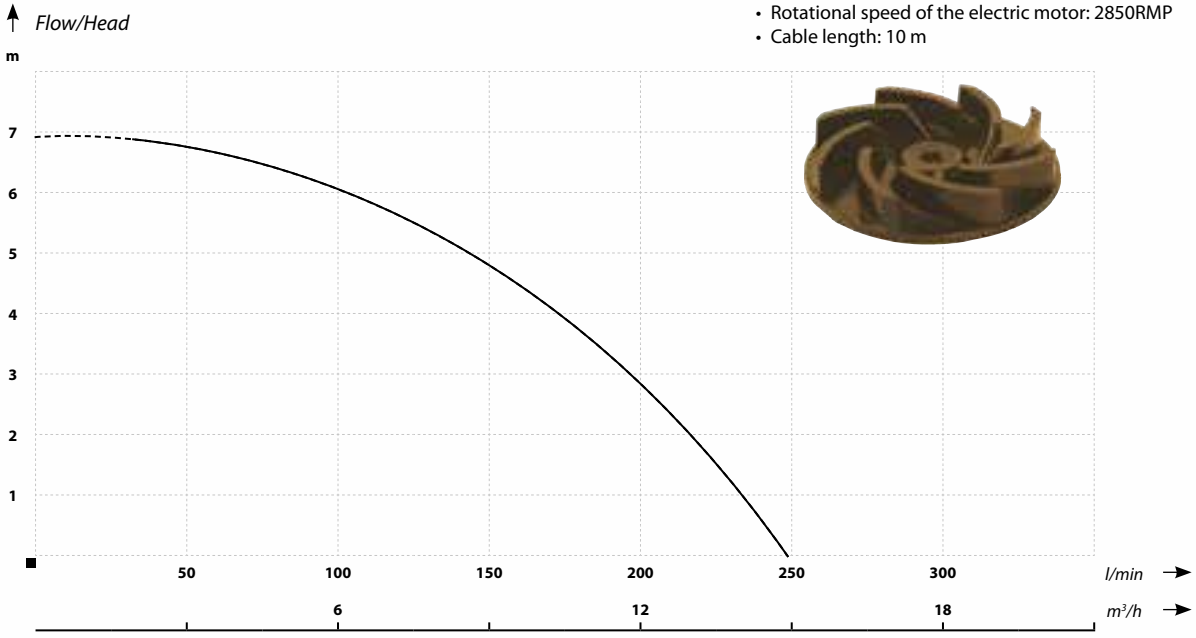
SN-450

Submersible pumps designed for pumping sewage, dirty water, and water from flooded premises. SN-450 pump is made of cast iron with VORTEX-type impeller. It can pump water with mechanical impurities with particle diameter of up to 20 mm. The pump is equipped with a vertical float switch for easy automatic operation in 25 cm diameter wells. SN-450 pump is equipped with thermal protection mounted in the motor winding.

APPLICATION:
Pumping sewage from domestic septic tanks, draining flooded rooms, houses, garages and premises and pumping water from narrow well and canals. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 5-8

MATERIALS:
- Motor housing: grey cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
SN-450	7	250	450	230	20	2,5	2	23/40	11,5

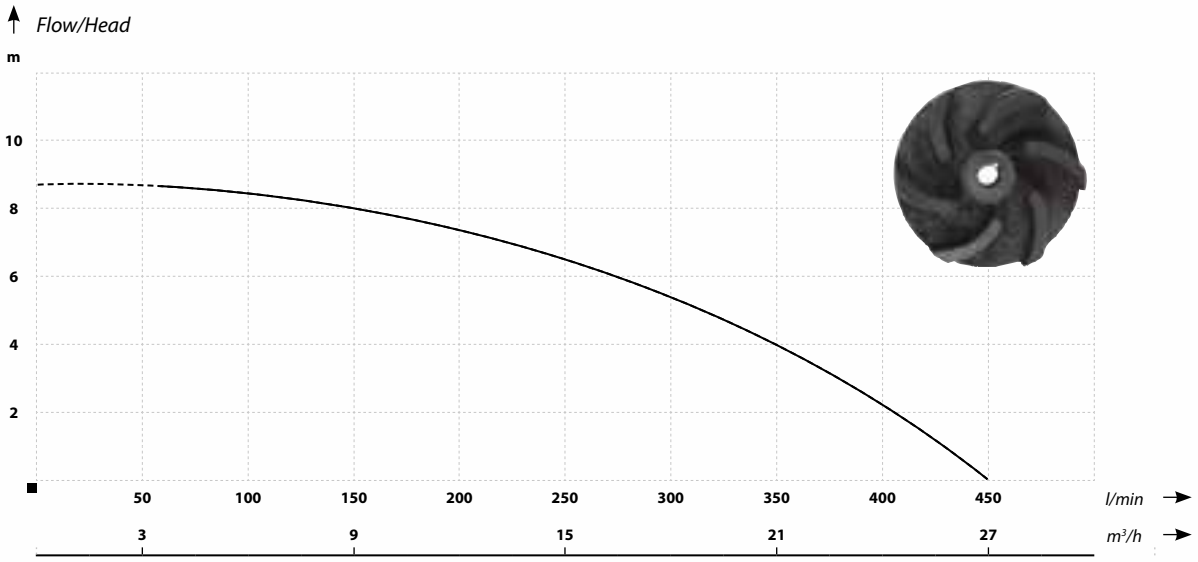
SWQ SEPTIC

Submersible pump with a 40mm passage Vortex impeller for pumping sewage, dirty water and water from flooded rooms. SWQ SEPTIC pumps are made of stainless steel and cast iron in order to withstand the adverse sewage environment. Pump outlet connection provides connection of the discharge hose with a hose clamp or fast-connection coupling. These pumps are widely used in agriculture. The SWQ SEPTIC pump is equipped with thermal protection mounted in the motor winding and a float switch for operation control.

APPLICATION:
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 4-10

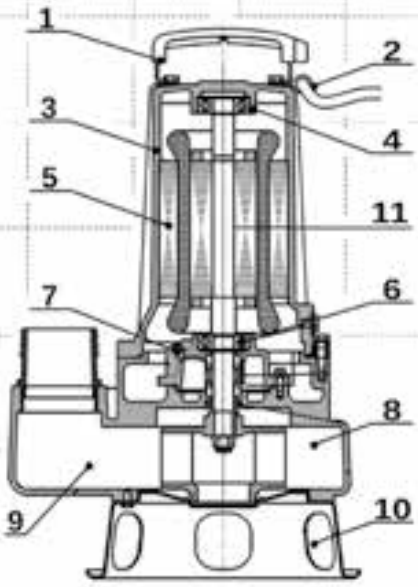
MATERIALS:
- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
SWQ SEPTIC	9	450	1100	230	40	7,7	2	30/48	25

BIG

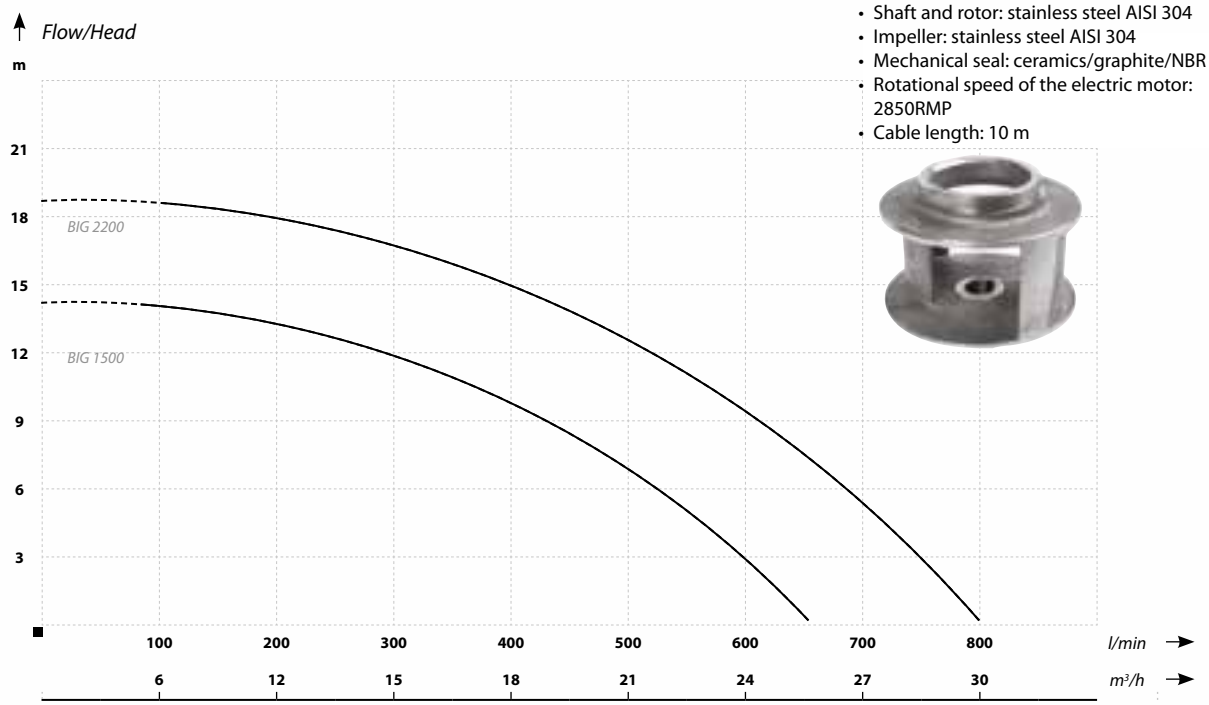


Professional submersible sewage pumps with two-channel impeller. The BIG 1500 pump is available as 230 V ~/50 Hz version, BIG 2200 - as 400 V ~ 3 / 50 Hz. The impeller design reduces the risk of its clogging and ensures pumping of medium containing solids with maximum particle diameter of 50 mm. The BIG 1500 pump is equipped with a float switch for operation control. Single-phase pumps are supplied with thermal protection mounted in the motor winding. Due to the high quality materials used and the durable design, the pumps can be used in industrial applications.

APPLICATION:
Pumping rainwater and surface water. Draining sewage in buildings, retail facilities and manufacturing plants, in industrial cooling or process water systems. Used in agriculture for draining and irrigation.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IPX8
- Water PH: 5-9
- Liquid density: 1.2x10^3kg/m^3

MATERIALS:
- Motor housing: grey cast iron
- Body: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m

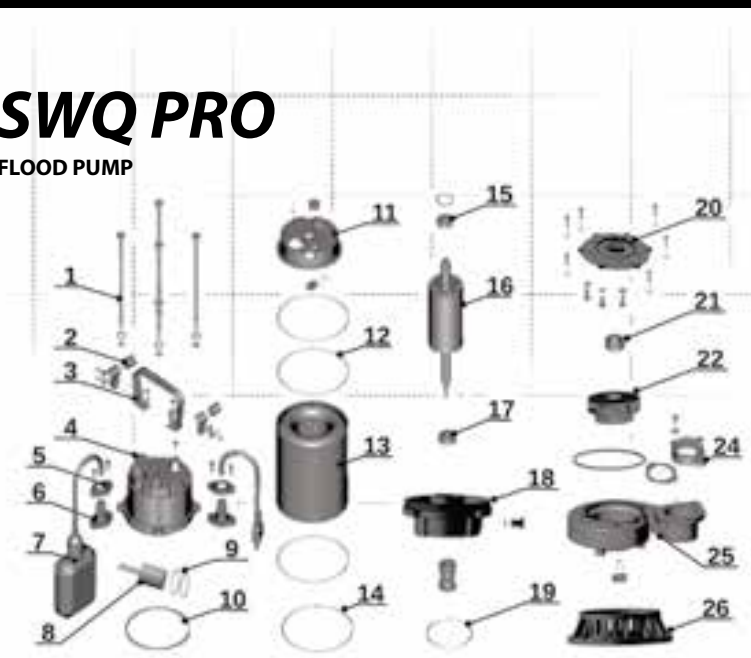


PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (mm)	Dimensions (cm)			Weight (kg)
								A	B	C	
BIG 1500	14	666	1500	230	50	8,8	75	349	270	520	37
BIG 2200	19	800	2200	400	50	5,4	80	349	270	520	43

SWQ PRO

FLOOD PUMP

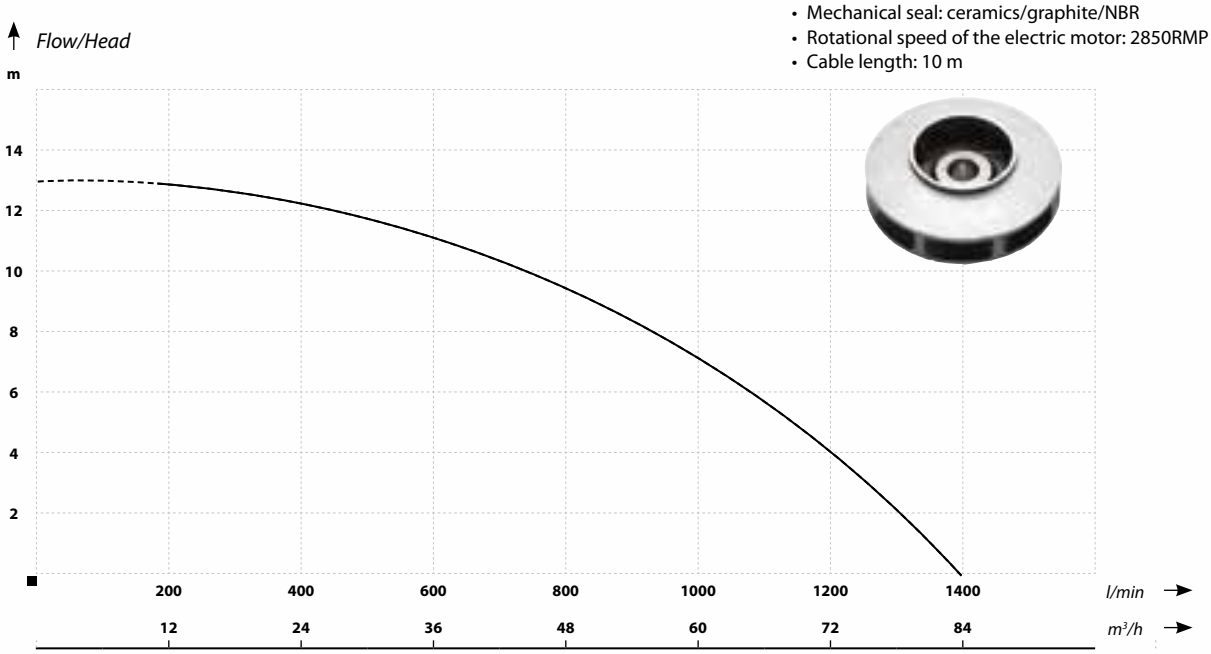


FLOOD PUMP
Professional submersible pump compliant with the most demanding European standards, intended for customers using drainage pumps in their professional work. Due to the use of a closed impeller, the pump can pump clean and slightly contaminated water.
With its 1500 W motor, 3-inch outlet, and maximum flow of up to 1400l/min, as well as a relatively low weight, the pump can be used to drain flooded houses, premises and garages during minor and major flooding. The pump is equipped with a float switch for operation control and thermal protection mounted in the motor winding.

APPLICATION:
Pumping rainwater and surface water. Drainage of flooded households, agriculture farms, premises and garages. Pumping cooling or process water in industrial systems. Used in agriculture for draining and irrigation. The pump can be used in fish farms.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 5-9
- Liquid density: 1.2x10^3kg/m^3

MATERIALS:
- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
SWQ 1500 PRO	13,5	1400	1500	230	3	9,5	3	29/54	25

WQ PRO

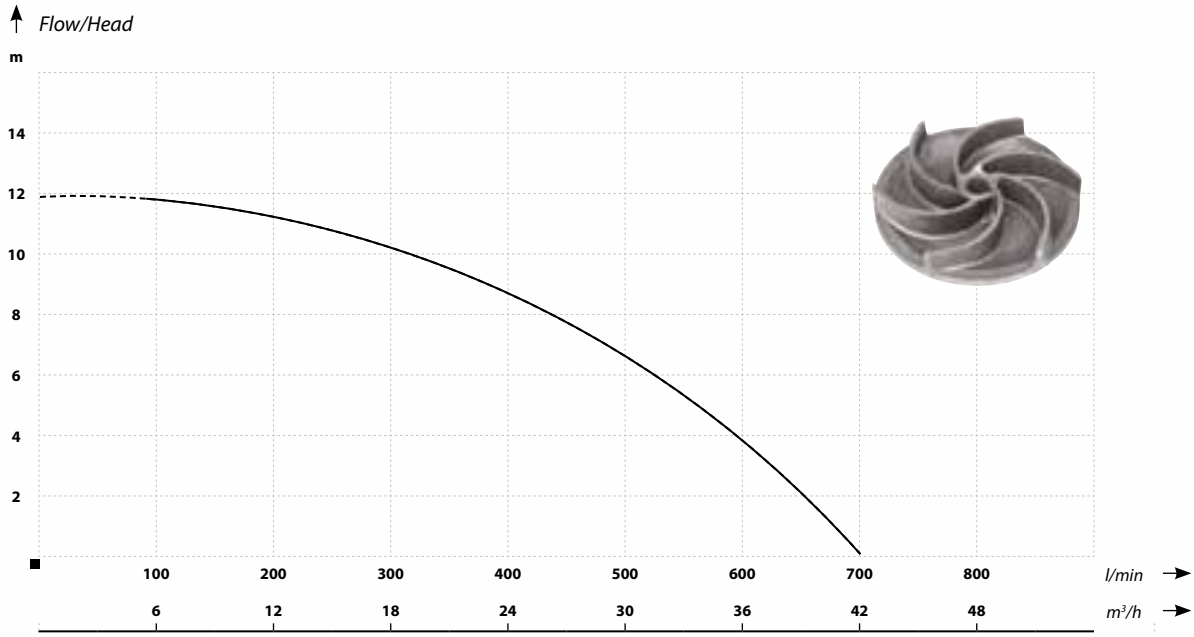
CONSTRUCTION PUMP

Submersible pump with a 40mm passage Vortex impeller for pumping sewage, dirty water and water from flooded rooms. The pump is compliant with the most demanding European standards, therefore it is intended for customers using such products in their professional work. WQ PRO pumps are made of cast iron in order to withstand the adverse sewage environment. Pump outlet connection provides connection of the discharge hose with a hose clamp or fast-connection coupling. These pumps are widely used in agriculture. The WQ PRO pump is equipped with thermal protection mounted in the motor winding and a float switch for operation control. The WQ 1500 PRO pump is mainly intended for customers in the civil engineering industry, where the top quality and high performance is required. It can also be used in industrial applications.

APPLICATION:
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 5-9

MATERIALS:
- Motor housing: stainless steel AISI 304
- Body: alloy
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQ 1500 PRO	12	700	1500	230	5	7,8	3	32/50	27

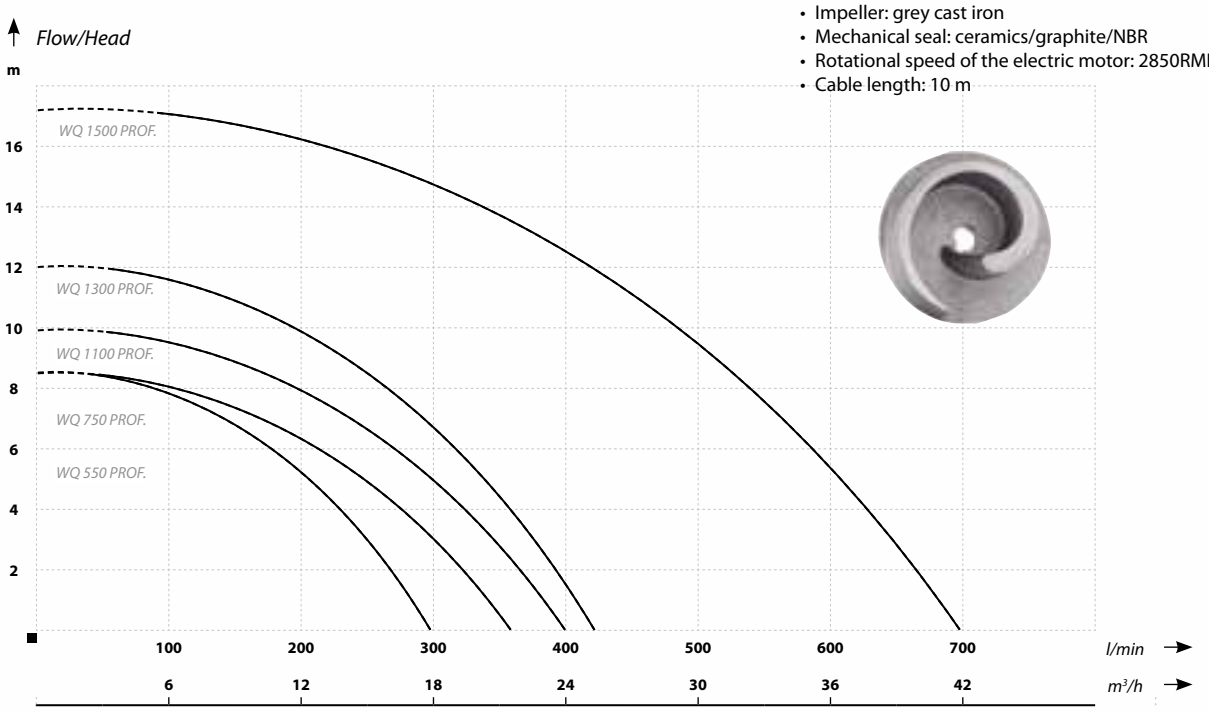
WQ PROFESSIONAL

Professional submersible pumps intended for customers who need strong and durable product in their professional work. Due to the top quality materials used, such as stainless steel and cast iron, and very high performance, WQ PROFESSIONAL pumps can operate in demanding conditions and withstand the adverse sewage environment. The pumps are widely used in sewage pumping stations. All pumps feature a factory-mounted float switch for operation control and thermal protection mounted in the motor winding. Additionally, the WQ Professional 1500 pump is equipped with a cutting impeller with 50 mm passage. Discharge hose can be connected to the pump outlet with a hose clamp or fast-connection coupling.

APPLICATION:
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Sewage treatment plants. Occasional renovation works. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 4-10
- Liquid density: 1.2x10^3kg/m^3

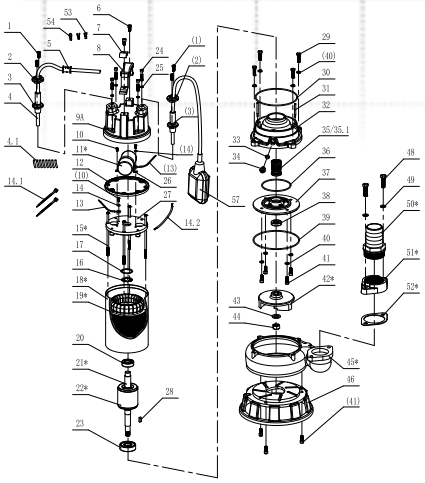
MATERIALS:
- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Impeller passage (mm)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQ 550 PROFESSIONAL	8,5	300	550	230	2	35	2	24/42	15
WQ 750 PROFESSIONAL	8,5	350	750	230	4	35	2	26/52	25,2
WQ 1100 PROFESSIONAL	10	400	1100	230	5,2	35	2	26/54	26,9
WQ 1300 PROFESSIONAL	12	420	1300	230	7	35	2	27/55	29,3
WQ 1500 PROFESSIONAL	17	700	1500	230	9,4	50	2	31/57	32,6

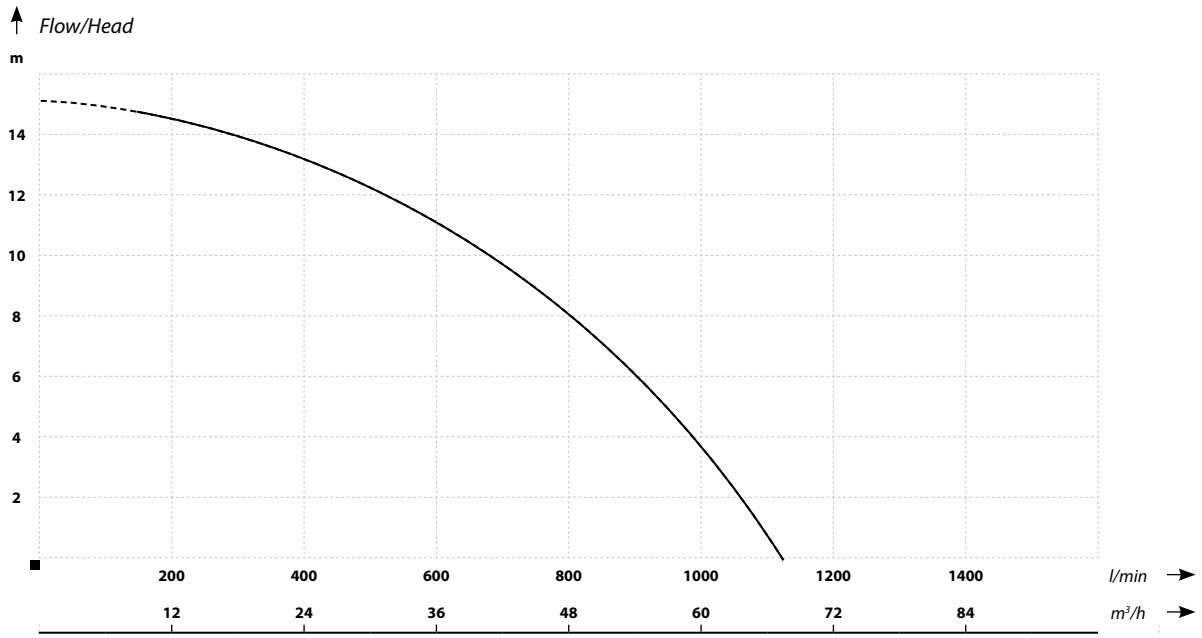
75-FWQ-1,5 INOX



75-FWQ-1,5 pumps are designed for pumping sewage, dirty water and water from flooded rooms. The pumps are used to pump sewage from domestic sump pits and to drain flooded rooms, houses, garages and premises. They are also used in pumping rainwater and surface water from ponds, lakes and rivers, and for feeding ponds.

CHARACTERISTICS:

- High efficiency with low motor power
- Rotor blades allow for breaking up the pumped elements
- Threaded discharge port for easy connection of discharge hose using a hose clamp or quick release coupling
- Top quality materials
- Thermal protection built into the motor winding
- 24 months warranty
- Warranty and post-warranty service



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
75 FWQ 1,5	15	1170	1500	230	15	8	3	52/32	26,5

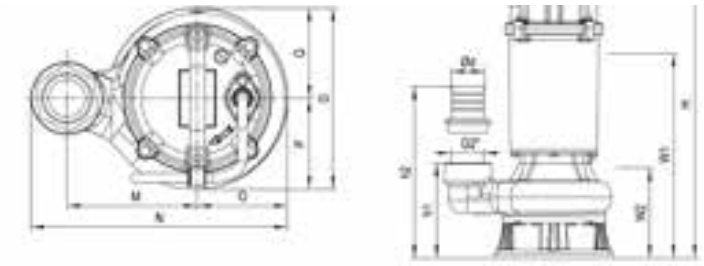
WQ-65-1,5

Professional submersible pumps for pumping domestic sewage and for draining flooded rooms. To ensure trouble-free operation, the pumps are equipped with overload protection mounted in the motor winding. If there is a risk of overloading the motor, the protection will switch off the pump. The construction made of cast iron, alloy and stainless steel makes the pumps resistant to mechanical damage and chemical corrosion. The pump impeller has a single-channel design, resulting in high efficiency. The pumps are fitted with a threaded discharge port which allows the discharge hose to be connected by means of a hose clamp or quick coupling.

The pumps are used for pumping sewage from domestic and agricultural septic tanks and for draining flooded premises, houses, garages and apartments. Pumping rainwater and surface water from ponds, lakes and rivers, feeding ponds. Domestic wastewater treatment plants.

FEATURES:

- Top quality materials
- 24 months warranty
- Warranty and aftermarket service



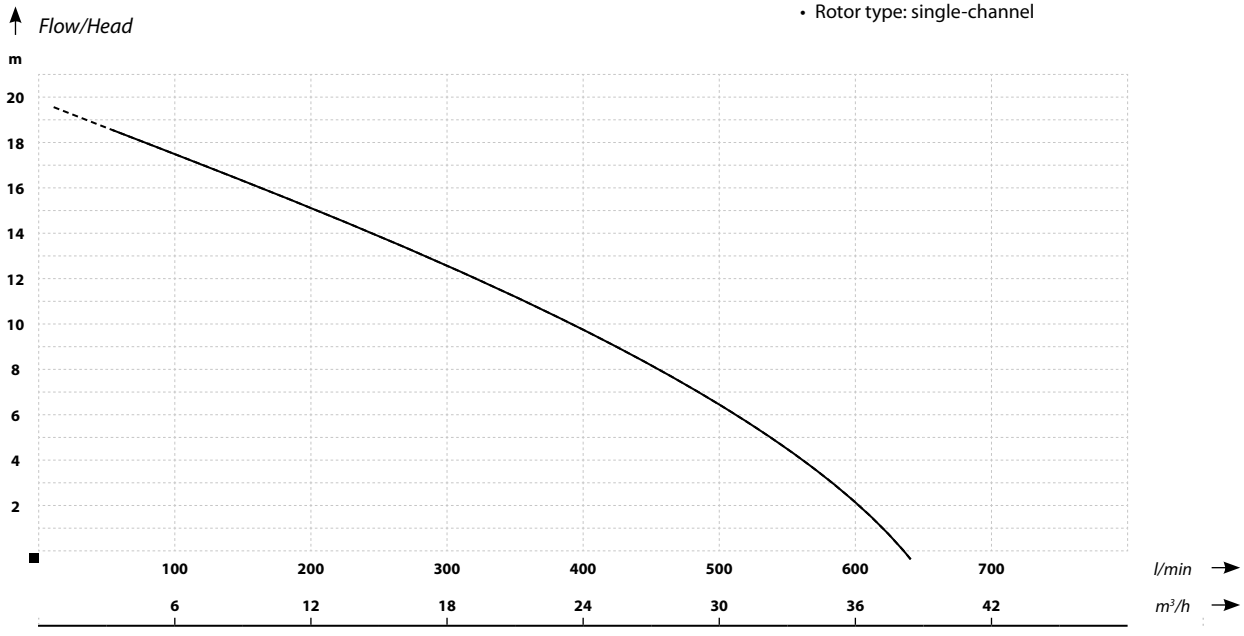
Nazwa	Dimensions (mm)					
	d	h1	h2	W1	W2	H
65-WQ-1,5	65	142	210	120	345	485
	M	N	O	P	Q	D
	130	253	90	90	90	180

TECHNICAL DATA:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: B
- Operating mode: continuous
- Safety: IP68
- Length of power cable: 8 m
- Motor speed: 2850 RPM
- Water PH: 6-10

MATERIALS:

- Motor housing: cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical gland:
- Sic-Ceramic/Carbon-Ceramic
- Rotor type: single-channel



PARAMETRY

Nazwa	Podnoszenie (m)	Wydajność (l/min)	Moc silnika (W)	Zasilanie (V)	Pobór prądu (A)	Króciec (cale)	Dimensions Dia/H (cm)	Waga (kg)
WQI 15-7-1,1	20	630	1500	400	3,2	2½	25	23,5

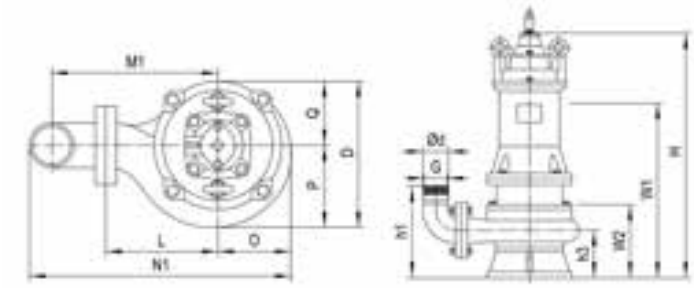
WQ-80-3 / WQ-65-4

Professional submersible pumps for pumping domestic sewage and for draining flooded rooms. To ensure trouble-free operation, the pumps are equipped with overload protection mounted in the motor winding. If there is a risk of overloading the motor, the protection will switch off the pump. The construction made of cast iron, alloy and stainless steel makes the pumps resistant to mechanical damage and chemical corrosion. The pump impeller has a single-channel design, resulting in high efficiency. The pump orifice allows the pump to be mounted on a coupling foot. The termination of the orifice is an elbow steel pipe ending in a thread or orifice.

The pumps are used for pumping sewage from domestic and agricultural septic tanks and for draining flooded premises, houses, garages and apartments. Pumping rainwater and surface water from ponds, lakes and rivers, feeding ponds. Domestic wastewater treatment plants.

FEATURES:

- Top quality materials
- 24 months warranty
- Warranty and aftermarket service



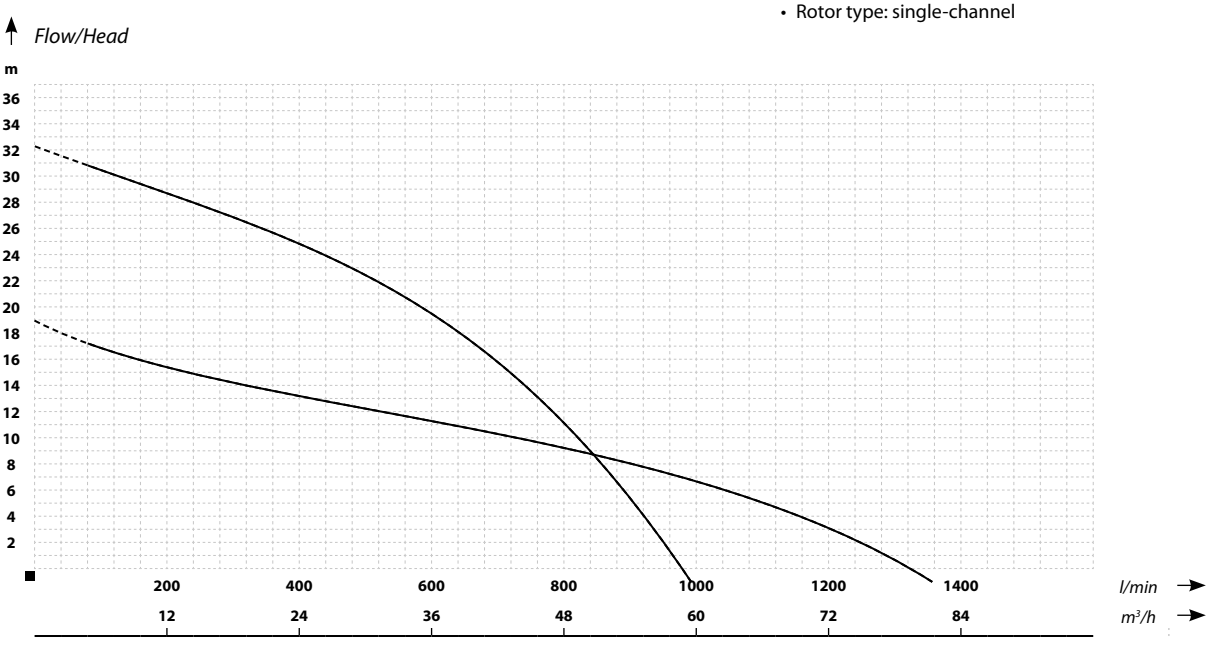
Model	Ød	h1	h3	W1	W2	H	O	P	Q	L	D	M1	N1
WQ-80-3	80	270	125	450	170	630	107	115	100	153	215	245	390
WQ-65-4	65	240	120	455	160	650	115	115	115	180	230	250	397

TECHNICAL DATA:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: B
- Operating mode: continuous
- Safety: IP68
- Length of power cable: 8 m
- Motor speed: 2850 RPM
- Water PH: 6-10

MATERIALS:

- Motor housing: cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical gland:
- Sic-Ceramic/Carbon-Ceramic
- Rotor type: single-channel



PARAMETRY

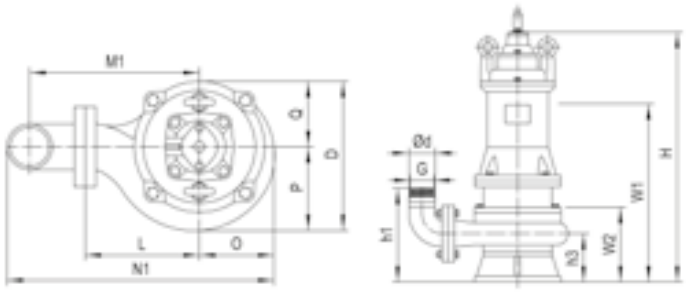
Nazwa	Podnoszenie (m)	Wydajność (l/min)	Moc silnika (kW)	Zasilanie (V)	Pobór prądu (A)	Króciec (cale)	Dimensions Dia/H (cm)	Waga (kg)
WQ-80-3	20	1360	3,0	400	6,5	3	30	55
WQ-56-4	33	1000	4,0	400	8,9	2½	20	61

VX-80-1,5 / VX-65-4

Professional submersible pumps fiitted with VORTEX open rotors for pumping domestic sewage and for draining flooded rooms. If there is a risk of overloading the motor, the protection will switch off the pump. The construction made of cast iron, alloy and stainless steel makes the pumps resistant to mechanical damage and chemical corrosion. The pump impeller has a single-channel design, resulting in high efficiency.
The pump orifice allows the pump to be mounted on a coupling foot. The termination of the orifice is an elbow steel pipe ending in a thread or orifice.

The pumps are used for pumping sewage from domestic and agricultural septic tanks and for draining flooded premises, houses, garages and apartments. Pumping rainwater and surface water from ponds, lakes and rivers, feeding ponds. Domestic wastewater treatment plants.

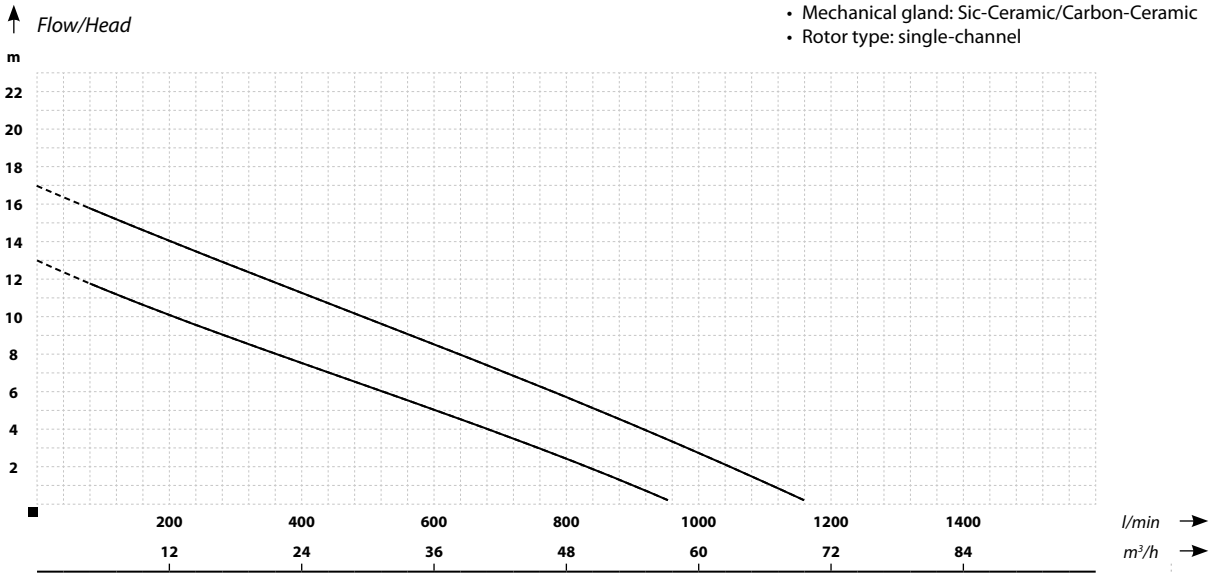
FEATURES:
- Top quality materials
- 24 months warranty
- Warranty and aftermarket service



Model	Ød	h1	h3	W1	W2	H	O	P	Q	L	D	M1	N1
VX-80-1,5	80	255	110	420	170	585	107	110	107	165	217	255	400
XV-80-2,2	80	255	110	400	170	565	107	110	107	165	217	255	400

TECHNICAL DATA:
- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: B
- Operating mode: continuous
- Safety: IP68
- Length of power cable: 8 m
- Motor speed: 2850 RPM
- Water PH: 6-10
- Liquid density: 1.3x103kg/m3

MATERIALS:
- Motor housing: cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical gland: Sic-Ceramic/Carbon-Ceramic
- Rotor type: single-channel



PARAMETRY

Nazwa	Podnoszenie (m)	Wydajność (l/min)	Moc silnika (kW)	Zasilanie (V)	Pobór prądu (A)	Króciec (cale)	Dimensions Dia/H (cm)	Waga (kg)
VX-80-1,5	13	1360	1,5	400	3,2	3	40	44
VX-80-2,2	17	1000	2,2	400	5,0	3	40	46

50-KBFU-0,40 INOX
50-KBFU-0,75 INOX

KBFU series submersible pumps are designed for professional draining works and for applications where there is a risk that pumped water contains sand or sludge. The pumps are intended for removal of water from flooded rooms, houses, garages and premises, and construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Mines and quarries.

CHARACTERISTICS:

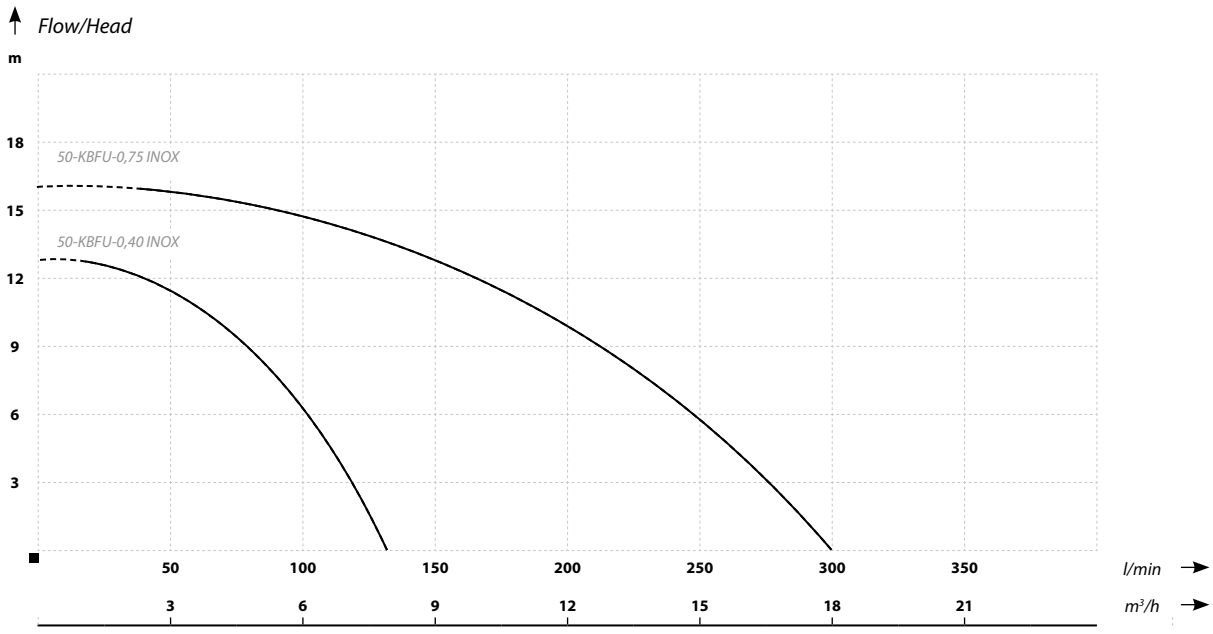
- Suitable for pumping water with sand
- Capable of pumping water to a low level of 5 mm
- Column float switch (50-KBFU-0.75 INOX)
- Top quality materials
- Threaded discharge port for easy connection of discharge hose using a hose clamp or quick release coupling
- 8m power cable with a plug
- Thermal protection built into the motor winding
- 24 months warranty
- Warranty and post-warranty service

TECHNICAL DATA:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230V
- Insulation class: B
- Operating mode: continuous
- Protection class: IP68
- Length of power supply cable: 8m with a plug
- Working position: vertical
- Motor speed: 2850 RPM

MATERIALS:

- Motor housing: AISI 316 stainless steel
- Impeller housing: Grey cast iron
- Shaft and rotor: AISI 316 stainless steel
- Impeller: Steel / glass fibre reinforced PA
- Mechanical seal: Double: ceramic/carbon/NBR (ITALY)
- Dimensions 40cmx24cm
- weight 12.4 kg
- port 2"



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions (cm)	Weight (kg)
50-KBFU-0,40 INOX	13	130	400	230	2	3	2"	40x24	12,4
50-KBFU-0,75 INOX	16	300	750	230	7	4,8	2"	44x24	13,8

25-KBFU-0,45
50-KBFU-0,45

25-KBFU-0,45 50-KBFU-0,45

KBFU submersible pumps are designed for professional drainage works and everywhere where there is a risk that pumped water contains sand or sludge. The pumps are used for draining flooded rooms, houses, garages, apartments or construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Mines and quarries.

FEATURES:

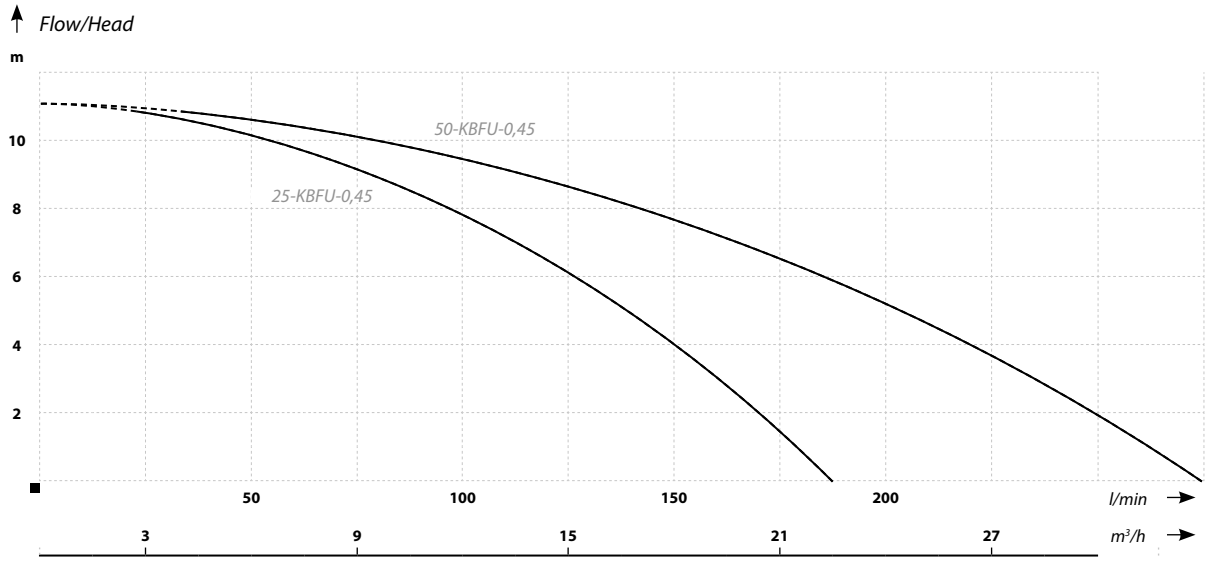
- Suitable for pumping water with sand
- Post float switch (50-KBFU-0,45)
- Capable of pumping water to a low level of 3 mm (25-KBFU-0.45)
- Top quality materials
- Thermal protection built into the motor winding
- The pump motors are from the Japanese company NSK
- 24 months warranty
- Warranty and aftermarket service

TECHNICAL DATA:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: F
- Operating mode: continuous
- Safety: IP68
- Length of power cable: 10m
- Motor speed: 2850 RPM
- Water PH: 5-9
- Liquid density: 1.2x10^3kg/m^3
-

MATERIALS:

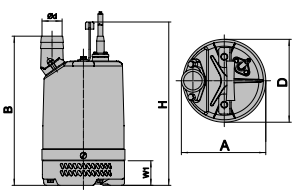
- Motor housing: stainless steel AISI 304
- Impeller housing: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron with heavy wear coating / chromium alloy
- Mechanical gland: Sic-Sic / Carbon-Sic
- Bearings: NSK



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
25-KBFU-0,45	15	750	1,5	400	3,5	3	37
50-KBFU-0,45	26	600	2,2	400	5,0	2	39

Name	Dimensions (mm)					
	d	A	B	D	H	W
25-KBFU-0,45	25	230	340	220	340	60
50-KBFU-0,45	50	230	360	220	340	60



50-KBFU-0,80

The small submersible pumps of the KBFU series are suitable wherever there is a risk that the pumped water contains sand or sludge. The pumps are used for draining flooded rooms, houses, garages or apartments. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering.

FEATURES:

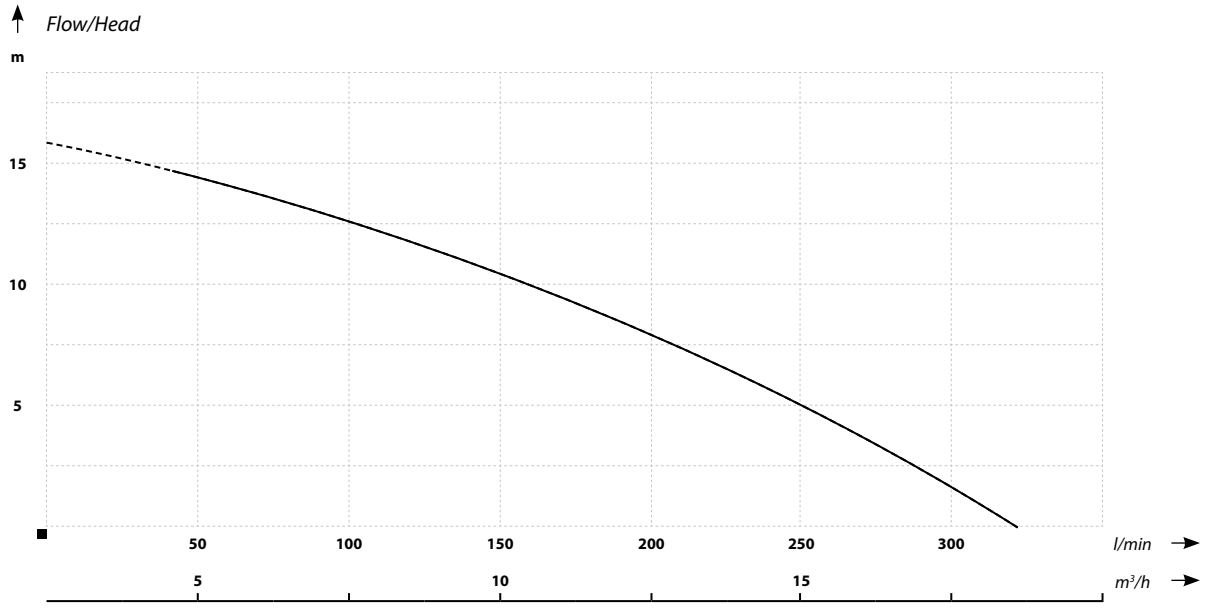
- Suitable for pumping water with sand
- Top quality materials
- Double thermal protection embedded in the motor winding
- The discharge spigot can be mounted either vertically or horizontally
- 24 months warranty
- Warranty and aftermarket service

TECHNICAL DATA:

- Maximum liquid temperature: 40ºC
- Maximum ambient temperature: 40ºC
- Power supply: 230 V
- Insulation class: F
- Operating mode: continuous
- Safety: IP68
- Length of power cable: 10m
- Motor speed: 2850 RPM
- Water PH: 6.5-8.5
- Liquid density: 1.2x10^3kg/m^3
- Maximum draught 7 m

MATERIALS:

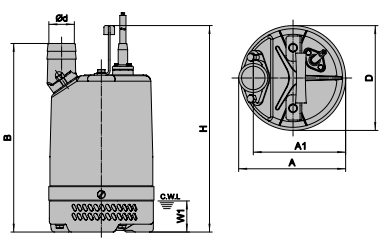
- Motor housing: aluminium alloy
- Body: aluminium alloy
- Shaft and rotor: stainless steel AISI 420SS
- Impeller: ASI201SS stainless steel with heavy wear coating (TPU)
- Bearings: NSK
- Mechanical gland: Ceramic-Sic / Carbon-Ceramic



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
50-KBFU-0,55	15	320	0,80	230	5	2	14,1

Name	Dimensions (mm)					
	d	A	B	D	H	W
50-KBFU-0,55	50	190	336	187	368	50



50-KBFU-0,55

The small submersible pumps of the KBFU series are suitable wherever there is a risk that the pumped water contains sand or sludge. The pumps are used for draining flooded rooms, houses, garages or apartments. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering.

FEATURES:

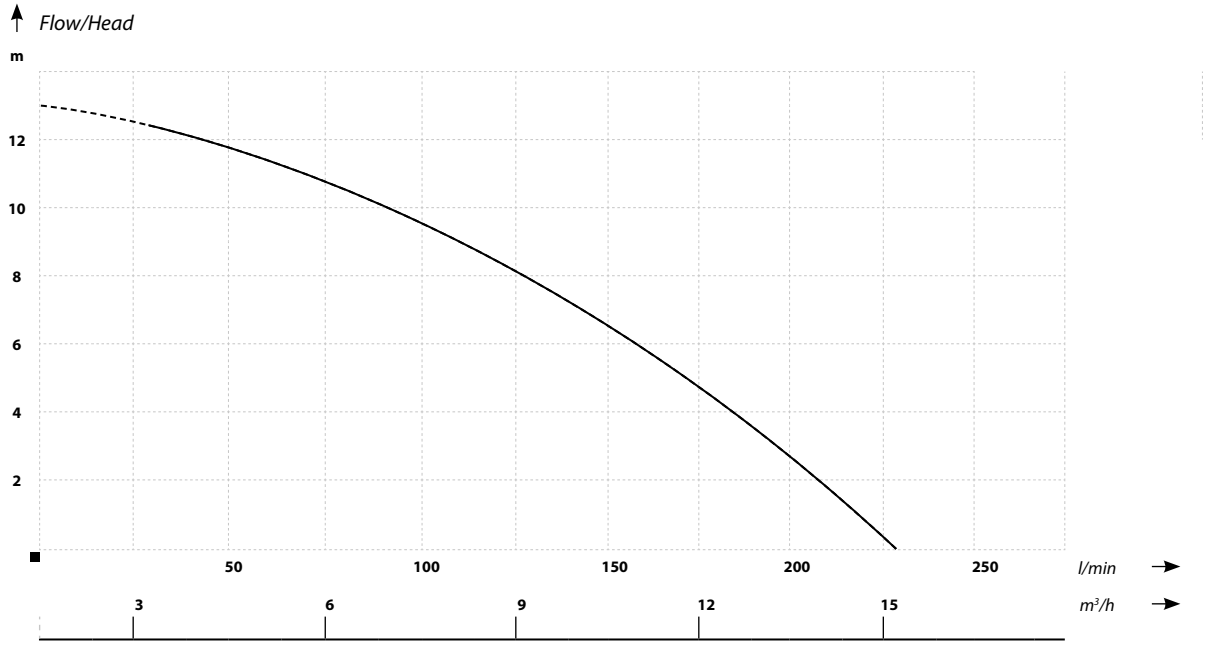
- Suitable for pumping water with sand
- Top quality materials
- Double thermal protection embedded in the motor winding
- 24 months warranty
- Warranty and aftermarket service

TECHNICAL DATA:

- Maximum liquid temperature: 40ºC
- Maximum ambient temperature: 40ºC
- Power supply: 230 V
- Insulation class: F
- Operating mode: continuous
- Safety: IP68
- Length of power cable: 10m
- Motor speed: 2850 RPM
- Water PH: 6.5-8.5
- Liquid density: 1.2x10^3kg/m^3
- Maximum draught 7 m

MATERIALS:

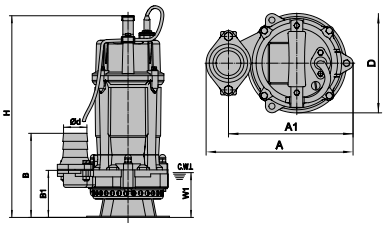
- Motor housing: aluminium
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 420SS
- Impeller: chrome alloy
- Agitator: chrome alloy
- Bearings: NSK
- Mechanical gland: Ceramic-Sic / Carbon-Ceramic



PARAMETERS

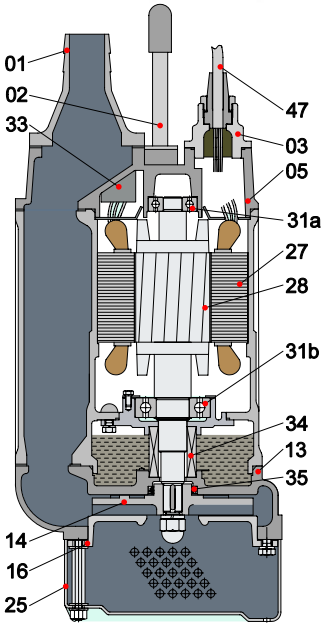
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
50-KBFU-0,55	13	220	0,55	230	4	2	15,8

Name	Dimensions (mm)					
	d	A	B	D	H	W
50-KBFU-0,55	50	237	168	160	405	95



KBFU

KBFU submersible pumps are designed for professional drainage works and everywhere where there is a risk that the pumped water a lot of sand or sludge. The pumps are used for draining flooded rooms, houses, garages, apartments or construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Mines and quarries.

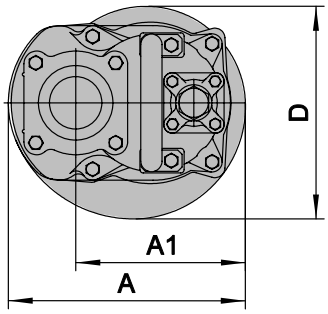


FEATURES:

- Suitable for pumping water with sand
- The design incorporates a cooling jacket so that the pumps do not have to be completely submerged
- Top quality materials
- Pumping of medium up to 3 mm (25 KBFU 0.45)
- Threaded discharge port for easy connection of the discharge hose with a hose clamp or quick coupling
- Float switch for pump control and protection against dry running (50 KBFU 0.45)
- 8 m power cable with plug
- Thermal protection built into the motor winding
- 24 months warranty
- Warranty and aftermarket service

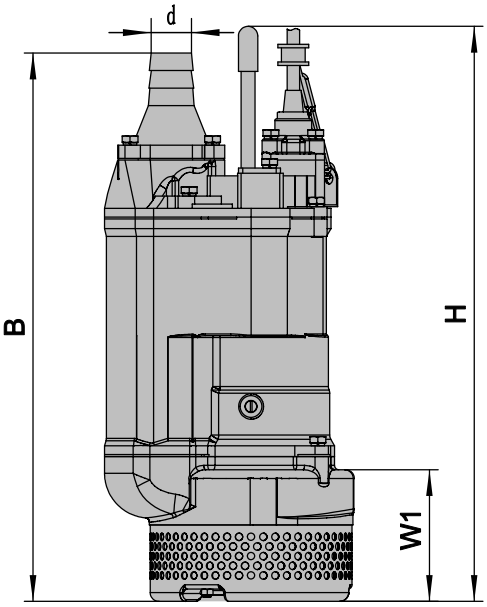
TECHNICAL DATA:

- Maximum liquid temperature: 35ºC
- Maximum ambient temperature: 40ºC
- Power supply: 230 V
- Insulation class: F
- Operating mode: continuous
- Safety: IP68
- Length of power cable: 10 m
- Working position: vertical
- Motor speed: 2850 RPM

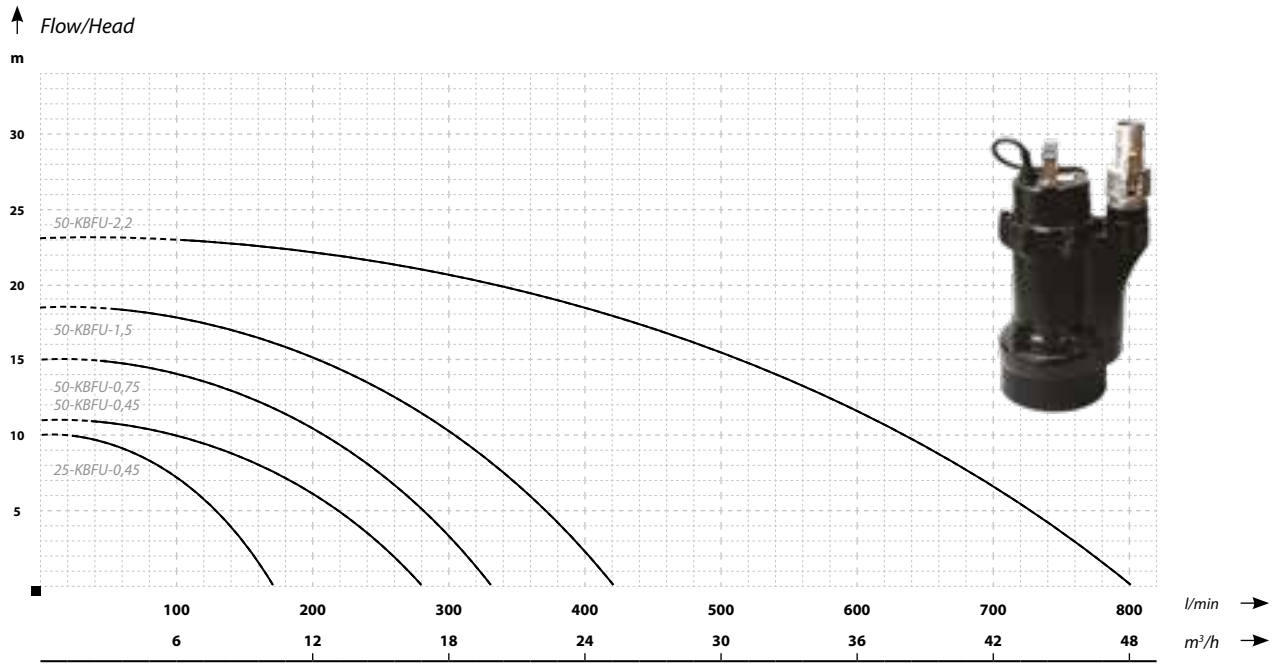


MATERIALS:

- Motor housing: grey cast iron alloy
- Impeller: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron with heavy wear coating / chromium alloy
- Mechanical gland: ≤ 2.2 kW: Sic-Sic /
- Carbon-Sic; ≥ 3.7 kW: Sic-Sic / Sic-Sic
- Bearings: NSK



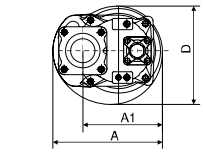
KBFU 230V

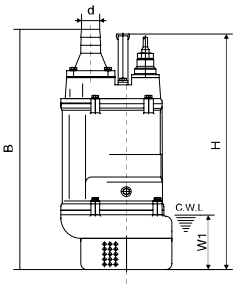


PARAMETERS

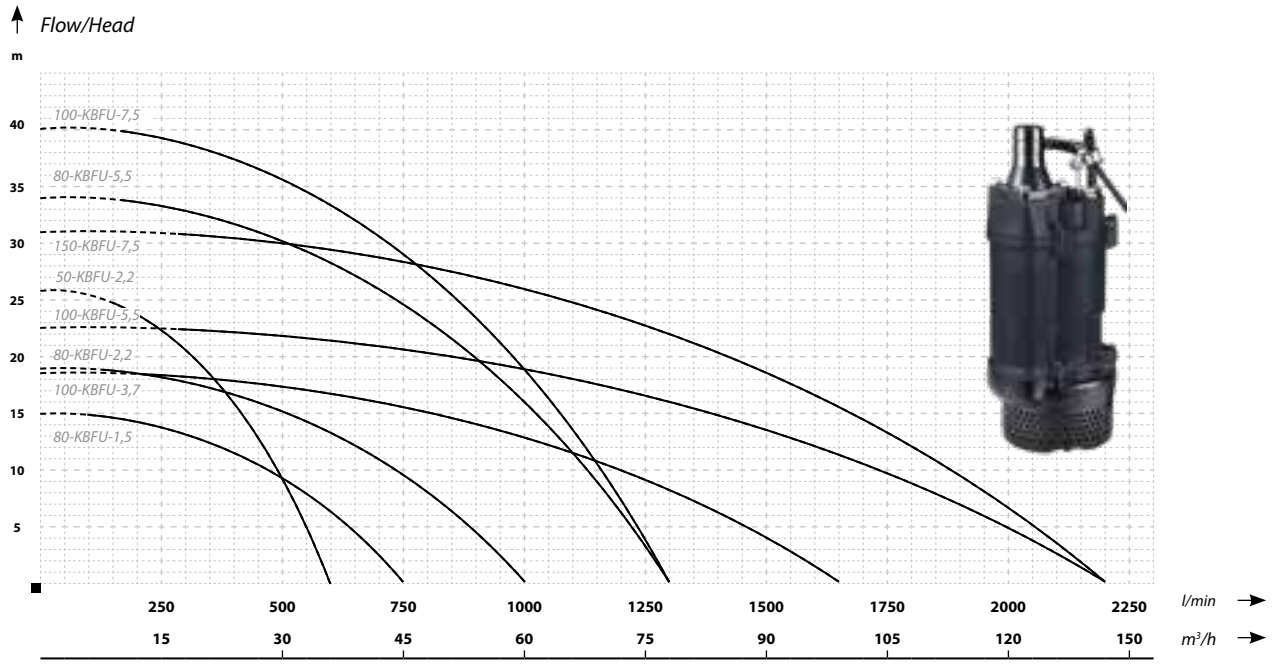
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
25-KBFU-0,45	10	170	0,45	230	2,3	1	11,8
50-KBFU-0,45	11	280	0,45	230	2,3	2	12
50-KBFU-0,75	15	330	0,75	230	5,8	2	39
50-KBFU-1,5	18,5	420	1,5	230	11,4	2	44
50-KBFU-2,2	23	800	2,2	230	14	2	46

Name	Dimensions (mm)						
	d	A	A1	B	D	H	W1
25-KBFU-0,45	25	230	173	340	220	340	60
50-KBFU-0,45	50	230	173	360	220	340	60
50-KBFU-0,75	50	273	225	508	220	488	150
50-KBFU-1,5	50	273	225	533	220	513	150
50-KBFU-2,2	50	273	225	558	220	538	150





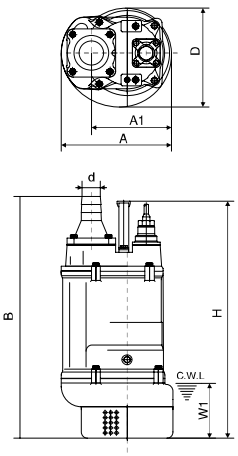
KBFU 400V



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
80-KBFU-1,5	15	750	1,5	400	3,5	3	37
50-KBFU-2,2	26	600	2,2	400	5,0	2	39
80-KBFU-2,2	19	1000	2,2	400	5,0	3	39
100-KBFU-3,7	18,5	1650	3,7	400	7,7	4	63
80-KBFU-5,5	34	1300	5,5	400	11,4	3	77
100-KBFU-5,5	23	2200	5,5	400	11,4	4	77
100-KBFU-7,5	40	1500	7,5	400	15	4	106
150-KBFU-7,5	31	2200	7,5	400	15	6	108

Name	Dimensions (mm)						
	d	A	A1	B	D	H	W1
80-KBFU-1,5	80	235	173	535	216	505	120
50-KBFU-2,2	50	235	173	535	216	505	120
80-KBFU-2,2	80	235	173	535	216	505	120
100-KBFU-3,7	100	283	208	642	252	629	150
80-KBFU-5,5	80	283	208	671	252	590	150
100-KBFU-5,5	100	283	208	686	252	590	150
100-KBFU-7,5	100	330	240	764	314	676	190
150-KBFU-7,5	150	330	240	790	314	676	190



80-KBFU-4,0-4P

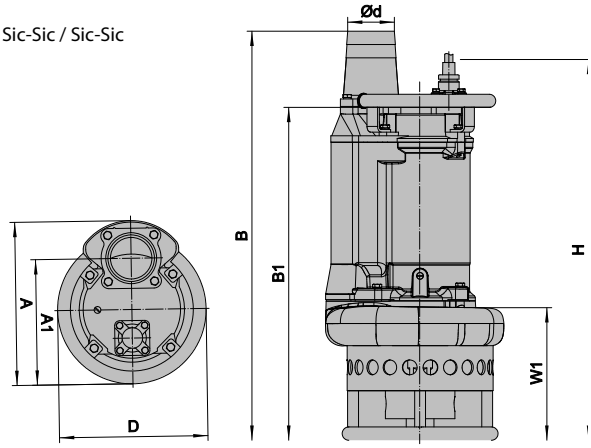
KBFU-4P series submersible pumps are designed for heavier dewatering work in mines, quarries and construction.
Characterised by a durable and robust design, the 4P series pump motors feature 4 poles, effecting in significant extension of the life of the equipment in relation to its 2-pole counterparts. In addition, the rotor and the external agitator are made of chrome alloy, enabling operation under severe conditions. Thanks to the casing in the form of a cooling jacket, they can operate only partially submerged.

The pumps are used for draining flooded areas, pumping raw sewage, dewatering construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Mines and quarries. Where there is a risk of bentonite or a significant sand content in the pumped water.

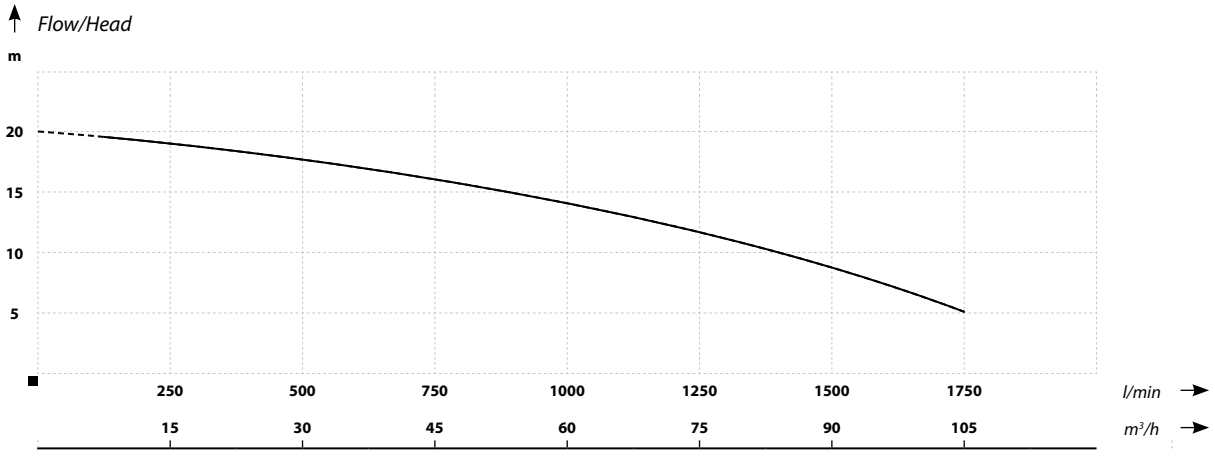
FEATURES:
- Suitable for pumping water with sand
- Top quality materials
- Double thermal protection embedded in the motor winding
- 24 months warranty
- Warranty and aftermarket service

MATERIALS:
- Motor housing: grey cast iron alloy
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 420SS
- Impeller: grey cast iron/chromium alloy
- Agitator: grey cast iron/chromium alloy
- Bearings: NSK
- Mechanical gland: Sic-Sic / Sic-Sic

TECHNICAL DATA:
- Maximum liquid temperature: 40ºC
- Maximum ambient temperature: 40ºC
- Power supply: 400V
- Insulation class: F
- Operating mode: continuous
- Safety: IP68
- Length of power cable: 10m
- Motor speed: 1450RMP
- Motor type: 4-pole
- Water PH: 5–9
- Liquid density: 1.2x10^3kg/m^3
- Maximum draught 7 m



Name	Dimensions (mm)						
	d	A	A1	B	D	H	W1
80-KBFU-4,0-4P	80	350		816	326	730	250



PARAMETERS

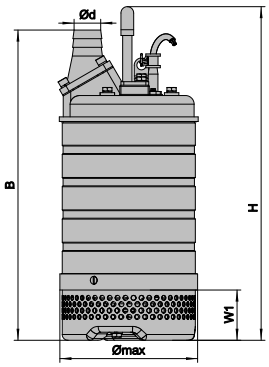
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)	Passage through Impeller (mm)	Prędkść obrotowa silnika (RPM)
80-KBFU-4,0-4P	15	1750	4,0	400	10,2	3	109	30	1450

7 IBX

IBX series submersible pumps are designed for pumping water contaminated by abrasive materials such as sand and silt, while maintaining a compact design. Mainly used in single-family construction for trench dewatering. Thanks to the casing in the form of a cooling jacket they can operate only partially submerged. A double mechanical gland resistant to high pressure is used to ensure guaranteed tightness.
Semi-open impeller made of high chromium alloy with wear plate (ductile iron) provides excellent durability. The pumps feature thermal protection installed in the winding.

For draining flooded rooms, houses, garages or apartments. Watering. Drainage of construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Anywhere where there is a risk of significant sand and sludge content in the pumped water.

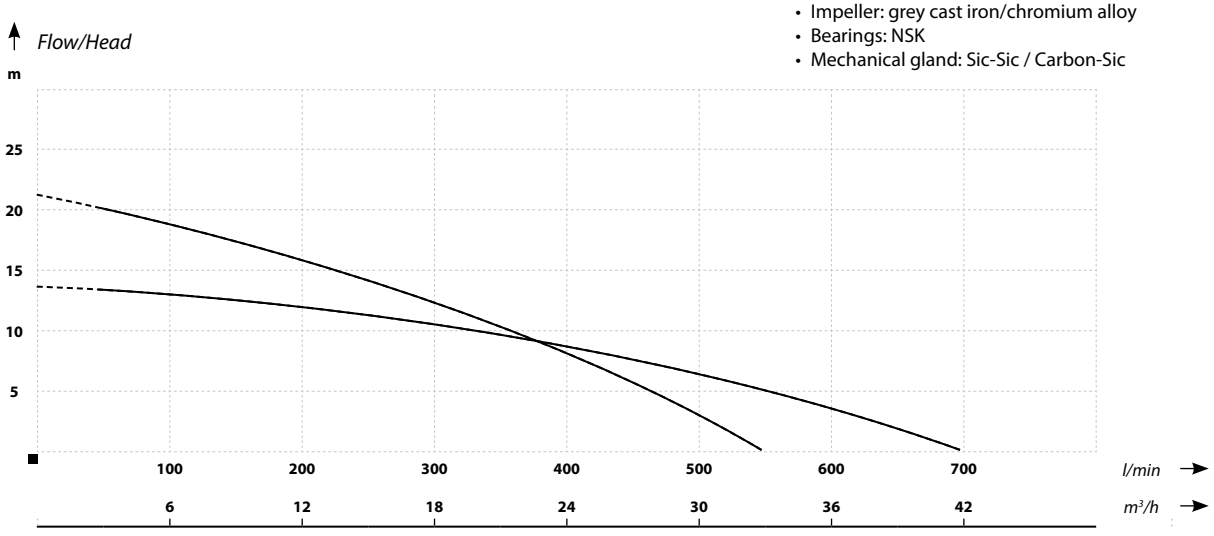
Name	Dimensions (mm)			
	d	B	H	W1
50-IBX-1,5	50	590	613	87
80-IBX-1,5	80	597	613	87



FEATURES:
- Suitable for pumping water with sand
- Top quality materials
- Double thermal protection embedded in the motor winding
- 24 months warranty
- Warranty and aftermarket service

TECHNICAL DATA:
- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: F
- Operating mode: continuous
- Safety: IP68
- Length of power cable: 8 m
- Motor speed: 2850 RPM
- Water PH: 5–9
- Liquid density: 1.2x10^3kg/m^3
- Maximum draught 7 m

MATERIALS:
- Motor housing: stainless steel AISI 304
- Body: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 420SS
- Impeller: grey cast iron/chromium alloy
- Bearings: NSK
- Mechanical gland: Sic-Sic / Carbon-Sic



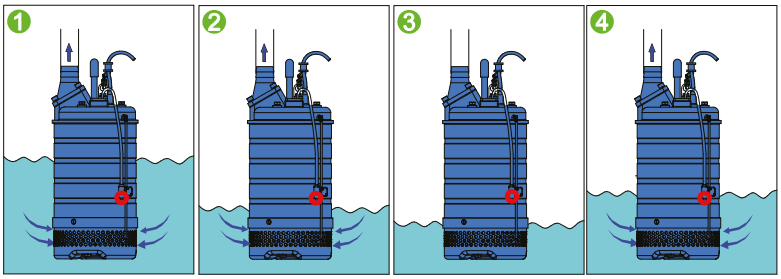
PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)	Passage through Impeller (mm)
50-IBX-1,5	21	560	1,5	230	10	2	37	8
80-IBX-1,5	14	700	1,5	230	10	3	37	8

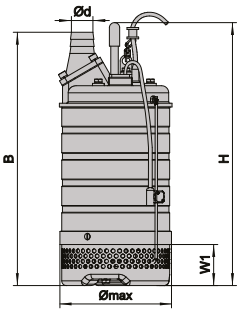
IBX-AUTO

IBX series submersible pumps are designed for pumping water contaminated by abrasive materials such as sand and silt, while maintaining a compact design. Mainly used in single-family construction for trench dewatering. Thanks to the casing in the form of a cooling jacket they can operate only partially submerged. Unlike the KBFU series, the pumps feature a control unit that acts as a safety device.
A double mechanical gland resistant to high pressure is used to ensure guaranteed tightness. Semi-open impeller made of high-chromium alloy with wear plate (ductile iron), provides excellent durability. The pumps feature thermal protection installed in the winding.

For draining flooded rooms, houses, garages or apartments. Watering. Drainage of construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Anywhere where there is a risk of significant sand and sludge content in the pumped water.



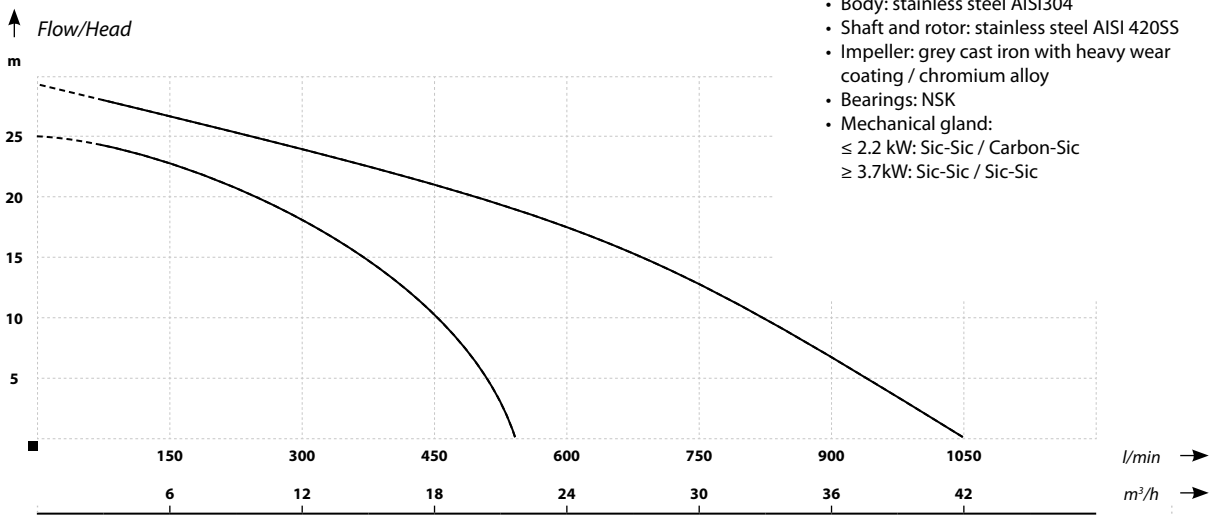
Name	Dimensions (mm)				
	d	B	H	W1	Ø max
50-IBX-2,2-CFA	50	590	613	87	260
80-IBX-3,7-CFA	80	641	565	87	320



FEATURES:
- Suitable for pumping water with sand
- Top quality materials
- Double thermal protection embedded in the motor winding
- 24 months warranty
- Warranty and aftermarket service

TECHNICAL DATA:
- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 400V
- Insulation class: F
- Operating mode: continuous
- Safety: IP68
- Length of power cable: 10m
- Motor speed: 2850 RPM
- Motor type: 4-pole
- Water PH: 5–9
- Liquid density: 1.2x10^3kg/m^3
- Maximum draught 7 m

MATERIALS:
- Motor housing: stainless steel AISI304
- Body: stainless steel AISI304
- Shaft and rotor: stainless steel AISI 420SS
- Impeller: grey cast iron with heavy wear coating / chromium alloy
- Bearings: NSK
- Mechanical gland:
  ≤ 2.2 kW: Sic-Sic / Carbon-Sic
  ≥ 3.7kW: Sic-Sic / Sic-Sic

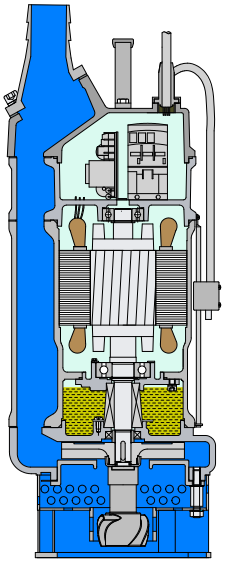


PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)	Passage through Impeller (mm)
50-IBX-2,2-CFA	25	550	2,2	400	5,1	2	42	8
80-IBX-3,7-CFA	29	1050	3,7	400	7,7	3	60	8

KBFU-AUTO

Submersible pumps of the KBFU-AUTO series are designed for professional dewatering works, based on the KBFU series. Mainly used in the construction industry for drainage of excavations. In contrast to the KBFU series, the pumps are equipped with a control unit and an external agitator to increase the life of the pumps in more severe conditions. The pumps are characterised by their durable and robust construction. Thanks to the automatic control, the pumps require virtually no manual operation and additionally have a number of safety features. Thanks to the cooling jacket enclosure they can operate only partially submerged. A double mechanical gland is used to ensure guaranteed tightness.
The pumps are used for the drainage of flooded rooms, garages and premises. Pumping of rainwater and surface water from ponds, lakes and rivers. Civil engineering. Mines and quarries.
Wherever there is a risk of bentonite or significant sand and sludge content in the pumped water.



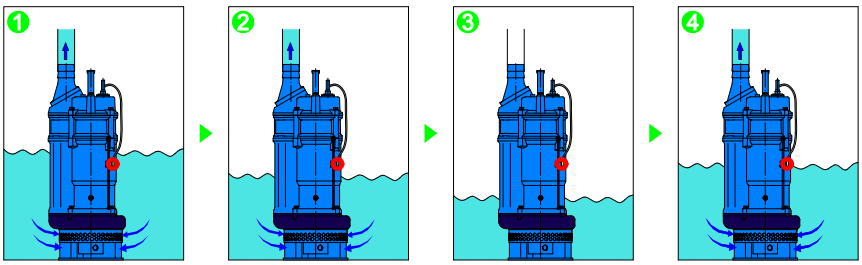
FEATURES:
- Suitable for pumping water with sand
- Top quality materials
- Thermal protection built into the motor winding
- Warranty 24 months
- Warranty and post-warranty service

TECHNICAL DATA:
- Maximum liquid temperature: 40ºC
- Maximum ambient temperature: 40ºC
- Thermal protection: 230V - yes / 400V no
- Insulation class: F
- Operating mode: continuous
- Safety: IP68
- Power supply cable length: 8 m
- Motor speed: 2850 RMP
- Liquid density: 1.2x10^3kg/m^3
- Maximum submersion 7 m

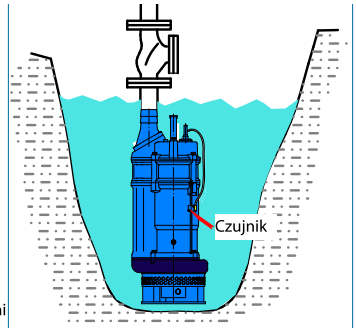
MATERIAL:
- Motor housing: alloy/grey cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron with heavy wear coating/chromium alloy
- Bearings: NSK
- Mechanical gland:
  ≤ 2.2 kW: Sic-Sic / Carbon-Sic
  ≥ 3.7 kW: Sic-Sic / Sic-Sic

CONTROL MODULE - FUNCTIONS:
- Phase reversal protection to ensure correct rotation of the rotor;
- Automatic pump stop in the event of overload (e.g. by blocked rotor) and incorrect voltage: after an emergency stop of the pump, a starting test is carried out within 5 minutes.
- Overheating protection: if the temperature is too high, the pump switches off and automatically restarts after cooling down.
- Adjustable fluid sensor level.

Automaczyczne sterowanie

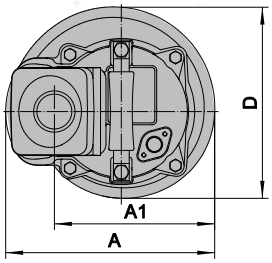


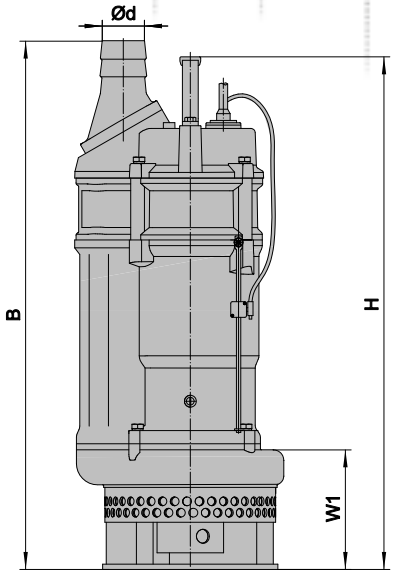
1. Pompa pracuje tak długo dopóki czujnik płynu jest zanurzony.
2. W ciągu ok. 1 minuty po odsłonięciu czujnika płynu pompa zostanie wyłączona
3. Po ok. 1 minucie pompa jest wyłączona do czasu ponownego zanurzenia czujnika płynu.
4. Gdy czujnik zostanie zanurzony poma uruchomi się automatycznie



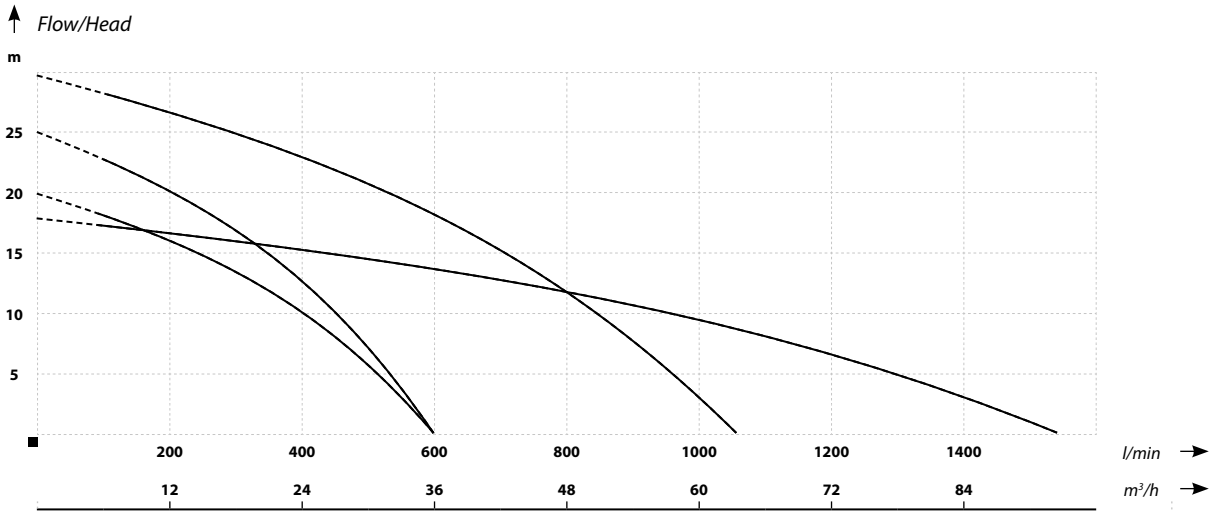
W przypadku niewielkiego napływu wody, zalecany jest montaż zaworu zwrotnego aby pompa nie uruchamiała się zbyt często oraz przesunięcie czujnika płynu ku górze.

KBFU-AUTO



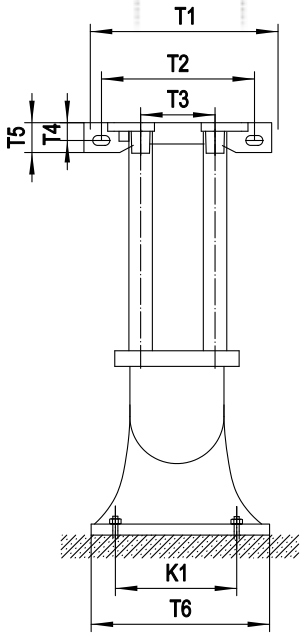


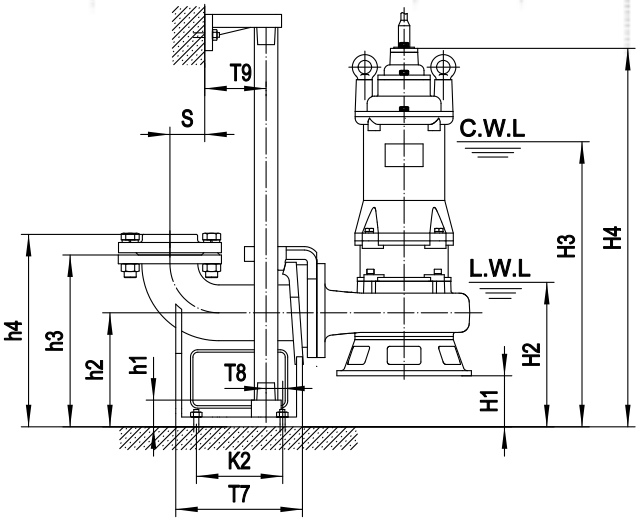
Name	Dimensions (mm)						
	d	A	A1	B	D	H	W1
50-KBFU-1,5-CFA	50	235	173	629	216	594	135
50-KBFU-2,2-CFA	50	235	173	629	216	594	135
80-KBFU-3,7-CFA	80	283	208	714	252	720	165
100-KBFU-3,7-CFA	100	283	208	739	252	720	165



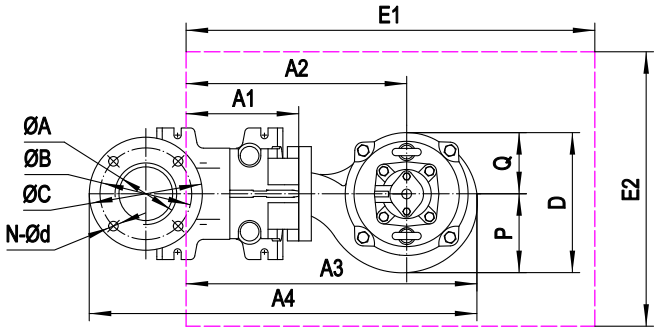
PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)	Passage through Impeller (mm)
50-KBFU-1,5-CFA	20	600	1,5	400	3,5	2	43	10
50-KBFU-2,2-CFA	25	600	2,2	400	5,1	2	46	10
80-KBFU-3,7-CFA	30	1050	3,7	400	8,0	3	46	10
100-KBFU-3,7-CFA	18	1550	3,7	400	8,0	4	46	10





FOOT COUPLING FITS TO:
65-WQ-4,0 / 80-WQ-3,0
80-VX-1,5 / 80-VX-2,2



PARAMETERS

Name	Stopa sprzęgająca	H1	H2	H3	H4	A1	A2	A3	A4	P	Q	D	E1xE2	N.W.
WQ-80-3	80-80	68	235	515	695	176	329	436	608	115	100	215	650x550	50
WQ-65-4	65-65	45	205	500	695	155	333	448	619	115	115	230	650x550	58
VX-80-1,5	80-80	80	250	480	645	176	340	447	620	110	107	217	650x550	39
VX-80-2,2	80-80	80	250	500	665	176	340	447	620	110	107	217	650x550	41

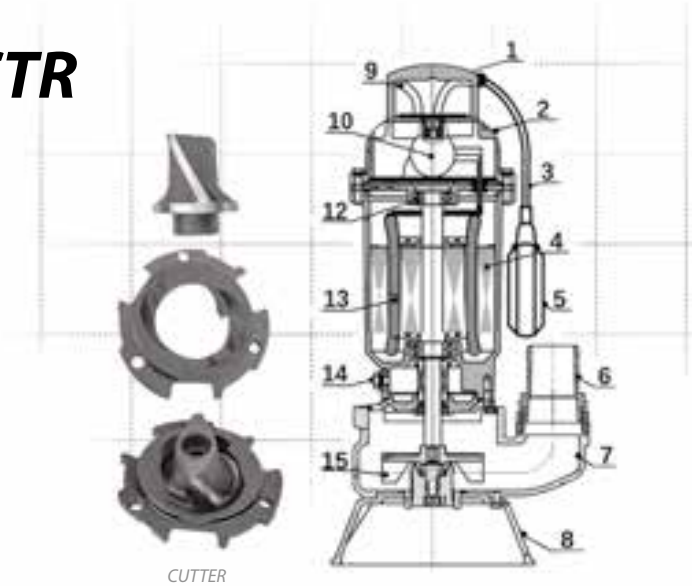
PARAMETERS

FOOT COUPLING	ØA	ØB	ØC	N-Ød	T1	T2	T3	T4	T5	T6	T7	T8	T9	K1	K2	S	h1	h2	h3	h4
50-50	Ø50 / G2"	110	140	4-Ø14	265	215	105	25	42	200	215	15	67	165	135	63	25	160	250	280
65-65	Ø65 / G2,5"	130	160	4-Ø14	280	260	125	30	50	230	235	20	70	190	155	90	25	165	265	295
80-80	Ø80 / G3"	150	190	4-Ø18	315	265	145	27	50	255	225	30	78	215	155	77	25	190	305	335
100-100	Ø100 / G4"	170	210	4-Ø18	365	305	170	32	55	295	260	35	95	265	175	100	25	230	350	380

SUBMERSIBLE PUMPS WITH CUTTING SYSTEM

CTR
FURIATKA
V
SWQ
WQI
KRAKEN
KRAKEN 1800
KRAKEN 1800 DF
UP 60/80
ZWQ
MWQ
GUIDE RAIL SYSTEM

CTR



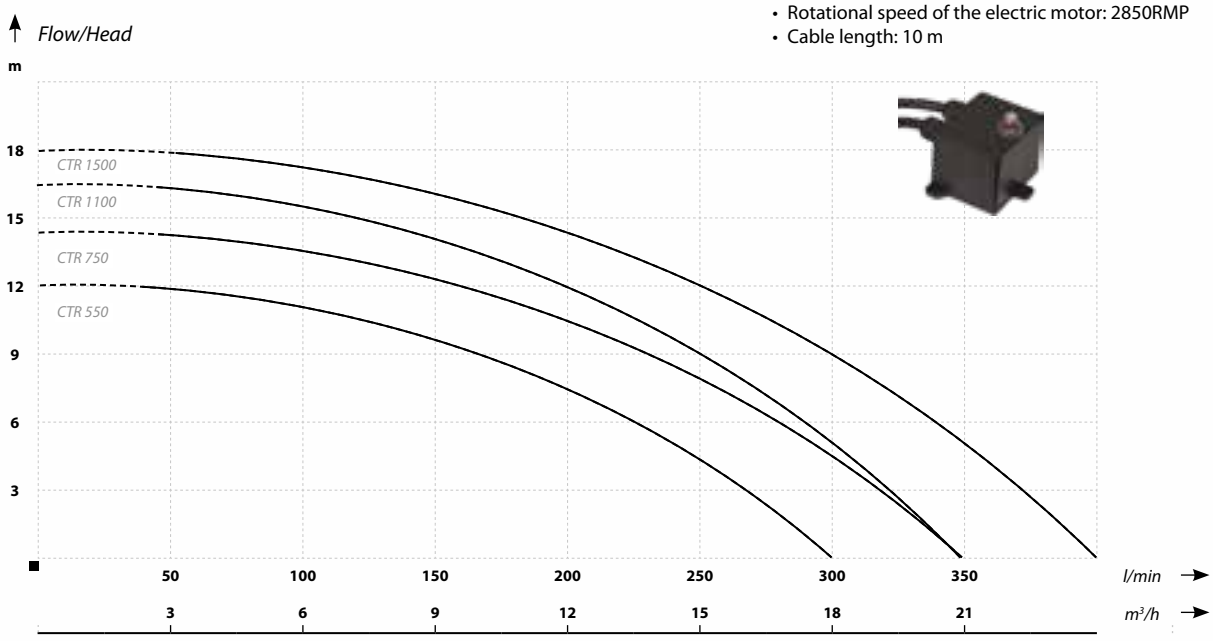
CUTTER

A series of submersible pumps with cutting system designed for pumping domestic sewage. In case of flooding, they can be used for draining rooms. The robust construction of the pump made of durable cast iron, the cutting system with a cutting knife and very reasonable price have made the pumps very popular among individual customers. The pumps are equipped with a float switch for automatic operation. To ensure reliable operation, the pumps are equipped with overload protection mounted on the cable. Pump outlet provides connection of the discharge hose with a hose clamp or fast-connection.

APPLICATION:
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 5 - 9

MATERIALS:
- Motor housing: grey cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Cutting knife: grey cast iron/stainless steel AISI 304
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m

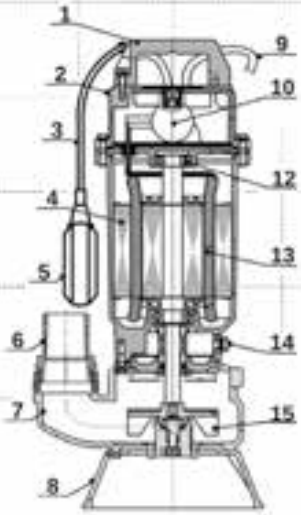


PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
CTR 550	12	300	550	230	4,8	2	25/42	17
CTR 750	14	350	750	230	6,4	2	25/44	18
CTR 1100	16	350	1100	230	9	2	26/44	20
CTR 1500	18	400	1500	230	11	2	26/46	22

FURIATKA

CUTTER



Submersible cast iron pumps with cutting system. The pumps are designed for pumping domestic sewage and draining flooded rooms. In order to minimize the risk of clogging, the pumps are equipped with an exceptionally effective "screw" cutting system. To ensure reliable operation, the pumps have overload protection mounted on the cable. To prevent motor overloading, the protection will stop the pump. The cast iron construction makes the pumps resistant to mechanical damage and chemical corrosion. The pumps are equipped with a float switch for automatic operation control, and the pump outlet provides connection of the discharge hose with a hose clamp or fast-connection. Their robust design and exceptionally effective cutting system have made the Furiatka series one of the most popular pumps with cutting system on the market in Poland.

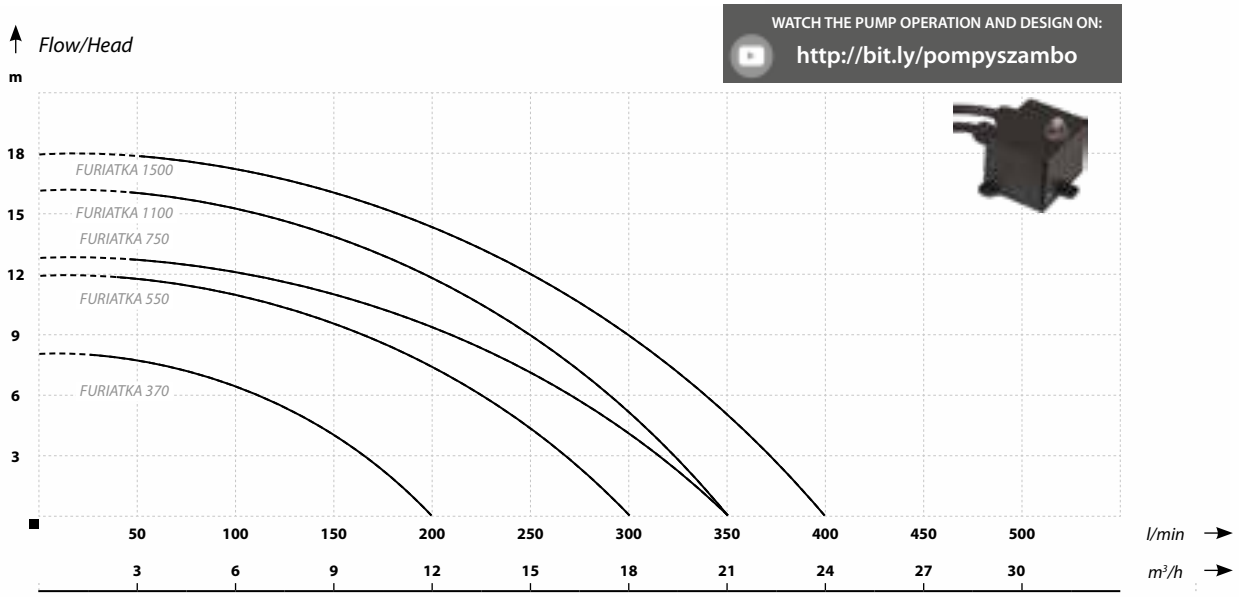
PUMP TEST: https://youtu.be/25uq0YBIw78

APPLICATION:
Pumping sewage from domestic and agricultural septic tanks, and draining flooded rooms, houses and garages. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes. Domestic sewage treatment plants.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 5-9

MATERIALS:
- Motor housing: grey cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Cutting knife: grey cast iron/stainless steel AISI 304
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m

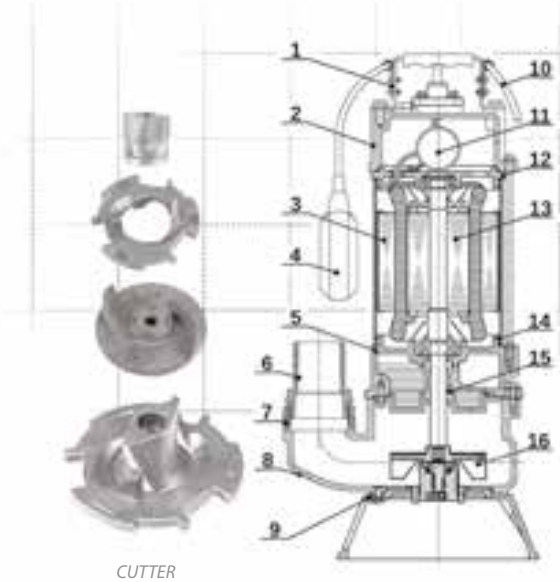
WATCH THE PUMP OPERATION AND DESIGN ON:
http://bit.ly/pompyszambo



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
FURIATKA 370	8	200	370	230	3	1½	21/40	10
FURIATKA 550	12	300	550	230	5,5	2	25/46	19
FURIATKA 750	13	350	750	230	6,5	2	26/47	19,6
FURIATKA 1100	16	350	1100	230	10	2	25/47	22,9
FURIATKA 1500	18	400	1500	230	12	2	26/48	23,1

V



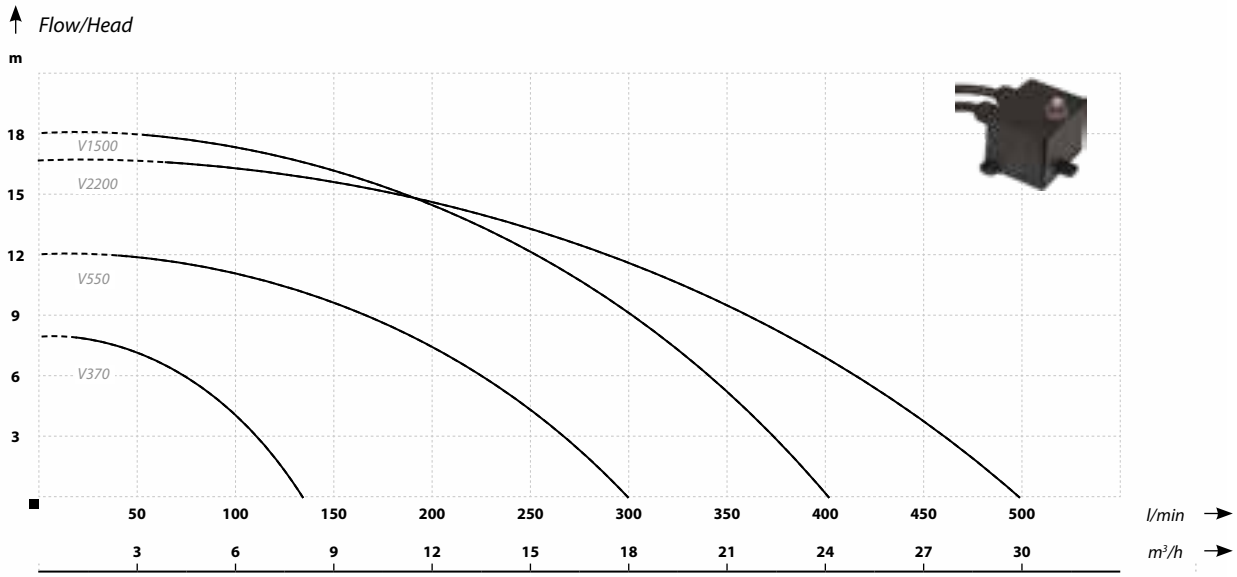
CUTTER

Submersible pumps with cutting system designed for pumping domestic sewage. In case of flooding, they can be used for draining rooms. Their robust design and quality materials used (stainless steel, cast iron), the cutting system with a cutting knife, and very reasonable price have made the pumps very popular among individual customers.
The pumps are equipped with a float switch for automatic operation. To ensure reliable operation, the pumps have overload protection mounted on the cable. V 550, V1500 and V2200 pumps incorporate the high efficiency "screw" cutting system. Pump outlet provides connection of the discharge hose with a hose clamp or fast-connection.

APPLICATION:
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 5 - 9

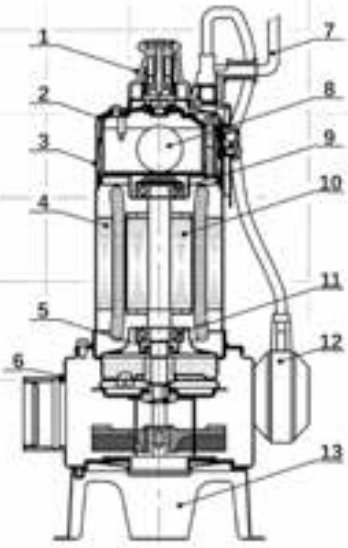
MATERIALS:
- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Cutting knife: grey cast iron/stainless steel AISI 304
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
V370	7,5	130	370	230	3,8	1¼	17/40	10,8
V550	12	300	550	230	5,7	2	25/44	17,5
V1500	18	400	1500	230	12,5	2	26/50	23
V 2200	16	500	1500	230	12	2	26/50	25,2

SWQ

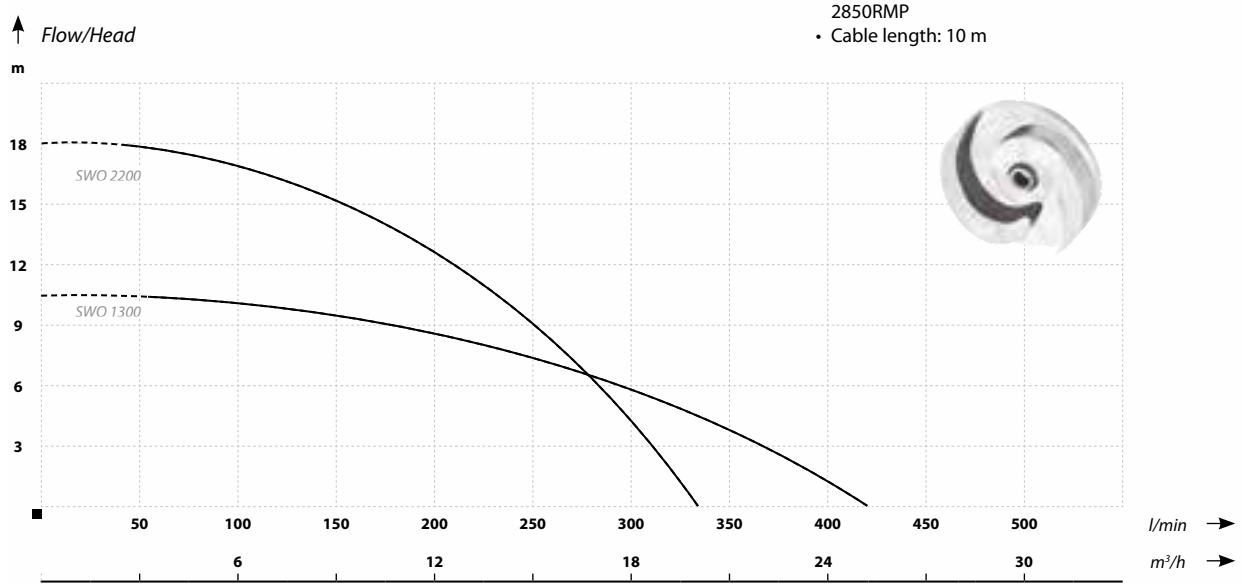


Stainless steel submersible pumps with cutting system Designed for pumping dirty water and domestic sewage. The risk of clogging has been minimized due to open cutting system. The top quality stainless steel design ensures long-term and reliable operation of the pumps. The motor is equipped with thermal protection mounted in the winding. In addition, the pumps have a float switch for automatic operation control.

APPLICATION:
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 4 - 10

Materials:
- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller/cutting system: stainless steel AISI 304
- Mechanical seal: ceramics/carbon/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m

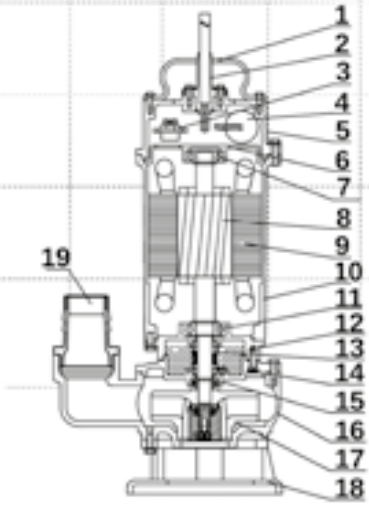


PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions (mm)		Weight (kg)
								H	B	
SWQ 1300	10	417	1300	230	25	7	2	480	250	12,5
SWQ 2200	18	333	2200	230	25	9	2	600	320	14,5

WQI

CUTTER

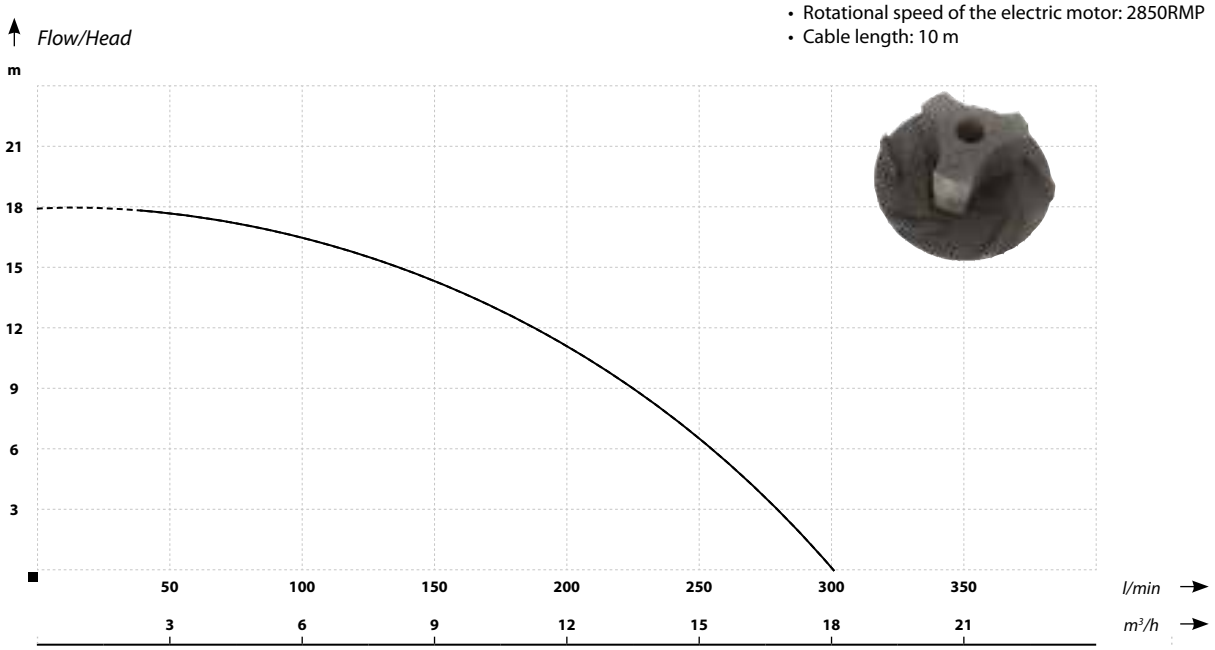


Professional submersible pump with cutting system. The pumps are designed for pumping domestic sewage and draining flooded rooms. In order to minimize the risk of clogging, the pumps are equipped with an exceptionally effective three-channel "screw" cutting system. To ensure reliable operation, the pumps have overload protection mounted in the motor winding. To prevent motor overloading, the protection will stop the pump. The construction made of cast iron, alloy and stainless steel makes the pumps resistant to mechanical damage and chemical corrosion. The pumps are equipped with a float switch for automatic operation control, and the pump outlet provides connection of the discharge hose with a hose clamp or fast-connection.

APPLICATION:
Pumping sewage from domestic and agricultural septic tanks, and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes. Domestic sewage treatment plants.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 5-9

MATERIALS:
- Motor housing: cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Cutting knife: grey cast iron/stainless steel AISI 304
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQI 15-7-1,1	18	300	1100	230	6	2	27/51	23,7

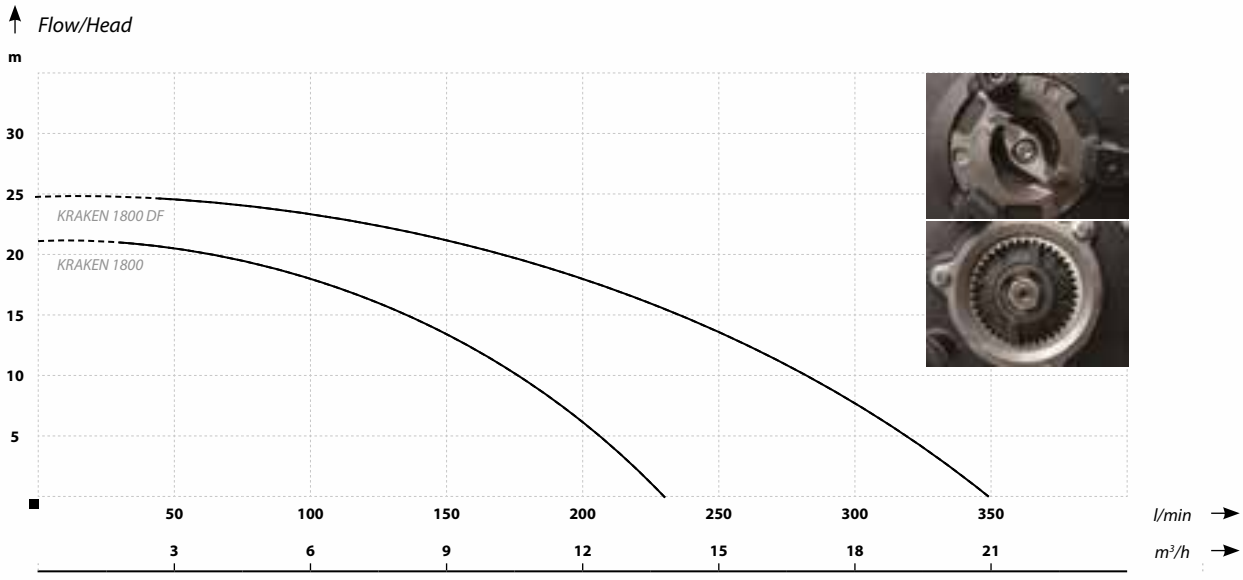
KRAKEN

A series of professional submersible pumps with cutting system designed for customers who need a strong and reliable product in their professional work. The top quality materials used and very high performance makes KRAKEN 1800 pumps suitable for operation in harsh conditions - stainless steel and cast iron design ensures the pumps withstand the adverse sewage environment. These pumps are widely used in sewage pumping stations. Pump operation is controlled by the factory-mounted float switch. KRAKEN 1800 is equipped with a multi-channel disk cutting system in order to minimize the risk of clogging. KRAKEN 1800 DF has an exceptionally effective two-channel screw cutting system. The motors with Class F winding insulation are additionally equipped with thermal protection mounted in the winding. Both models are supplied with flanges for connecting pipes or fast-connection, and an adapter for connecting 2" discharge hose with a hose clamp. The pumps are available as single-phase 230V ~/ 50Hz versions, with a float switch, and 3-phase 400V ~ 3 / 50Hz version.

KRAKEN DF can be supplied with a guide rail system for installation in pump stations. The guide rail system is sold separately.

PUMP TEST: https://youtu.be/srPLsaIKsqM

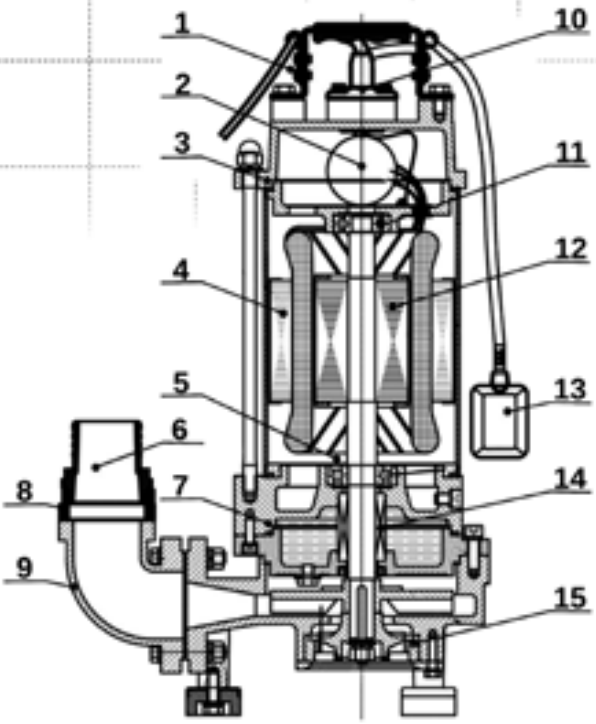
APPLICATION:
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Sewage treatment plants. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

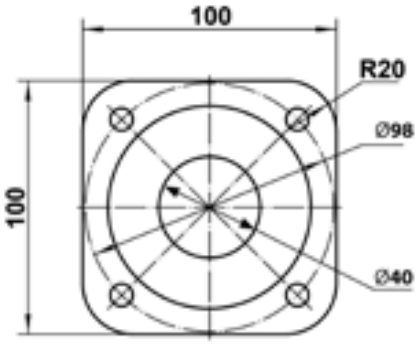


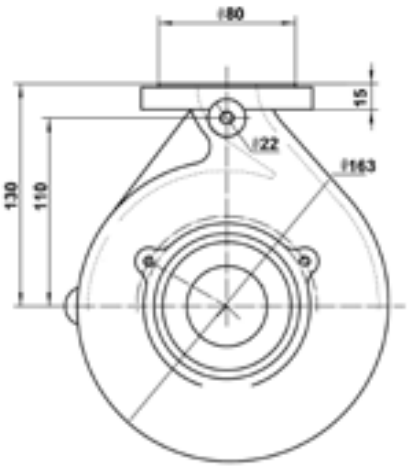
PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch))	Dimensions (cm)			Weight (kg)
							Depth	Width	Height	
KRAKEN 1800	21	233	1800	230/400	9,5/4,2	2	317	190	513	34
KRAKEN 1800 DF	25	350	1800	230/400	9,5/4,2	2	343	198	500	35

KRAKEN 1800







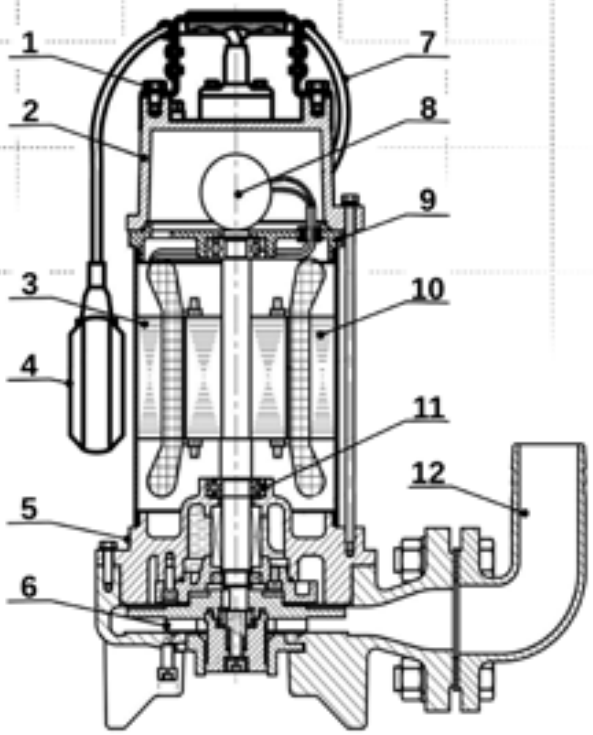
OPERATING CONDITIONS:

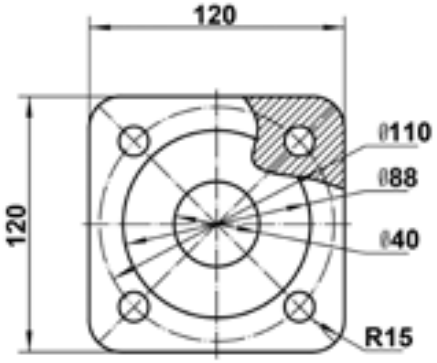
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 4-10
- Liquid density: 1.2x10^3kg/m^3

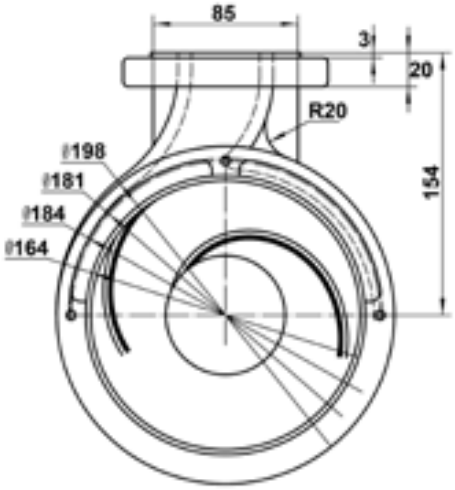
MATERIALS:

- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cutting knives: grey cast iron/stainless steel AISI 304
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m

KRAKEN 1800 DF







OPERATING CONDITIONS:

- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 4-10
- Liquid density: 1.2x10^3kg/m^3

MATERIALS:

- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cutting knifes: grey cast iron/stainless steel AISI 304
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m

UP 60/80

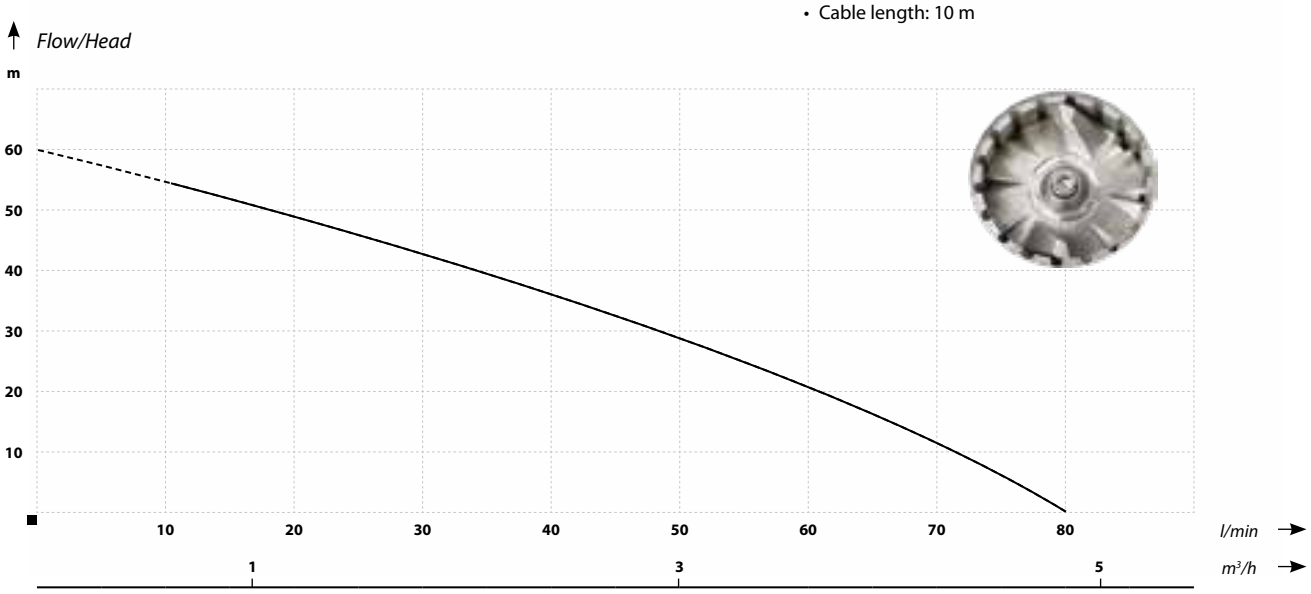
HIGH-PRESSURE SUBMERSIBLE SEWAGE PUMP
WITH CUTTING SYSTEM

The UP60/80 pumps are equipped with a two-stage hydraulics to increase the maximum pressure. An important feature of KRAKEN 1800 is a multi-channel disk cutting system designed to minimize the risk of clogging. In addition, the outlet is threaded in order to connect a pipeline or fast connection. The pump is supplied with thermal protection mounted in the motor winding.

APPLICATION:
The pump is designed for operating in pressure sewage systems.

OPERATING CONDITIONS:
- Maximum liquid temperature 50°C (60)
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 4-10
- Liquid density: 1.2x103kg/m3

MATERIALS:
- Motor housing: stainless steel AISI 304
- Body: ASTM cast iron
- Shaft and rotor: stainless steel AISI 420
- Impeller: Stainless steel AISI 440
- Mechanical seal: SiC-SiC
- Cutting knives: Stainless steel AISI 440
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch))	Dimensions (mm)		Weight (kg)
							HEIGHT	BASE-PLATE	
UP 60/80	60	80	1500	230	12	1¼	550	250	31,5

ZWQ

A series of professional submersible pumps with cutting system, designed for customers who need a strong and reliable product in their professional work. The top quality materials used and very high performance makes ZWQ pumps suitable for operation in harsh conditions. These pumps are widely used in sewage pumping stations. Single-phase pumps have a float switch for operation control. All pumps are equipped with a three-channel cutting system integrated with the impeller in order to minimize the risk of clogging. All ZWQ pumps are suitable for installation with a guide rail system. The motors have Class F winding insulation and single-phase versions are additionally equipped with thermal protection mounted in the winding. Flanges for connecting pipes or fast-connection. The pumps are available as single-phase 230V ~/ 50Hz versions with a float switch, and 3-phase 400V ~ 3 / 50Hz version.
The pumps have bearings manufactured by NSK in Japan.

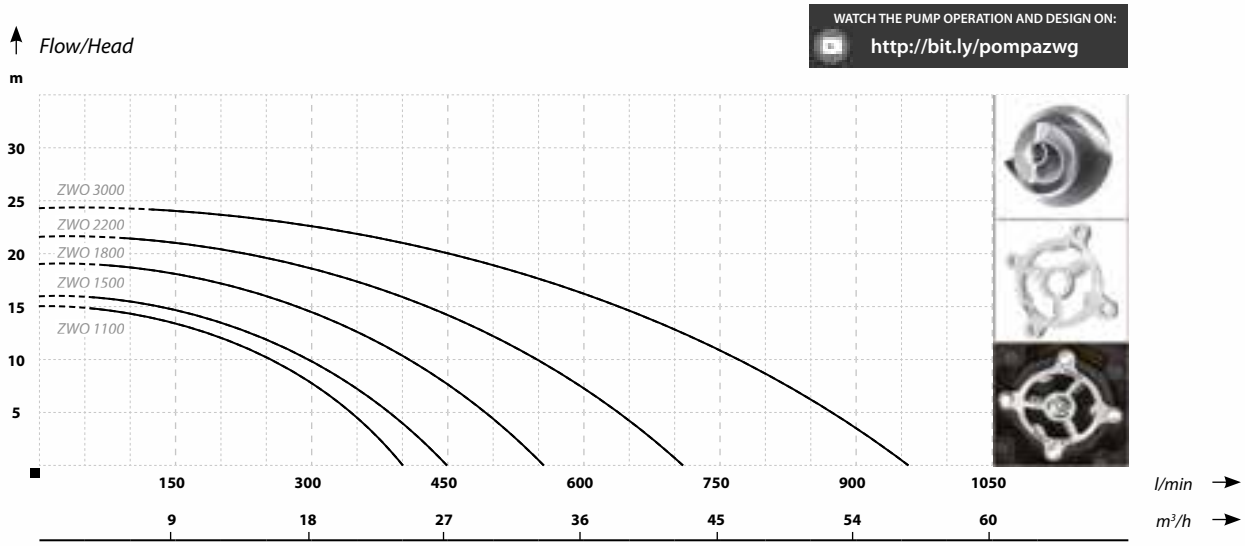
The pumps can be supplied with guide rail systems for installation in pump stations. The guide rail system is sold separately.

APPLICATION:
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Sewage treatment plants. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 4-10
- Liquid density: 1.2x103kg/m3

MATERIALS:
- Motor housing: cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cutting knives: grey cast iron/stainless steel AISI 304
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m

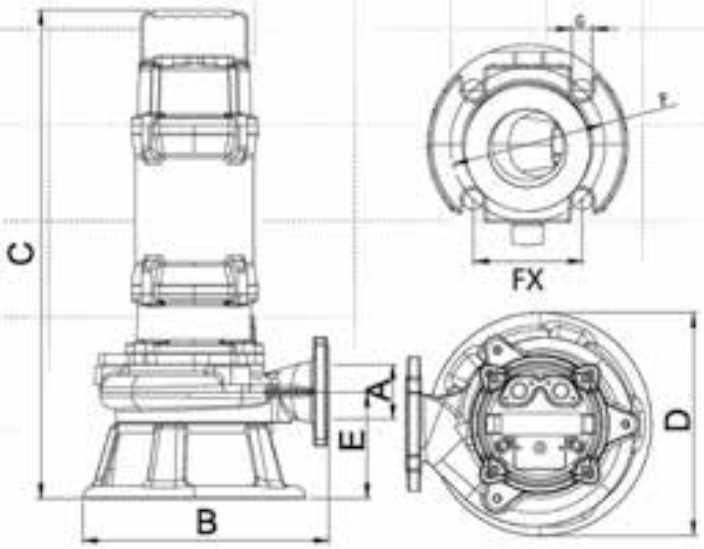
WATCH THE PUMP OPERATION AND DESIGN ON:
http://bit.ly/pompazwg



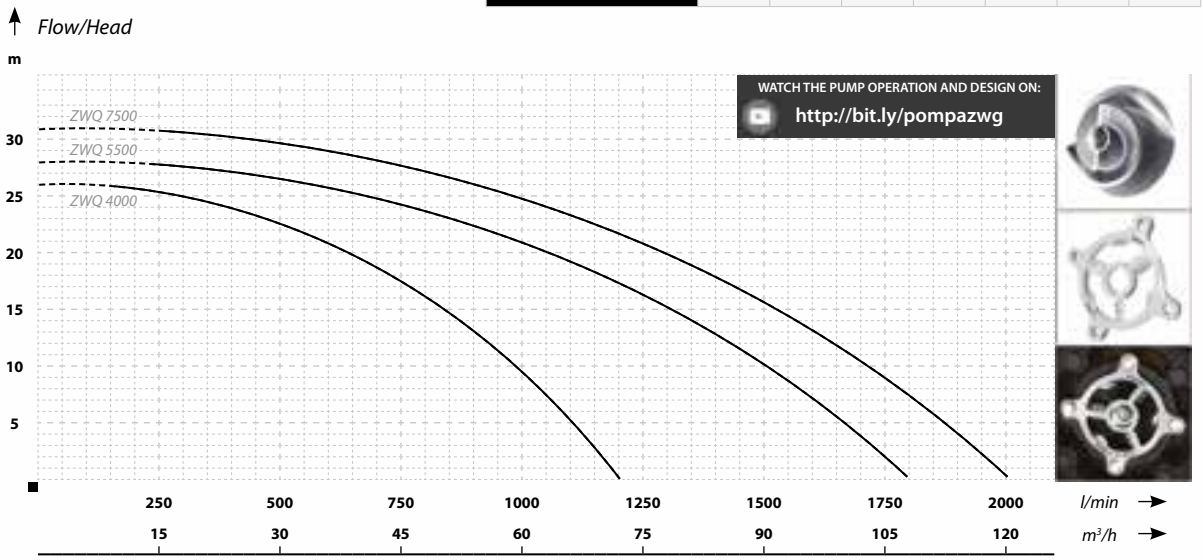
PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
ZWQ 1100	15	400	1,1	230	6,5	2	23
ZWQ 1500	16	450	1,5	230/400	8,5/3,8	2	26
ZWQ 1800	18	550	1,8	230/400	8,6/3,9	2½	27
ZWQ 2200	22	700	2,2	400	4,5	2½	38
ZWQ 3000	24	950	3,0	400	6,3	3	49

ZWQ



Name	Dimensions (mm)						
	A	B	C	D	E	F	G
ZWQ 1500	50	250	568	240	117	110	15
ZWQ 1800	65	250	568	240	117	110	15
ZWQ 2200	65	295	585	265	127	130	15
ZWQ 3000	80	280	575	240	123	110	15
ZWQ 4000	80	315	590	265	127	130	15
ZWQ 5500	100	325	650	268	131	160	18
ZWQ 7500	100	335	660	285	137	160	18



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
ZWQ 4000	26	1200	4,0	400	8,5	3	54
ZWQ 5500	28	1800	5,5	400	11	4	70
ZWQ 7500	31	2000	7,5	400	14,8	4	77

MWQ

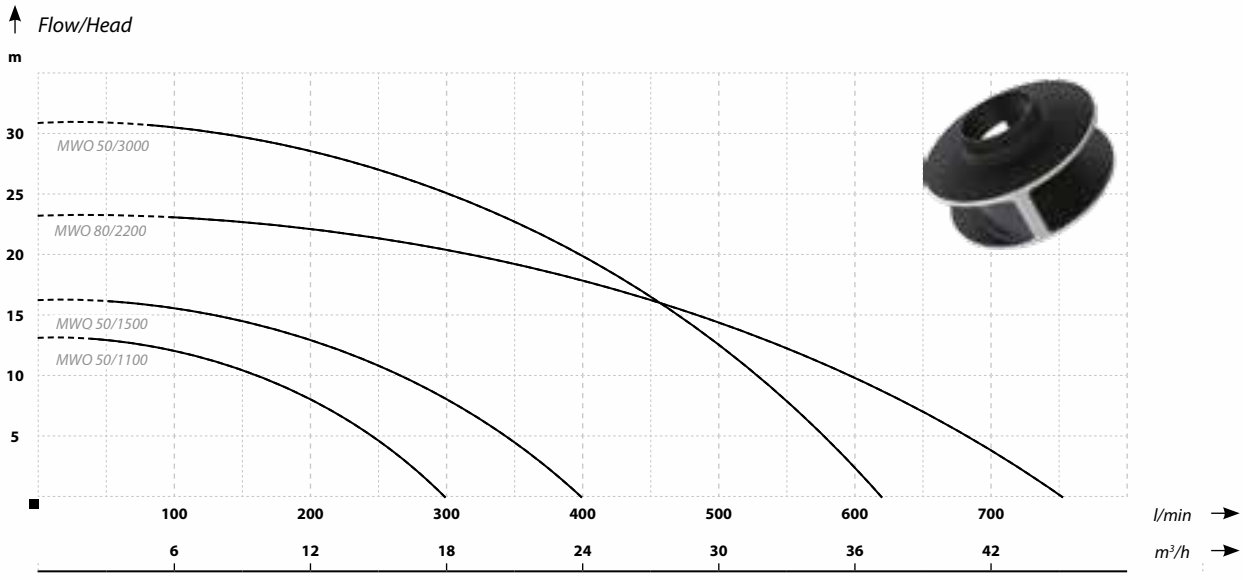
SUBMERSIBLE SEWAGE PUMPS WITH AGITATOR (MIXER)

A series of professional submersible pumps with mixing system, designed for customers who need a strong and reliable product in their professional work. These pumps are widely used in sewage pumping stations. MWQ pumps are designed for pumping raw sewage from pumping stations where dense sludge may be deposited. The pumps have a special additional external rotor (agitator) for mixing and splitting heavy sludge. Materials used guarantee long-term and faultless operation. Motor shaft is made of stainless steel. Motor chamber is sealed with a double SiC/ SiC mechanical seal. The pump uses a multi-channel impeller for pumping large diameter impurities. All MWQ pumps are suitable for installation with a guide rail system. The motors have Class F winding insulation and single-phase versions are additionally equipped with thermal protection mounted in the winding. The pumps have bearings manufactured by NSK in Japan. Flanges for connecting pipes or fast-connection. The pumps are available as single-phase 230V ~/ 50Hz versions with a float switch, and 3-phase 400V ~ 3 / 50Hz version. The pumps can be supplied with guide rail systems for installation in pump stations. The guide rail system is sold separately.

APPLICATION:
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Sewage treatment plants. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Water PH: 5-10
- Liquid density: 1.2x10^3kg/m^3

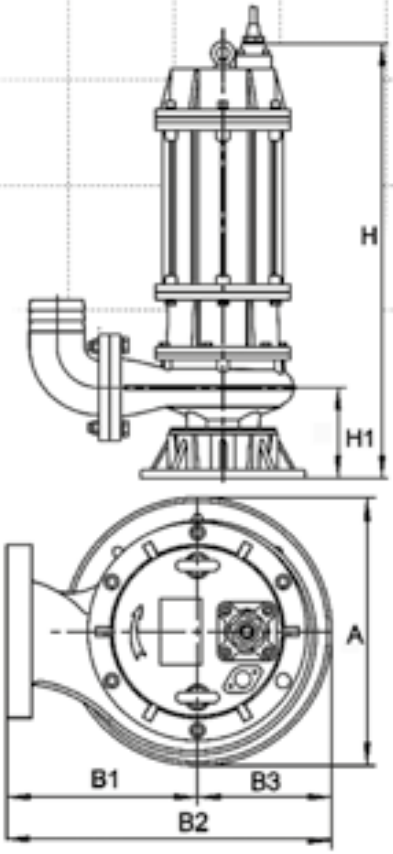
MATERIALS:
- Motor housing: grey cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Agitator: Grey cast iron
- Bearings: NSK
- Mechanical seal: Double, ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m

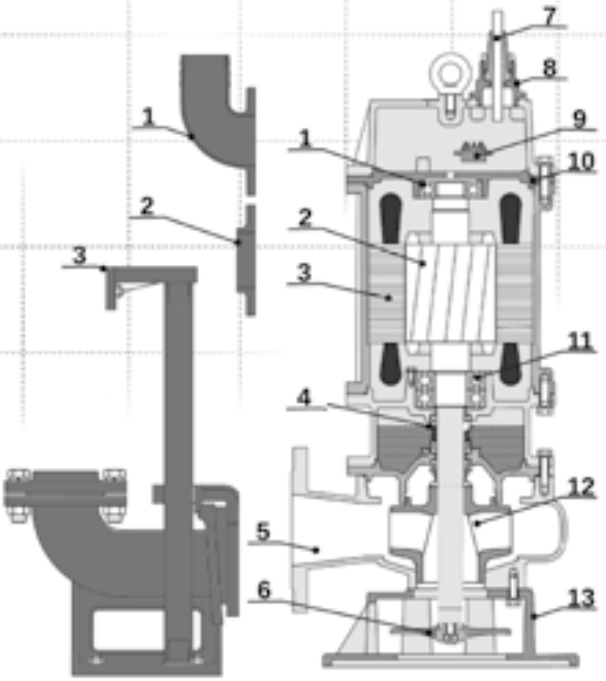


PARAMETERS

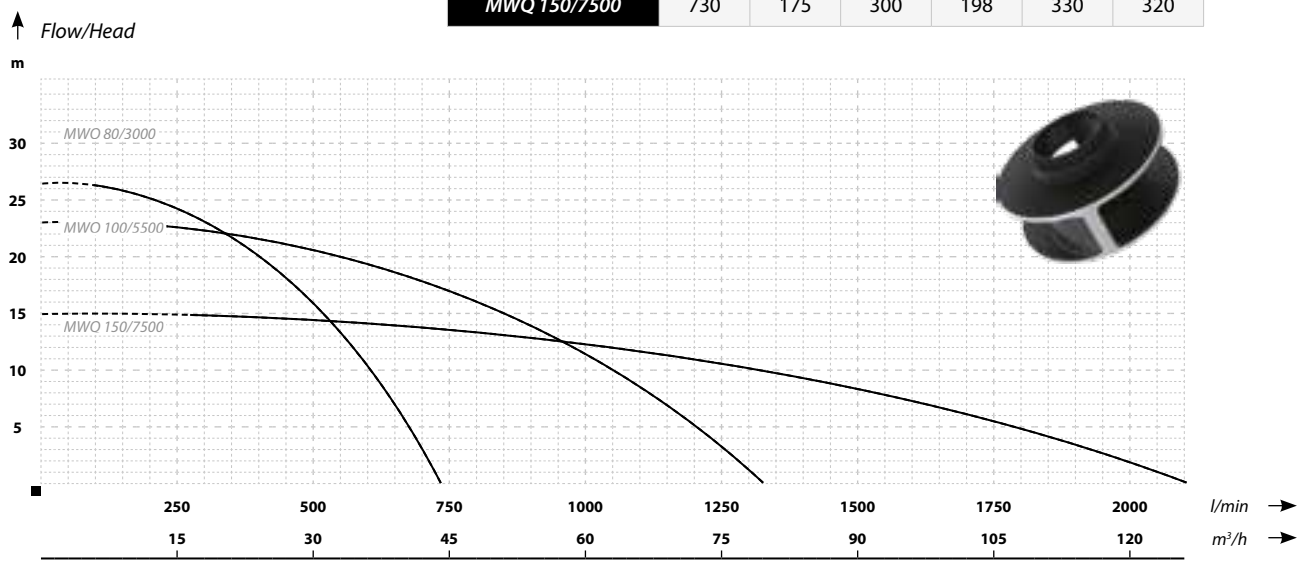
Name	Head (m)	Flow (l/min)	Moc silnika (kW)	Voltage (V)	Voltage (A)	Inlet/outlet DN	Agitator working range (mm)	Weight (kg)
MWQ 50/1100	13	300	1,1	230/400	6,5/2,2	50	1200	23
MWQ 50/1500	16	400	1,5	230/400	7,5/2,5	50	1200	27
MWQ 80/2200	22,5	750	2,2	400	4,5	80	1600	37
MWQ 50/3000	31	620	3,0	400	6,1	50	1200	43

MWQ





Name	Dimensions (mm)					
	H	H1	A	B1	B2	B3
MWQ 50/1100	471	104	187	137	230	190
MWQ 50/1500	491	117	208	143	238	230
MWQ 80/2200	551/544	128	230	167	278	230
MWQ 50/3000	556/559	120	215	151	258	230
MWQ 80/3000	559/562	122	220	152	260	230
MWQ 100/5500	660	146	258	180	310	260
MWQ 150/7500	730	175	300	198	330	320



PARAMETERS

Name	Head (m)	Flow (l/min)	Moc silnika (kW)	Voltage (V)	Voltage (A)	Inlet/outlet DN	Agitator working range (mm)	Weight (kg)
MWQ 80/3000	26,5	740	3,0	400	6,1	80	1600	43
MWQ 100/5500	23	1320	5,5	400	9,5	100	2000	73
MWQ 150/7500	15	2100	7,5	400	15,4	150	2500	105

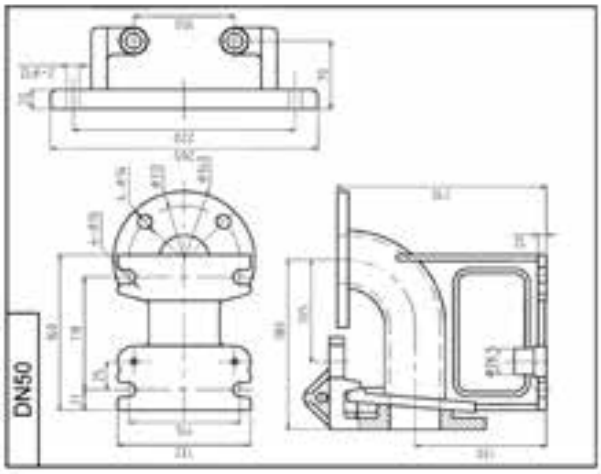
GUIDE RAIL SYSTEM

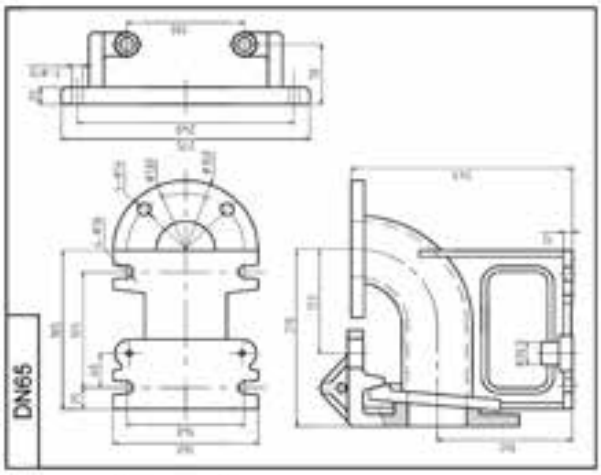
It is a device for mounting submersible pumps in sewage treatment plants on a so-called "rail". In order to mount the pump, it must be equipped with a horizontal flange.

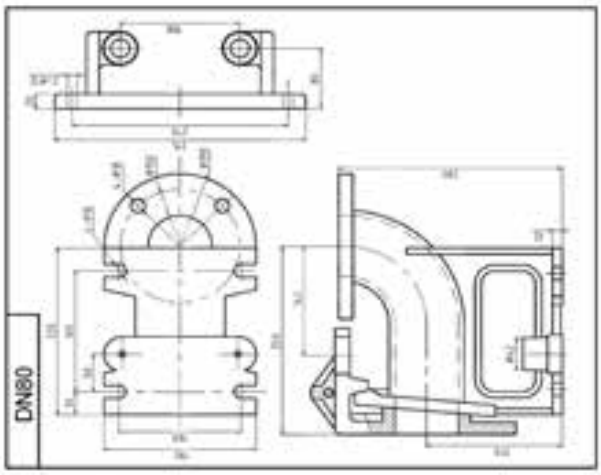
The set includes:
1. Adapter
2. Guide rail saddle
3. Upper guide rail bracket

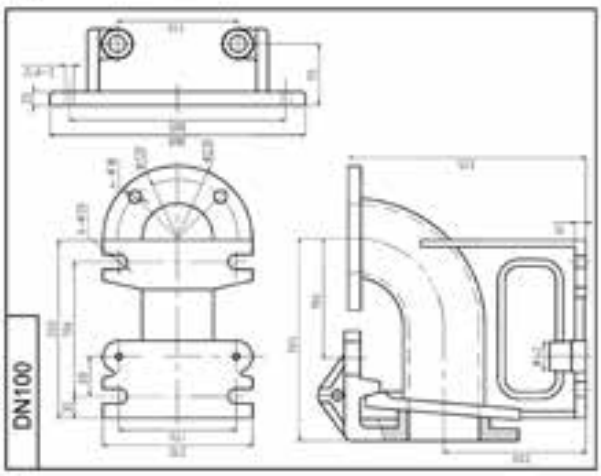
Using guide rail system connection - the lifting system allows to remove the pump without disassembling the entire pipeline.
It is particularly important in case of heavy pumps, such as ZWQ or MWQ.

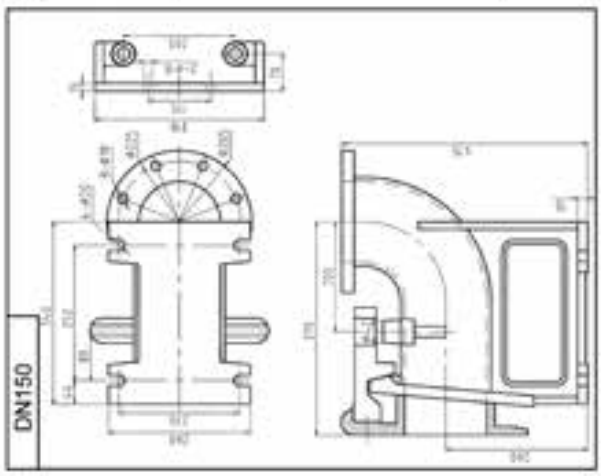
Suitable for:
- ZWQ
- MWQ
- Kraken 1800 DF











AERAT 1

Hydrotechnical device - Aerator is mainly used in professional aeration applications for marine and freshwater aquaculture. It creates mixtures with a high percentage of dissolved oxygen and has a large area of oxygen aeration, which improves water quality on agriculture farms and supports growth. The device consists of a motor with impeller and a triangular baseplate.

Areat 1 is designed for clean water from ponds, lakes and other bodies of water without the content of abrasive solids.

Description:

- Advanced technology: a unique air intake chamber and a star-shaped impeller design provide high oxidation capacity and accurate gas and water mixing. Compared to other devices, the amount of oxygen supplied is up to 30% higher, which translates into lower farming costs.
- Many small air bubbles are created on the contact surface of the impeller and the surrounding water. A rotating impeller creates water flow extending horizontally at a certain speed and flowing
- upwards, stirring the water below and thus increasing the range of oxygenation. This solution eliminates a dead angle effect creating a large gas-water intersection area, which increases the oxygen dissolution.
- A large number of small air bubbles increases the contact surface of water and gas as well as the rate of oxygen dissolution, and as a result, water is more effectively saturated with dissolved oxygen and many harmful substances are removed. Improving water quality directly affects the health of cultured organisms and accelerates the growth rate.
- The equipment is compact, flexible, easy to install and use, which saves installation time and costs.

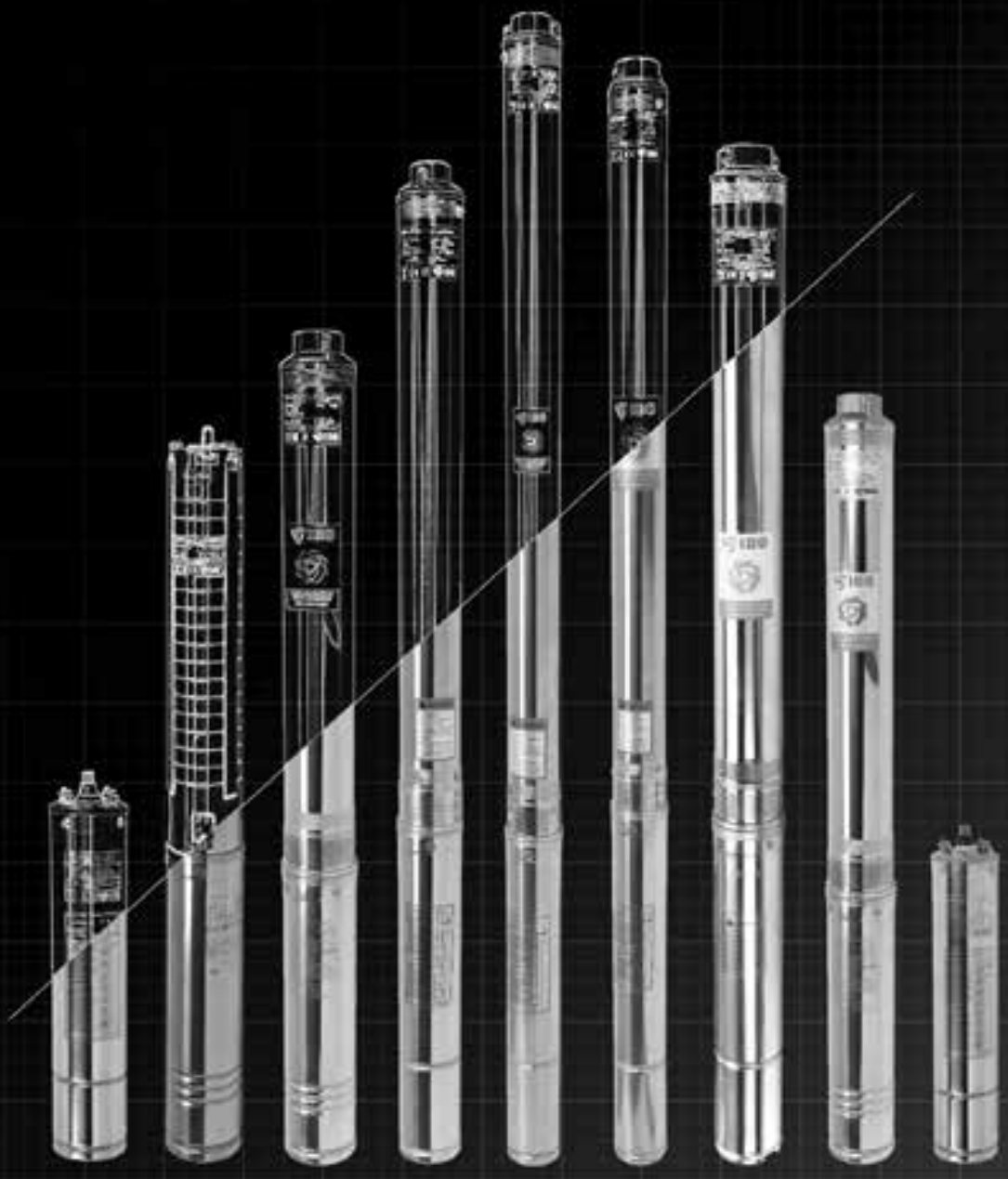
PARAMETERS

Model	Voltage (V)	Power (kW)	Aeration (m^3/h)	Oxygenation (kg (O_2) /h)	Max. temperature (°C)	Immersion depth (m)	Active operating area (m^2)
AERAT 1	400	1,5	10 - 320	2,5	35	3 - 5	2000 - 4000

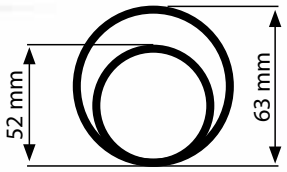
DEEP WELL PUMPS

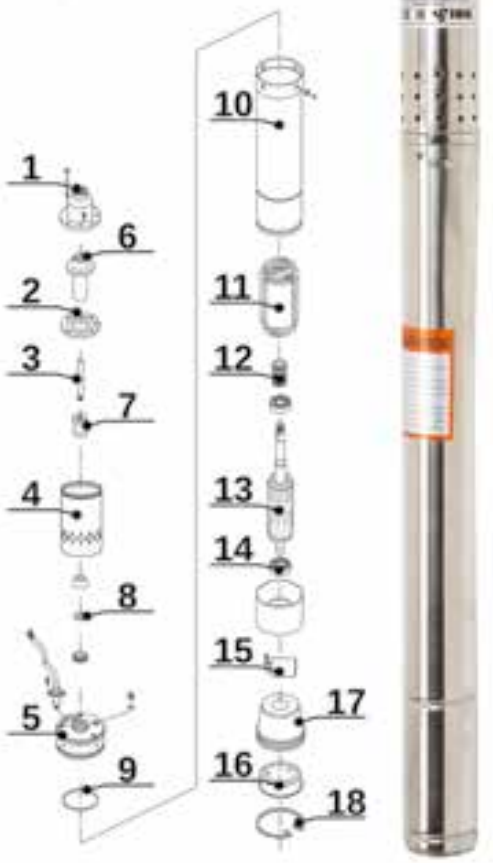
2” STING
3” SQIBO / SCR
3” SKM / 4 "SKM
OLA INOX / AUTO
2,5” STM
3” Ti
3” SDM
3” STM
3” ISP
3,5” SCM / 3,5”SC
3,5” SDM

4” SD / 4” SDM
4” ISP / 4” ISPM
3” IBQ
4” IBQ
5” SD
6” SD
6” ISP
6” ISP



2" STING



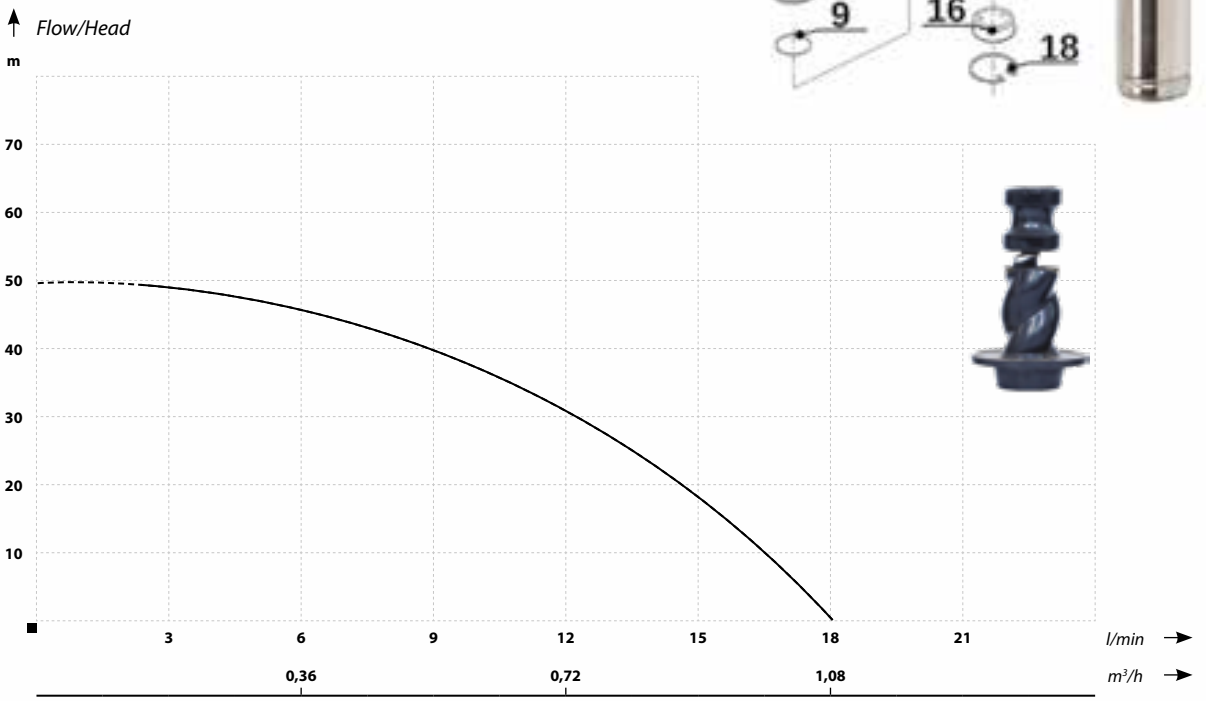


2 "STING is the first and at the moment the only IBO 2" deep well displacement pump. The diameter of the pump does not exceed 53 mm and the hydraulic section consists of the stator, rotor and clutch. The pump is mainly made of stainless steel. The pump is equipped with a 14 m cable terminated with a plug and the capacitor is built into the motor so that pump is ready for installation immediately after unpacking. The pump is equipped with thermal protection mounted in the motor winding.

APPLICATION:
Supply of water from deep wells to small single-family houses and recreational plots. The pump can be used by companies providing hydro-geological services.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C Maximum ambient temperature 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Screw: stainless steel AISI 304
- Stator: NBR
- Motor: oil cooling
- Mechanical seal: ceramics/Sic
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
2"STING	50	18	370	230	1,8	½	52/690	11

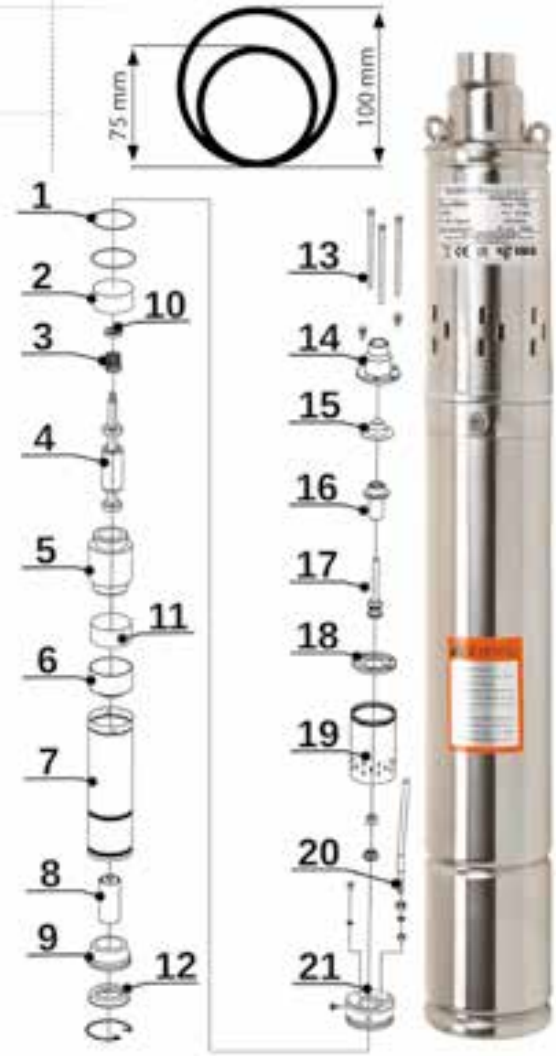
3" SQIBO / SCR

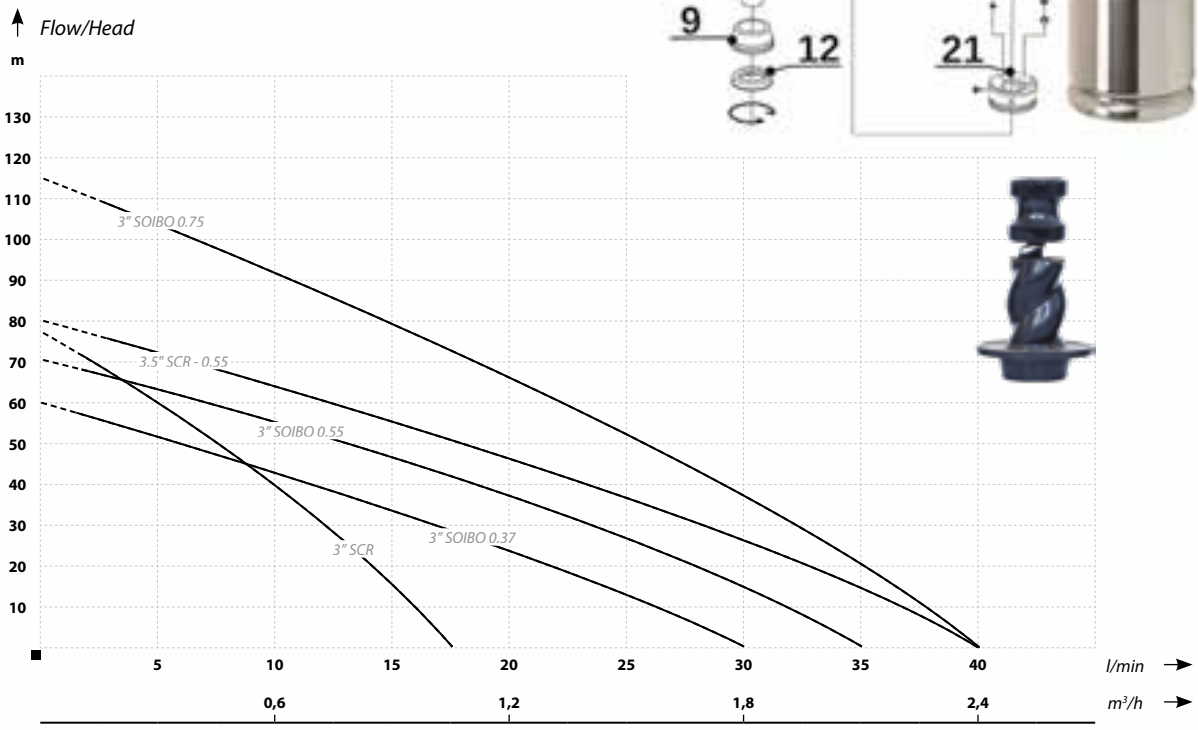
75mm deep well displacement pumps (SQIBO/3"SCR). The pump is mainly made of stainless steel, e.g. housing, bolts, inlet/outlet and rotor. Depending on the customer's requirements, the pumps are equipped with power cables of varying lengths terminated with a plug. Due to the capacitor built into the motor, the pump is ready for installation immediately after unpacking. The pump is equipped with thermal protection mounted in the motor winding. SQIBO and SCR pumps are among the most popular screw pumps available on the Polish market. The pumps are recognized by customers for their robust design and attractive price.

APPLICATION:
Supply of water to single-family houses and holiday houses.

OPERATING CONDITIONS:
- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Screw: stainless steel AISI 304
- Stator: NBR
- Motor: oil cooling
- Mechanical seal: ceramics/Sic
- Rotational speed of the electric motor: 2850RMP





PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Cable length (m)	Dimensions Dia/H (mm)	Weight (kg)
3" SCR	77	17	250	230	2,5	¾	14	75/550	10
3" SQIBO 0,37	60	30	370	230	3,4	1	15	75/580	7,5
3" SQIBO 0,55	70	35	550	230	4	1	15/20	75/610	9
3" SQIBO 0,75	115	40	750	230	6,5	1	15/25	75/650	10,5
3,5" SCR - 0,55	80	40	550	230	5,2	1	14	90/600	11

3" SKM / 4 "SKM

3"SKM 100
3" (75 mm diameter) multi-stage deep well peripheral pump. Due to the small diameter, the pump can be installed in well with 25 cm diameter pipes. Depending on the customer requirements, the pump can be equipped with standard 15 or 20 m cable with a plug. Due to the capacitor built into the motor, the pump is ready for installation immediately after unpacking. The pump is supplied with thermal protection mounted in the motor winding.

4"SKM 100
4" (98 mm diameter) deep well peripheral pumps. The pumps are designed for minimum 4-inch wells. Durable materials such as stainless steel and brass have been used in the production of pump impellers. The pumps are available with the following power cables terminated with a plug:

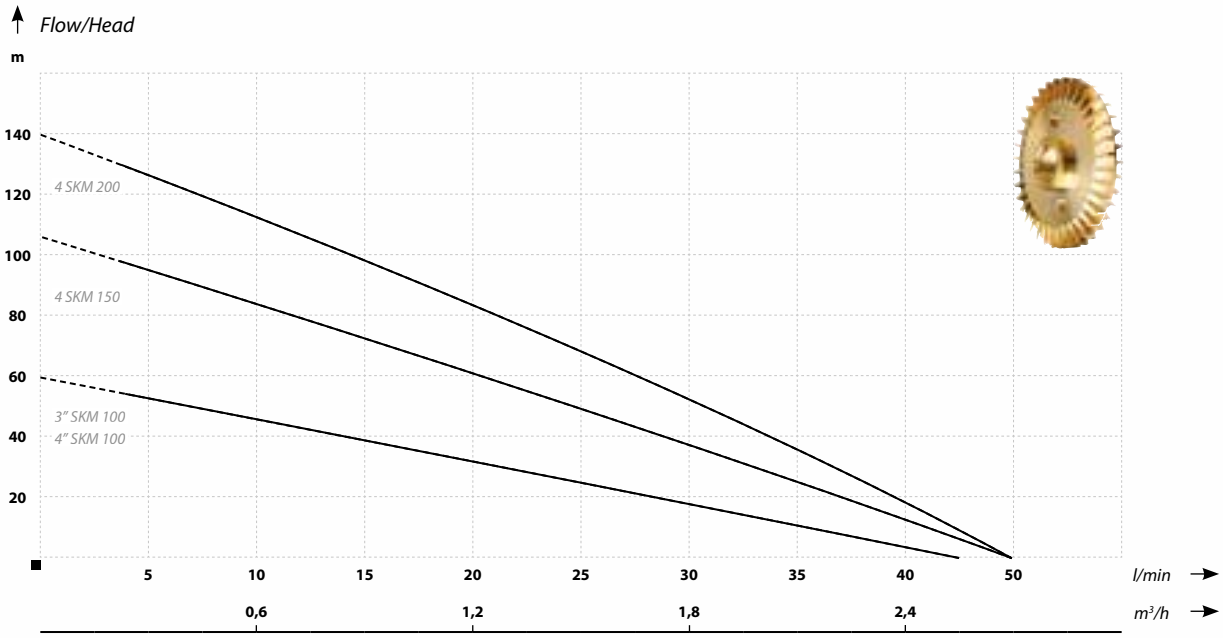
4"SKM 100 – 15m / capacitor built into the motor
4"SKM 100 – 20m + control box
4"SKM 150 – 15m / capacitor built into the motor
4"SKM 150 – 20m + control box
4"SKM 200 – 15m / capacitor built into the motor

Depending on the version, the 4"SKM pumps have thermal protection mounted in the motor winding or in the control box. The pumps are available as single-phase 230 V ~ /50 Hz versions - 4 SKM, and 3-phase 400 V ~ 3/50 Hz versions - 4 SKT.

APPLICATION:
Supply of water to single-family houses and holiday houses. Irrigating gardens.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Brass
- Venturi tube: stainless steel
- Mechanical seal: Carbon-SIC/Sic
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3" SKM 100	60	45	750	230	5	1	75/590	12
4" SKM 100	60	45	750	230	5,8	1	98/530	16
4" SKM 150/SKT 150	107	50	1100	230/400	10	1	98/530	16
4" SKM 200/SKT 200	140	50	1500	230/400	11	1	98/540	17

OLA INOX / AUTO

OLA / OLA INOX
98 mm diameter multi-stage deep well pumps for minimum 4" diameter ring and drilled wells. The pumps have a motor cooling jacket so they do not have to be completely submerged, and there is no need for a jacket tube, which is required for classic multi-stage pumps. Due to the capacitor built into the motor, the pump is ready for installation immediately after unpacking. The pumps are equipped with thermal protection mounted in the motor winding.

OLA AUTO
The OLA AUTO pumps are equipped with automatic pump control so there is no need to install additional equipment such as a pressure switch or external PC or SK control. The principle of the sensor operation is based on the flow rate monitoring. When the pump is connected to the electrical or hydraulic system, opening the tap will start the pump, and closing it will stop the pump within a few seconds. The pump has a built-in non-return valve that limits the return of water from the system.

Both Ola 60/60 and OLA AUTO pumps can be installed together with a pressure tank, however, it should be remembered that an additional pressure switch does not need to be installed with OLA AUTO pumps.

OLA INOX OLA OLA AUTO

OLA INOX FLOAT SWITCH

APPLICATION:

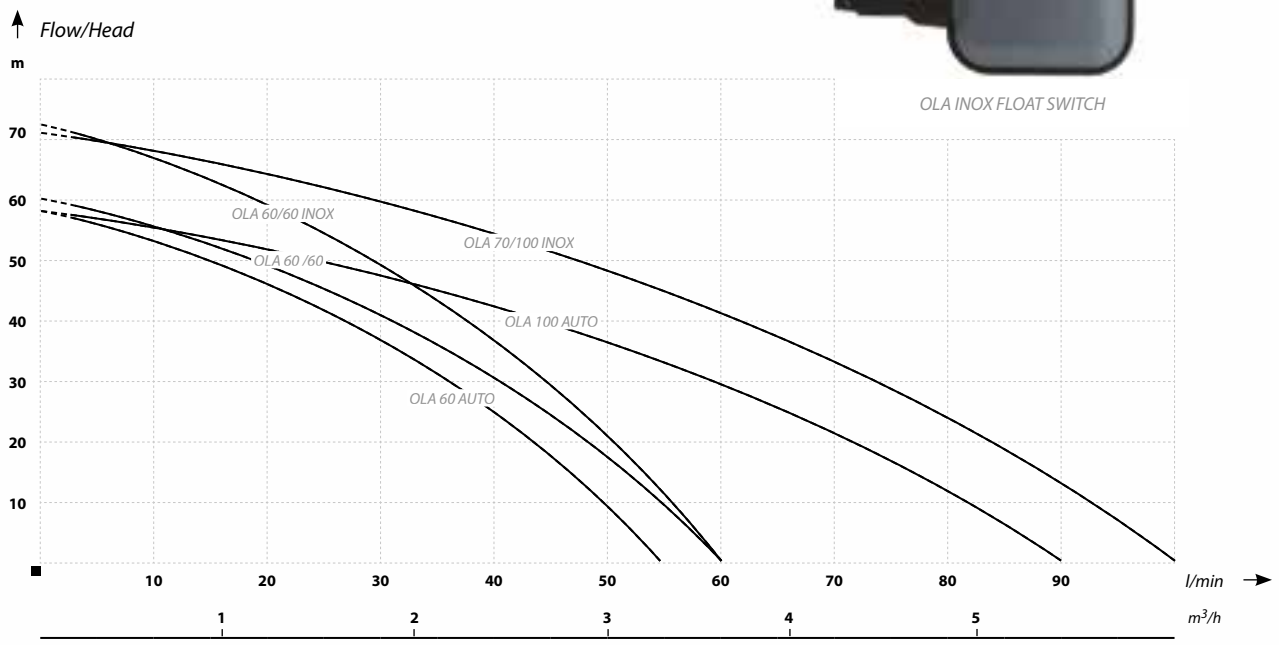
Pumping water from ring wells, deep water wells, lakes and rivers. Supply of utility (tap) water to holiday houses and single-family houses. Irrigating gardens.

OPERATING CONDITIONS:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Carbon-SIC/Sic
- Motor: cooling jacket
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Cable length (m)	Dimensions Dia/H (mm)	Weight (kg)
OLA 60 /60	60	60	1000	230	5,2	1¼	20	69/630	10,75
OLA 60 AUTO	58	55	450	230	4,1	1	20	98/890	11
OLA 100 AUTO	58	90	800	230	5,0	1	20	98/920	14
OLA 60/60 INOX	72	60	800	230	4,6	1	20	98/680	11,5
OLA 70/100 INOX	71	100	1100	230	6,9	1	20	98/770	13,4

2,5" STM

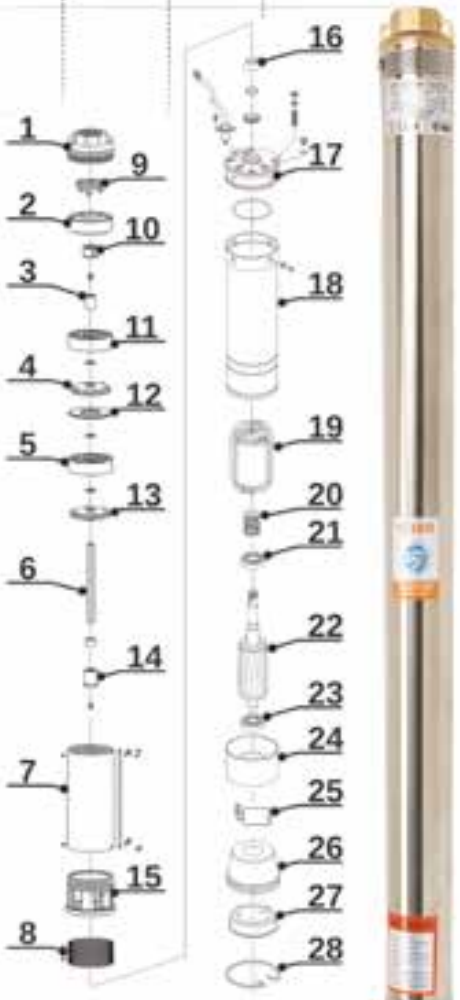
INCREASED RESISTANCE TO SAND

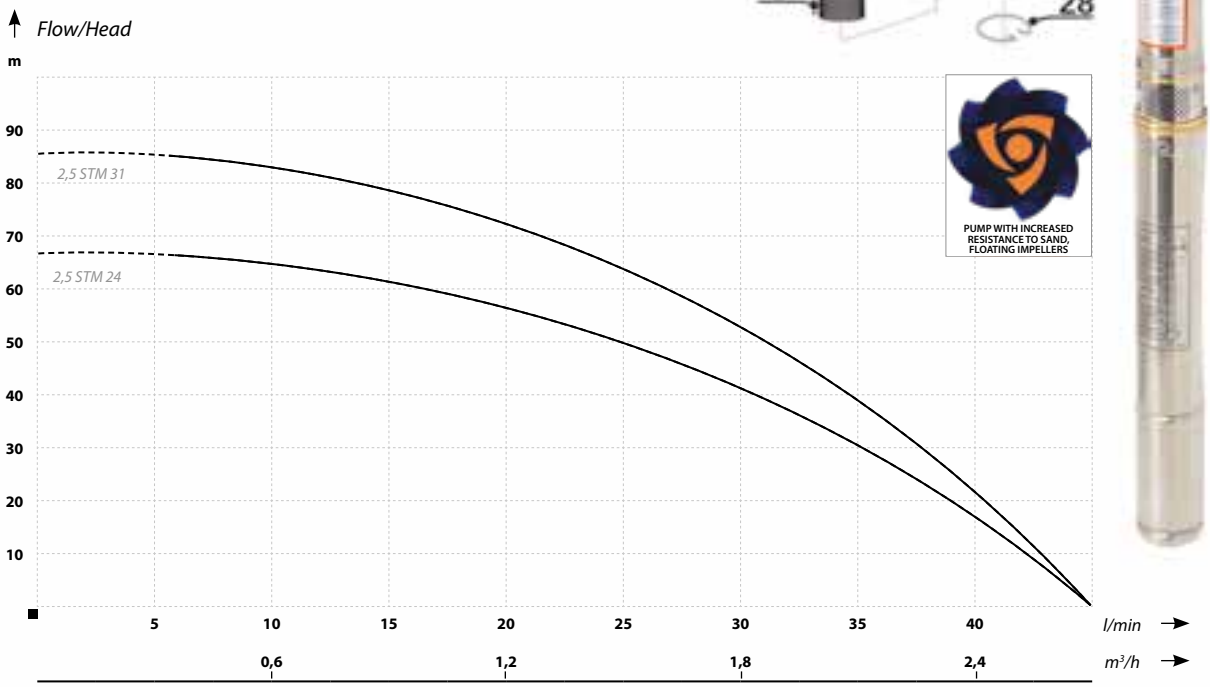
2.5" (66 mm diameter) multi-stage deep well pumps with increased resistance to sand. The 2.5 STM pumps were the first multi-stage pumps available on the Polish market with a diameter of less than 3". The pump capacitor is built into the motor. The pumps are available with 1.5 m long cable section or 20 m long stock cable terminated with a plug. Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials. The pumps are equipped with thermal protection mounted in the motor winding.

APPLICATION:
Supply of water to single-family houses and holiday houses. Irrigating small gardens.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: steel Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP





PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
2,5 STM 24	66	45	370	230	2,8	1	66/1305	7,8
2,5 STM 31	85	45	550	230	4,2	1	66/1565	9,5

3" Ti

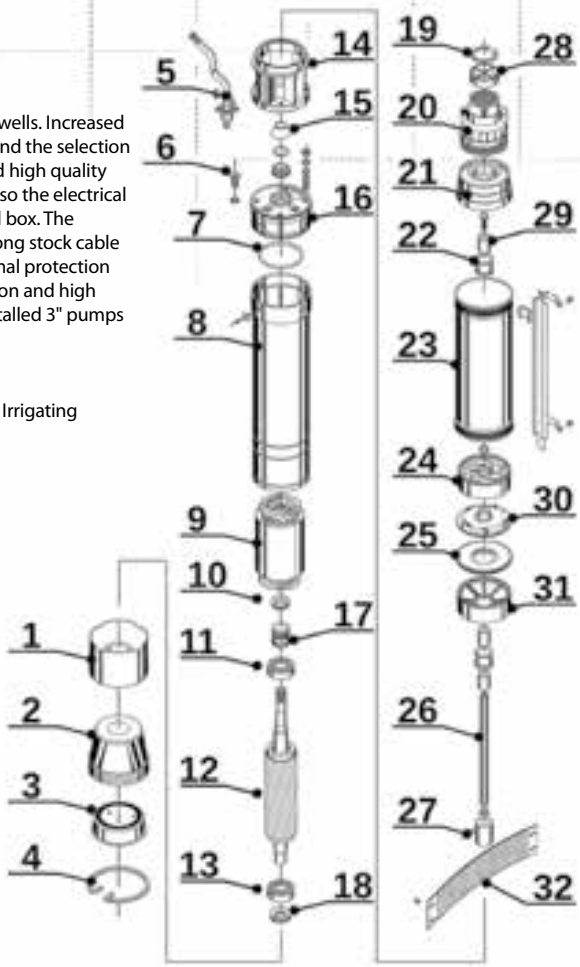
INCREASED RESISTANCE TO SAND

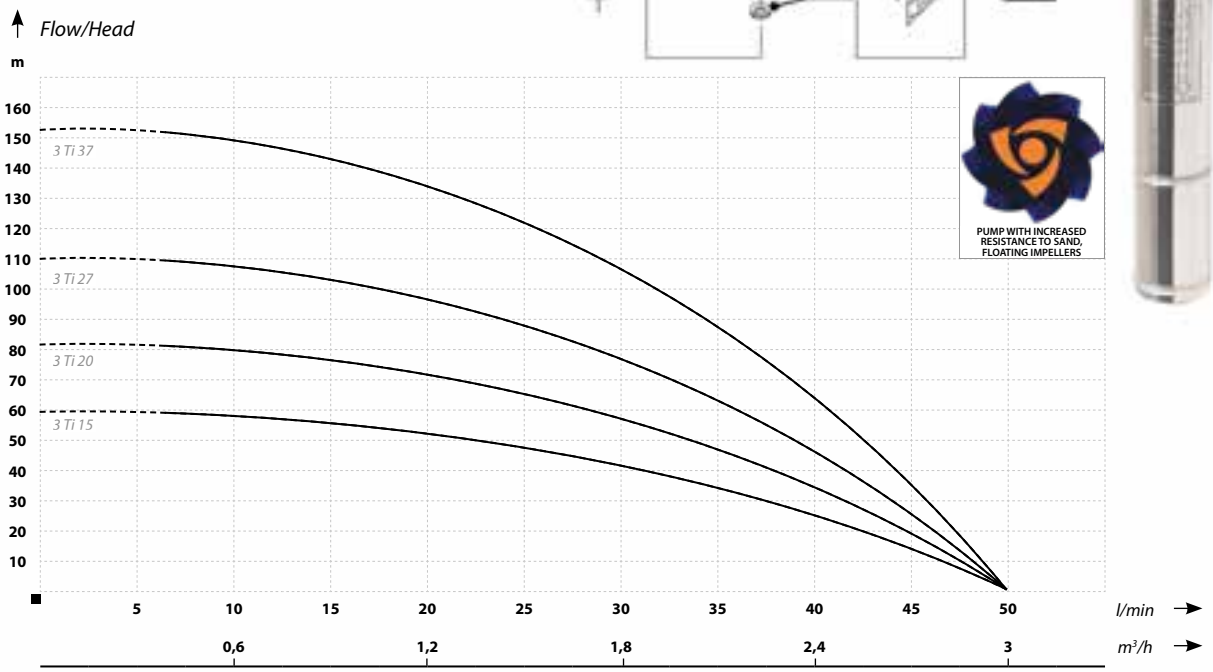
3 inch (74 mm diameter) multi-stage deep well pumps with increased resistance to sand, intended for 3 and 4 inch wells. Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials: brass, AISI 304 stainless steel, and high quality plastic materials. The pump capacitor is built into the motor so the electrical system is much simpler than in case of pumps with a control box. The pumps are available with 1.5 m long cable section or 20 m long stock cable terminated with a plug. The pumps are equipped with thermal protection mounted in the motor winding. Due to their reliable operation and high performance, the 3"Ti pumps are among the most often installed 3" pumps in Poland.

APPLICATION:
Supply of water to single-family houses and holiday houses. Irrigating gardens.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP





PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS

PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3 Ti 15	60	50	370	230	3,2	1	75/1035	10
3 Ti 20	82	50	550	230	4,2	1	75/1210	12
3 Ti 27	110	50	750	230	5,2	1	75/1470	14
3 Ti 37	152	50	1100	230	6,7	1	75/1810	18

3" SDM

INCREASED RESISTANCE TO SAND

3 inch (74 mm diameter) multi-stage deep well pumps,
with increased resistance to sand, intended for 3 and 4 inch wells. Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials. The pump capacitor is built into the motor so the electrical system is much simpler than in case of pumps with a control box. The pumps are available with 1.5 m long cable section or 20 m long stock cable terminated with a plug. The pumps are equipped
with thermal protection mounted in the motor winding. The pumps design is the same as 3"Ti pumps but they provide higher flow of up to 70l/min.

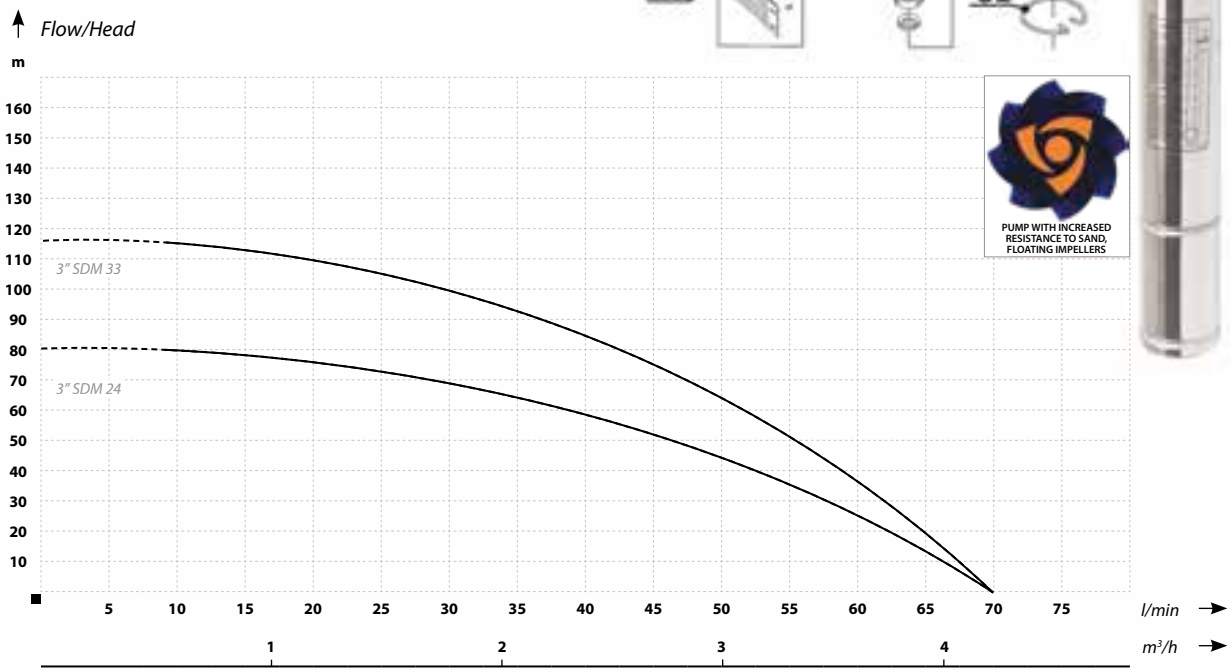
APPLICATION:
Supply of water to single-family houses and holiday houses. Irrigating gardens. Drainage/dewatering.

OPERATING CONDITIONS:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:

- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3" SDM 24	80	70	750	230	6,5	1¼	75/1320	11
3" SDM 33	117	70	1100	230	7,2	1¼	75/1660	13

3" STM

INCREASED RESISTANCE TO SAND

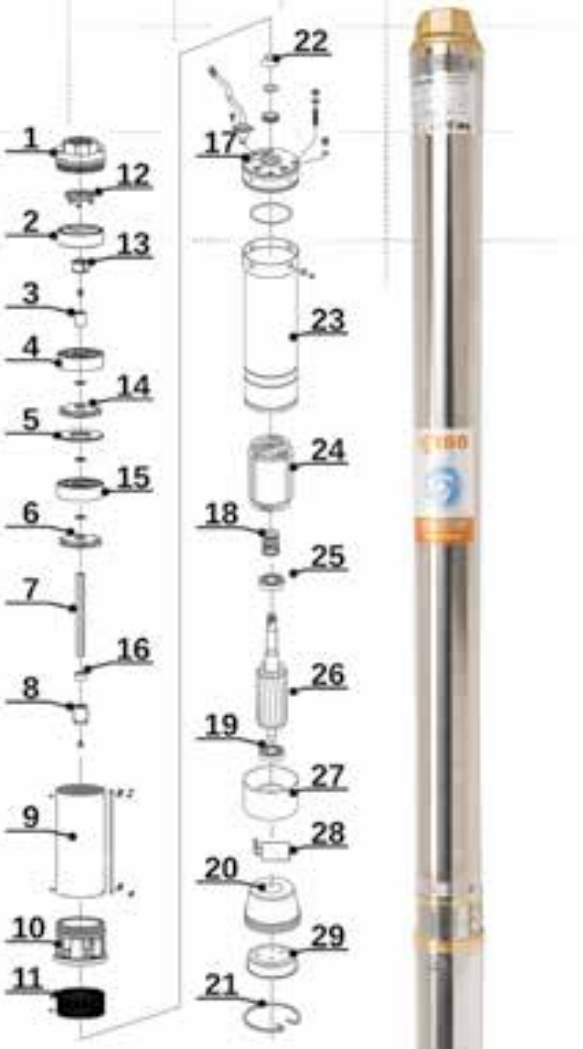
75 mm diameter multi-stage deep well pumps with increased resistance to sand, intended for 3 and 4 inch wells. Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials. The pump capacitor is built into the motor so the electrical system is much
simpler than in case of pumps with a control box. The pumps are equipped with thermal protection mounted in the motor winding. The pumps are available with 1.5 m long cable section or 20 m long stock cable terminated with a plug.

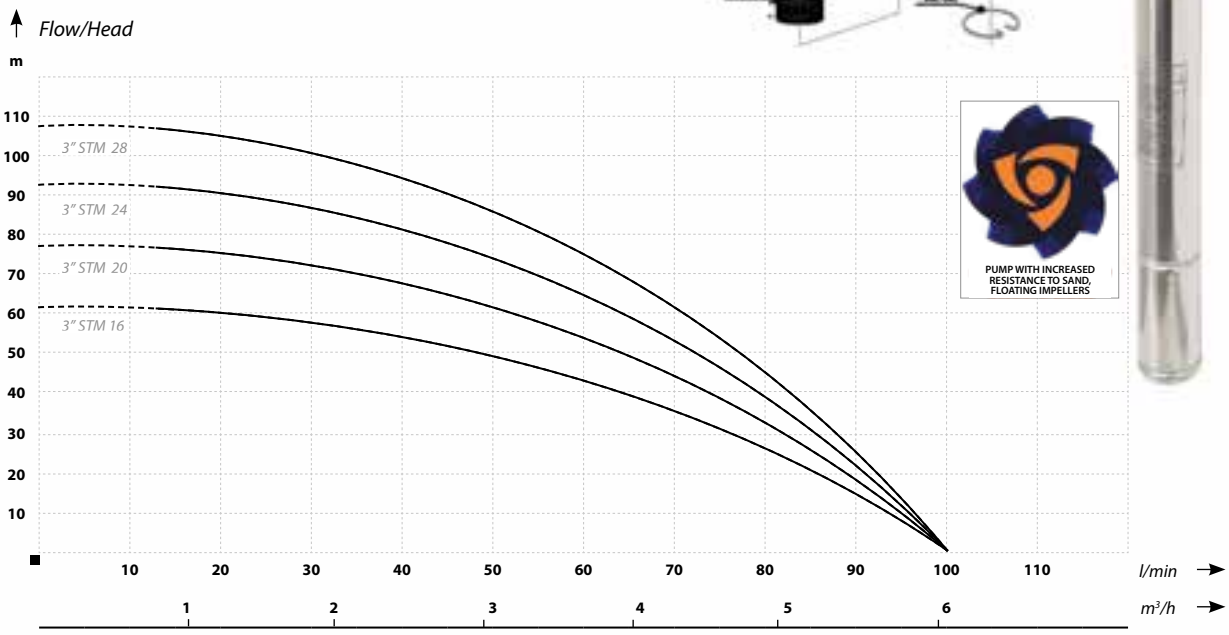
The main advantage of the 3STM pumps is their up to 100l/min. flow, exceptionally high as for 3" pumps.

APPLICATION:
Supply of water to single-family houses and holiday houses. Irrigating gardens. Drainage/dewatering.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP





PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3" STM 16	62	100	750	230	5,5	1¼	75/1260	10
3" STM 20	77	100	1100	230	6,7	1¼	75/1480	12
3" STM 24	93	100	1100	230	6,7	1¼	75/1580	14
3" STM 28	108	100	1500	230	9,7	1¼	75/1760	16

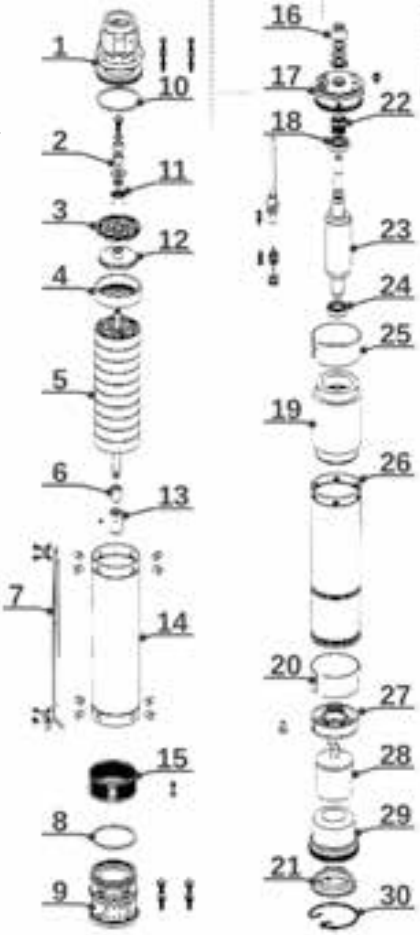
3,5" SCM / 3,5"SC

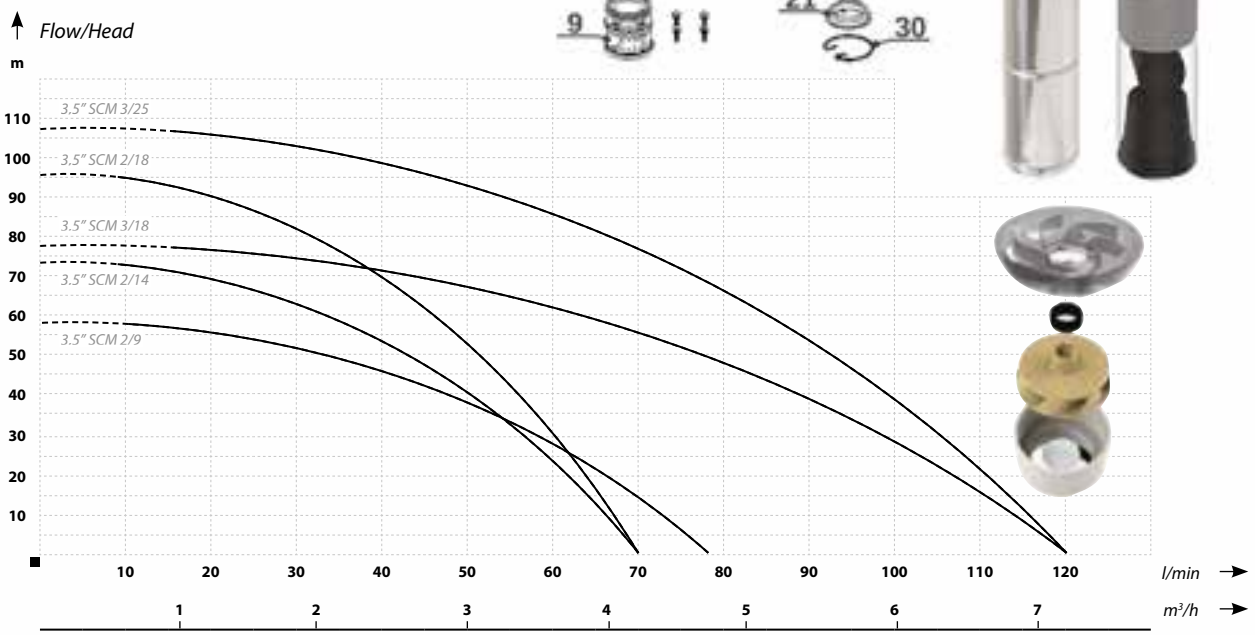
90 mm diameter multi-stage deep well pumps. Due to the proven design, it is the most economical solution for single-family houses and farms. With its small diameter, the capacitor built into the motor and the factory-mounted 18 m long cable, the pump is ready for installation immediately after unpacking. Pumps are available as 230 V ~ /50 Hz and 400 V ~ 3/50 Hz versions. Single-phase pumps are equipped with thermal protection mounted in the motor winding.

APPLICATION:
Supply of water to single-family houses and holiday houses. Irrigating gardens. Drainage/dewatering.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Inlet/outlet: grey cast iron
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP





PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3,5" SCM 2/9	58	78	550	230	4	1 ½	90/790	13
3,5" SCM 2/14	74	70	1100	230/400	5,8 / 2,8	1½	90/1010	16
3,5" SCM 2/18	95	70	1500	230/400	7,3 / 3,5	1½	90/1160	18
3,5" SCM 3/18	78	120	1500	230/400	7,3 / 3,5	1½	90/1410	19
3,5" SCM 3/25	108	120	1800	230/400	10 / 4,2	1½	90/1780	27

3,5" SDM

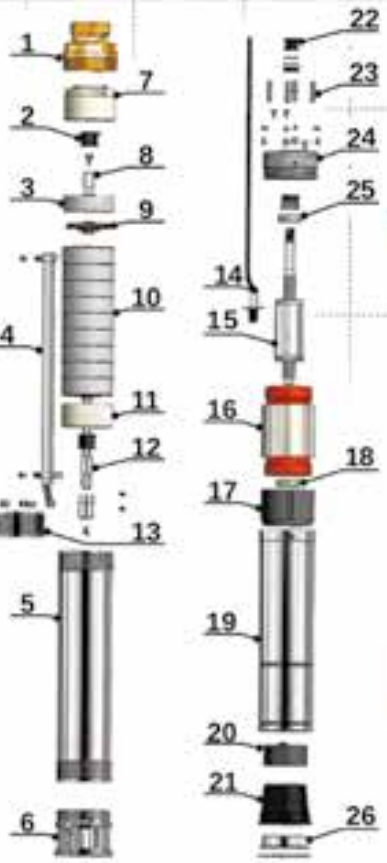
INCREASED RESISTANCE TO SAND

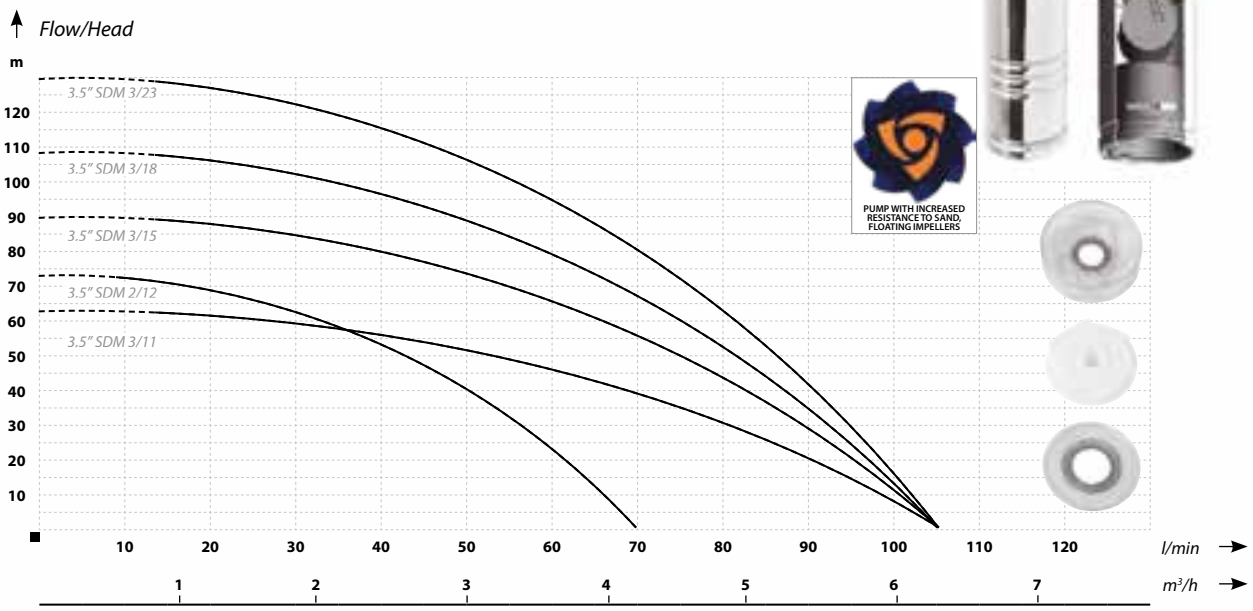
90 mm diameter multi-stage deep well pumps
with increased resistance to sand. Power supply 230 V~ /50 Hz.
The IBO SDM series were the first pumps on the market to be known as "sand resistant". Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials: brass, AISI 304 stainless steel, and high quality plastic materials.
The pumps are equipped with thermal protection mounted in the motor winding. With its small diameter, the capacitor built into the motor and the factory-mounted 20 m long cable, the pump is ready for installation immediately after unpacking.
The 3.5SDM pumps were the first 90 mm diameter pumps in Poland and are currently among the most often installed pumps by installation services.

APPLICATION:
Supply of water to single-family houses and holiday houses. Irrigating gardens. Drainage/dewatering.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP





PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3,5" SDM 2/12	73	70	800	230	5,5	1 ¼	90/920	11,5
3,5" SDM 3/11	63	105	800	230	5,5	1½	90/1020	11
3,5" SDM 3/15	90	105	1100	230	7,5	1½	90/1260	17
3,5" SDM 3/18	109	105	1500	230	9,9	1½	90/1410	18
3,5" SDM 3/23	130	105	1800	230	11,9	1½	90/1670	23

4" SD / 4" SDM

INCREASED RESISTANCE TO SAND

98 mm diameter multi-stage deep well pumps with increased resistance to sand, intended for minimum 4 inch diamater wells.

All SD pumps have PZH (National Institute of Hygiene) approval. 4SD/4SDM pumps are available with IBO and IBO ITALY motors as 400V~3 /50Hz and 230V / 50Hz versions. Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials: brass inlet and outlet, AISI 304 stainless steel housing, shaft and filter screen, and the impellers made of high quality plastic materials. Pumps with 230 V ~ / 50 Hz motors are equipped with a control box with built-in capacitor and overcurrent protection. Pumps with 0.75 kW to 2.2 kW motors are available with 1.5 m or 20 m long cable. 4SD 2/12 pumps have 20 m power cable.

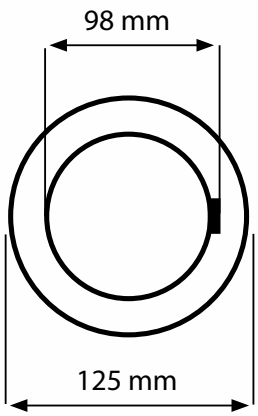
Pumps with 3 kW to 4 kW motors are available with 2 m long cable. Pumps with 5.5 kW do 7.5 kW motors are available with 3 m long cable. Upon request, the cable can be extended by any length. The IBO 4SD series were the first pumps on the market to be known as "sand resistant". Currently, they are among the few on the market to provide such high sand resistance. Maximum sand content in water is up to 5%.

APPLICATION:
Supply of water to single-family houses and farms from deep well intakes. Irrigating gardens and orchards. Land drainage/dewatering. Water supply systems. Industrial applications.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B/F Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP

PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS



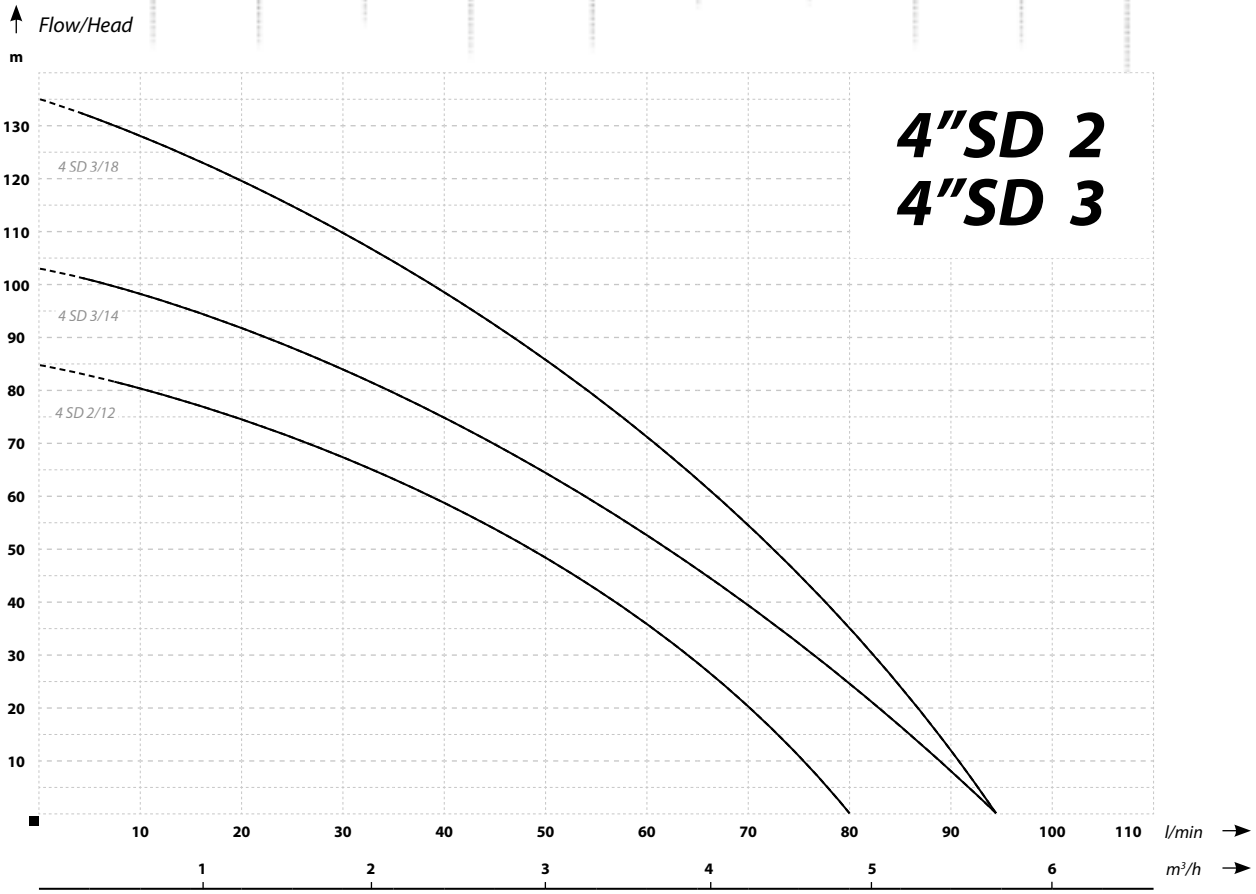
4" SD

INCREASED RESISTANCE TO SAND

PARAMETERS

Depending on the production batch, the device parameters may differ from the data provided in the table

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
4 SD 2/12	85	80	0,75	230	6,3	1¼	98/930	16
4 SD 3/14	103	94	1,1	230/400	8,5/4,0	1½	98/1050	17
4 SD 3/18	135	94	1,5	230/400	10,5/5,0	1½	98/1260	19
4SD 4/14	102	120	1,1	230/400	8,5/4,0	1½	98/1010	14,7
4SD 4/18	131	120	1,5	230/400	10,5/5,0	1½	98/1210	17,5
4 SD 6/10	74	162	1,5	230/400	10,5/5,0	2	98/1100	18
4 SD 6/14	103	162	2,2	230/400	15,5/6,3	2	98/1340	21
4 SD 6/20	148	162	3	400	7,2	2	98/1580	23
4SD 7/12	76	200	1,5	230/400	10,5/5,1	2	98/1150	16,5
4SD 7/17	107	200	2,2	230/400	15,5/6,3	2	98/1435	21,5
4SD 7/23	145	200	3	400	7,20	2	98/1740	27,5
4 SD 8/15	100	250	3	400	7,2	2	98/1640	23
4 SD 8/20	135	250	4	400	9,2	2	98/1970	30
4 SD 8/25	169	250	5,5	400	12,9	2	98/2430	35
4SD 9–12/16	98	300	3	400	7,20	2	98/1760	26,9
4SD 9–12/20	123	300	4	400	9,20	2	98/2115	32
4SD 9–12/26	159	300	5,5	400	12,90	2	98/2545	38,5
4 SD 10/13	72	360	3	400	7,2	2	98/1650	26
4 SD 10/17	94	360	4	400	9,2	2	98/2010	31
4 SD 10/22	121	360	5,5	400	12,9	2	98/2460	38
4SD 14/16	95	415	4	400	9,20	2	98/2095	32
4SD 14/20	118	415	5,5	400	12,90	2	98/2450	37,9
4SD 14/25	149	415	7,5	400	18,50	2	98/2950	44,5
4 SD 16/14	75	435	4	400	9,2	2	98/1800	30
4 SD 16/18	99	435	5,5	400	12,9	2	98/2250	37
4 SD 16/28	153	435	7,5	400	18,5	2	98/3000	47
4SD 20/15	90	500	4	400	9,2	2	98/2120	29
4SD 20/20	125	500	5,5	400	12,9	2	98/2360	37
4SD 20/25	150	500	7,5	400	18,5	2	98/2840	46


Flow/Head
m
4"SD 2
4"SD 3
4 SD 3/18
4 SD 3/14
4 SD 2/12
130
120
110
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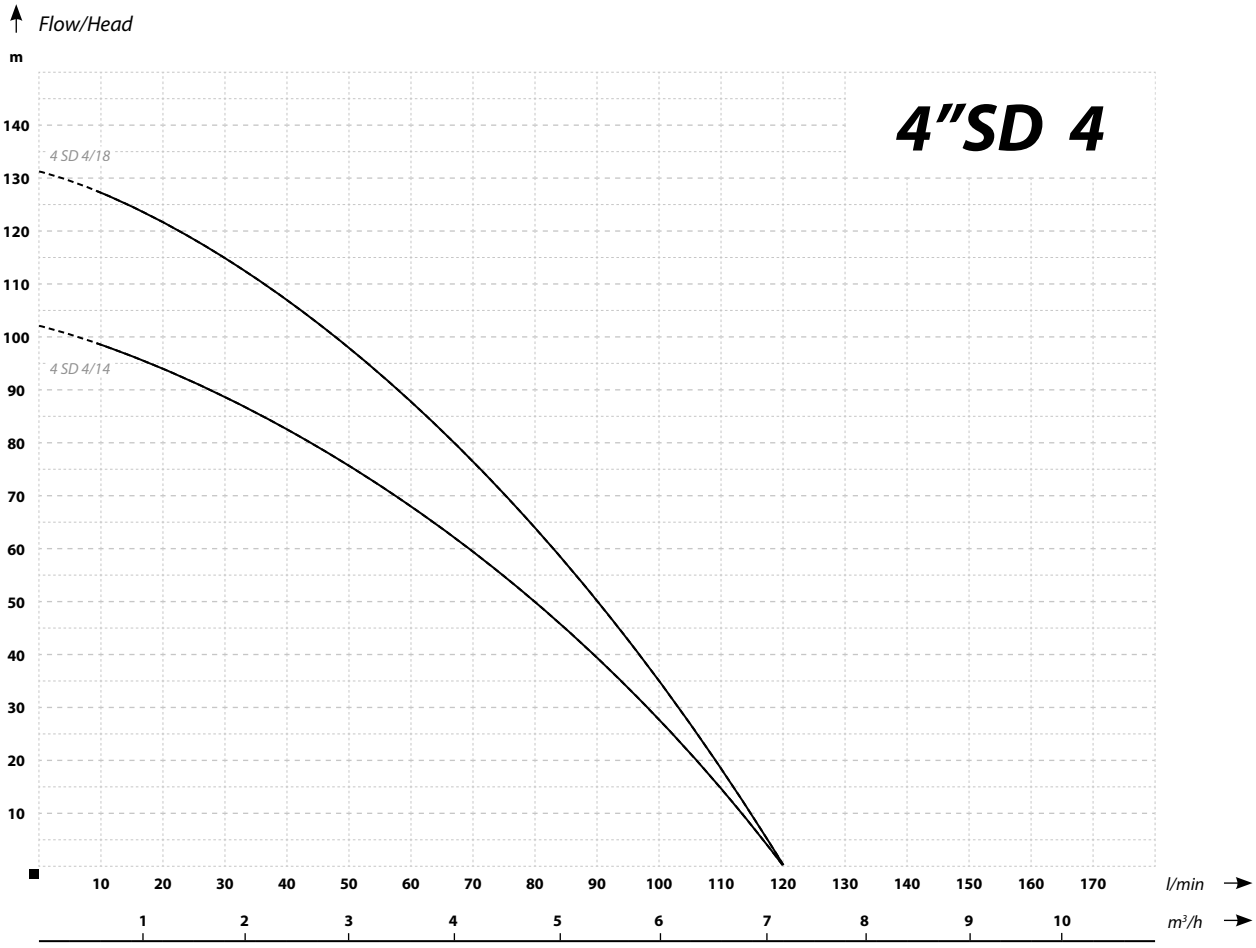
80
70
60
50
40
30
20
10
10 20 30 40 50 60 70 80 90 100 110 l/min
1 2 3 4 5 6 m³/h


Flow/Head
m
4"SD 4
4 SD 4/18
4 SD 4/14
140
130
120
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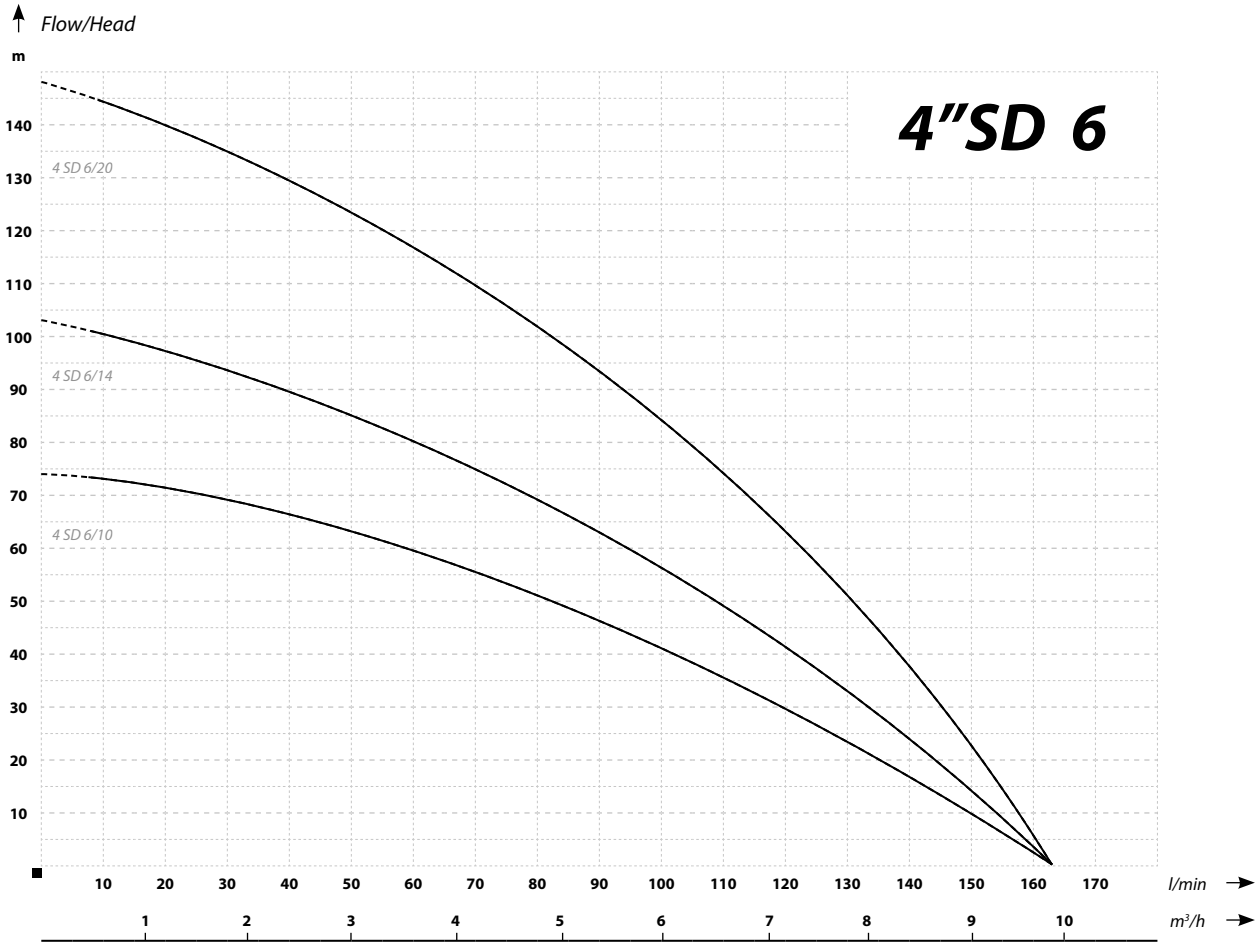
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 l/min
1 2 3 4 5 6 7 8 9 10 m³/h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4 SD 6/14
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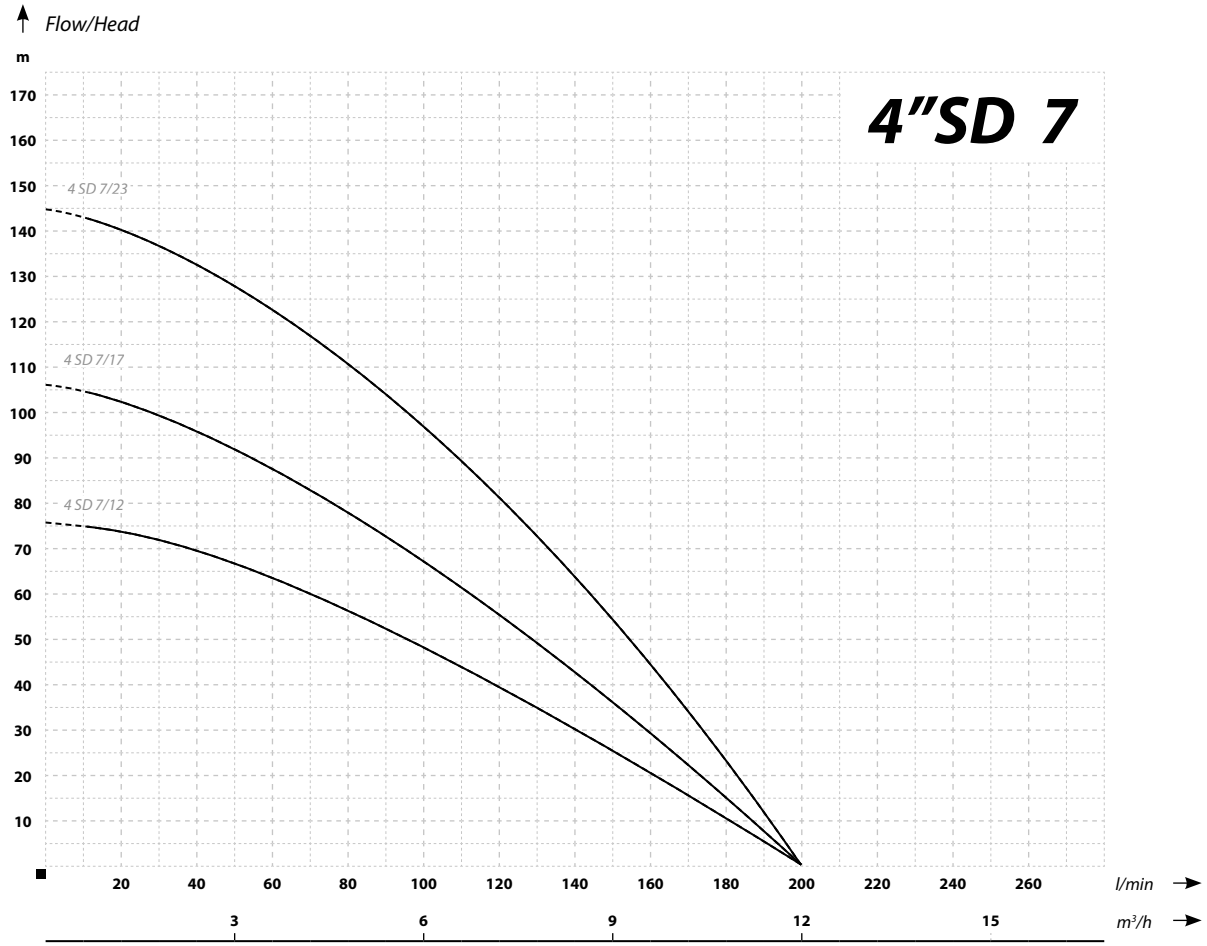
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170
l/min
1 2 3 4 5 6 7 8 9 10
m³/h


Flow/Head
m
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4 SD 7/23
4 SD 7/17
4 SD 7/12
170
160
150
140
130
120
110
100
90
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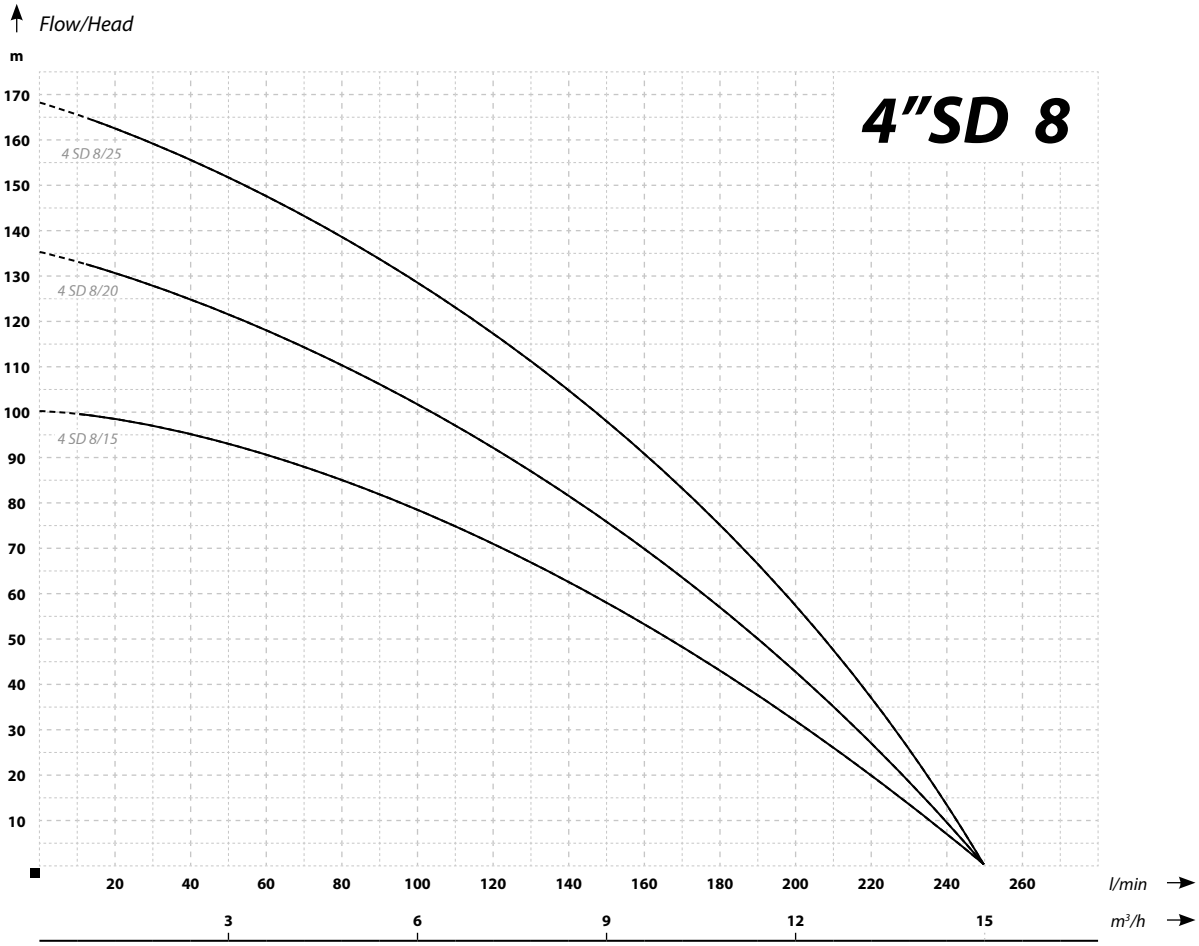
70
60
50
40
30
20
10
20 40 60 80 100 120 140 160 180 200 220 240 260
l/min
3 6 9 12 15
m³/h


Flow/Head
m
4"SD 8
4 SD 8/25
4 SD 8/20
4 SD 8/15
170
160
150
140
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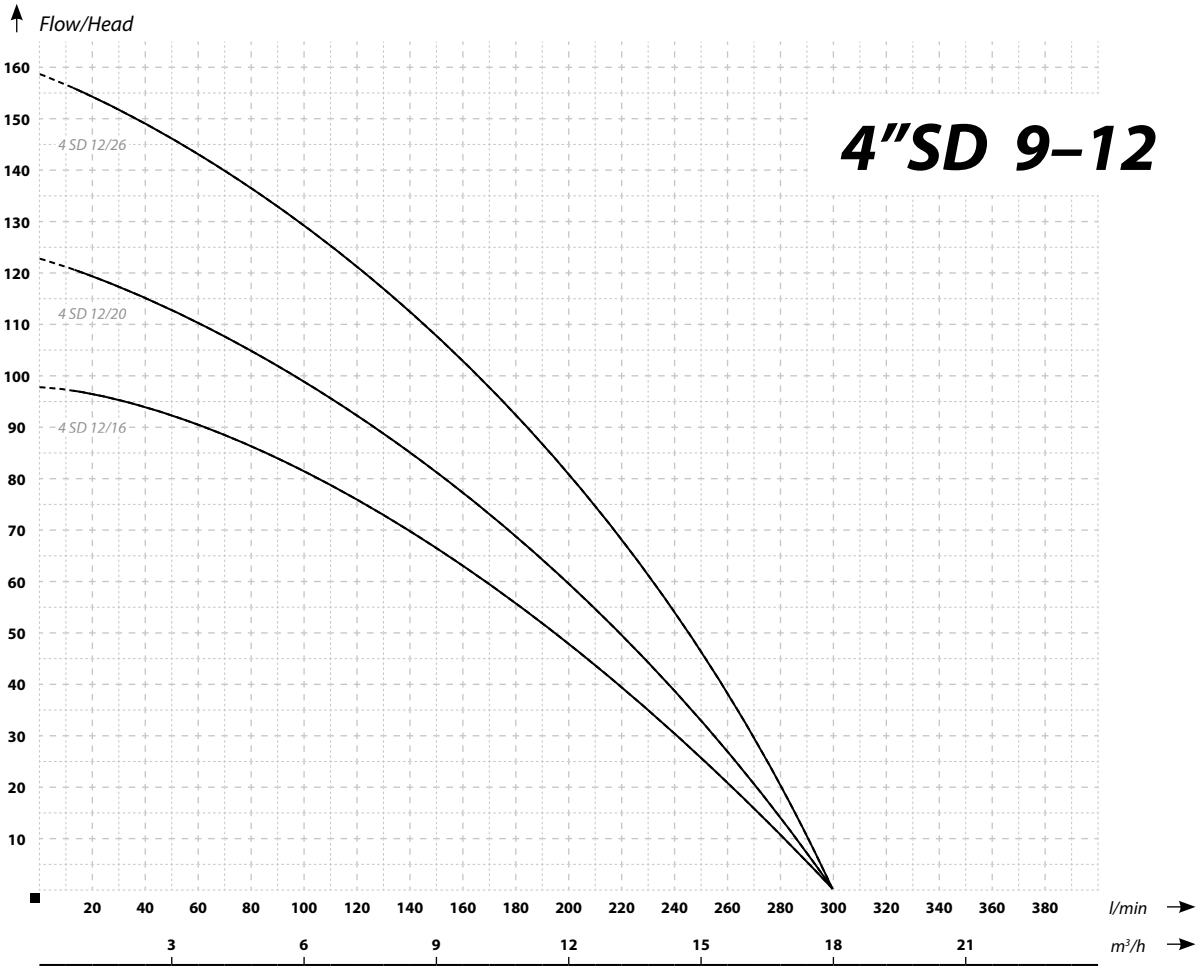
20 40 60 80 100 120 140 160 180 200 220 240 260
l/min
3 6 9 12 15
m³/h


Flow/Head
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4 SD 12/26
4 SD 12/20
4 SD 12/16
160
150
140
130
120
110
100
90
80
70
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30
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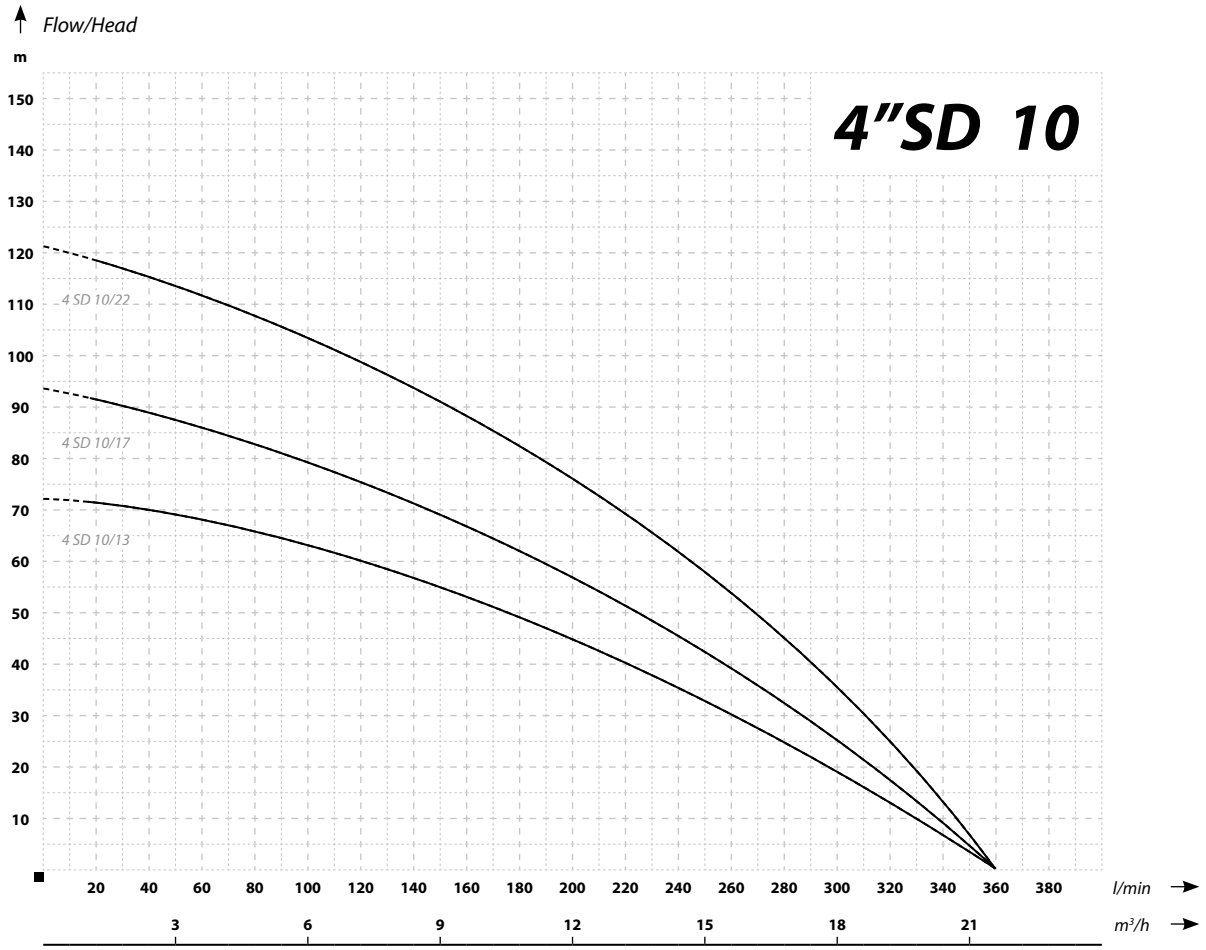
20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380
l/min
3 6 9 12 15 18 21
m³/h


Flow/Head
m
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4 SD 10/22
4 SD 10/17
4 SD 10/13
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140
130
120
110
100
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80
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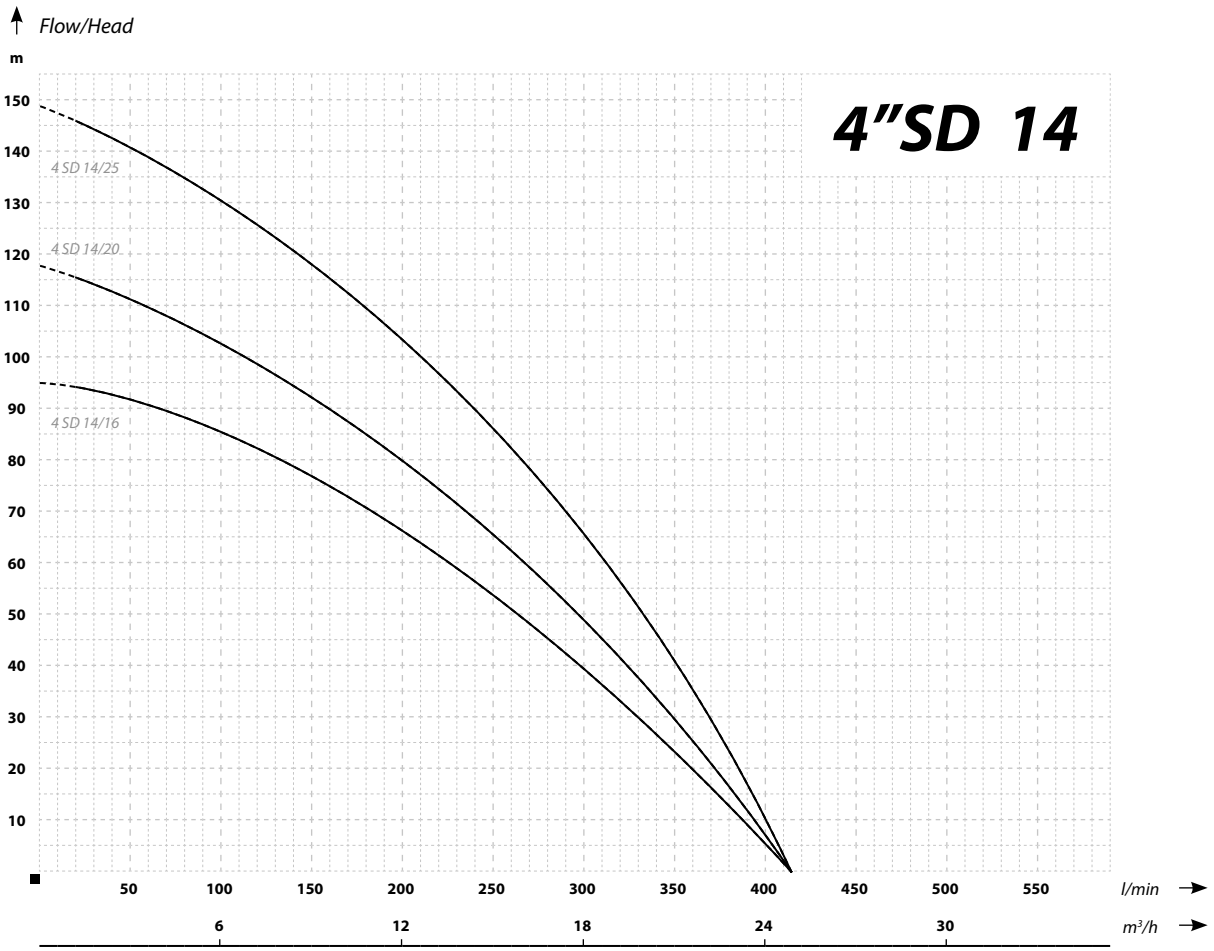
20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380
l/min
3 6 9 12 15 18 21
m³/h


Flow/Head
m
4"SD 14
4 SD 14/25
4 SD 14/20
4 SD 14/16
150
140
130
120
110
100
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80
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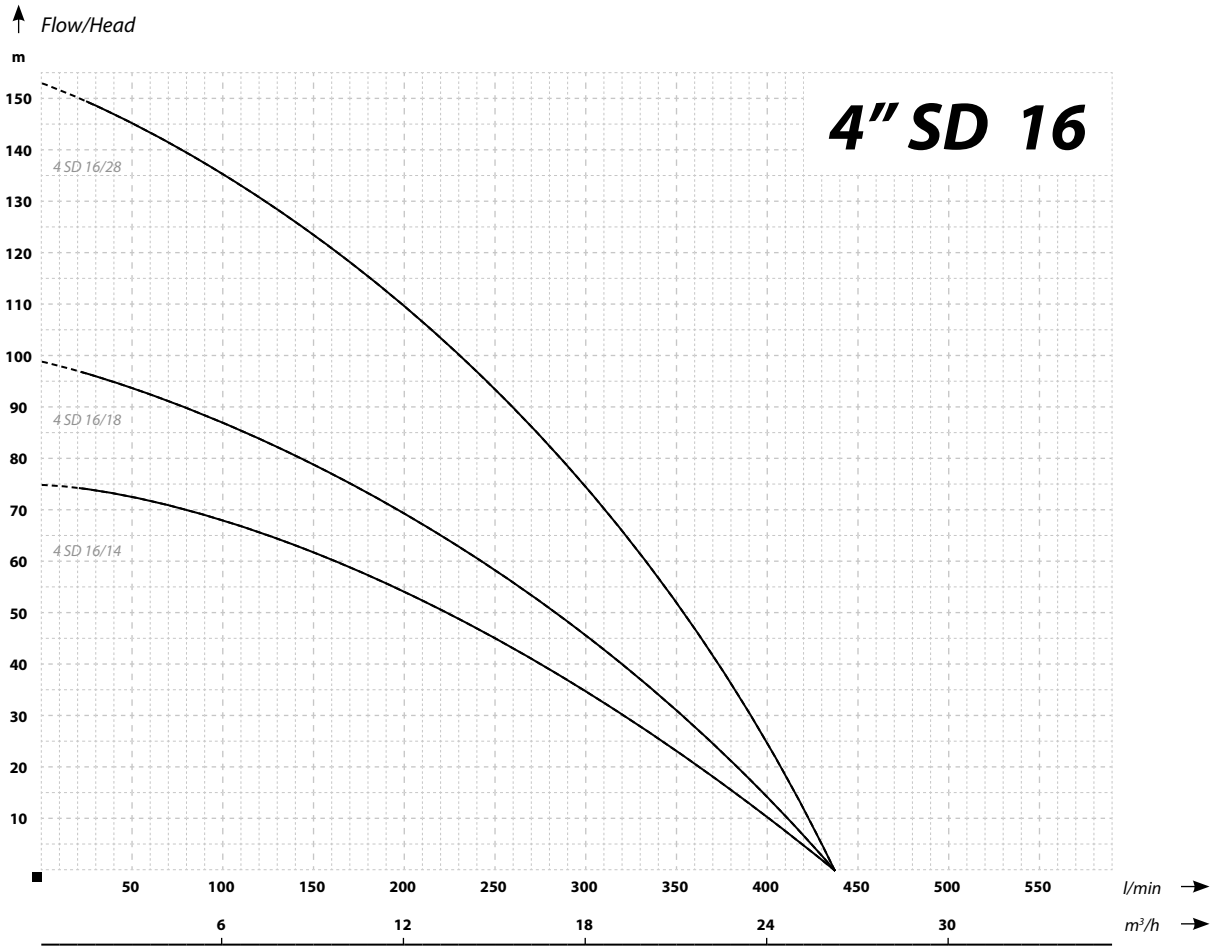
20
10
50 100 150 200 250 300 350 400 450 500 550
l/min
6 12 18 24 30
m³/h


Flow/Head
m
4" SD 16
4 SD 16/28
4 SD 16/18
4 SD 16/14
150
140
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120
110
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70
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l/min
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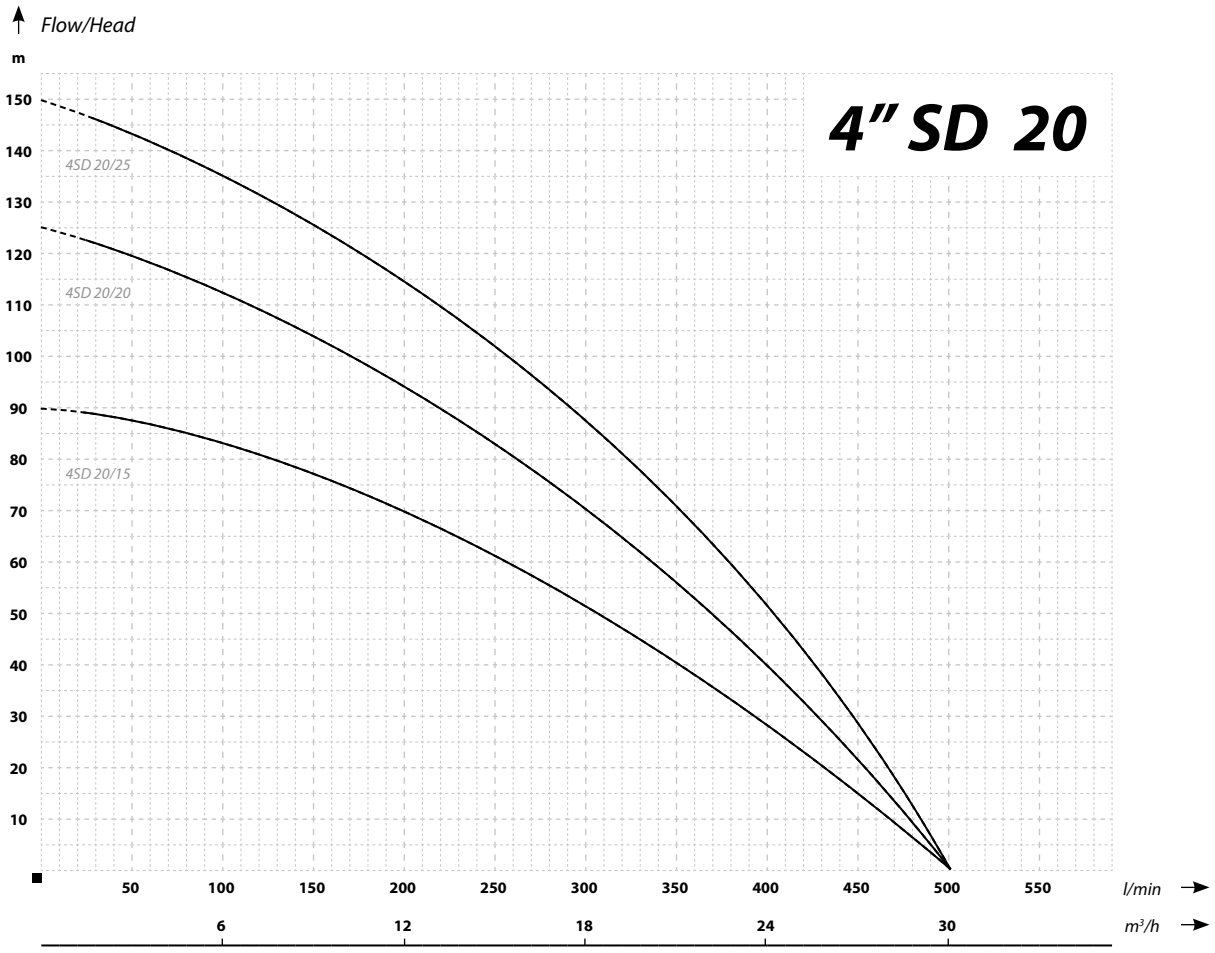
m³/h


Flow/Head
m
4" SD 20
4SD 20/25
4SD 20/20
4SD 20/15
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
50
100
150
200
250
300
350
400
450
500
550
l/min
6
12
18
24
30
m³/h

5" SD

INCREASED RESISTANCE TO SAND

127 mm diameter multi-stage deep well pumps with increased resistance to sand, intended for minimum 5" wells. The IBO SD series were the first pumps on the market to be known as "sand resistant". The "sand resistance" is the unquestionable advantage of IBO pumps over competing products due their innovative and rare design with increased resistance to sand, unusual in 3-inch pumps. For 5SD 25 pumps, the maximum sand content in water is 5%. Increased resistance to sand is achieved by using "floating impellers".

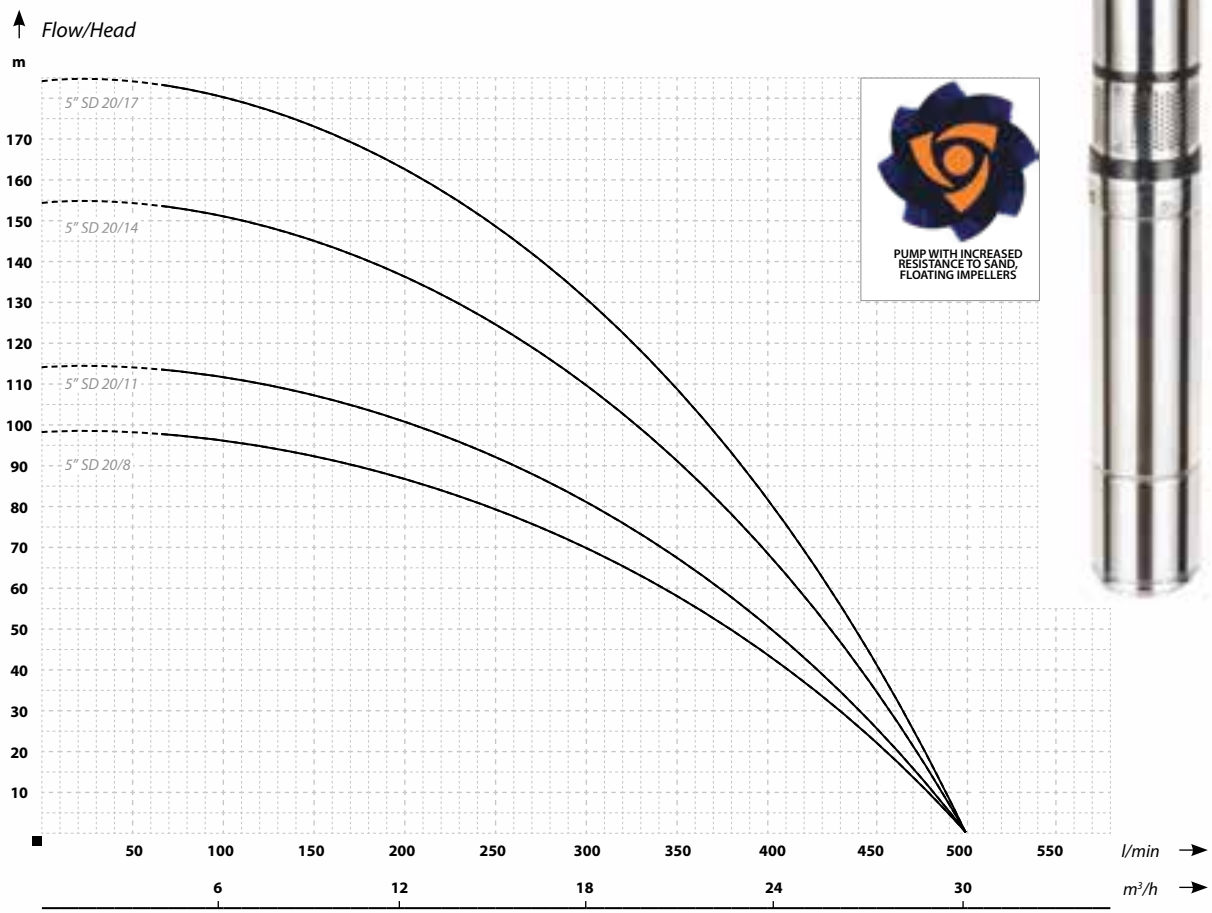
Increased resistance to sand is achieved by using "floating impellers".
Upon request, the cable of any length can be installed.

APPLICATION:
Supply of water to large farms from deep water intakes, garden and orchard irrigation, shrubs and tree nurseries, land drainage/dewatering. Water supply systems, industrial applications.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Inlet/outlet: grey cast iron
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP

Flow/Head



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
5" SD 20/8	99	500	4	400	10,4	3	127/1440	34
5" SD 20/11	115	500	5,5	400	14	3	127/1640	42
5" SD 20/14	155	500	7,5	400	17,5	3	127/1880	50
5" SD 20/17	185	500	9,2	400	21,5	3	127/2040	58

Depending on the production batch, the device parameters may differ from the data provided in the table

6" SD

INCREASED RESISTANCE TO SAND

Wielostopniowe pompy głębinowe o średnicy 146 mm, z podwyższoną odpornością na piasek, przeznaczone do instalacji w studniach o minimalnej średnicy wewnętrznej 160 mm. Pompy służą do zaopatrywania w wodę domów jedno- i wielorodzinnych, gospo-darstw rolnych, a także do zasilania systemów nawodnieniowych (zraszaczy, linii kroplu-jących). Pompy mają zastosowanie również w przemyśle oraz odwodnieniach.

CECHY:
- Podwyższona odporność na piasek
- Atest PZH
- Najwyższej jakości materiały
- Kabel zasilający 2m
- Zabezpieczenie termiczne wbudowane w uzwojeniu silnika
- Gwarancja 24 miesiące
- Serwis gwarancyjny oraz pogwarancyjny

DANE TECHNICZNE:
- Maksymalna temperatura cieczy: 35°C
- Maksymalna temperatura otoczenia: 35°C
- Zasilanie: 230 V lub 400 V
- Klasa izolacji: B
- Tryb pracy: ciągły
- Bezpieczeństwo: IP68
- Cable length zasilającego: 2 m
- Pozycja pracy: pionowa
- Max. liczba uruchomień na 1h: 20
- Max. głębokość zanurzenia: 100 m
- Prędkość obrotowa silnika: 2850 RMP

MATERIAŁY:
- Króciec ssący/ tłoczny: żeliwo szare
- Obudowa: stal nierdzewna AISI 304
- Wał i rotor: stal nierdzewna AISI 304
- Wirnik: noryl
- Dyfuzor: noryl
- Dławica mechaniczna: Ceramika/Sic/NBR
- Silnik: chłodzony olejem

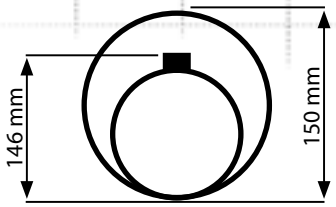
PARAMETERS

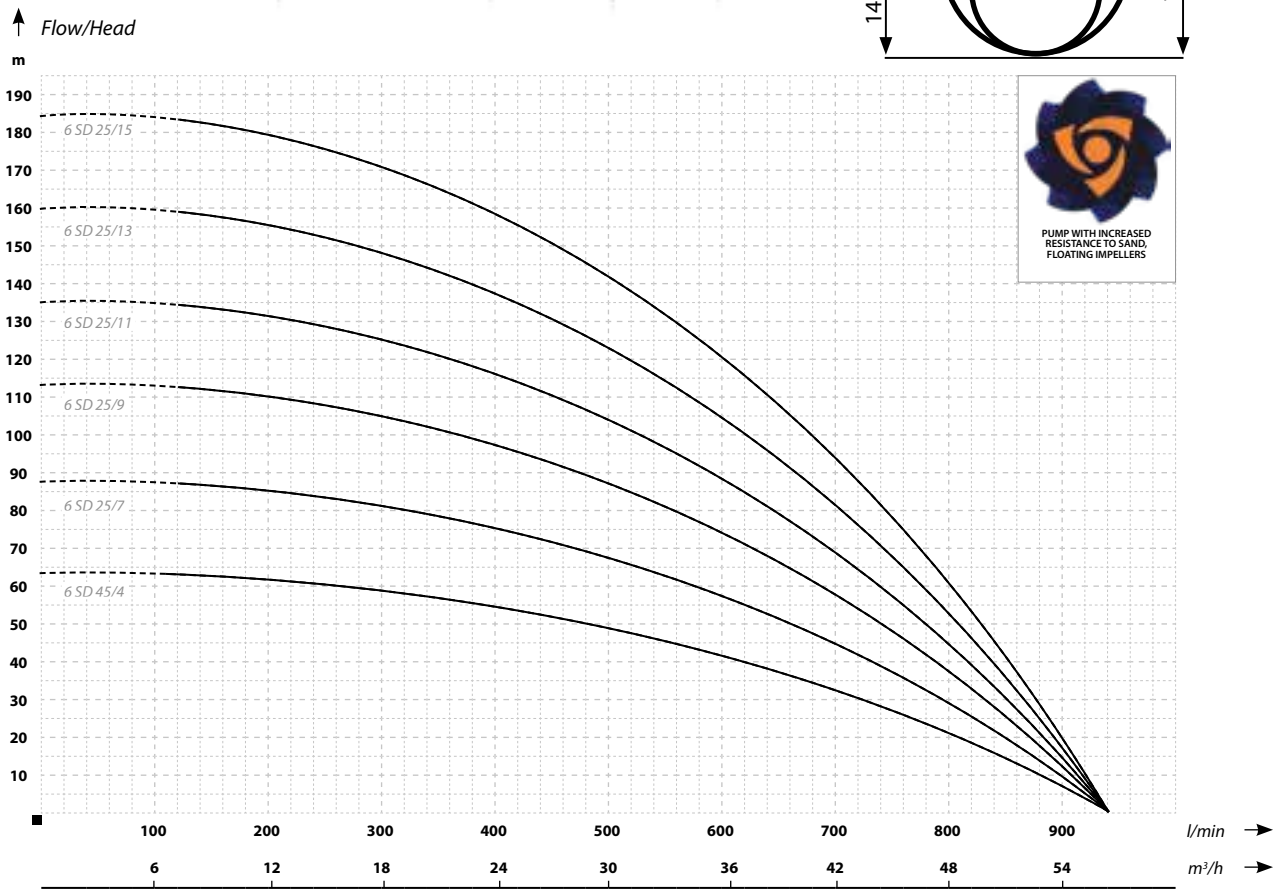
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
6 SD 25/7	89	920	7,5	400	17,5	3	146/1440	52
6 SD 25/9	113	920	9,2	400	21,5	3	146/1650	59
6 SD 25/11	135	920	11	400	24,5	3	146/1880	67
6 SD 25/13	160	920	13	400	27,5	3	146/2090	73
6 SD 25/15	185	920	15	400	31,5	3	146/2300	82
6 SD 30/13	183	650	13	400	27,5	3	146/2150	73
6 SD 30/15	211	650	15	400	31,5	3	146/2400	83
6 SD 45/4	64	1150	5,5	400	19,3	3	146/1390	43
6 SD 45/9	112	1150	15	400	31,5	3	146/1818	81
6 SD 60/7	85	1300	15	400	31,5	3	146/1784	83

Depending on the production batch, the device parameters may differ from the data provided in the table

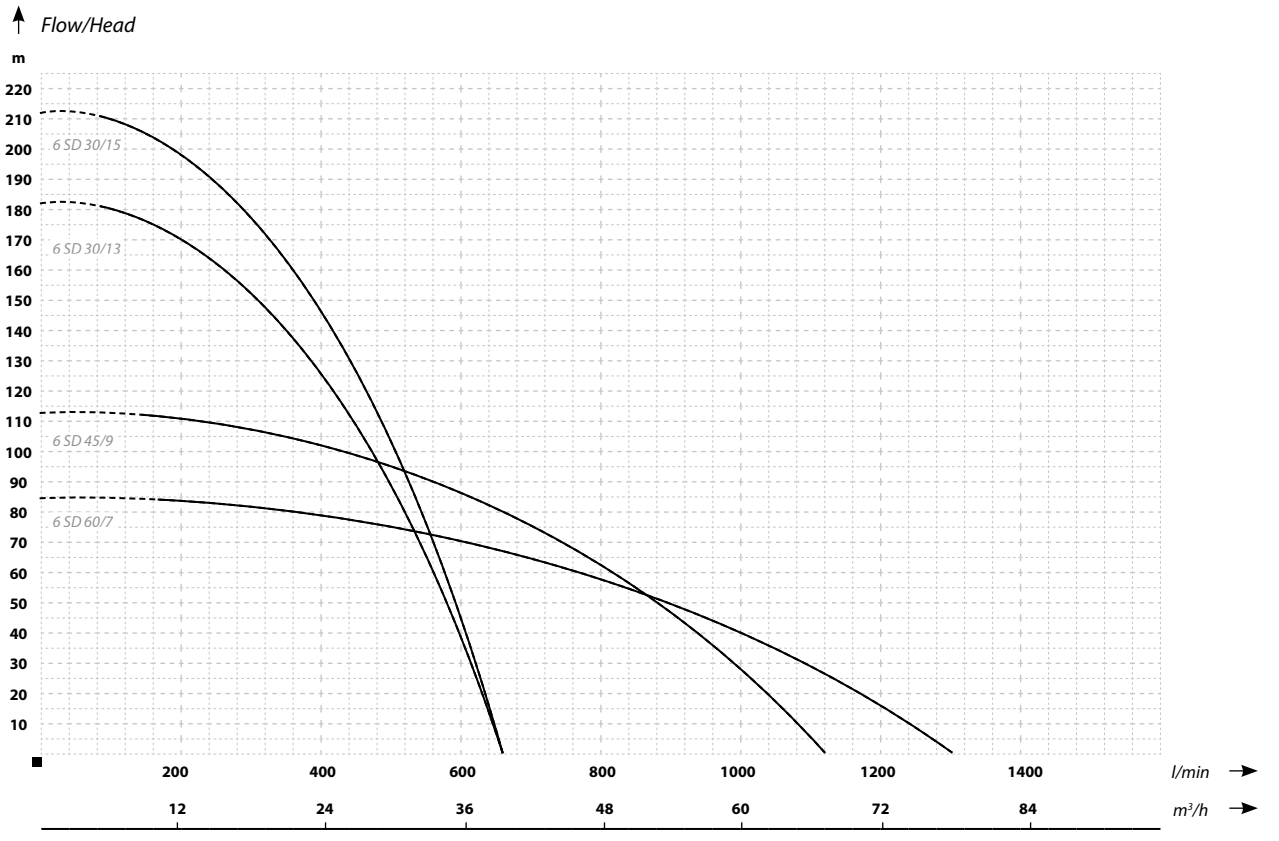
6" SD

INCREASED RESISTANCE TO SAND





PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS



3" ISP

MADE ENTIRELY OF STAINLESS STEEL

76 mm diameter stainless steel multi-stage deep well pumps intended for wells with 4" minimum diameter. Maximum sand content in water is up to 3%. Due to the materials used, the ISP pumps are among the most durable deep well pumps. Inlet, outlet, housing, shaft and impeller are made entirely of stainless steel. The pumps are supplied with 3" oil-cooled motors.

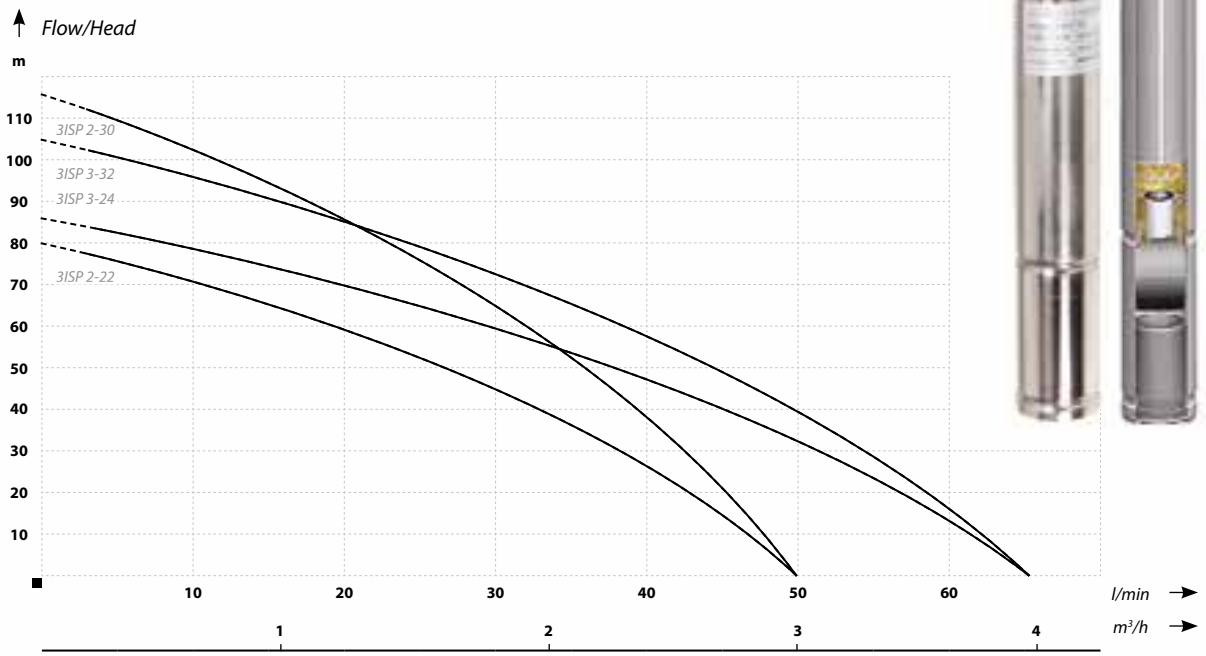
The 3" ISP series are the first pumps made entirely of stainless steel available on the Polish market.
The pumps have a 2 m long power cable that can be extended.
Upon request, the cable can be extended by any length. APPLICATION:
Supply of water to single-family houses and holiday houses. Irrigating gardens. Drainage/dewatering.

OPERATING CONDITIONS:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:

- Inlet/outlet: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Venturi tube: stainless steel AISI 304
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP



PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3ISP 2-22	80	50	550	230	5,7	1 1/4"	75/1150	12
3ISP 2-30	115	50	750	230	7,3	1 1/4"	75/1350	14
3ISP 3-24	85	65	750	230	7,9	1 1/4"	75/1290	16
3ISP 3-32	105	65	1100	230	9,7	1 1/4"	75/1630	18

4" ISP / 4" ISPM

98 mm diameter stainless steel multi-stage deep well pumps intended for minimum 4" diamater wells. Maximum sand content in water is up to 0.3%.

Due to the materials used, the ISP pumps are among the most durable deep well pumps. Inlet, outlet, housing, shaft and impellers are made entirely of stainless steel.

4 ISPM pumps are available with IBO and IBO ITALY 230 V ~ / 50Hz motors. 4 ISP pumps are available with IBO and IBO ITALY 400 V ~ / 50Hz motors.

Pumps with 230 V ~ / 50 Hz motors are equipped with a control box with built-in capacitor and overcurrent protection.

Pumps with 0.75 kW to 2.2 kW motors are available with 1.5 m or 20 m long cable. Upon request, the cable can be extended by any length.

APPLICATION:
Supply of water to single-family houses and farms from deep well intakes. Irrigating gardens and orchards. Land drainage/dewatering. Water supply systems. Industrial applications.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B/F Insulation
- Operating mode - continuous
- Protection - IP68

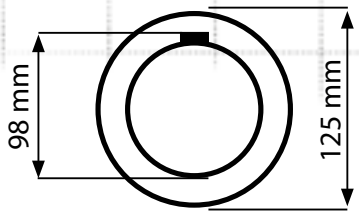
MATERIALS:
- Inlet/outlet: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Venturi tube: stainless steel AISI 304
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP

Depending on the production batch, the device parameters may differ from the data provided in the table

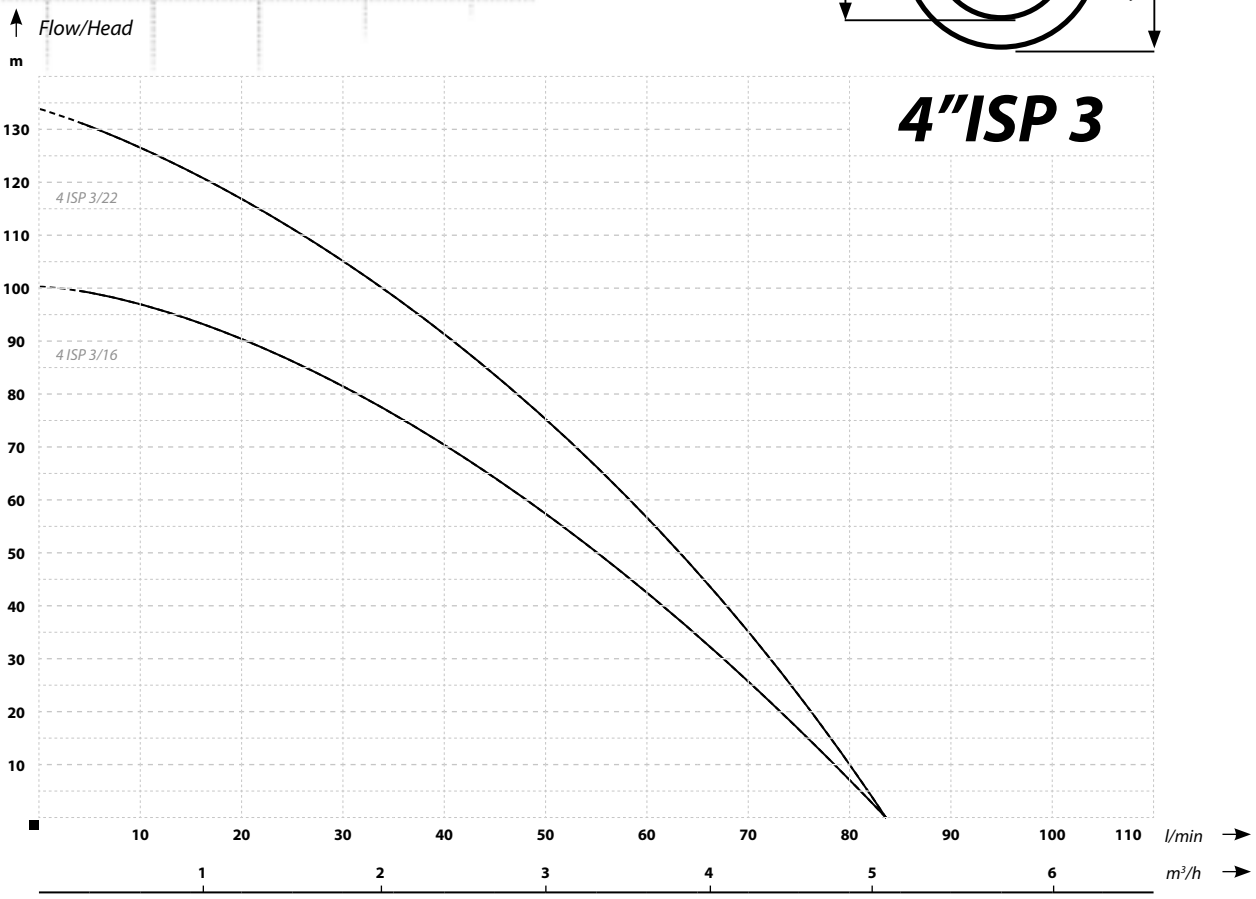
PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
4 ISP 3/16	100	83	1,1	230/400	8,5/4,0	1¼	98/950	16
4 ISP 3/22	134	83	1,5	230/400	10,5/5,0	1¼	98/1100	20
4 ISP 5/14	85	130	1,5	230/400	10,5/5,0	1½	98/950	19
4 ISP 5/20	120	130	2,2	230/400	15,5/6,3	1½	98/1140	22
4 ISP 5/28	169	130	3	400	7,2	1½	98/1340	25
4 ISP 8/13	74	240	2,2	230/400	15,5/6,3	2	98/1150	23
4 ISP 8/18	103	240	3	400	7,2	2	98/1400	26
4 ISP 8/25	143	240	4	400	9,2	2	98/1780	32
4 ISP 14/10	66	383	3	400	7,2	2	98/1150	22
4 ISP 14/13	86	383	4	400	9,2	2	98/1350	27
4 ISP 14/18	119	383	5,5	400	12,9	2	98/1670	33
4 ISP 14/25	165	383	7,5	400	18,5	2	98/2160	44

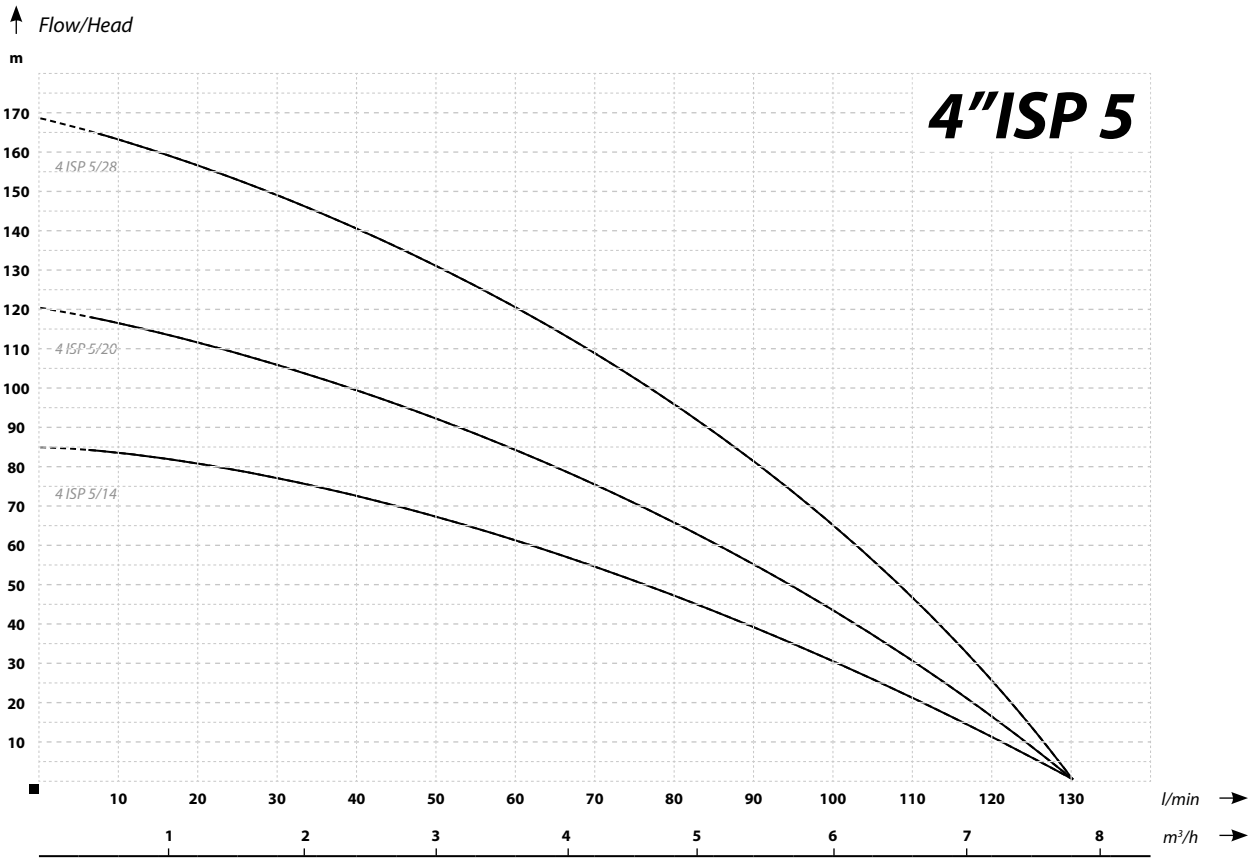
4" ISP / 4" ISPM



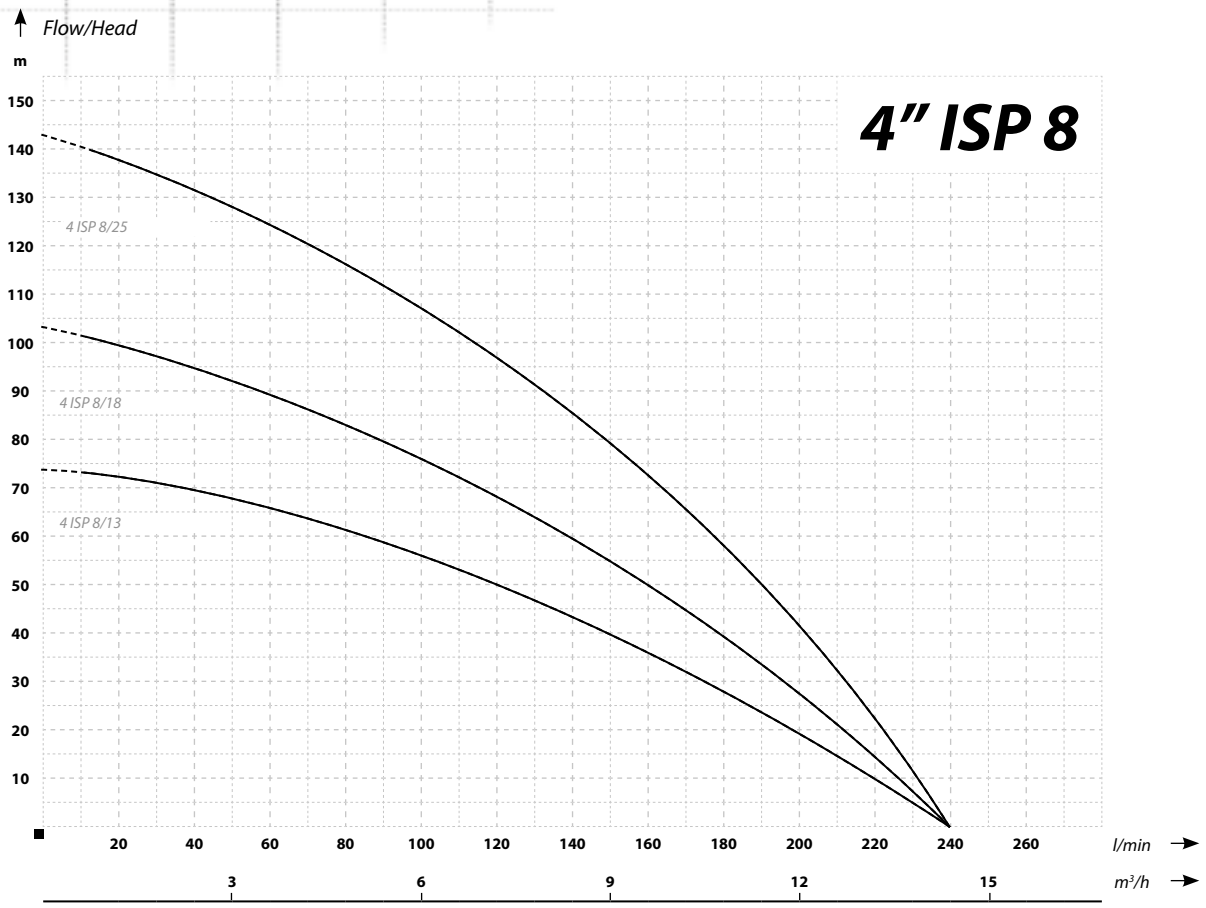
4"ISP 3



4"ISP 5



4" ISP / 4" ISPM


Flow/Head
m
4" ISP 8
4 ISP 8/25
4 ISP 8/18
4 ISP 8/13
150
140
130
120
110
100
90
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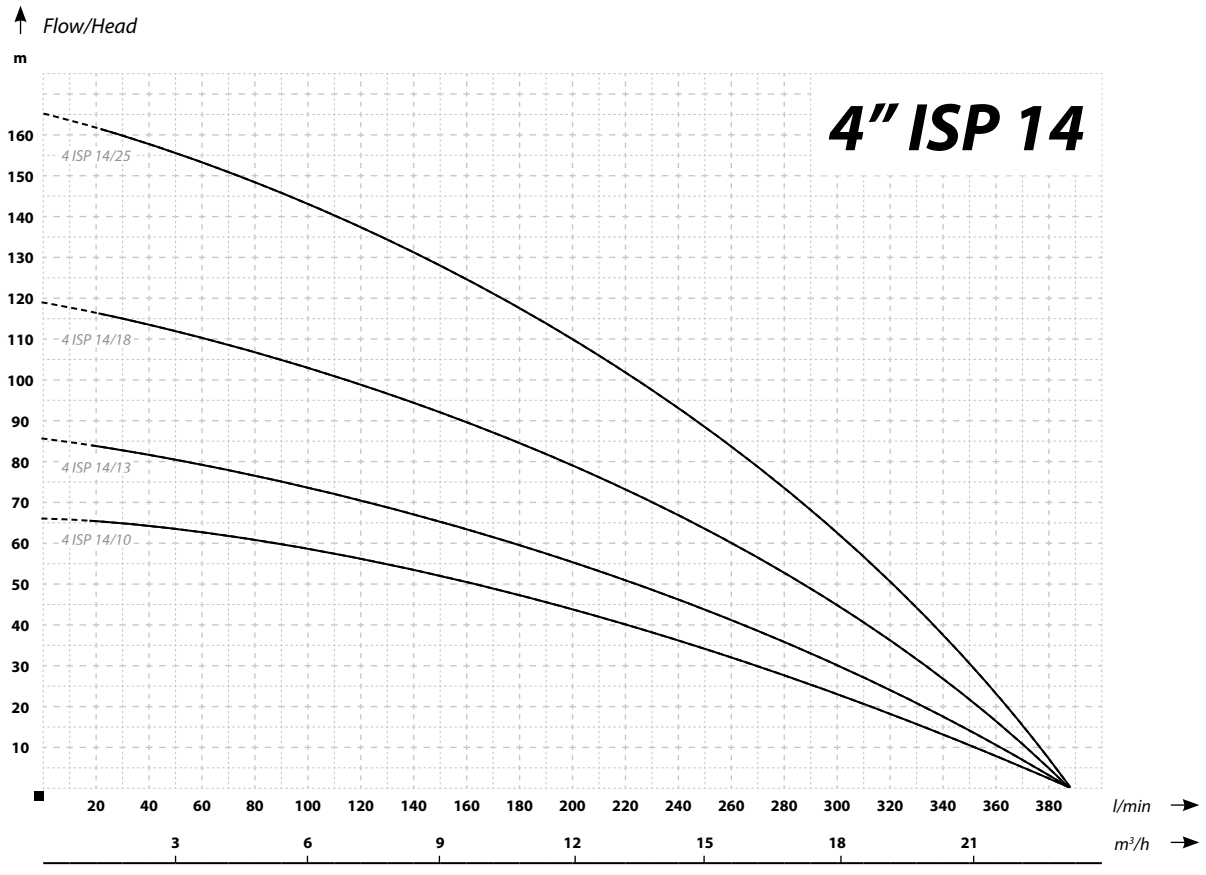
70
60
50
40
30
20
10
20 40 60 80 100 120 140 160 180 200 220 240 260
l/min
3 6 9 12 15
m³/h


Flow/Head
m
4" ISP 14
4 ISP 14/25
4 ISP 14/18
4 ISP 14/13
4 ISP 14/10
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380
l/min
3 6 9 12 15 18 21
m³/h

IBQ HIGH SPEED DEEP WELL PUMPS

IBQ multi-stage centrifugal deep well pumps are designed for operation in drilled wells and open water reservoirs. Unlike other deep well pumps, the IBQ have advanced energy-saving motors with permanent magnets and a frequency converter. As a result, the motor achieves 6000 rpm and a very high performance.

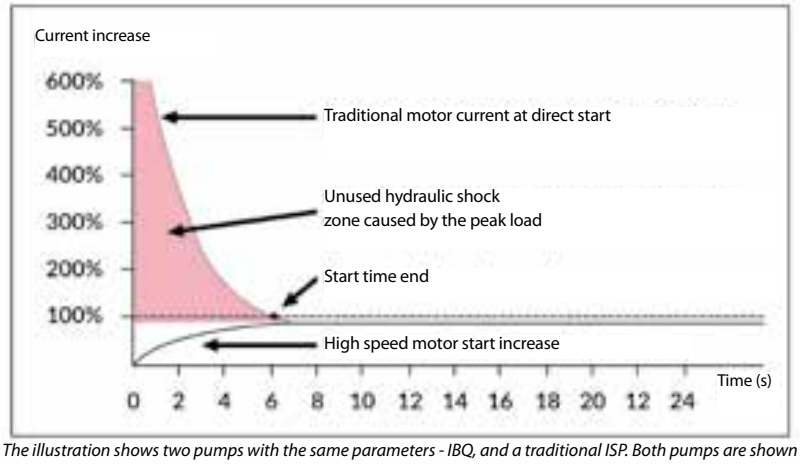
Motor design with permanent magnets and an inverter has many advantages over traditional pumps. These include:

- Energy saving due to high performance of the motor and pump. By achieving the same hydraulic parameters of pressure and performance, the IBQ pumps can be used with motor that are approximately 15-20% smaller than motors used in traditional pumps.
- Dry-running protection. The inverter electronics control the motor current draw. When dry run specific draw is detected, the motor is stopped. After a certain period of time, the pump tries to automatically restart, and its operation will continue after inflow is restored.
- Soft start resulting in no negative effect of hydraulic shock on the hydraulic system, significantly reduced mechanical wear of the motor and pump, no impact of inrush current on the electricity network.
- In traditional solutions, in order to achieve constant motor operating parameters, rapid starting is required. During starting, the motor draws a multiple of normal operating current during the first few seconds of operation (inrush current). This may result in voltage fluctuations in the electricity network affecting operation of other devices connected to this network, blown fuses, and burning of electrical connections in control units. Usually, hydraulic parameters of the pump are during starting instantaneously higher than nominal, which means that in the first seconds of operation water with higher parameters (pressure, flow) than nominal, designed for a given network is pumped into the system. This is called hydraulic shock. Repeated hydraulic shock leads to excessive wear of hydraulic components of the water supply system. Another disadvantage eliminated by soft start is the wear and tear of motor's mechanical and electrical components. Hydraulic shocks increase the mechanical load on the motor and pump, and the high inrush current weakens the internal insulation of the motor.
- The motors can operate with relatively high voltage fluctuations 160-250V for single-phase motors, 320-450V for three-phase motors.
- Due to the smaller size of IBQ pumps compared to traditional pumps, drilling and installation costs are considerably lower.

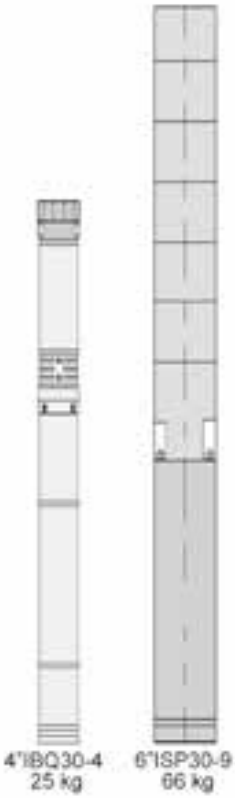
APPLICATION:
Supply of water to single-family houses and farms from deep well intakes. Irrigating gardens and orchards. Land drainage/dewatering. Water supply systems. Industrial applications.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class F Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Inlet/outlet: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: noryl
- Venturi tube: noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling / with inverter
- Rotational speed of the electric motor: 6000RMP



The illustration shows two pumps with the same parameters - IBQ, and a traditional ISP. Both pumps are shown in the same scale.



3″ IBQ

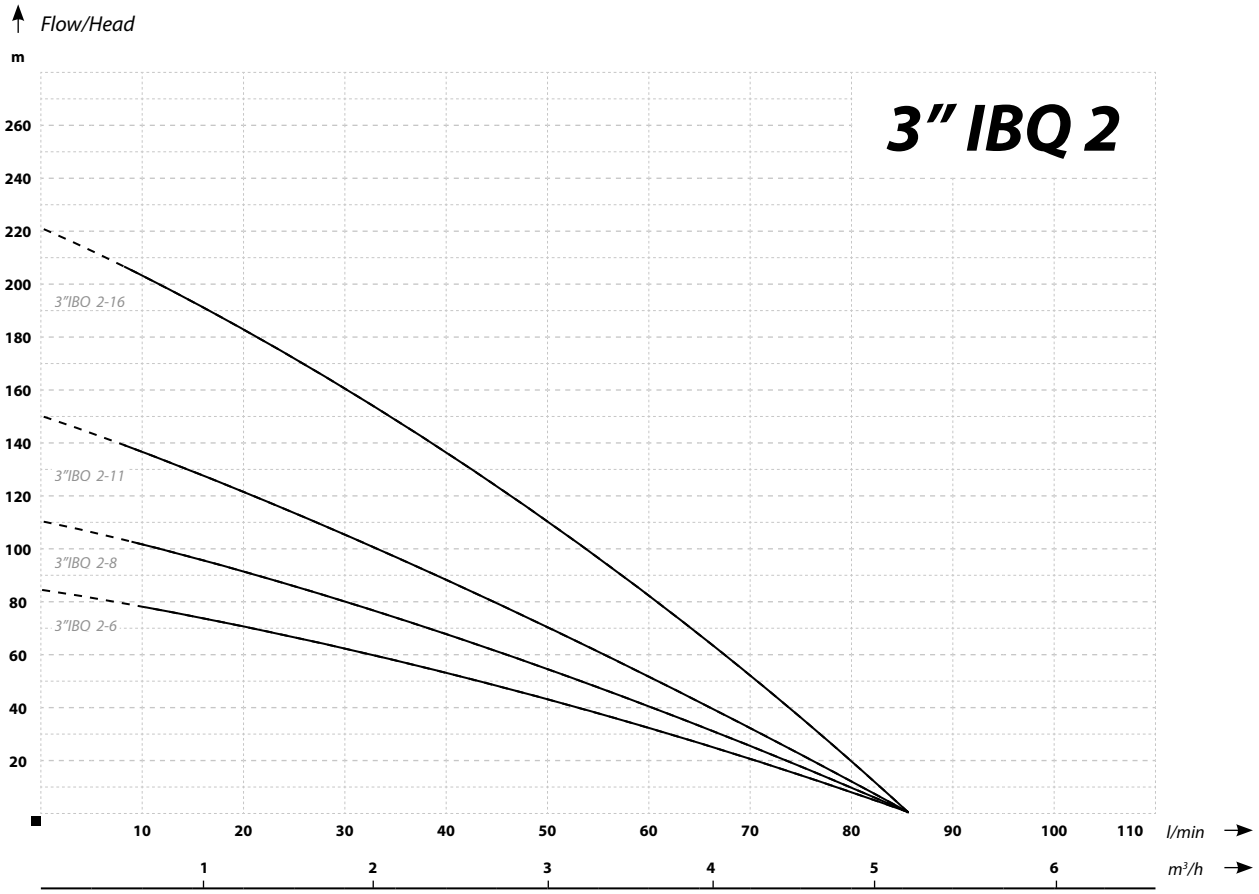
Maximum pump diameter 78 mm

PARAMETERS

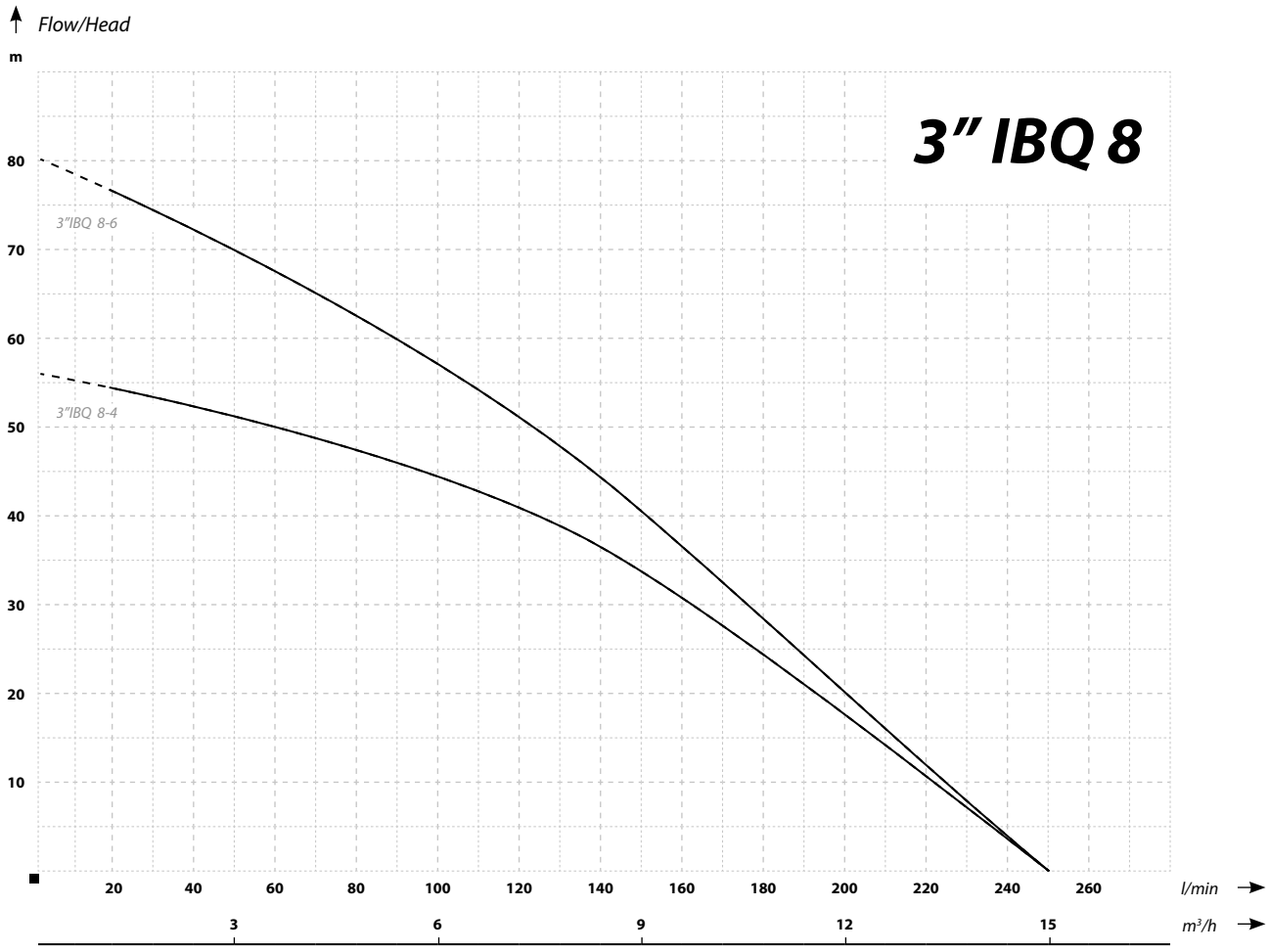
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) single phase	Outlet (inches)	Pump height (cm)	Weight (kg)
3″IBQ 2-6	85	85	0,8	160 - 250	1¼	109	9,3
3″IBQ 2-8	110	85	1,1	160 - 250	1¼	112	10,3
3″IBQ 2-11	150	85	1,5	160 - 250	1¼	117	12,5
3″IBQ 2-16	220	85	2,2	160 - 250	1¼	130	14,2

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) single phase	Outlet (inches)	Pump height (cm)	Weight (kg)
3″IBQ 5-6	75	150	1,1	160 - 250	1¼	108	10,3
3″IBQ 5-8	102	150	1,5	160 - 250	1¼	120	13,3
3″IBQ 5-10	130	150	2,2	160 - 250	1¼	131	13,8

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) single phase	Outlet (inches)	Pump height (cm)	Weight (kg) (no cord)
3″IBQ 8-4	56	250	1,5	160 - 250	1½	101	12,1
3″IBQ 8-6	80	250	2,2	160 - 250	1½	113	13,6




Flow/Head
m
3" IBQ 5
3"IBQ 5-10
3"IBQ 5-8
3"IBQ 5-6
140
130
120
110
100
90
80
70
60
50
40
30
20
10
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160
l/min
1 2 3 4 5 6 7 8 9
m³/h


Flow/Head
m
3" IBQ 8
3"IBQ 8-6
3"IBQ 8-4
80
70
60
50
40
30
20
10
20 40 60 80 100 120 140 160 180 200 220 240 260
l/min
3 6 9 12 15
m³/h

4" IBQ

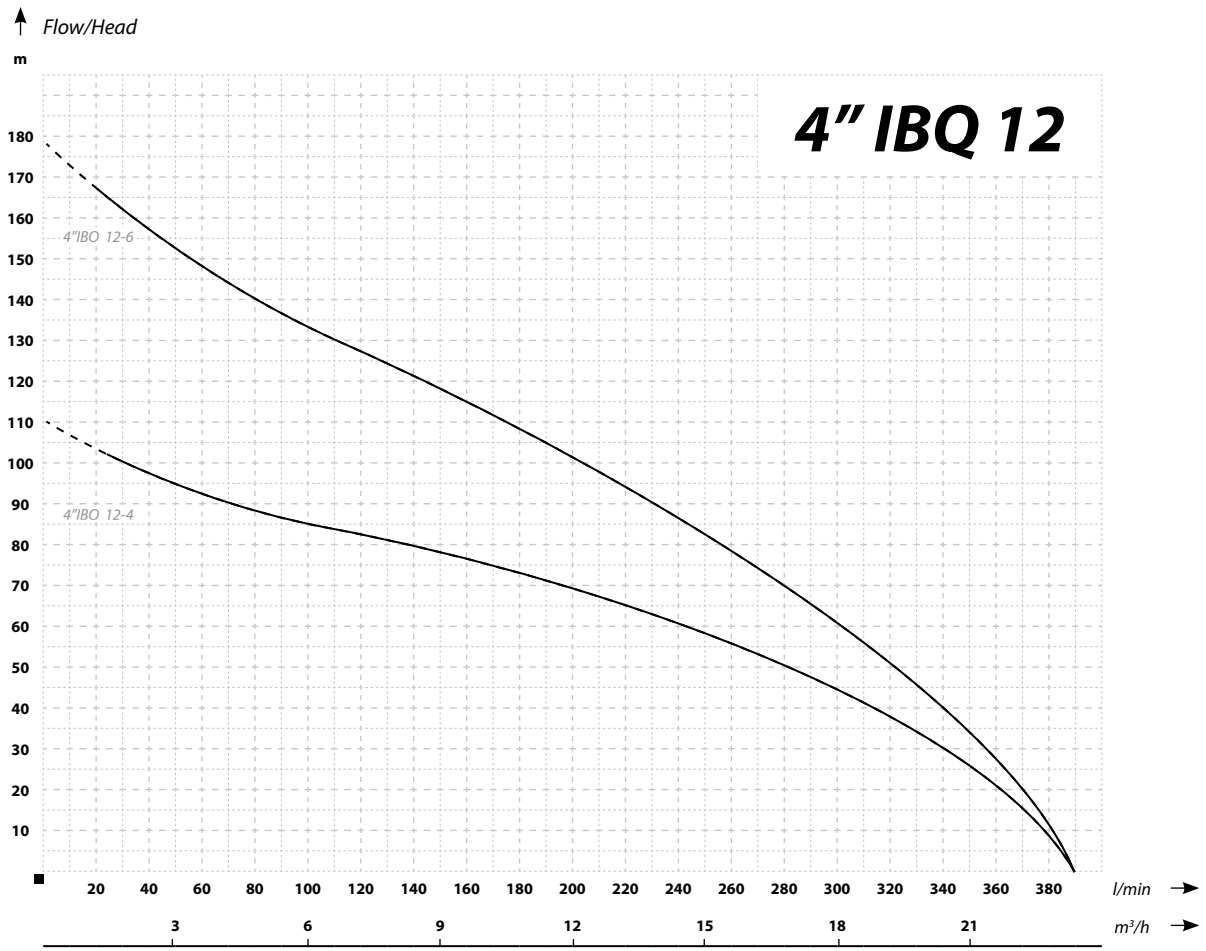
Maximum pump diameter 98 mm

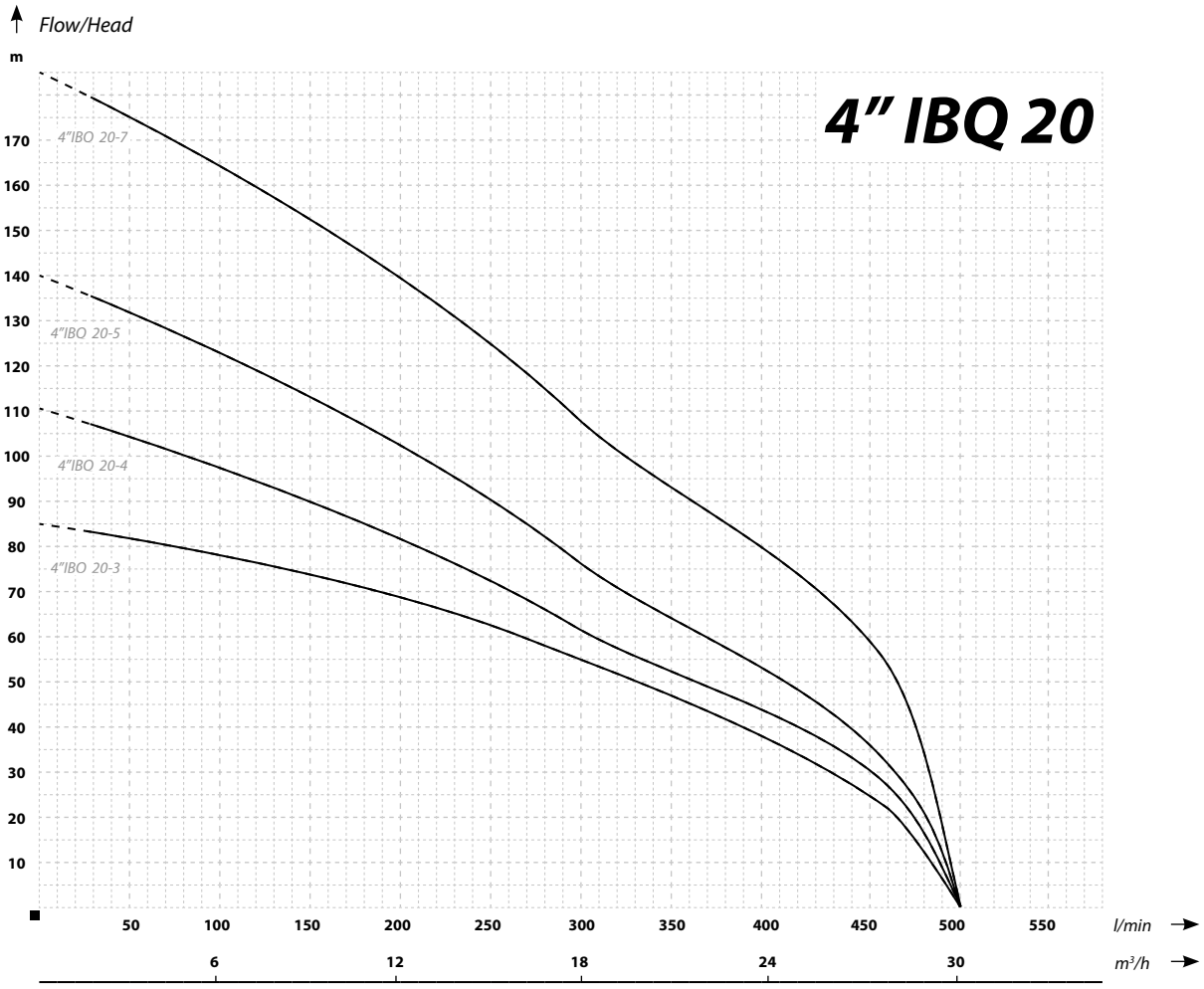
PARAMETERS

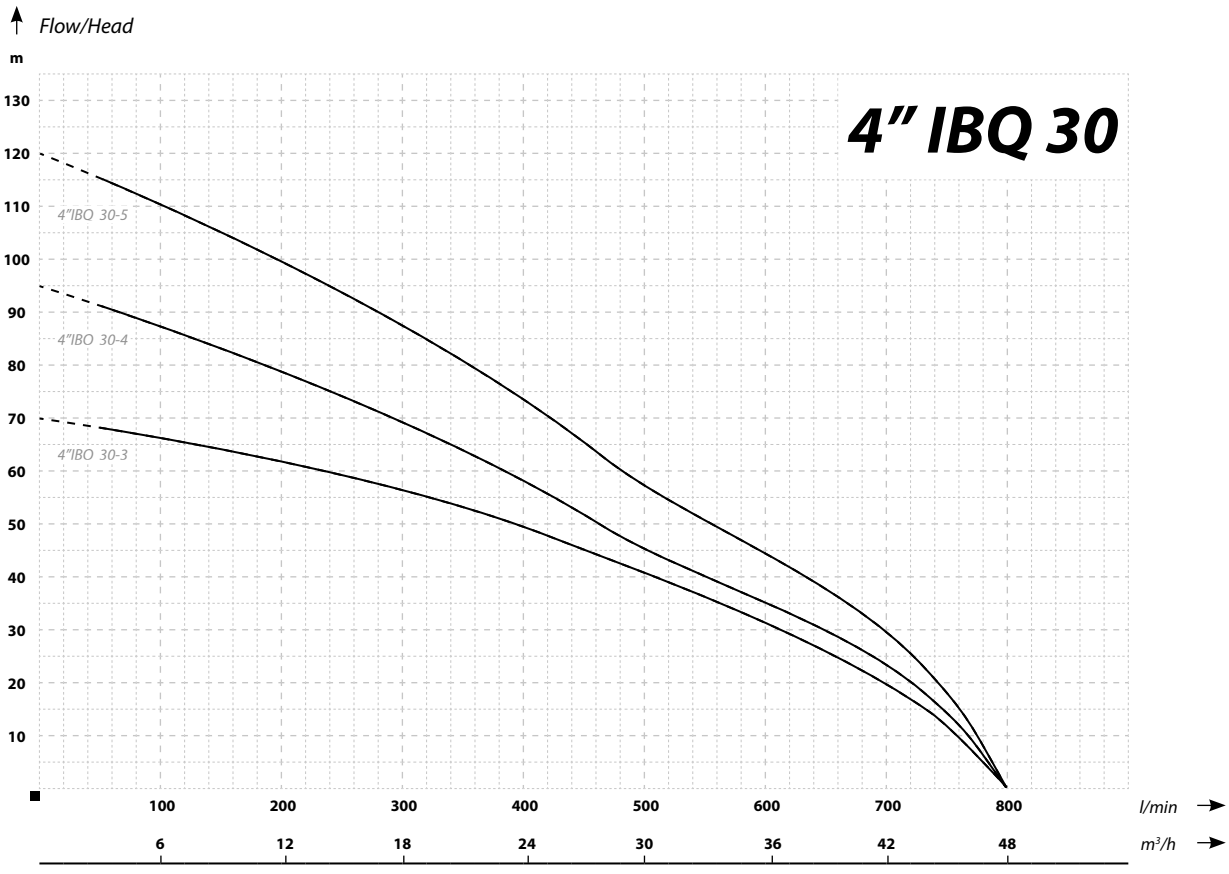
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) trzy fazy	Outlet (inches)	Pump height (cm)	Weight (kg) (no cord)
4"IBQ 12-4	110	390	4	320-450	2	104	20,2
4"IBQ 12-6	178	390	5,5	320-450	2	114	22,2

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) trzy fazy	Outlet (inches)	Pump height (cm)	Weight (kg) (no cord)
4"IBQ 20-3	85	500	4	320-450	2	104	20,2
4"IBQ 20-4	110	500	5,5	320-450	2	114	20,7
4"IBQ 20-5	140	500	7,5	320-450	2	124	25,1
4"IBQ 20-7	185	500	11	320-450	2	144	29

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) trzy fazy	Outlet (inches)	Pump height (cm)	Weight (kg) (no cord)
4"IBQ 30-3	70	800	5,5	320-450	3	115	22,5
4"IBQ 30-4	95	800	7,5	320-450	3	126	25,3
4"IBQ 30-5	120	800	11	320-450	3	140	28,7




Flow/Head
m
4" IBQ 20
4"IBO 20-7
4"IBO 20-5
4"IBO 20-4
4"IBO 20-3
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
50
100
150
200
250
300
350
400
450
500
550
l/min
6
12
18
24
30
m³/h


Flow/Head
m
4" IBQ 30
4"IBO 30-5
4"IBO 30-4
4"IBO 30-3
130
120
110
100
90
80
70
60
50
40
30
20
10
100
200
300
400
500
600
700
800
l/min
6
12
18
24
30
36
42
48
m³/h

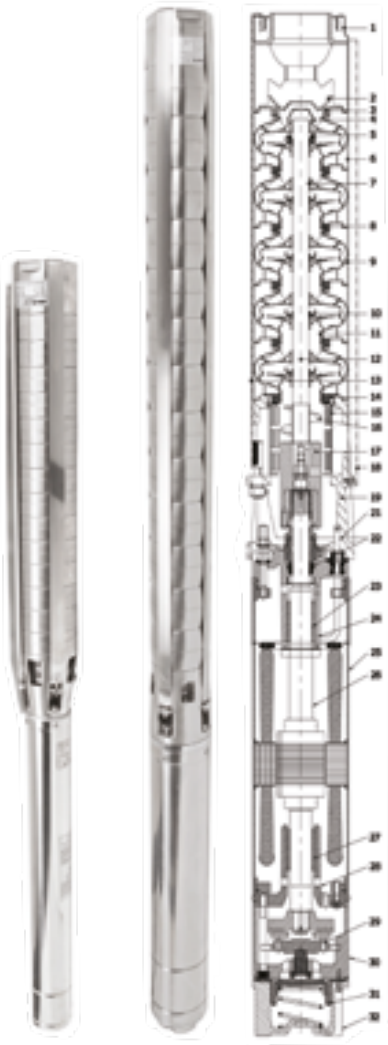
6" ISP
STAINLESS STEEL PUMPS

Stainless steel multi-stage deep well pumps with diameters of up to 145 mm, designed for pumping water with up to 0.3% sand content from a minimum 6"(150 mm) wells. Robust stainless steel design provides long-term and reliable operation.

The pumps are available with 4 and 6 inch IBO or IBO ITALY motors.
Depending on customer requirements, connected IBO ITALY motors can be oil- or water-cooled.

Due to the proven design and very high parameters compared to the diameter of the pumps, they can be used in a very wide range of applications, from supplying water to large farms to industrial solutions.

APPLICATION:
Supply of water to large farms from deep water intakes, garden and orchard irrigation, shrubs and tree nurseries, land drainage/dewatering. water supply systems, industrial applications.



OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class B/F Insulation
- Operating mode - continuous
- Protection - IP68

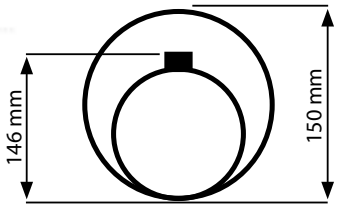
MATERIALS:
- Inlet/outlet: stainless steel AISI 304
- Clutch, tie rods and cable protector: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Venturi tube: stainless steel AISI 304
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil/water cooling
- Rotational speed of the electric motor: 2850RMP

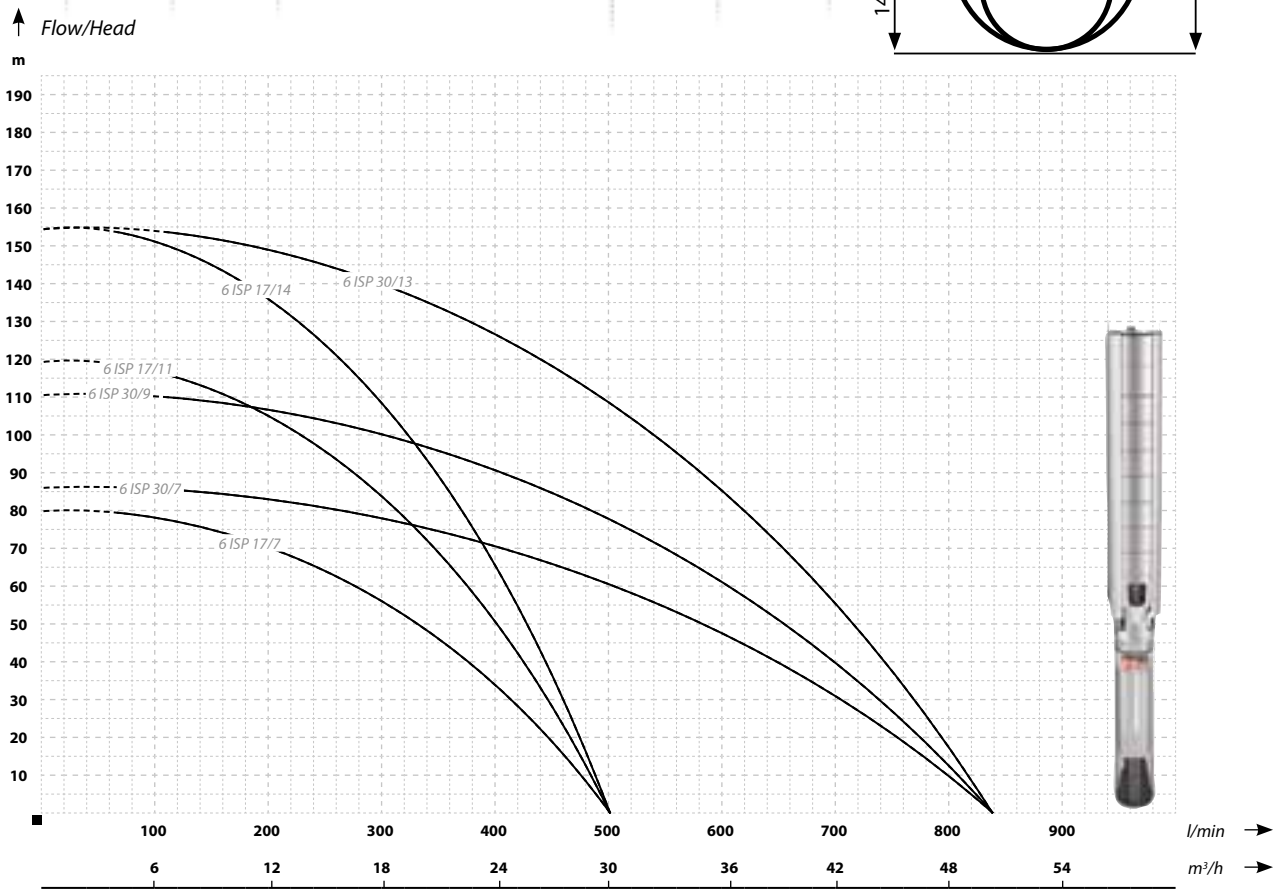
PARAMETERS

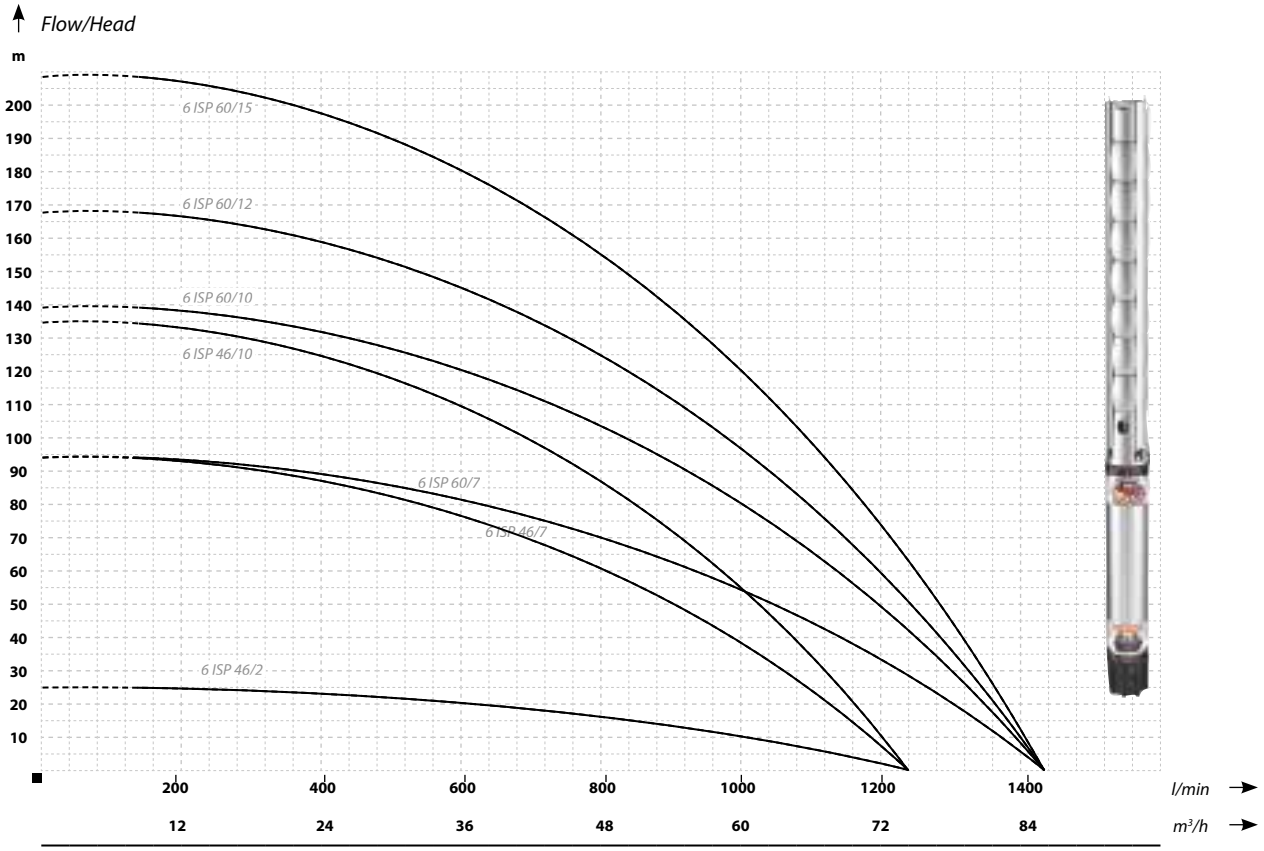
Name	Head (m)	Flow (l/min)	Motor power (kW)	Motor diameter (inch)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
6 ISP 17/7	80	500	4	4	400	10,2	2½	145/1220	29
6 ISP 17/11	120	500	5,5	4	400	14	2½	145/1480	37
6 ISP 17/14	155	500	7,5	4	400	17,5	2½	145/1770	47
6 ISP 30/7	85	833	7,5	4/6	400	17,5	3	145/1500	56
6 ISP 30/9	110	833	9,2	6	400	21,5	3	145/1720	66
6 ISP 30/13	155	833	13	6	400	27,5	3	145/1920	70
6 ISP 46/2	25	1250	3	4	400	8,2	3	145/960	22
6 ISP 46/7	95	1250	11	6	400	24,5	3	145/1950	65
6 ISP 46/10	135	1250	15	6	400	31,5	3	145/2380	83
6 ISP 60/7	95	1420	15	6	400	31,5	3	145/2040	75
6 ISP 60/10	140	1420	18,5	6	400	37,9	3	145/2328	88
6 ISP 60/12	168	1420	22	6	400	47,1	3	145/2632	99
6 ISP 60/15	210	1420	26	6	400	58,3	3	145/3031	119

Depending on the production batch, the device parameters may differ from the data provided in the table

6" ISP
STAINLESS STEEL PUMPS



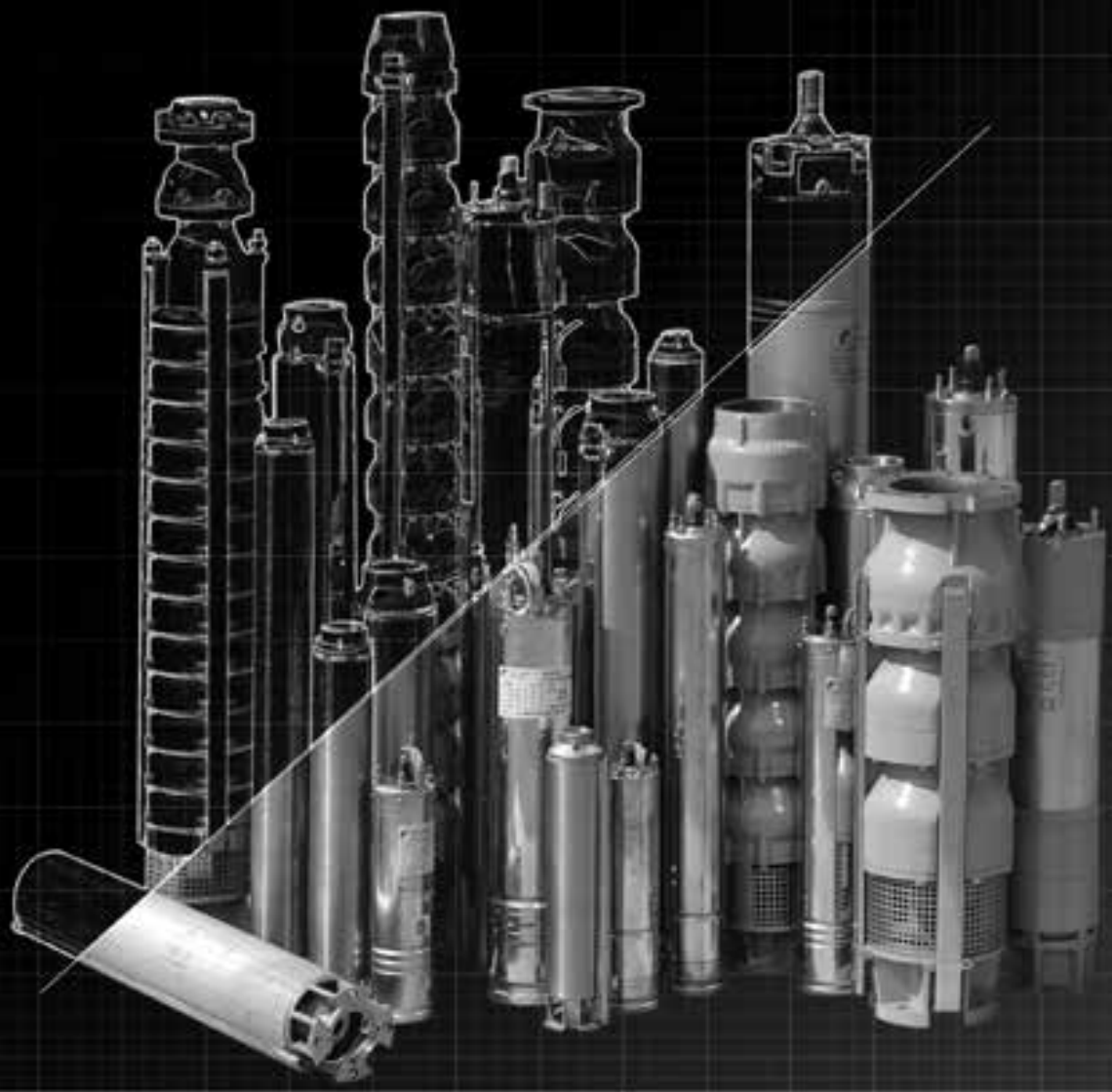




ITALIAN DEEP WELL PUMPS

IBO ITALY FP4
IBO ITALY FP4 A
IBO ITALY FP4 B
IBO ITALY FP4 D
IBO ITALY FP4 E
IBO ITALY FP4 F
IBO ITALY FP4 H
IBO ITALY FP4 L

IBO ITALY FP4 Q
IBO ITALY AP6 F
IBO ITALY AP6 E
IBO ITALY AP6 F
IBO ITALY AP6 H
IBO ITALY AP6 L
IBO ITALY FX6/FX8/ FX10



3 YEAR WARRANTY

IBO ITALY FP4

ITALIAN STAINLESS STEEL DEEP WELL PUMPS
WITH DRY RUN PRO TECHNOLOGY

Due to the DRY RUN PRO technology, the FP4 pumps have increased resistance to seizure in case of dry running operation. The design and materials
used make the pump suitable for pumping water for food processing purposes. The pump has been properly certified. Pumps in A, B, D, E
sizes are equipped with radial impellers and 1¼" outlets while pumps in F, H, L sizes have semi-axial impellers and 2" outlets.

All pumps are supplied with built-in check valves. The maximum outer diameter of the pump including cable protector is 98 mm. The pump is suitable for vertical and horizontal operation.

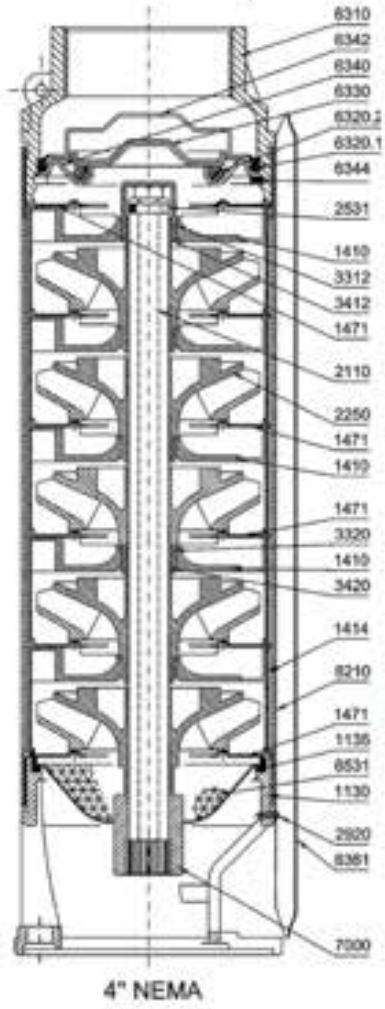
The FP4 pumps can be used in households and on farms, in water supply systems, irrigation systems, fire extinguishing systems and industrial applications.

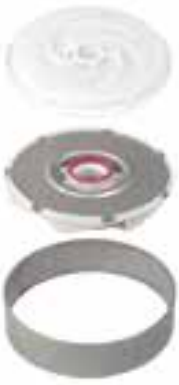
The FP4 deep well pumps has been manufactured in the innovative DRY RUN PRO technology by the leading Italian manufacturer of deep well pumps. They are very robust, compact and reliable. The inlet and outlet body
sections are made of AISI 304 stainless steel made by lost-wax technique, which guarantees high chemical resistance in contact with water, as well as product reliability. The pumps design is based on floating rotors moving independently in the Venturi tube chambers.

Due to the innovative design, it is protected by a European patent. This solution guarantees that pumps have unique properties, such as reliable operation in dry running conditions.

OPERATING CONDITIONS:
- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class F Insulation
- Operating mode - continuous
- Protection - IP68

MATERIALS:
- Inlet/outlet: stainless steel AISI 304
- Non-return valve: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Venturi tube cover: stainless steel AISI 304
- Venturi tube: PA
- Impeller: PA
- Sliding sleeve: AI203
- Clutch: stainless steel AISI 316L
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling
- Rotational speed of the electric motor: 2850RMP





PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS

Technology
DRY RUN PRO

WATCH THE PUMP OPERATION AND DESIGN ON:
http://bit.ly/pompyglebinowe

OPERATIONAL DATA

Max. flow rate	30 m³/h
Max. head	340 m
Max. motor power	7,5 kW
Max. sand content	185 g/m³
Max. water temperature	35°C
Max. ON/OFF cycles per hour	30
Can operate in vertical orientation	

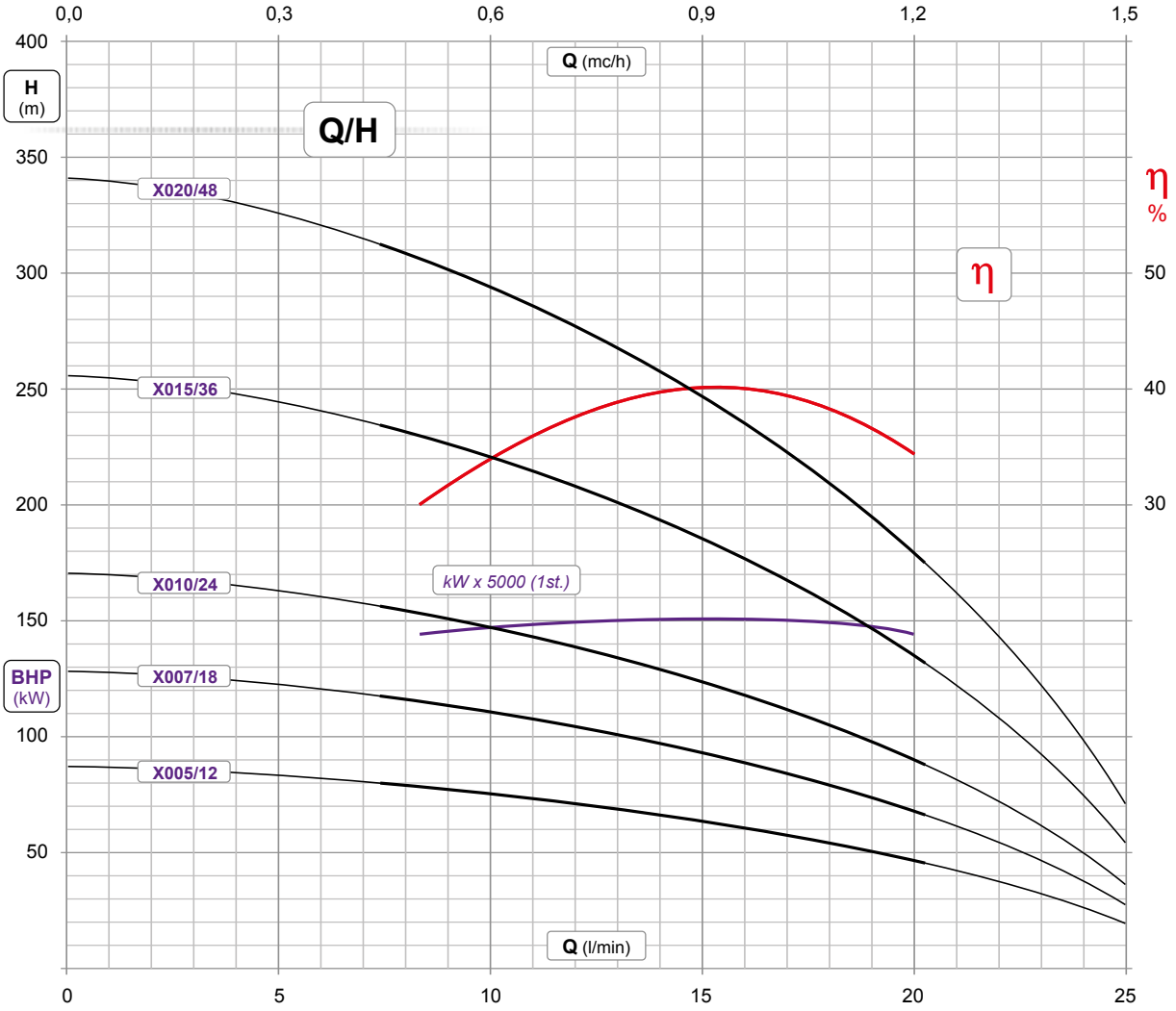
PARAMETERS FP4

TYPE	kW		m3/h	0	0,6	0,9	1,2	1,5	1,8	2,1	2,4	2,7	3	3,6	4,2	4,8	5,4	6	6,6	7,2	8,4	9,6	10,8	12	13,5	15	16,5	18	19,5	21	22,5	24	25,5	27
			l/min	0	10	15	20	25	30	35	40	45	50	60	70	80	90	100	110	120	140	160	180	200	225	250	275	300	325	350	375	400	425	450
			l/sec	0	0,17	0,25	0,33	0,42	0,50	0,58	0,67	0,75	0,83	1,00	1,17	1,33	1,50	1,67	1,83	2,00	2,33	2,67	3,00	3,33	3,75	4,17	4,58	5,00	5,42	5,83	6,25	6,67	5,83	6,25
FP4 X005	0,37			87	73	62	45	18																									
FP4 X007	0,55			128	109	92	68	27																									
FP4 X010	0,75			170	145	123	90	36																									
FP4 X015	1,1			255	218	185	136	53																									
FP4 X020	1,5			340	290	246	180	71																									
FP4 A005	0,37			63	59	55	50	43	35	26	15																						
FP4 A007	0,55			90	85	80	72	62	51	37	20																						
FP4 A010	0,75			124	117	109	99	86	70	50	28																						
FP4 A015	1,1			181	171	159	144	125	101	73	41																						
FP4 A020	1,5			237	224	209	189	163	133	96	54																						
FP4 A030	2,2			356	336	313	283	245	199	144	81																						
FP4 B005	0,37			47		44	42	39	36	33	28	23	18																				
FP4 B007	0,55			70		65	63	59	54	49	43	35	27																				
FP4 B010	0,75			96		89	85	80	74	67	58	48	37																				
FP4 B015	1,1			140		129	124	117	107	96	83	68	50																				
FP4 B020	1,5			187		174	166	155	142	126	109	87	64																				
FP4 B030	2,2			274		254	243	227	208	185	159	128	94																				
FP4 B040	3			373		346	331	310	284	253	217	175	128																				
FP4 D005	0,37			33				31	30	30	29	27	26	23	18	13																	
FP4 D007	0,55			46				44	43	42	40	38	36	32	25	18																	
FP4 D010	0,75			65				62	61	59	57	55	52	45	36	25																	
FP4 D015	1,1			97				91	89	87	83	80	76	65	52	36																	
FP4 D020	1,5			129				121	119	116	111	106	101	87	69	48																	
FP4 D030	2,2			193				182	178	173	167	160	151	130	103	71																	
FP4 D040	3			257				241	235	228	220	209	198	170	134	90																	
FP4 D055	4			346				325	318	307	296	282	267	229	181	122																	
FP4 E005	0,37			27						26	25	25	24	22	20	17	13	9	5	1													
FP4 E007	0,55			41						38	38	37	36	33	30	25	20	14	8	2													
FP4 E010	0,75			54						51	50	49	48	44	40	33	26	19	11	2													
FP4 E015	1,1			82						77	75	74	72	67	60	50	39	28	16	4													
FP4 E020	1,5			109						102	101	98	96	89	79	67	53	38	22	5													
FP4 E030	2,2			163						154	151	148	144	133	119	100	79	56	32	7													
FP4 E040	3		H (m)	218						205	201	197	191	178	159	134	105	75	43	10													
FP4 E055	4			299						282	277	271	263	245	218	184	145	103	59	13													
FP4 F007	0,55			27								23	22	22	21	20	19	18	17	16	12	8	4										
FP4 F010	0,75			40								34	34	33	32	30	29	28	26	24	18	12	6										
FP4 F015	1,1			60								51	51	49	47	46	44	41	39	35	28	19	9										
FP4 F020	1,5			77								67	66	64	63	60	58	55	52	47	37	25	12										
FP4 F030	2,2			116								101	100	97	94	91	87	83	77	71	55	37	18										
FP4 F040	3			154								135	133	129	125	121	115	110	103	95	74	50	24										
FP4 F055	4			210								187	184	178	173	166	159	150	140	129	101	67	27										
FP4 F075	5,5			266								241	238	232	224	215	203	190	176	160	124	79	31										
FP4 F100	7,5			370								330	325	315	305	294	280	265	248	227	179	118	47										
FP4 H010	0,75			26												24	23	23	22	21	20	18	15	12	8	4							
FP4 H015	1,1			39												35	35	34	33	32	30	27	23	18	12	5							
FP4 H020	1,5			52												47	46	45	44	43	40	36	30	24	16	7							
FP4 H030	2,2			78												71	69	68	67	64	60	53	46	37	23	11							
FP4 H040	3			104												94	93	91	89	86	80	71	61	49	31	14							
FP4 H055	4			144												129	127	125	123	121	113	102	88	69	44	16							
FP4 H075	5,5			197												176	174	171	168	164	154	139	120	94	60	22							
FP4 H100	7,5			262												235	231	228	224	219	206	185	159	126	80	30							
FP4 L020	1,5			36																30	28	27	25	23	21	18	16	13	11	8	4	1	
FP4 L030	2,2			50																42	40	37	35	33	29	25	22	19	15	11	6	1	
FP4 L040	3			72																59	57	53	50	47	42	35	32	27	21	15	9	2	
FP4 L055	4			101																83	79	75	70	65	59	49	45	37	29	21	12	3	
FP4 L075	5,5			137																112	107	101	95	88	80	67	61	50	40	29	17	4	
FP4 L100	7,5			180																148	142	133	125	116	105	88	80	66	53	38	22	5	
FP4 Q015	1,1			24																	20	19	18	17	16	15	14	13	11	10	8	7	5	3
FP4 Q020	1,5			30																	25	24	23	22	20	19	17	16	14	12	10	8	6	4
FP4 Q030	2,2			48																	39	38	36	35	33	30	28	25	22	19	16	13	10	7
FP4 Q040	3			65																	54	52	50	48	45	42	38	35	31	27	23	18	14	9
FP4 Q055	4			89																	74	71	68	65	61	57	52	47	42	36	31	25	19	13
FP4 Q075	5,5			119																	98	95	91	87	82	76	70	63	56	49	41	33	25	17
FP4 Q100	7,5			161																	133	128	123	117	110	102	94	85	76	66	55	45	34	23

IBO ITALY FP4 X

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

WITH DRY RUN PRO TECHNOLOGY



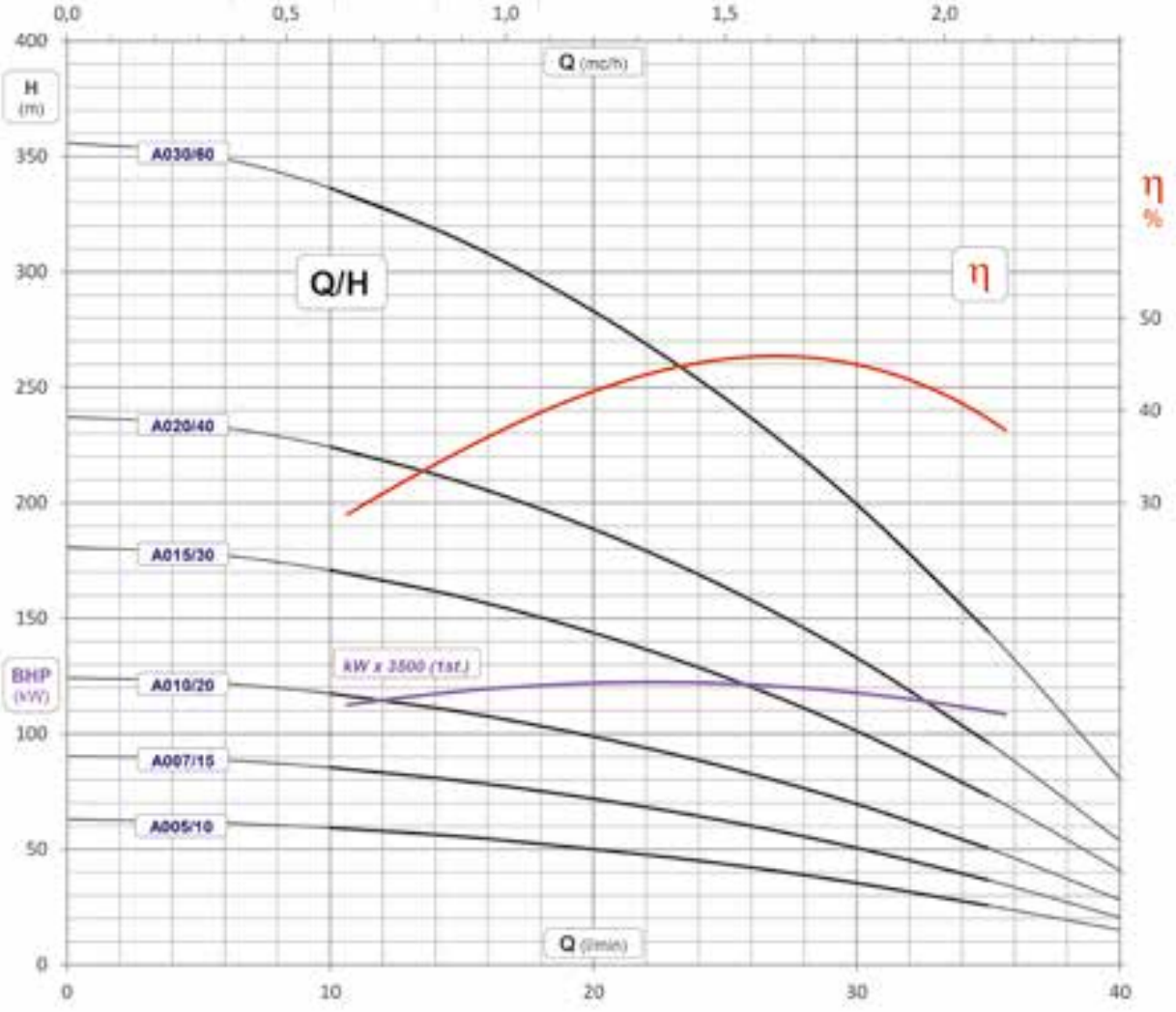
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (cm)	Weight (kg) 230V/400V	
X005	87	25	0,37	230/400	1¼	3,5	1,35	98/732	11,6	10,9
X007	128	25	0,55	230/400	1¼	4,7	1,85	98/924	14,1	12,9
X010	170	25	0,75	230/400	1¼	5,9	2,20	98/1002	16,4	14,9
X015	255	25	1,1	230/400	1¼	8,6	3,00	98/1217	19,7	18,9
X020	340	25	1,5	230/400	1¼	10,7	4,10	98/1470	23,7	21,7

IBO ITALY FP4 A

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

WITH DRY RUN PRO TECHNOLOGY

PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS



Depending on the production batch, the device parameters may differ from the data provided in the table

PARAMETERS

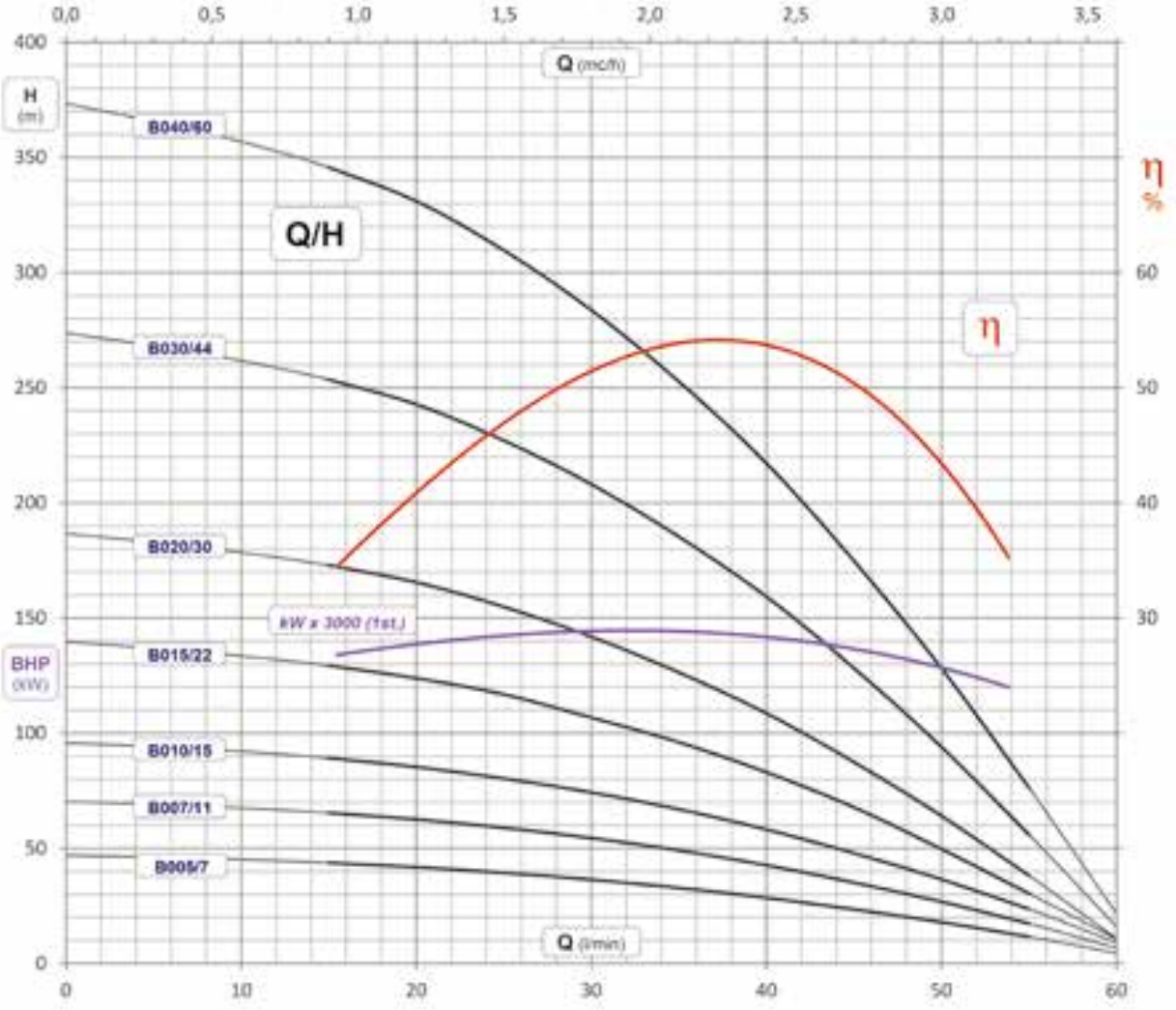
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (mm)	Weight (kg) 230V/400V	
A 005	63	40	0,37	230/400	1¼	3,5	1,36	98/710	11,5	10,8
A 007	91	40	0,55	230/400	1¼	4,7	1,85	98/835	13,6	12,4
A 010	128	40	0,75	230/400	1¼	5,9	2,20	98/977	15,9	14,4
A 015	185	40	1,1	230/400	1¼	8,6	3,00	98/1231	19,3	18,5
A 020	240	40	1,5	230/400	1¼	10,7	4,10	98/1464	22,7	20,7
A 030	348	40	2,2	230/400	1¼	14,8	5,6	98/2013	31,8	26,9

IBO ITALY FP4 B

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

WITH DRY RUN PRO TECHNOLOGY

PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS



PARAMETERS

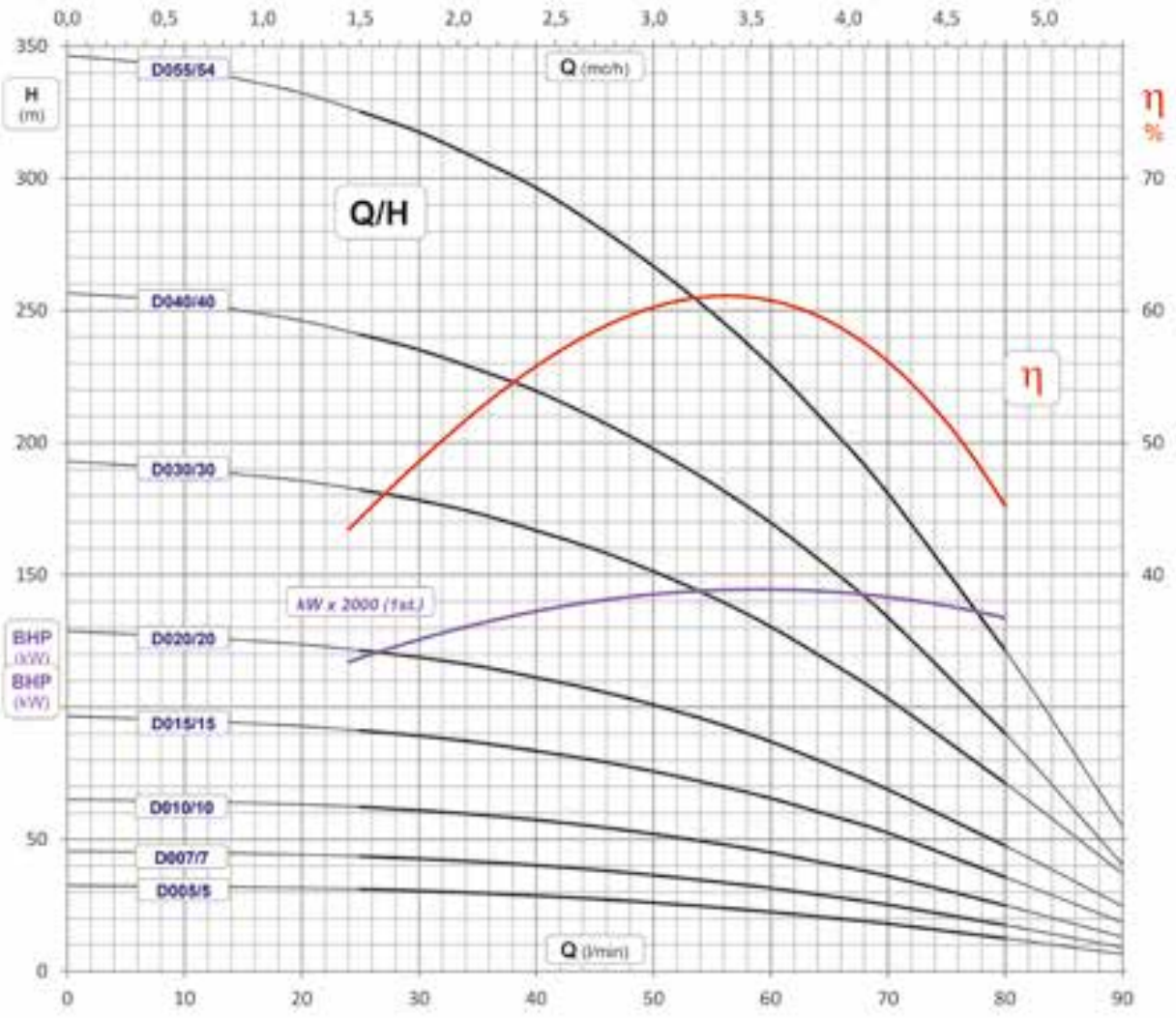
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (cm)	Weight (kg) 230V/400V	
B 005	43	60	0,37	230/400	1¼	3,5	1,5	98/631	10,8	10,1
B 007	70	60	0,55	230/400	1¼	4,7	1,85	98/735	12,7	11,5
B 010	95	60	0,75	230/400	1¼	5,9	2,20	98/838	14,7	13,2
B 015	139	60	1,1	230/400	1¼	8,6	3,00	98/1000	17,2	16,4
B 020	182	60	1,5	230/400	1¼	10,7	4,10	98/1192	20,2	18,2
B 030	260	60	2,2	230/400	1¼	14,8	5,60	98/1602	28,1	23,2
B 040	342	60	3	400	1¼	-	7,50	98/1910	-	7,5

IBO ITALY FP4 D

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

WITH DRY RUN PRO TECHNOLOGY

PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS



PARAMETERS

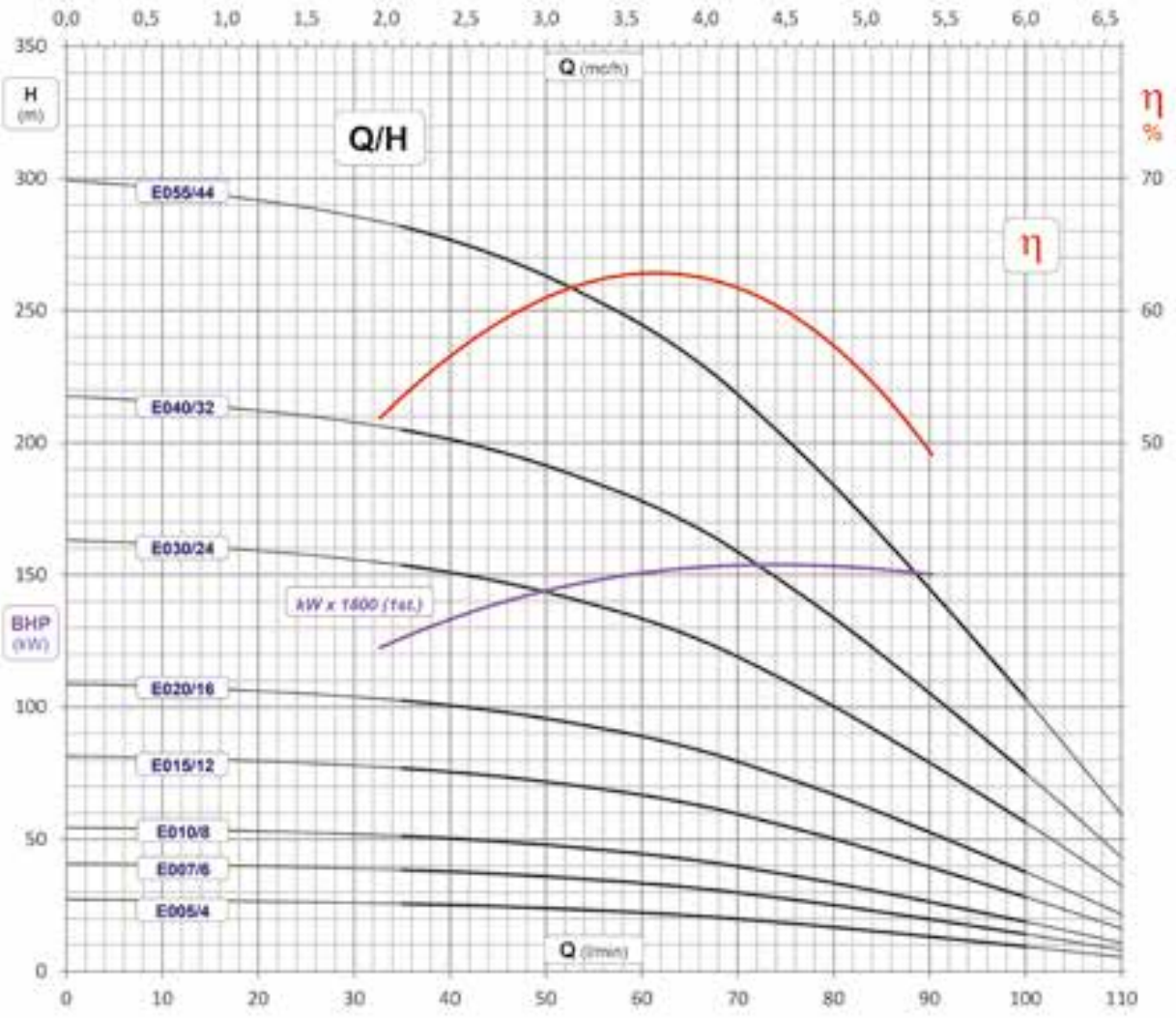
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (cm)	Weight (kg) 230V/400V	
D 005	33	90	0,37	230/400	1¼	3,5	1,35	98/591	10,4	9,7
D 007	46	90	0,55	230/400	1¼	4,7	1,85	98/656	11,9	10,7
D 010	68	90	0,75	230/400	1¼	5,9	2,20	98/738	13,6	12,1
D 015	100	90	1,1	230/400	1¼	8,6	3,00	98/861	15,7	14,9
D 020	133	90	1,5	230/400	1¼	10,7	4,10	98/993	18,1	16,1
D 030	194	90	2,2	230/400	1¼	14,8	5,60	98/1290	24,7	19,8
D 040	261	90	3	400	1¼	-	7,50	98/1479	-	24,8
D 055	338	90	4	400	1¼	-	9,80	98/1824	-	30,9

IBO ITALY FP4 E

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

WITH DRY RUN PRO TECHNOLOGY

PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS



PARAMETERS

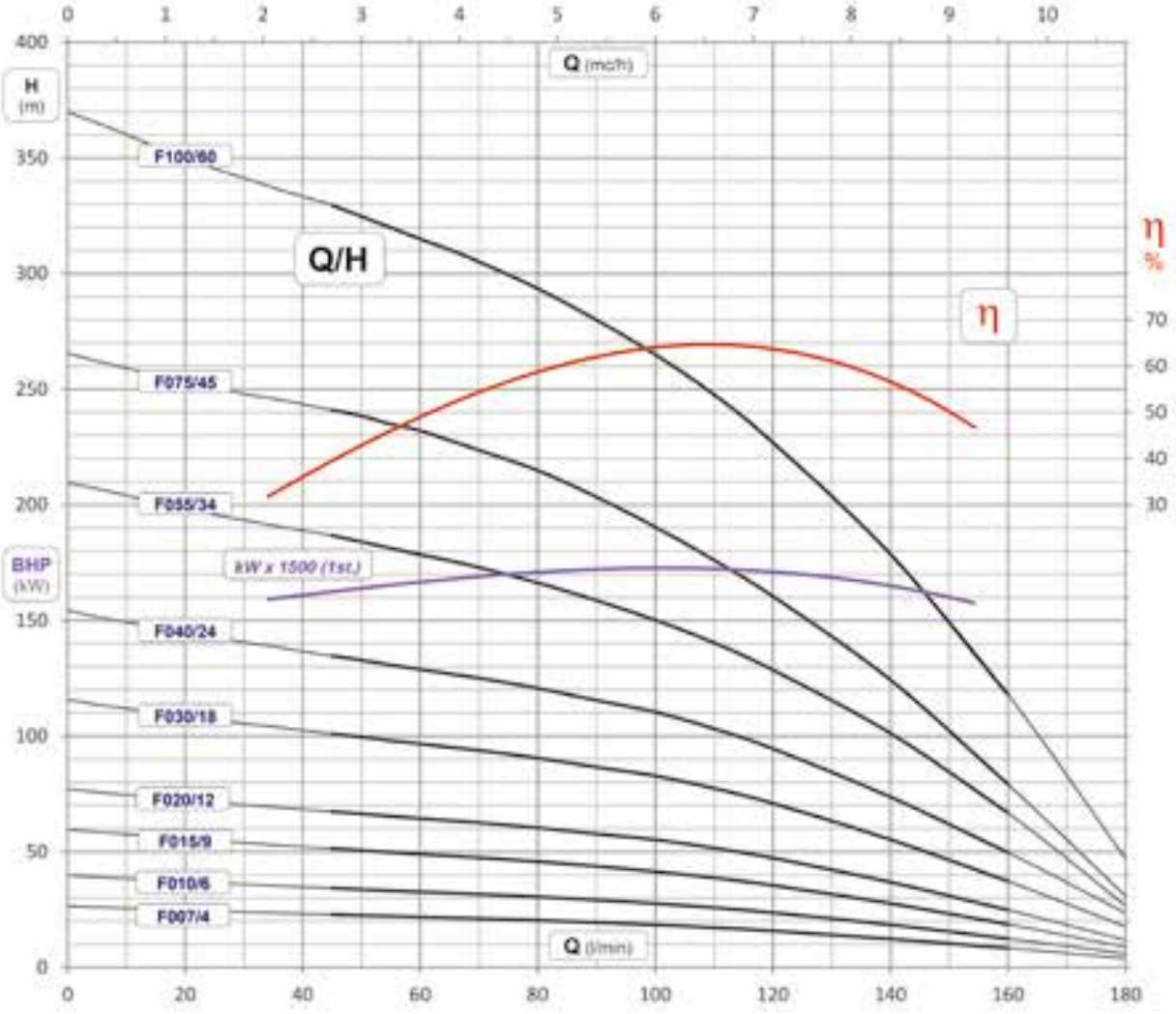
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (cm)	Weight (kg) 230V/400V	
E 005	29	110	0,37	230/400	1¼	3,5	1,35	98/579	10,3	9,6
E 007	44	110	0,55	230/400	1¼	4,7	1,85	98/648	11,8	10,6
E 010	58	110	0,75	230/400	1¼	5,9	2,20	98/714	13,3	11,8
E 015	85	110	1,1	230/400	1¼	8,6	3,00	98/824	15,2	14,4
E 020	114	110	1,5	230/400	1¼	10,7	4,10	98/945	17,5	15,5
E 030	170	110	2,2	230/400	1¼	14,8	5,60	98/1219	23,8	18,9
E 040	225	110	3	400	1¼	-	7,50	98/1383	-	23,5
E 055	303	110	4	400	1¼	-	9,80	98/1712	-	29,3

IBO ITALY FP4 F

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

WITH DRY RUN PRO TECHNOLOGY

PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS



PARAMETERS

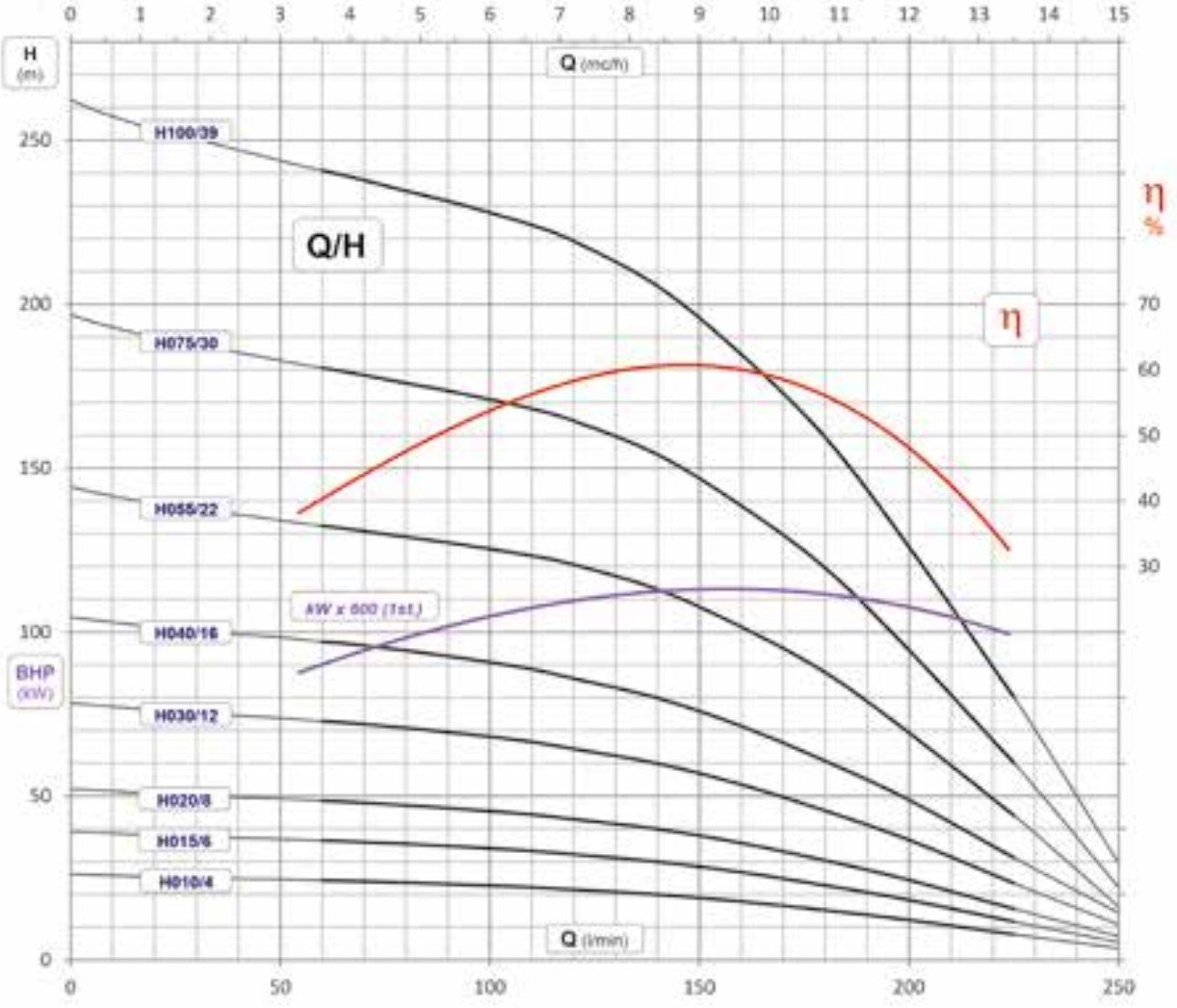
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (cm)	Weight (kg) 230V/400V	
F 007	27	180	0,55	230/400	2	4,7	1,85	98/664	11,9	10,7
F 010	40	180	0,75	230/400	2	5,9	2,20	98/760	13,6	12,1
F 015	60	180	1,1	230/400	2	8,6	3,00	98/894	15,7	14,9
F 020	77	180	1,5	230/400	2	10,7	4,10	98/1037	18,1	16,1
F 030	116	180	2,2	230/400	2	14,8	5,60	98/1356	24,7	19,8
F 040	154	180	3	400	2	-	7,50	98/1567	-	24,8
F 055	210	180	4	400	2	-	9,80	98/2000	-	31,4
F 075	266	180	5,5	400	2	-	12,7	98/2537	-	41,5
F 100	370	180	7,5	400	2	-	16,9	98/3176	-	50,5

IBO ITALY FP4 H

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

WITH DRY RUN PRO TECHNOLOGY

PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS



PARAMETERS

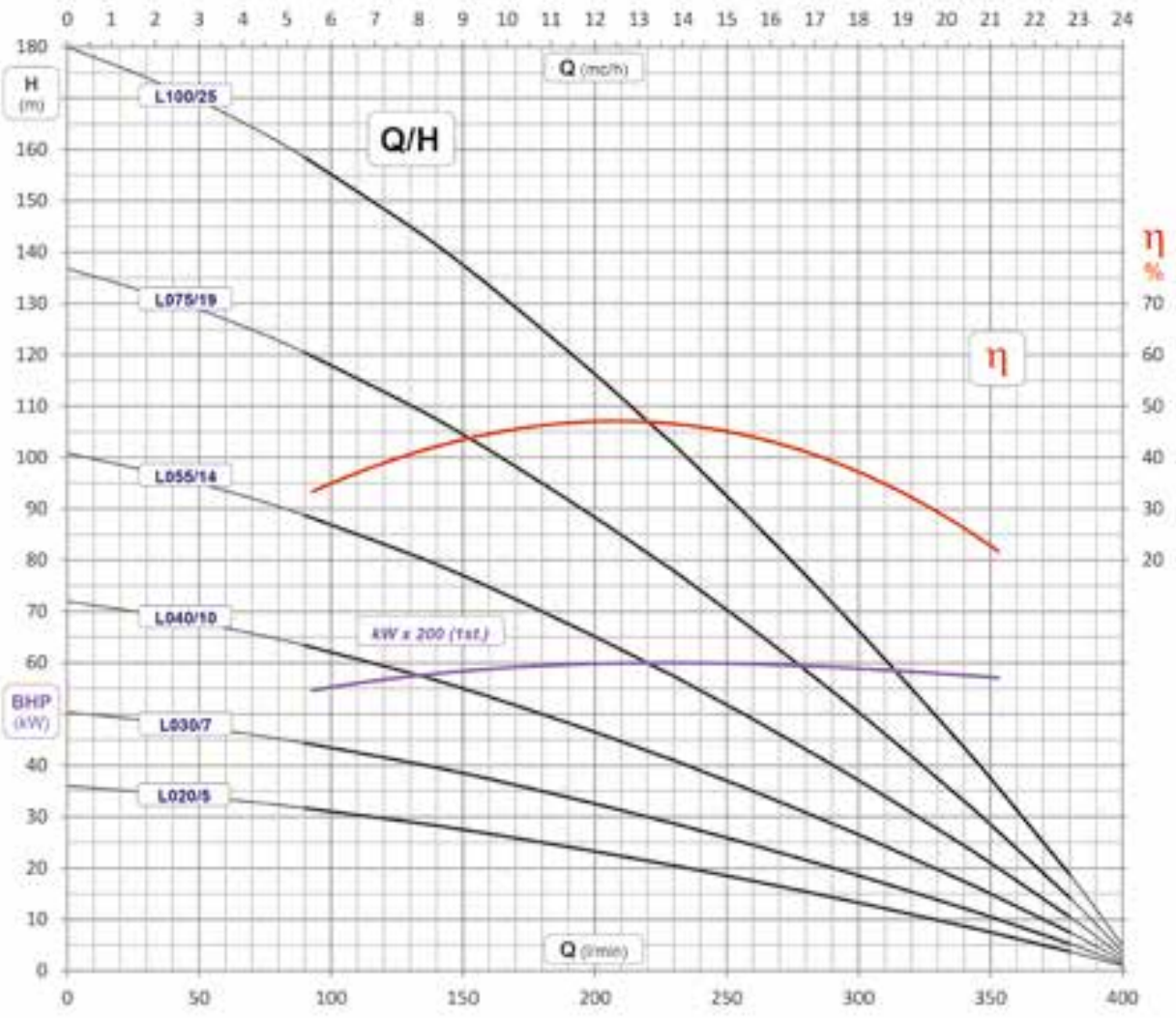
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (cm)	Weight (kg) 230V/400V	
H 010	21	250	0,75	230/400	2	5,9	2,20	98/698	13,0	11,5
H 015	35	250	1,1	230/400	2	8,6	3,00	98/801	14,8	14,0
H 020	50	250	1,5	230/400	2	10,7	4,10	98/914	16,9	14,9
H 030	71	250	2,2	230/400	2	14,8	5,60	98/1171	22,9	18,8
H 040	100	250	3	400	2	-	7,50	98/1288	-	21,9
H 055	135	250	4	400	2	-	9,80	98/1624	-	27,7
H 075	192	250	5,5	400	2	-	12,7	98/2044	-	36,4
H 100	251	250	7,5	400	2	-	16,9	98/2523	-	43,9

IBO ITALY FP4 L

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

WITH DRY RUN PRO TECHNOLOGY

PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS



PARAMETERS

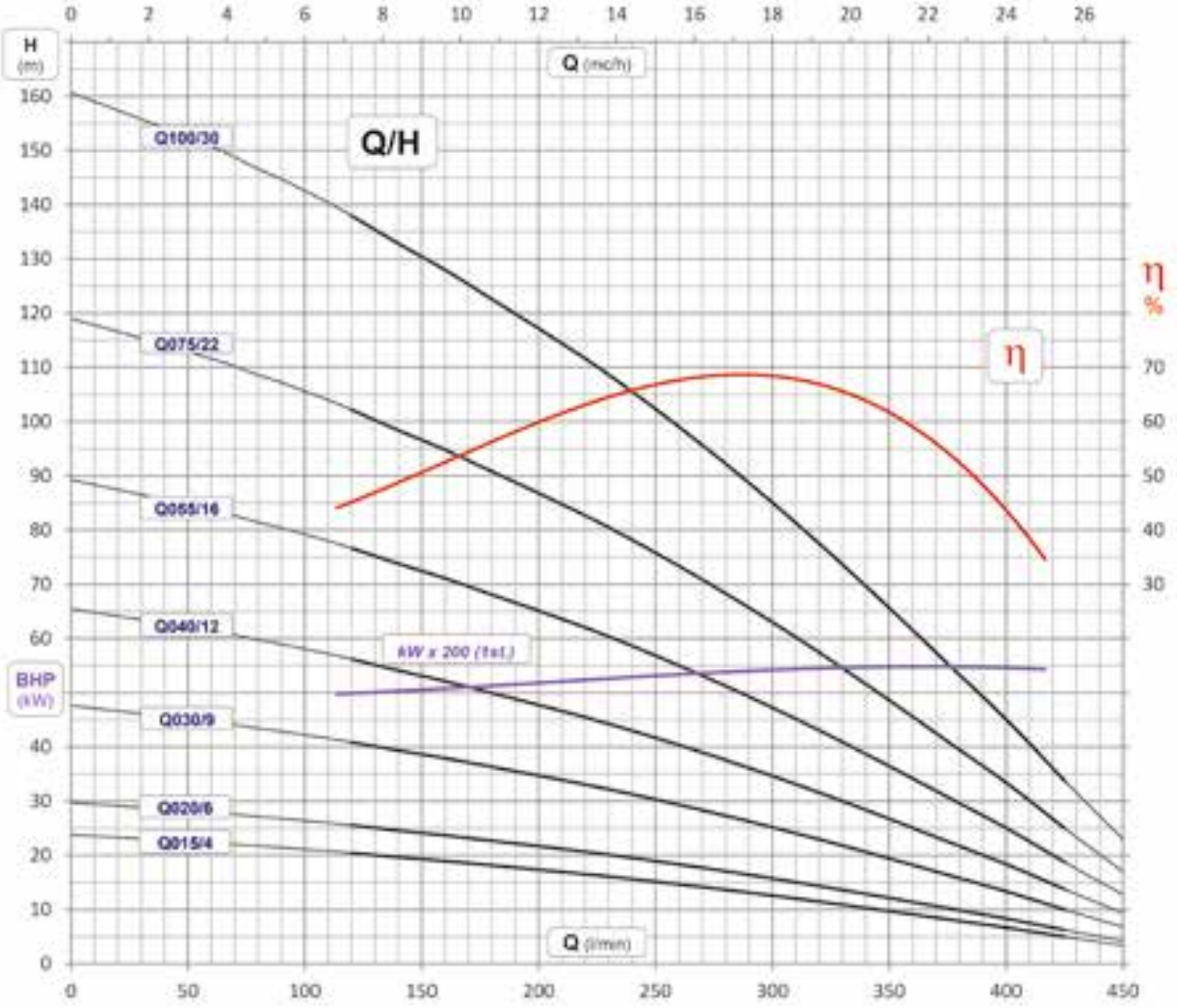
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (cm)	Weight (kg) 230V/400V	
L 020	36	400	1,5	230/400	2	10,7	4,10	98/889	16,3	14,3
L 030	50	400	2,2	230/400	2	14,8	5,60	98/1119	21,8	16,9
L 040	72	400	3	400	2	-	7,50	98/1259	-	20,7
L 055	100	400	4	400	2	-	9,80	98/1567	-	25,8
L 075	137	400	5,5	400	2	-	12,7	98/1971	-	34,0
L 100	180	400	7,5	400	2	-	16,9	98/2417	-	40,7

IBO ITALY FP4 Q

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

WITH DRY RUN PRO TECHNOLOGY

PUMP WITH INCREASED RESISTANCE TO SAND, FLOATING IMPELLERS



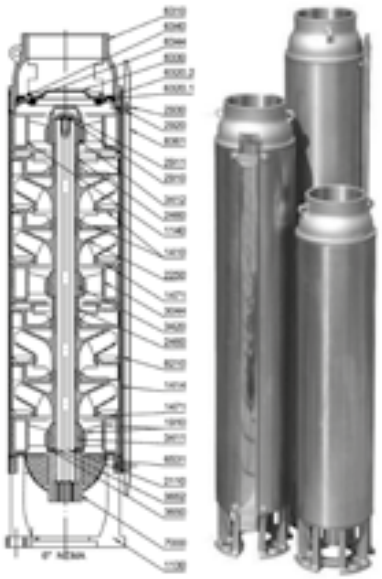
PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (cm)	Weight (kg) 230V/400V	
Q15	24	500	1,1	230/400	2	8,6	3,00	98/833	14,8	14,0
Q20	30	500	1,5	230/400	2	10,7	4,10	98/934	16,7	14,7
Q30	48	500	2,2	230/400	2	14,8	5,60	98/1236	22,8	17,9
Q40	65	500	3	230/400	2	-	7,50	98/1396	-	22,0
Q55	89	500	4	400	2	-	9,80	98/1766	-	27,8
Q75	119	500	5,5	400	2	-	12,7	98/2204	-	36,3
Q100	161	500	7,5	400	2	-	16,9	98/2693	-	43,4

IBO ITALY AP6 F

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

Following the FP4 series, the AP6 pumps intended for 6-inch wells are another very successful design of the leading Italian pump manufacturer. Their high quality and reliable design created by Italian engineers ensures long-term and faultless operation. High quality inlet and outlet castings are made of AISI 304 stainless steel. The pumps are equipped with 3 inch diameter outlets and a built-in check valve. Pumps with dedicated 5.5 kW motors have NEMA standard inlets designed for connecting 4-inch motors. Pumps with 7.5 kW motors have inlets designed for connecting 6-inch motors. The maximum outer diameter including cable protector is 144 mm. The pump shaft rotates anticlockwise when viewed at the outlet from above. The water surface should not be lower than 1 m above the inlet. The pump is suitable for vertical and horizontal operation. The AP6 pumps can be used in households and on farms, in water supply systems, irrigation systems, fire extinguishing systems and industrial applications.



OPERATING CONDITIONS:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class F Insulation
- Operating mode - continuous
- Protection - IP68

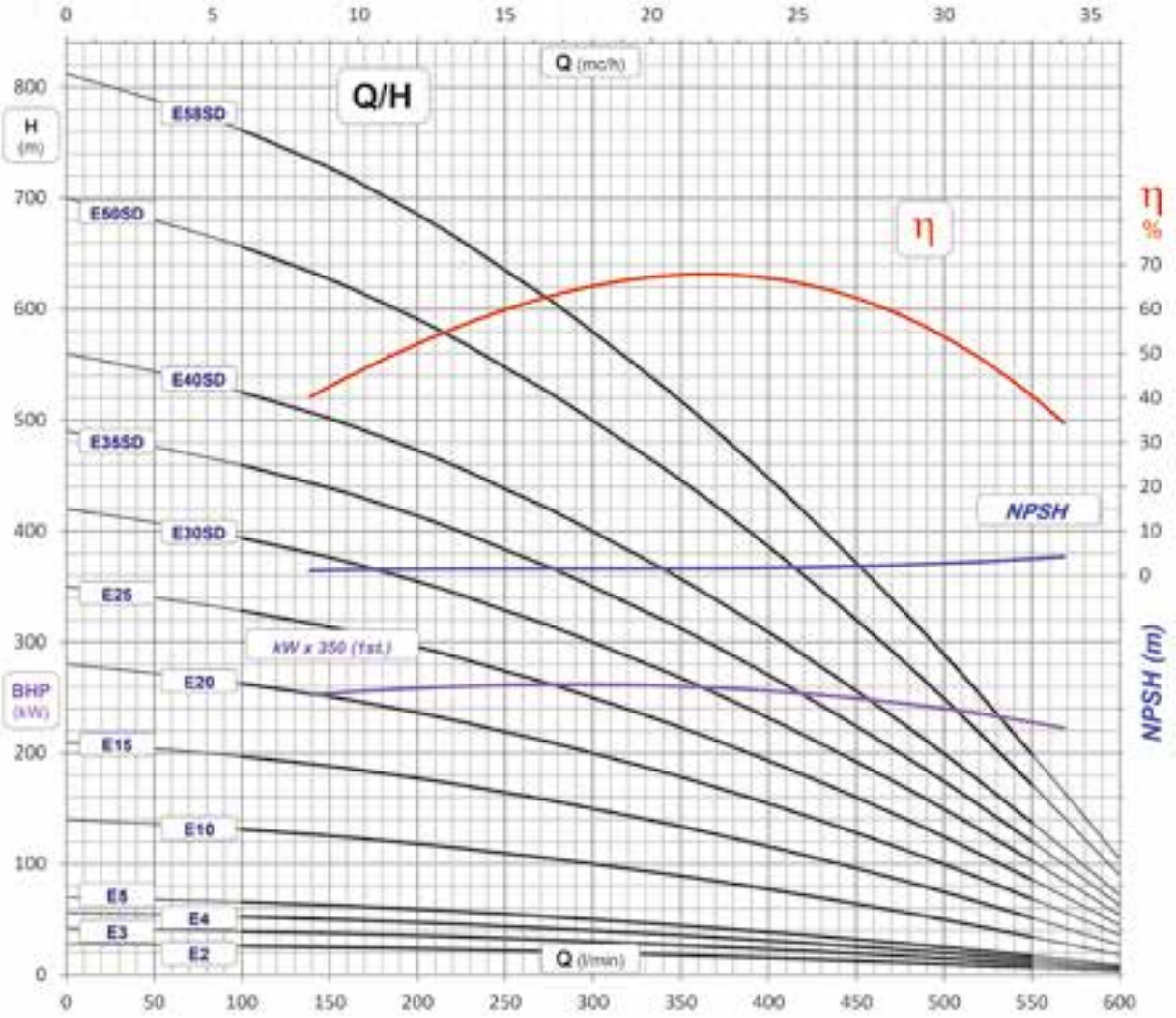
MATERIALS:

- Inlet/outlet: stainless steel AISI 304
- Non-return valve: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Venturi tube cover: stainless steel AISI 304
- Venturi tube: PA

TYPE	kW	m3/h	3	4,5	6	7,5	9	10,5	12	13,5	15	16,5	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	63	66
		l/min	50	75	100	125	150	175	200	225	250	275	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
		l/sec	0,83	1,25	1,67	2,08	2,50	2,92	3,33	3,75	4,17	4,58	5,00	5,83	6,67	7,50	8,33	9,17	10,0	10,8	11,7	12,5	13,3	14,2	15,0	15,8	16,7	17,5	18,3
AP6 E2	1,5						25	24	24	23	22	21	20	18	15	13	10	7	4										
AP6 E3	2,2						38	37	35	34	33	32	30	27	23	19	15	10	5										
AP6 E4	3						50	49	47	46	44	42	40	36	31	26	20	14	7										
AP6 E5	4						63	61	59	57	55	53	50	45	39	32	25	17	9										
AP6 E10	7,5						125	122	118	114	110	105	100	89	77	64	50	34	18										
AP6 E15	11						188	183	177	171	164	158	150	134	116	96	75	51	27										
AP6 E20	15						251	244	236	228	219	210	200	178	154	128	100	69	36										
AP6 E25	18,5						314	305	296	285	274	263	250	223	193	160	125	86	45										
AP6 E30SD	22						376	366	355	342	329	315	300	268	232	192	149	103	54										
AP6 E35SD	26						439	427	414	399	383	368	350	312	270	224	174	120	63										
AP6 E40SD	30						502	488	473	456	438	420	400	357	309	256	199	137	72										
AP6 E50SD	37						627	610	591	571	548	525	500	446	386	320	249	172	90										
AP6 E58ST	45						727	707	686	662	635	609	579	517	448	371	289	199	104										
AP6 F3	3								40	39	38	36	35	32	29	25	21	16	10	4									
AP6 F4	4								53	52	50	49	47	43	39	33	27	21	13	5									
AP6 F6	5,5								79	77	75	73	70	65	58	50	41	31	20	8									
AP6 F8	7,5								106	103	100	97	94	86	77	67	55	42	27	11									
AP6 F10	9,2								132	129	125	121	117	108	97	84	69	52	34	14									
AP6 F12	11								159	155	150	146	141	129	116	100	82	63	40	16									
AP6 F14	13								185	180	175	170	164	151	135	117	96	73	47	19									
AP6 F16	15								212	206	200	194	187	172	154	134	110	83	54	22									
AP6 F20	18,5								264	258	251	243	234	215	193	167	137	104	67	27									
AP6 F24	22								317	309	301	291	281	258	232	200	164	125	81	32									
AP6 F28SD	26								370	361	351	340	328	301	270	234	192	146	94	38									
AP6 F32SD	30								423	412	401	388	375	344	309	267	219	167	108	43									
AP6 F40SD	37	H							529	515	501	486	468	430	386	334	274	208	134	54									
AP6 F46SD	45	(m)							608	592	576	558	539	495	444	384	315	240	155	62									
AP6 H2	3												28	27	26	25	23	21	19	16	13	10	7	3					
AP6 H3	4												42	40	39	37	35	32	28	24	20	15	10	4					
AP6 H4	5,5												55	54	52	49	46	42	38	32	26	20	13	6					
AP6 H5	7,5												69	67	65	62	58	53	47	40	33	25	17	7					
AP6 H6	9,2												83	81	78	74	70	64	57	48	39	30	20	8					
AP6 H8	11												111	108	104	99	93	85	76	65	53	40	26	11					
AP6 H9	13												125	121	117	111	104	96	85	73	59	45	30	13					
AP6 H10	15												139	135	130	124	116	106	95	81	66	50	33	14					
AP6 H13	18,5												180	175	169	161	151	138	123	105	86	64	43	18					
AP6 H16	22												222	216	208	198	186	170	151	129	105	79	53	22					
AP6 H19	26												264	256	246	235	220	202	180	154	125	94	63	27					
AP6 H22	30												305	296	285	272	255	234	208	178	145	109	73	31					
AP6 H27SD	37												374	364	350	334	313	287	255	218	178	134	89	38					
AP6 H32SD	45												444	431	415	396	371	340	302	259	211	158	106	45					
AP6 L4	7,5														47	45	42	39	36	33	31	28	26	24	21	18	14	9	4
AP6 L6	9,2														70	68	63	58	54	50	46	43	39	36	32	27	21	14	6
AP6 L7	11														82	79	74	68	63	58	54	50	46	42	37	32	25	16	7
AP6 L8	13														93	90	84	78	72	66	61	57	53	48	43	36	28	18	8
AP6 L9	15														105	101	95	88	81	75	69	64	59	54	48	41	32	21	9
AP6 L12	18,5														140	135	126	117	107	99	92	85	79	72	64	54	42	28	12
AP6 L14	22														163	158	147	136	125	116	108	100	92	84	74	63	49	32	14
AP6 L17	26														198	191	179	165	152	141	131	121	112	102	90	77	60	39	17
AP6 L19	30														221	214	200	185	170	157	146	135	125	114	101	86	67	44	19
AP6 L24S	37														280	270	252	234	215	199	184	171	158	144	128	108	84	55	24
AP6 L28SD	45														326	315	294	272	251	232	215	199	184	168	149	126	98	64	28

IBO ITALY AP6 E

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

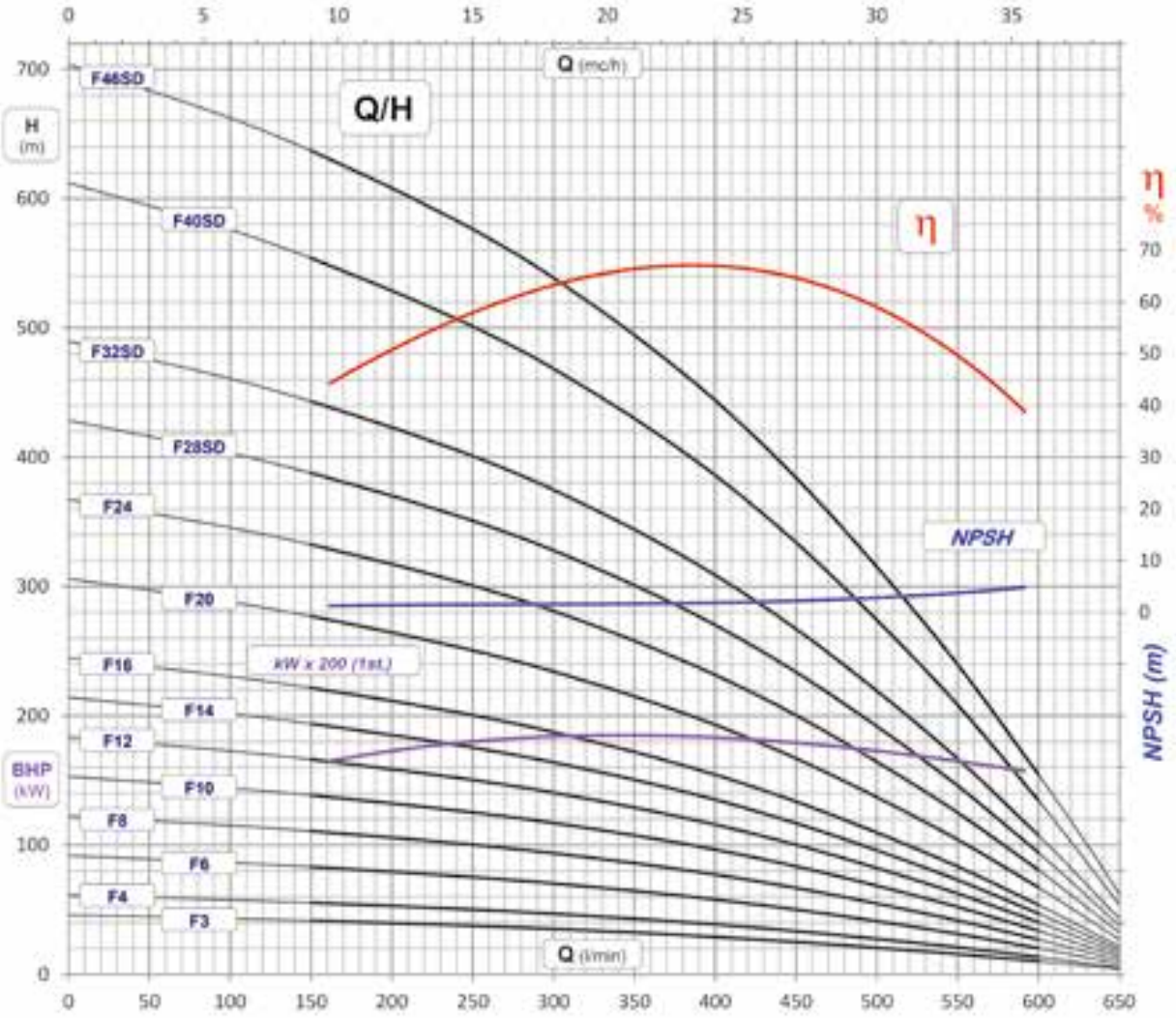


PARAMETERS

Name	Flow (l/min)	Head (m)	Motor power (kW)	Inlet/outlet (inch)	Motor diameter (cale)	L1 (mm)	Weight (kg)	Amperage (A) 400V
AP6 E2	600	28	1,5	3	4	787	19	4,6
AP6 E3	600	42	2,2	3	4	879	22	6,2
AP6 E4	600	56	3	3	4	934	24	7,8
AP6 E5	600	70	3,7	3	4	1.041	26	9,8
AP6 E10	600	140	7,5	3	6	1.542	74	18
AP6 E15	600	210	11	3	6	1.912	90	26
AP6 E20	600	280	15	3	6	2.339	99	34
AP6 E25	600	350	18,5	3	6	2.713	120	41
AP6 E30SD	600	420	22	3	6	3.221	145	49
AP6 E35SD	600	490	26	3	6	3.601	161	57
AP6 E40SD	600	560	30	3	6	4.030	173	67
AP6 E50SD	600	700	37	3	6	4.632	190	74
AP6 E58SD	600	812	45	3	6	5.048	196	95

IBO ITALY AP6 F

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

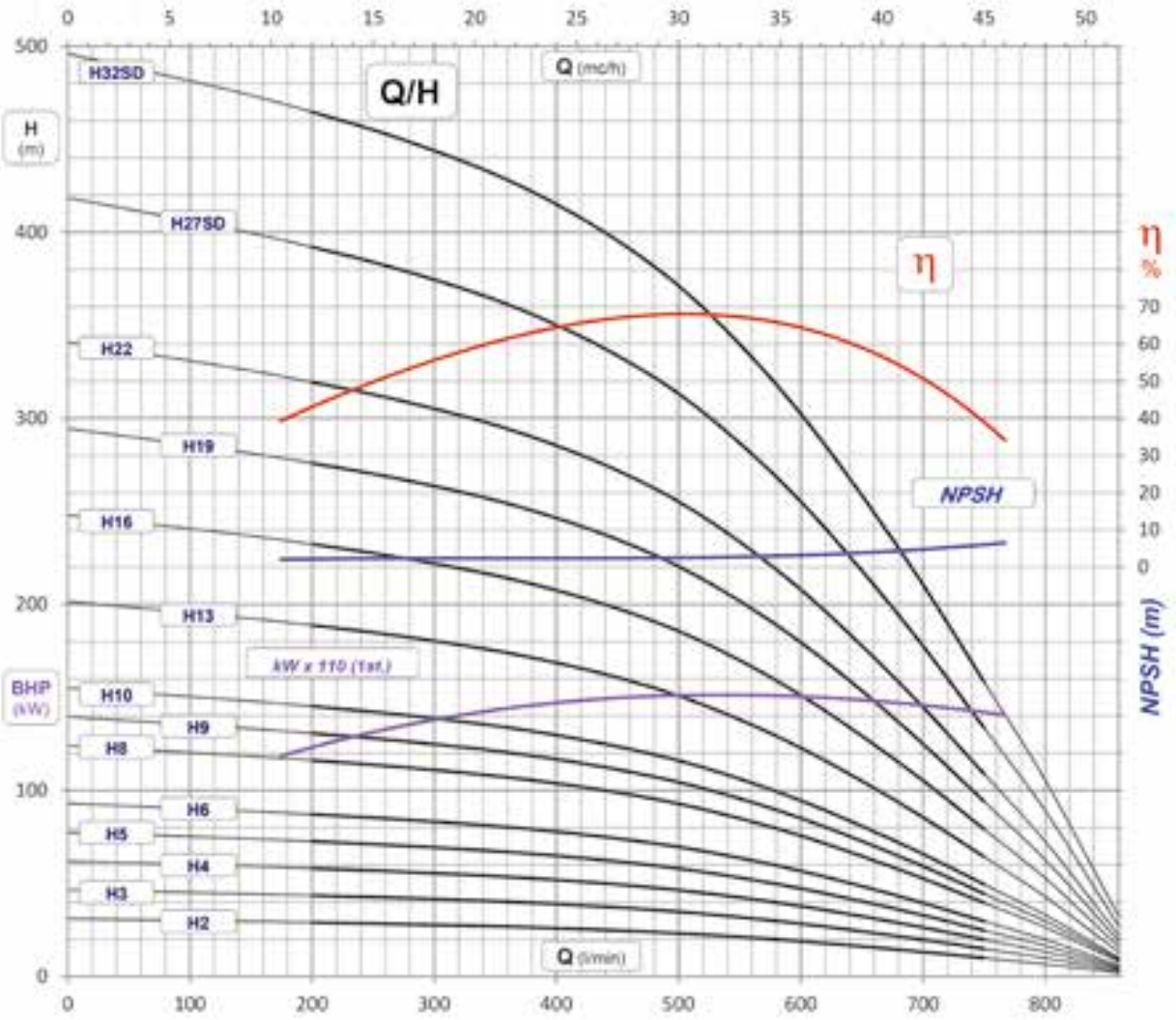


PARAMETERS

Name	Flow (l/min)	Head (m)	Motor power (kW)	Inlet/outlet (inch)	Motor diameter (cale)	L1 (mm)	Weight (kg)	Amperage (A) 400V
AP6 F3	650	46	3	3	4"	879	23	7,8
AP6 F4	650	61	4	3	4"	984	26	9,8
AP6 F6	650	92	5,5	3	4"	1.168	32	13,8
AP6 F8	650	122	7,5	3	6"	1.428	72	18
AP6 F10	650	153	9,2	3	6"	1.582	79	22
AP6 F12	650	184	11	3	6"	1.741	86	26
AP6 F14	650	214	13	3	6"	1.900	93	30
AP6 F16	650	245	15	3	6"	2.059	99	34
AP6 E20	650	306	18,5	3	6"	2.429	115	41
AP6 E24	650	367	22	3	6"	2.741	128	49
AP6 F28SD	650	428	26	3	6"	3.202	153	57
AP6 F32SD	650	490	30	3	6"	3.470	161	67
AP6 F40SD	650	612	37	3	6"	3.958	196	74
AP6 F46SD	650	704	45	3	6"	4.374	182	95

IBO ITALY AP6 H

ITALIAN STAINLESS STEEL DEEP WELL PUMPS

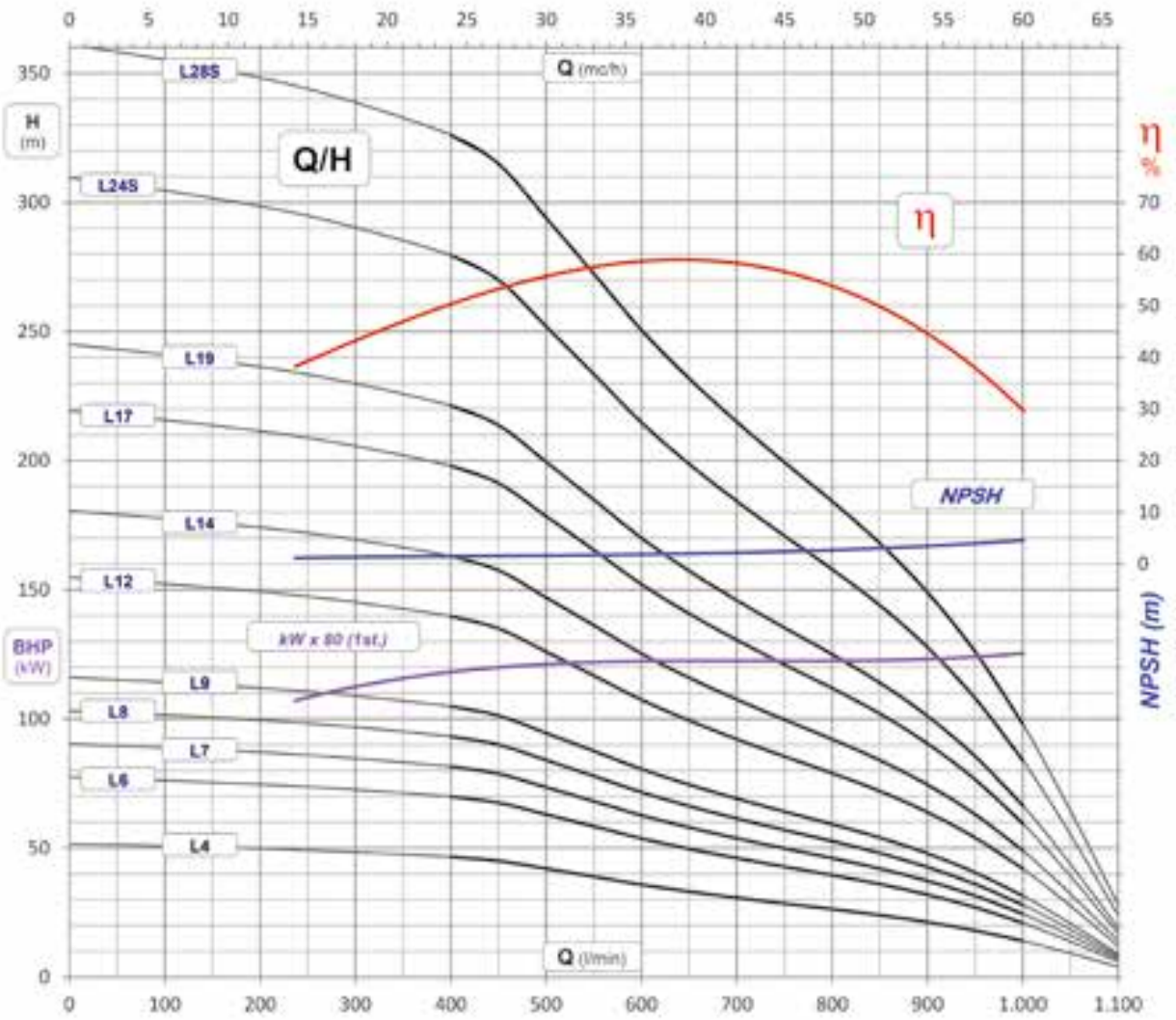


PARAMETERS

Name	Flow (l/min)	Head (m)	Motor power (kW)	Inlet/outlet (inch)	Motor diameter (cale)	L1 (mm)	Weight (kg)	Amperage (A) 400V
AP6 H2	850	31	3	3	4	828	21	7,8
AP6 H3	850	47	4	3	4	936	25	9,8
AP6 H4	850	62	5,5	3	4	1.066	29	13,8
AP6 H5	850	78	7,5	3	6	1.272	68	18
AP6 H6	850	93	9,2	3	6	1.372	74	22
AP6 H8	850	124	11	3	6	1.537	81	26
AP6 H9	850	140	13	3	6	1.642	87	30
AP6 H10	850	155	15	3	6	1.747	92	34
AP6 H13	850	202	18,5	3	6	2.017	106	41
AP6 H16	850	248	22	3	6	2.282	118	49
AP6 H19	850	295	26	3	6	2.609	134	57
AP6 H22	850	341	30	3	6	2.829	141	67
AP6 H27S	850	419	37	3	6	3.160	157	74
AP6 H32SD	850	496	45	3	6	3.672	169	95

IBO ITALY AP6 L

ITALIAN STAINLESS STEEL DEEP WELL PUMPS



PARAMETERS

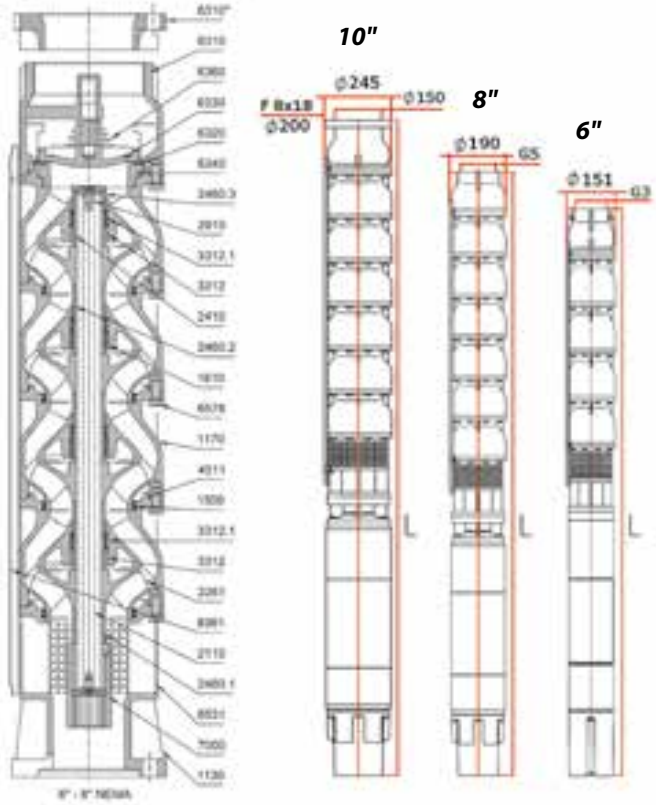
Name	Flow (l/min)	Head (m)	Motor power (kW)	L1 (mm)	Weight (kg)	N	Motor diameter (cale)	Weight (kg)	Amperage (A) 400V
AP6 L4	1100	52	7,5	528	10,2	1.760	6	67	18
AP6 L6	1100	77	9,2	648	12,2	2.640	6	74	22
AP6 L7	1100	90	11	708	12,9	3.070	6	80	26
AP6 L8	1100	103	13	768	13,8	3.510	6	86	30
AP6 L9	1100	116	15	828	14,8	3.950	6	91	34
AP6 L12	1100	155	18,5	1.008	15,7	5.270	6	103	41
AP6 L14	1100	181	22	1.128	17,8	6.140	6	114	49
AP6 L17	1100	219	26	1.308	21,9	7.460	6	128	57
AP6 L19	1100	245	30	1.480	26,8	8.340	6	137	67
AP6 L245	1100	310	37	1.779	37,1	10.530	6	153	74
AP6 L285	1100	361	45	1.959	41,7	12.290	6	158	95

IBO ITALY FX6 / FX8 / FX10

Top quality cast iron deep well pumps made in Italy. Pump hydraulic components are made of cast iron, and upon customer's request brass impellers can be installed. The pump has 5"diameter outlet (DN 125), and depending on the user's requirements, it can be threaded or flanged. For pumps up to 26 kW, 6 "(144 mm) motors are mounted, for 8" pumps over 26 kW, 8 "(193 mm) motors are mounted. Maximum pump diameter including cable protector is: for 6" pumps – 153mm, 8" pumps - 193 mm, 10" pumps – 245mm.
Pumps are available on request, delivery time from 7 to 21 days.

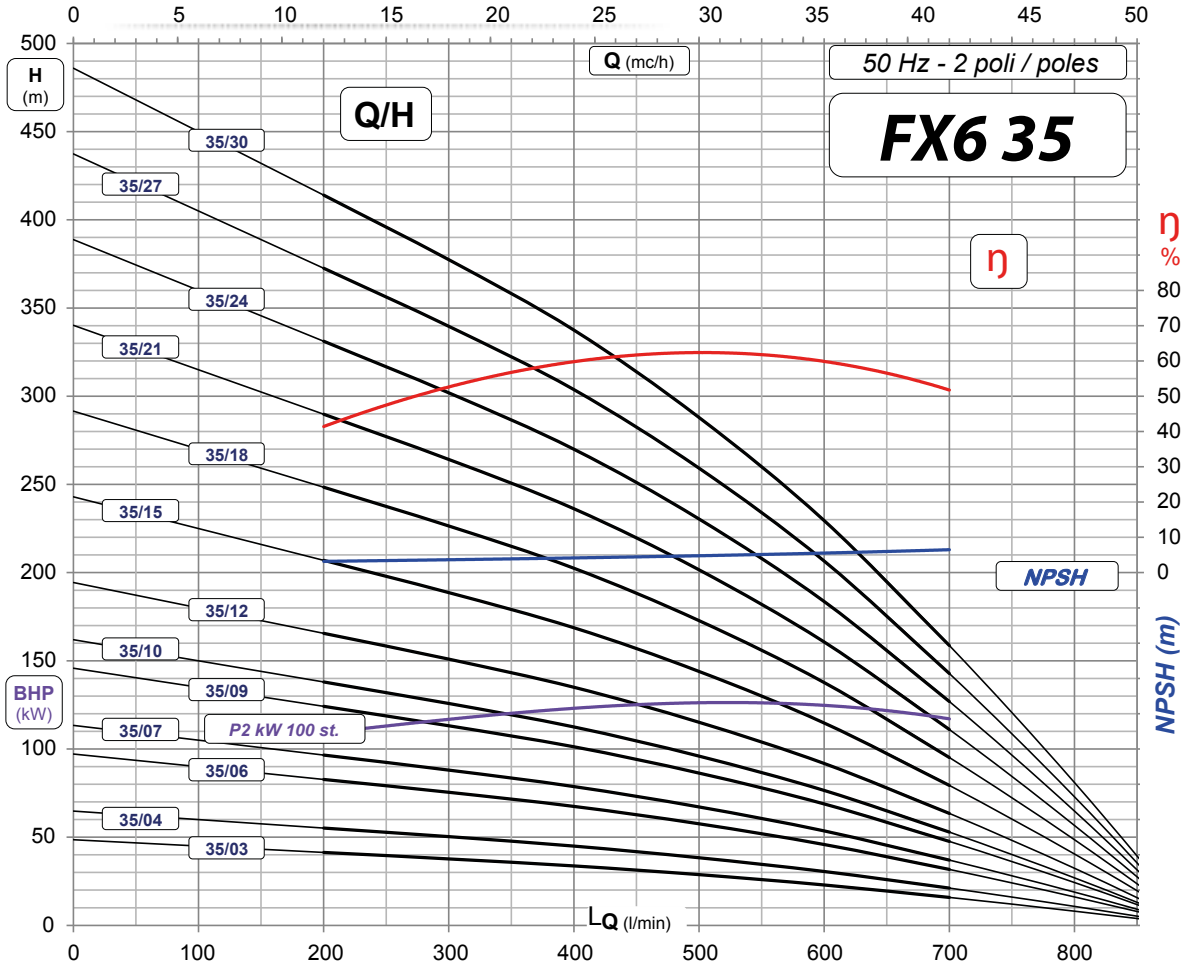
APPLICATION:

- farms,
- water supply systems,
- irrigation systems,
- fire extinguishing systems,
- industrial applications.



Item	PART NAME	MATERIAL
1130	Inlet	G25 cast iron
1170	Venturi tube	G25 cast iron
1500	Sealing ring II	PU 45 shD / (FX10 bz.B8)
1610	Venturi tube sleeve	PU 45 shD
2110	Shaft	AISI 420
2261	Impeller	G25 cast iron / B.0 bronze
2410	Sliding sleeve	OT58 chrome
2460.1	Bottom bearing retainer	AISI 316
2460.2	Spacing sleeve	AISI 316
2460.3	Upper bearing retainer	AISI 316
2460.4	Spacer	AISI 316
2910	Shaft bolt+washer	AISI 304-420
3312	Bronze sleeve	B8 bronze
3312.1	Sliding sleeve	PU 45 shD
4511	O-ring	NBR
6310	Threaded outlet	G25 cast iron
6310*(FX8)	Flanged outlet	G25 cast iron
6320	Valve sealing	NBR
6330	Non-return valve	G25 cast iron / AISI 304
6340	Valve support	G25 cast iron
6360	Spring	AISI 302
6531	Filter mesh	AISI 304
6576	Bolt	AISI 304
7000	Clutch	AISI 420
8361	Cable protector	AISI 304

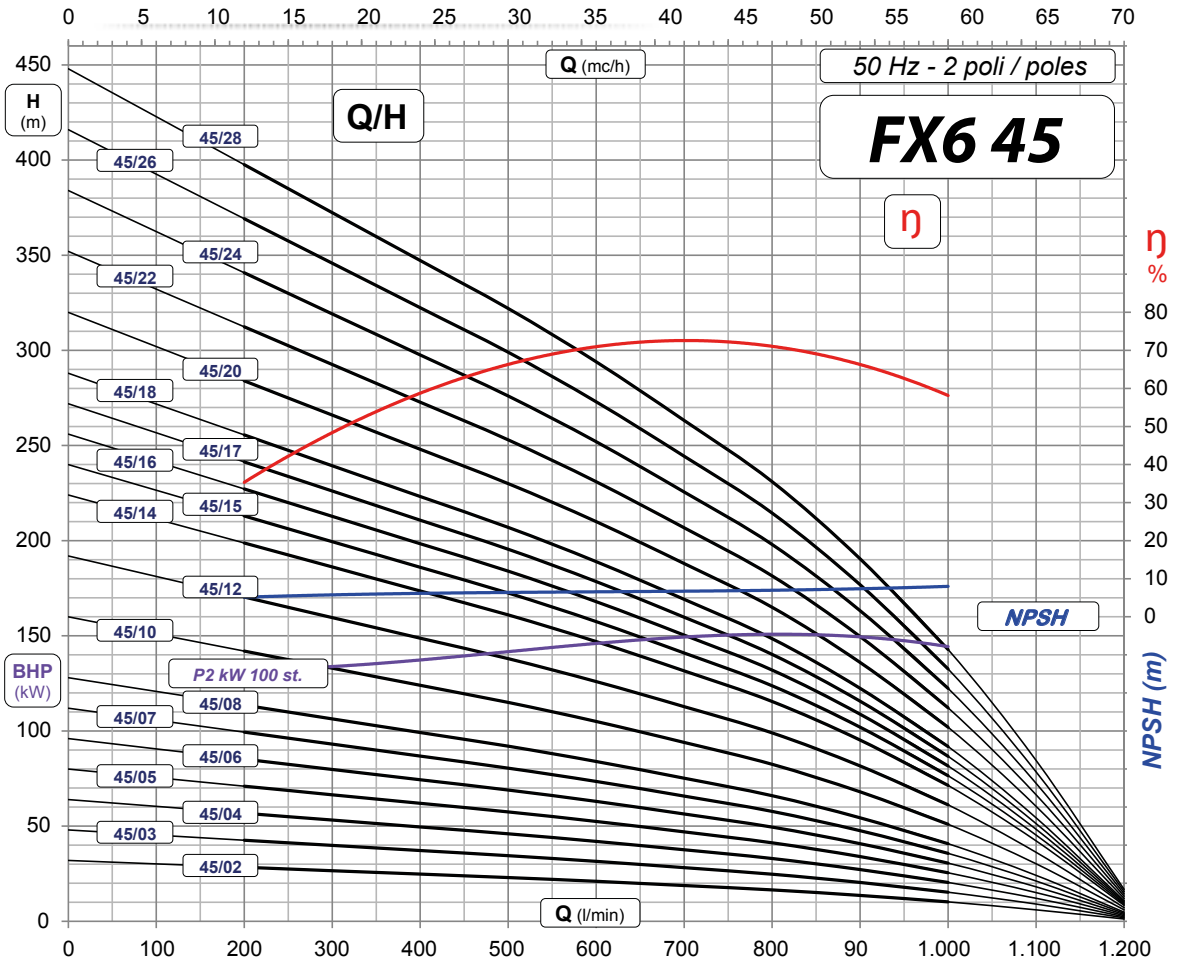
IBO ITALY FX 6



PARAMETERS

TYPE	kW	Motor diameter	Length L(mm)	Weight (kg)	Ampe-rage (A)	m3/h	0	12	15	18	21	24	27	30	33	36	39	42	45	48
						l/min	0	200	250	300	350	400	450	500	550	600	650	700	750	800
						l/sec	0	4,17	5,00	5,83	6,67	6,67	7,50	8,33	9,17	10,0	10,8	11,7	12,5	13,3
FX6 35/03	4	6"	590	29	12	H (m)	49	41	40	38	36	34	31	29	26	23	19	16	12	8
FX6 35/04	5,5	6"	698	35	15		65	55	53	50	48	45	42	38	35	31	26	21	16	11
FX6 35/06	7,5	6"	914	47	18		97	83	79	75	71	68	63	58	52	46	39	32	24	16
FX6 35/07	9,2	6"	1 022	53	22		113	97	92	88	83	79	73	67	60	54	45	37	28	19
FX6 35/09	11	6"	1 238	65	26		146	124	119	113	107	101	94	86	78	69	58	48	36	24
FX6 35/10	13	6"	1 346	71	30		162	138	132	126	119	113	104	96	86	77	65	53	40	27
FX6 35/12	15	6"	1 562	83	34		194	166	158	151	143	135	125	115	104	92	78	63	48	32
FX6 35/15	18,5	6"	1 886	101	41		243	207	198	189	179	169	156	144	129	115	97	79	60	41
FX6 35/18	22	6"	2 210	119	49		292	248	237	226	214	203	188	173	155	138	116	95	72	49
FX6 35/21	26	6"	2 534	138	57		340	290	277	264	250	236	219	202	181	161	136	111	84	57
FX6 35/24	30	6"	2 858	156	67		389	331	317	302	286	270	250	230	207	184	155	127	96	65
FX6 35/27	37	6"	3 182	173	74		437	373	356	340	322	304	281	259	233	207	175	143	108	73
FX6 35/30	37	6"	3 506	191	74		486	414	396	377	357	338	313	288	259	230	194	159	120	81

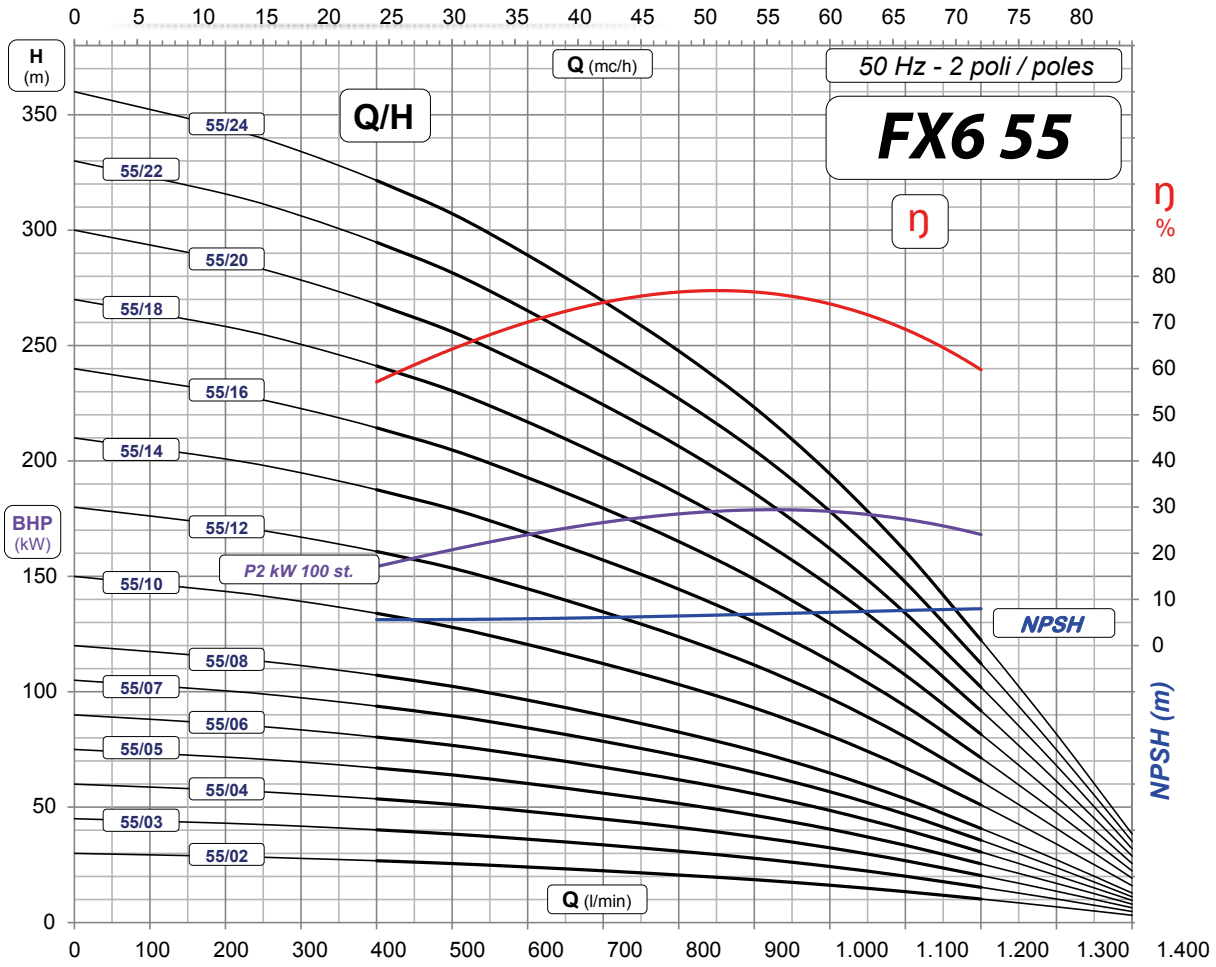
IBO ITALY FX 6



PARAMETERS

TYPE	kW	Motor diameter	Length L(mm)	Weight (kg)	Amperage (A)																
						m3/h	0	18	21	24	27	30	33	36	39	42	45	48	51	54	60	66
						l/min	0	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100
						l/sec	0	5,83	6,67	6,67	7,50	8,33	9,17	10,0	10,8	11,7	12,5	13,3	14,2	15,0	16,7	18,3
FX6 45/02	4	6"	482	23	12		32	27	26	25	24	23	22	21	20	19	18	17	15	14	10	6
FX6 45/03	5,5	6"	590	29	15		48	40	39	37	36	35	33	32	30	28	26	25	23	20	15	9
FX6 45/04	7,5	6"	698	35	18		64	53	51	50	48	46	44	42	40	38	35	33	30	27	20	12
FX6 45/05	7,5	6"	806	41	18		80	67	64	62	60	58	55	53	50	47	44	41	38	34	26	15
FX6 45/06	9,2	6"	914	47	22		96	80	77	74	72	69	66	63	60	56	53	50	45	41	31	18
FX6 45/07	11	6"	1 022	53	26		112	93	90	87	84	81	77	74	70	66	62	58	53	48	36	21
FX6 45/08	13	6"	1 130	59	30		128	106	103	99	96	92	88	84	80	75	71	66	60	54	41	24
FX6 45/10	15	6"	1 346	71	34		160	133	129	124	120	115	110	105	100	94	88	83	75	68	51	30
FX6 45/12	18,5	6"	1 562	83	41	H (m)	192	160	154	149	143	138	132	126	119	113	106	99	90	82	61	36
FX6 45/14	22	6"	1 778	95	49		224	186	180	174	167	161	154	147	139	132	124	116	105	95	71	42
FX6 45/15	22	6"	1 886	101	49		240	200	193	186	179	173	165	158	149	141	132	124	113	102	77	45
FX6 45/16	26	6"	1 994	107	57		256	213	206	198	191	184	176	168	159	150	141	132	120	109	82	48
FX6 45/17	26	6"	2 102	114	57		272	226	218	211	203	196	187	179	169	160	150	140	128	116	87	51
FX6 45/18	30	6"	2 210	119	67		288	239	231	223	215	207	198	189	179	169	159	149	135	122	92	54
FX6 45/20	30	6"	2 426	131	67		320	266	257	248	239	230	220	210	199	188	177	165	151	136	102	60
FX6 45/22	37	6"	2 642	143	74		352	293	283	273	263	253	242	231	219	207	194	182	166	150	112	66
FX6 45/24	37	6"	2 858	156	74		384	319	308	298	287	276	264	252	239	226	212	198	181	163	122	72
FX6 45/26	45	6"	3 074	168	95		416	346	334	322	311	299	286	273	259	244	229	215	196	177	133	79
FX6 45/28	45	6"	3 290	179	95		448	372	360	347	335	322	308	294	279	263	247	231	211	190	143	85

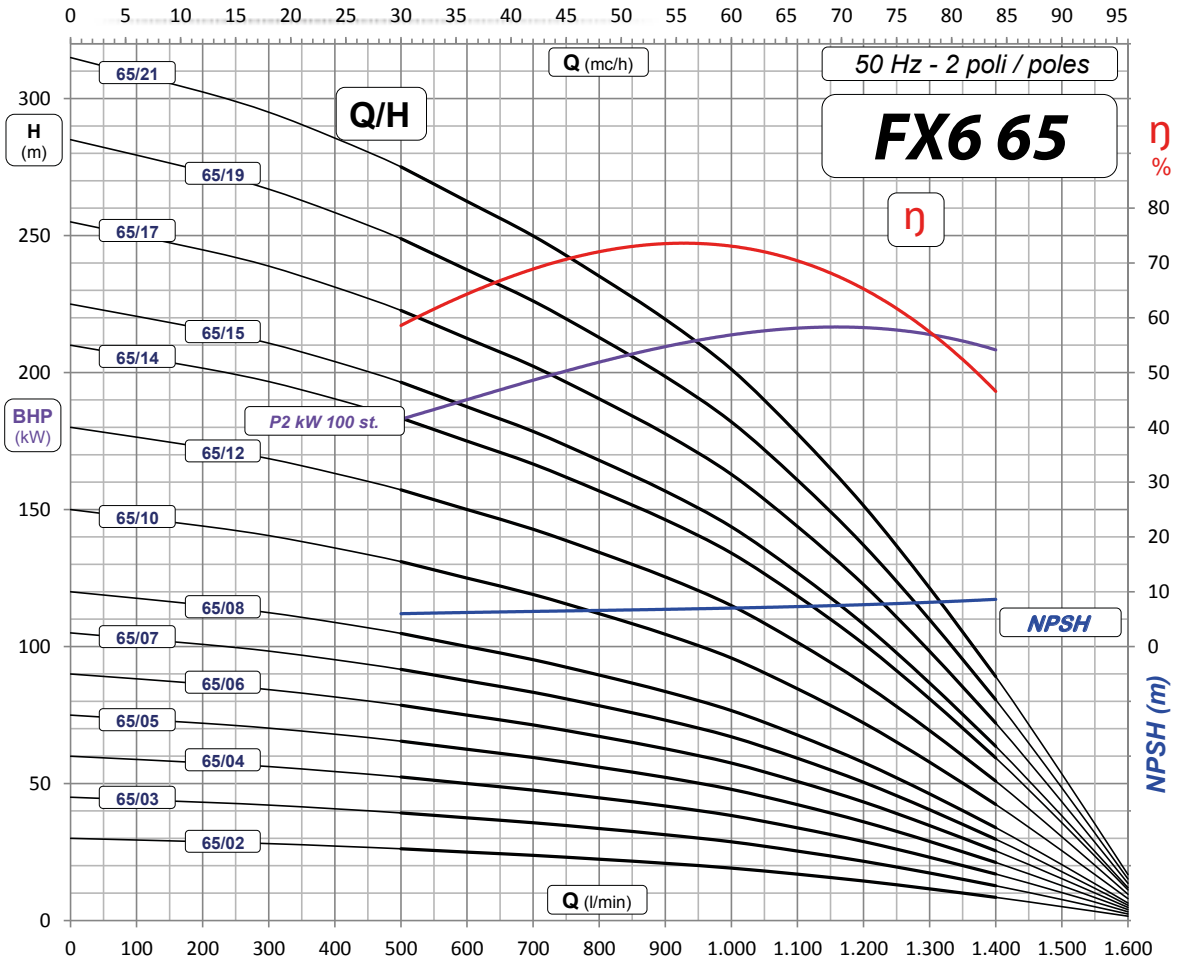
IBO ITALY FX 6



PARAMETERS

TYPE	kW	Motor diameter	Length L(mm)	Weight (kg)	Amperage (A)																	
m3/h							0	24	27	30	33	36	39	42	45	48	51	54	60	66	72	78	84
l/min							0	400	450	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400
l/sec							0	6,67	7,50	8,33	9,17	10,0	10,8	11,7	12,5	13,3	14,2	15,0	16,7	18,3	20,0	21,7	23,3
FX6 55/02	4	6"	482	23	12	H (m)	30	27	26	26	25	24	23	22	22	21	20	19	16	13	10	7	3
FX6 55/03	5,5	6"	590	29	15		45	40	39	38	37	36	35	34	32	31	29	28	24	20	15	10	5
FX6 55/04	7,5	6"	698	35	18		60	54	52	51	50	48	47	45	43	41	39	37	32	27	20	14	6
FX6 55/05	9,2	6"	806	41	22		75	67	66	64	62	60	58	56	54	52	49	47	41	34	26	17	8
FX6 55/06	11	6"	914	47	26		90	80	79	77	75	72	70	67	65	62	59	56	49	40	31	20	10
FX6 55/07	13	6"	1 022	53	30		105	94	92	90	87	84	81	79	75	72	69	65	57	47	36	24	11
FX6 55/08	15	6"	1 130	59	34		120	107	105	102	99	96	93	90	86	83	78	74	65	54	41	27	13
FX6 55/10	18,5	6"	1 346	71	41		150	134	131	128	124	121	116	112	108	103	98	93	81	67	51	34	16
FX6 55/12	22	6"	1 562	83	49		180	161	157	154	149	145	140	135	129	124	118	112	97	80	61	41	19
FX6 55/14	26	6"	1 778	95	57		210	188	183	179	174	169	163	157	151	144	137	130	113	94	71	48	22
FX6 55/16	30	6"	1 994	107	67		240	214	210	205	199	193	186	180	172	165	157	149	130	107	82	54	26
FX6 55/18	37	6"	2 210	119	74		270	241	236	230	224	217	209	202	194	186	177	167	146	121	92	61	29
FX6 55/20	37	6"	2 426	131	74		300	268	262	256	249	241	233	224	215	206	196	186	162	134	102	68	32
FX6 55/22	45	6"	2 642	143	95		330	295	288	282	273	265	256	247	237	227	216	205	178	147	112	75	35
FX6 55/24	45	6"	2 858	156	95		360	322	314	307	298	289	279	269	258	248	235	223	194	161	122	82	38

IBO ITALY FX 6

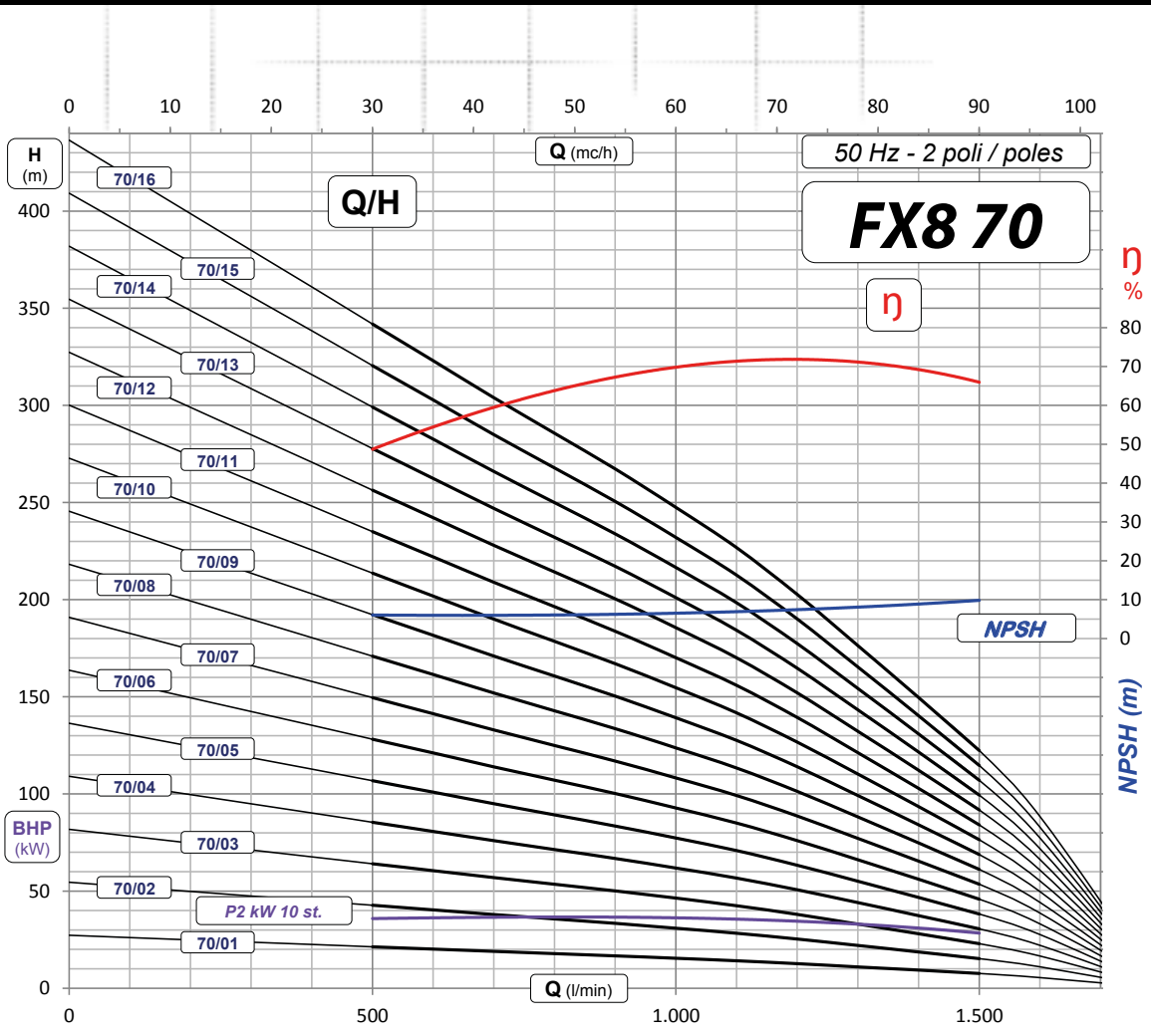


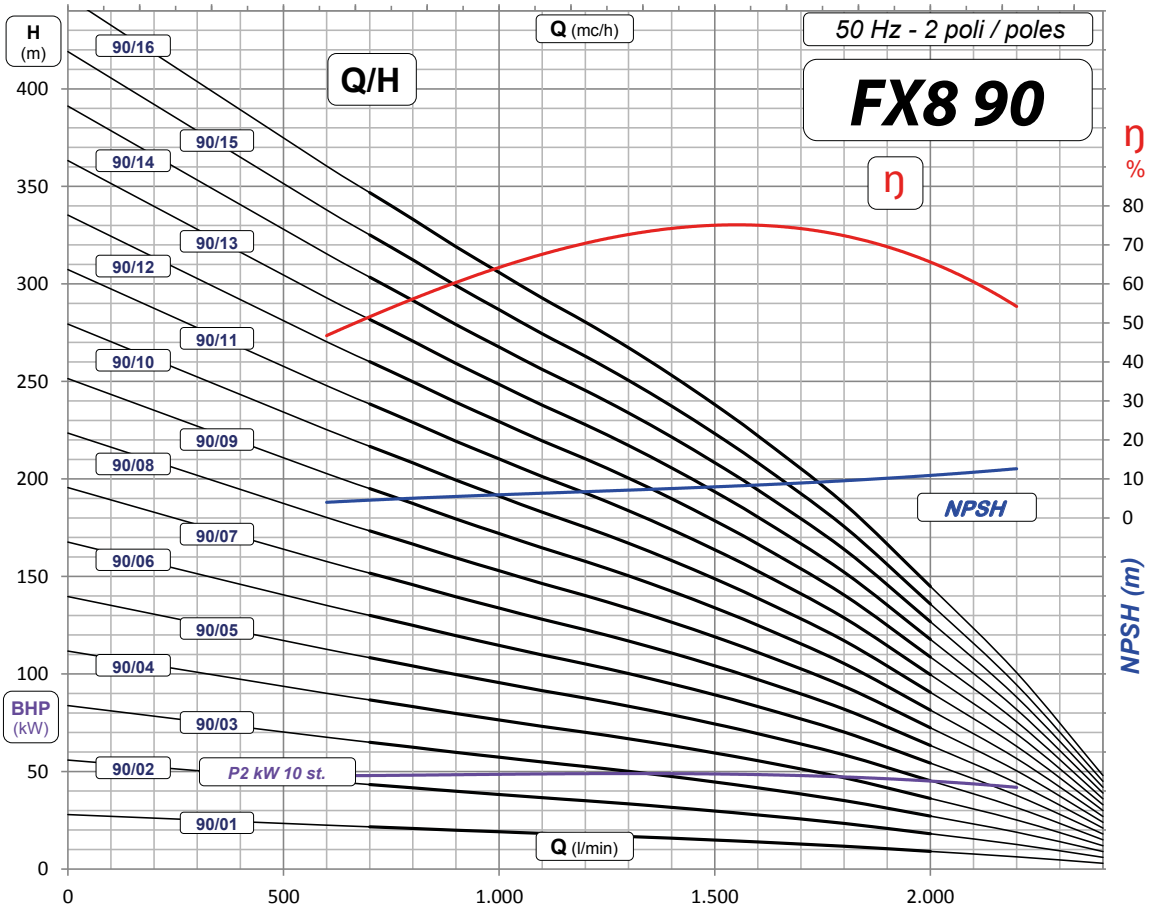
PARAMETERS

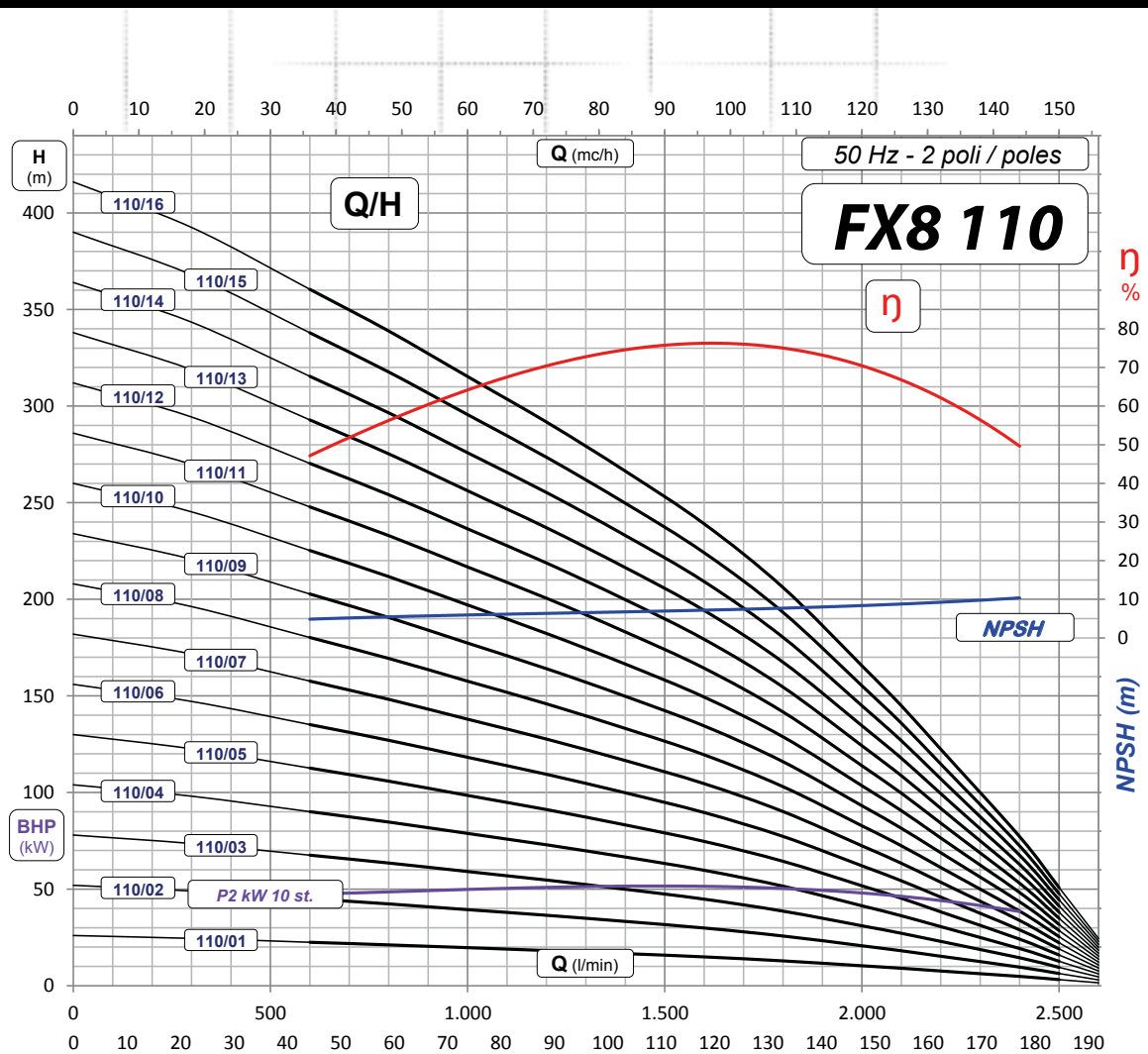
TYPE	kW	Motor diameter	Length L(mm)	Weight (kg)	Amperage (A)		m3/h	0	30	33	36	39	42	45	48	51	54	60	66	72	78	84	90	96
							l/min	0	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1600
							l/sec	0	8,33	9,17	10,0	10,8	11,7	12,5	13,3	14,2	15,0	16,7	18,3	20,0	21,7	23,3	25,0	26,7
FX6 65/02	4	6"	1076	68	11			26	26	25	24	24	23	22	22	21	19	17	14	12	8	5	2	2
FX6 65/03	7,5	6"	1274	86	18			39	38	38	37	36	35	34	32	31	29	25	22	17	13	8	2	2
FX6 65/04	9,2	6"	1422	97	22			52	51	50	49	48	46	45	43	42	38	34	29	23	17	10	3	3
FX6 65/05	11	6"	1575	108	26			66	64	63	61	60	58	56	54	52	48	42	36	29	21	13	4	4
FX6 65/06	13	6"	1728	119	29			79	77	75	73	71	69	67	65	63	57	51	43	35	25	15	5	5
FX6 65/07	15	6"	1881	129	33			92	90	88	85	83	81	78	76	73	67	59	50	40	30	18	6	6
FX6 65/08	18,5	6"	2079,0	146,0	41,0		H	105	102	100	98	95	92	90	87	84	77	68	58	46	34	20	6	6
FX6 65/10	22	6"	2187,0	152,0	41,0		(m)	131	128	125	122	119	116	112	108	105	96	85	72	58	42	26	8	7
FX6 65/12	26	6"	2380	167	49			157	154	150	146	143	139	134	130	125	115	102	87	69	51	31	10	8
FX6 65/14	30	6"	2488	173	49			183	179	175	171	167	162	157	152	146	134	118	101	81	59	36	11	9
FX6 65/15	37	6"	2691	189	57			197	192	188	183	179	173	168	162	157	144	127	108	87	64	38	12	10
FX6 65/17	37	6"	2947	205	67			223	218	213	207	202	196	190	184	178	163	144	123	98	72	43	14	11
FX6 65/19	45	6"	3195	223	74			249	243	238	232	226	219	213	206	199	182	161	137	110	81	48	15	13
FX6 65/21	45	6"	3411	235	74			275	269	263	256	250	243	235	227	219	201	178	151	121	89	54	17	14

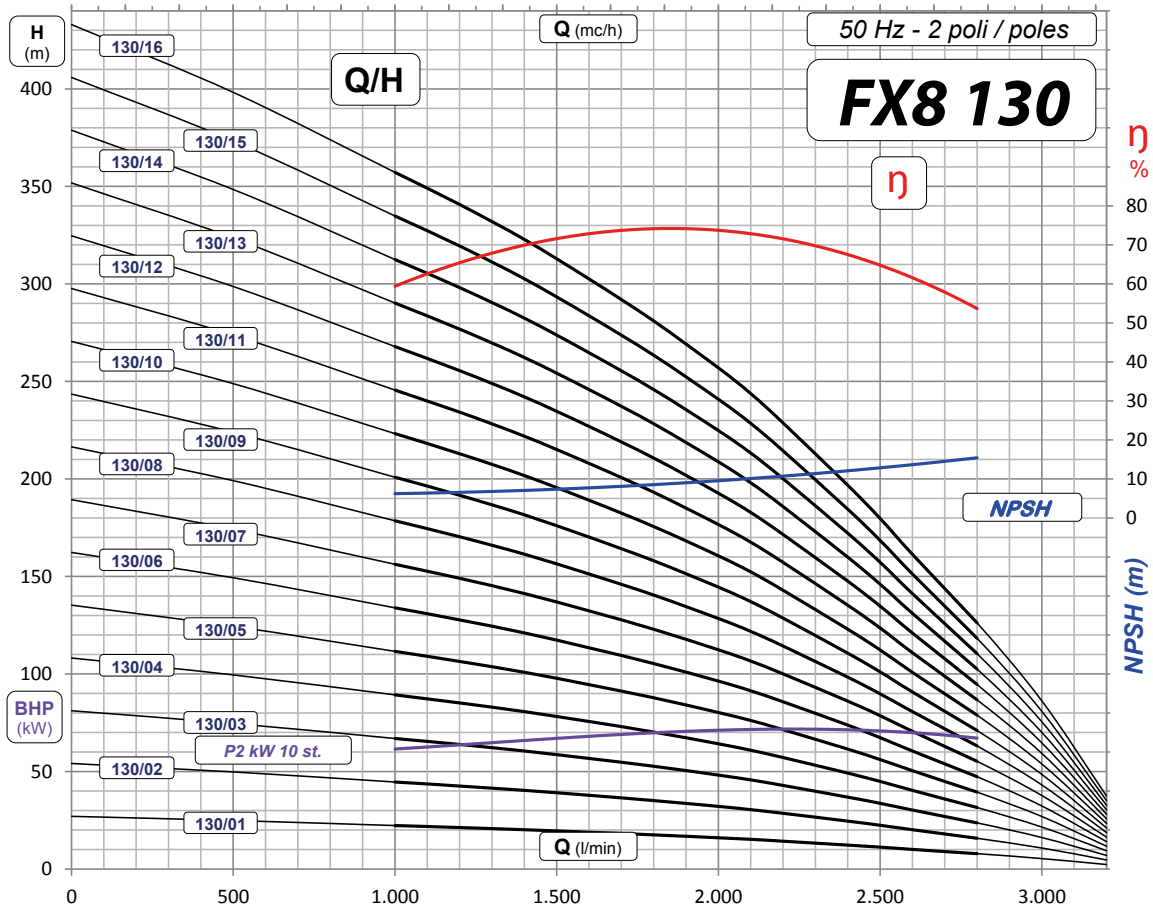
IBO ITALY FX 8

TYPE	kW	Ampe-rage (A)	Length L (mm)	Weight (kg)		m3/h	0	24	30	36	42	48	54	60	66	72	78	84	90	96	108	120	132	144	156	168	180	192
						l/min	0	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2200	2400	2600	2800	3000	3200
						l/sec	0	6,70	8,33	10,0	11,7	13,3	15,0	16,7	18,3	20,0	21,7	23,3	25,0	26,7	30,0	33,3	36,7	40,0	43,3	46,7	50,0	53,3
FX8 70/01	4	12	458	32			27	23	21	20	19	18	17	15	14	13	11	9	8	6								
FX8 70/02	7,5	18	592	44			55	45	43	40	38	36	33	31	28	25	22	19	15	11								
FX8 70/03	11	26	726	55			82	68	64	61	57	54	50	46	43	38	33	28	23	17								
FX8 70/04	15	34	860	67			109	90	85	81	76	71	67	62	57	51	44	37	31	22								
FX8 70/05	18,5	41	994	78			136	113	107	101	95	89	84	77	71	63	55	47	38	28								
FX8 70/06	22	49	1 128	90			164	135	128	121	114	107	100	93	85	76	66	56	46	33								
FX8 70/07	26	57	1 262	101			191	158	150	141	133	125	117	108	99	89	77	65	54	39								
FX8 70/08	30	62	1 396	115			218	180	171	162	152	143	134	124	113	101	88	75	61	44								
FX8 70/09	37	77	1 530	126			246	203	192	182	171	161	150	139	128	114	99	84	69	50								
FX8 70/10	37	77	1 664	138			273	226	214	202	190	179	167	155	142	127	110	94	76	55								
FX8 70/11	45	87	1 798	149			300	248	235	222	209	196	184	170	156	139	121	103	84	61								
FX8 70/12	45	87	1 932	161			327	271	256	242	228	214	200	186	170	152	132	112	92	66								
FX8 70/13	52	100	2 066	172			355	293	278	262	247	232	217	201	184	165	143	122	99	72								
FX8 70/14	52	100	2 200	184			382	316	299	283	266	250	234	217	198	177	154	131	107	77								
FX8 70/15	55	110	2 334	195			409	338	321	303	285	268	251	232	213	190	165	140	115	83								
FX8 70/16	59	113	2 468	207			437	361	342	323	304	286	267	248	227	203	176	150	122	89								
FX8 90/01	5,5	15	458	32			28			23	22	21	20	19	18	18	17	16	15	14	12	9	6					
FX8 90/02	9,2	22	592	44			56			45	43	42	40	38	37	35	33	32	30	28	23	18	13					
FX8 90/03	15	34	726	55			84			68	65	62	60	57	55	53	50	47	45	42	35	27	19					
FX8 90/04	18,5	41	860	67			112			90	87	83	80	76	73	70	67	63	60	56	47	36	25					
FX8 90/05	26	57	994	78			140			113	108	104	100	96	91	88	84	79	74	69	59	45	31					
FX8 90/06	30	62	1 128	90			168			135	130	125	120	115	110	105	100	95	89	83	70	54	38					
FX8 90/07	37	77	1 262	101			196			158	152	146	140	134	128	123	117	111	104	97	82	63	44					
FX8 90/08	45	87	1 396	115			224			180	173	167	160	153	146	140	134	127	119	111	94	72	50					
FX8 90/09	45	87	1 530	126			251			203	195	187	179	172	165	158	150	142	134	125	105	82	57					
FX8 90/10	52	100	1 664	138			279			225	217	208	199	191	183	175	167	158	149	139	117	91	63					
FX8 90/11	55	110	1 798	149			307			248	238	229	219	210	201	193	184	174	164	153	129	100	69					
FX8 90/12	59	113	1 932	161			335			270	260	250	239	229	220	210	200	190	179	167	140	109	76					
FX8 90/13	67	130	2 066	172			363			293	282	271	259	249	238	228	217	206	193	180	152	118	82					
FX8 90/14	74	143	2 200	184			391			315	303	292	279	268	256	245	234	222	208	194	164	127	88					
FX8 90/15	74	143	2 334	195			419			338	325	312	299	287	274	263	251	237	223	208	176	136	94					
FX8 90/16	81	158	2 468	207	H		447			360	347	333	319	306	293	280	267	253	238	222	187	145	101					
FX8 110/01	5,5	15	458	32	(m)		26					21	20	20	19	18	17	17	16	15	13	10	8	5	2			
FX8 110/02	11	26	592	44			52					42	41	39	38	36	35	33	32	30	26	21	15	10	3			
FX8 110/03	15	34	726	55			78					64	61	59	57	55	52	50	47	45	39	31	23	14	5			
FX8 110/04	22	49	860	67			104					85	82	79	76	73	70	67	63	60	52	41	31	19	6			
FX8 110/05	26	57	994	78			130					106	102	99	95	91	87	83	79	75	64	52	38	24	8			
FX8 110/06	37	77	1 128	90			156					127	123	118	114	109	105	100	95	90	77	62	46	29	9			
FX8 110/07	37	77	1 262	101			182					148	143	138	133	128	122	117	111	105	90	72	54	34	11			
FX8 110/08	45	87	1 396	115			208					169	164	158	152	146	140	133	126	120	103	83	61	39	12			
FX8 110/09	52	100	1 530	126			234					191	184	177	171	164	157	150	142	134	116	93	69	43	14			
FX8 110/10	52	100	1 664	138			260					212	204	197	190	182	174	166	158	149	129	104	76	48	15			
FX8 110/11	59	113	1 798	149			286					233	225	217	209	201	192	183	174	164	142	114	84	53	17			
FX8 110/12	67	130	1 932	161			312					254	245	236	228	219	209	200	190	179	155	124	92	58	18			
FX8 110/13	74	143	2 066	172			338					275	266	256	247	237	227	216	205	194	167	135	99	63	20			
FX8 110/14	74	143	2 200	184			364					296	286	276	266	255	244	233	221	209	180	145	107	68	21			
FX8 110/15	81	158	2 334	195			390					318	307	296	285	274	262	250	237	224	193	155	115	72	23			
FX8 110/16	81	158	2 468	207			416					339	327	315	304	292	279	266	253	239	206	166	122	77	24			
FX8 130/01	7,5	18	458	32			27							22	22	21	21	20	20	19	18	16	14	12	10	8	5	2
FX8 130/02	15	34	592	44			54							45	44	43	41	40	39	38	35	32	29	25	20	16	11	5
FX8 130/03	22	49	726	55			81							67	65	64	62	61	59	57	53	48	43	37	30	24	16	7
FX8 130/04	30	62	860	67			108							89	87	85	83	81	78	76	70	64	57	49	40	32	22	9
FX8 130/05	37	77	994	78			135							112	109	106	104	101	98	95	88	80	71	61	50	39	27	12
FX8 130/06	45	87	1 128	90			162							134	131	128	124	121	117	113	105	96	86	74	61	47	32	14
FX8 130/07	52	100	1 262	101			189							156	153	149	145	141	137	132	123	112	100	86	71	55	38	16
FX8 130/08	59	113	1 396	115			216							179	174	170	166	161	156	151	141	128	114	98	81	63	43	19
FX8 130/09	67	130	1 530	126			244							201	196	192	187	182	176	170	158	145	129	111	91	71	49	21
FX8 130/10	74	143	1 664	138			271							223	218	213	207	202	195	189	176	161	143	123	101	79	54	23
FX8 130/11	81	158	1 798	149			298							246	240	234	228	222	215	208	193	177	157	135	111	87	59	26
FX8 130/12	92	184	1 932	161			325							268	262	256	249	242	235	227	211	193	172	148	121	95	65	28
FX8 130/13	92	184	2 066	172			352							290	284	277	270	262	254	246	228	209	186	160	131	103	70	30
FX8 130/14	110	212	2 200	184			379							313	305	298	290	282	274	265	246	225	200	172	141	110	75	33
FX8 130/15	110	212	2 334	195			406							335	327	319	311	303	293	284	263	241	214	184	151	118	81	35
FX8 130/16	132	257	2 468	207			433							357	349	341	332	323	313	303	281	257	229	197	161	126	86	37


Q/H
50 Hz - 2 poli / poles
FX8 70
H (m)
Q (mc/h)
η %
NPSH (m)
BHP (kW)
Q (l/min)
P2 kW 10 st.
NPSH
70/16
70/15
70/14
70/13
70/12
70/11
70/10
70/09
70/08
70/07
70/06
70/05
70/04
70/03
70/02
70/01


Q/H
50 Hz - 2 poli / poles
FX8 90
H (m)
Q (mc/h)
η %
NPSH (m)
BHP (kW)
Q (l/min)
P2 kW 10 st.
NPSH
90/16
90/15
90/14
90/13
90/12
90/11
90/10
90/09
90/08
90/07
90/06
90/05
90/04
90/03
90/02
90/01


Q/H
FX8 110
50 Hz - 2 poli / poles
H (m)
Q (mc/h)
Q (l/min)
η
%
NPSH
NPSH (m)
BHP (kW)
P2 kW 10 st.
110/16
110/15
110/14
110/13
110/12
110/11
110/10
110/09
110/08
110/07
110/06
110/05
110/04
110/03
110/02
110/01

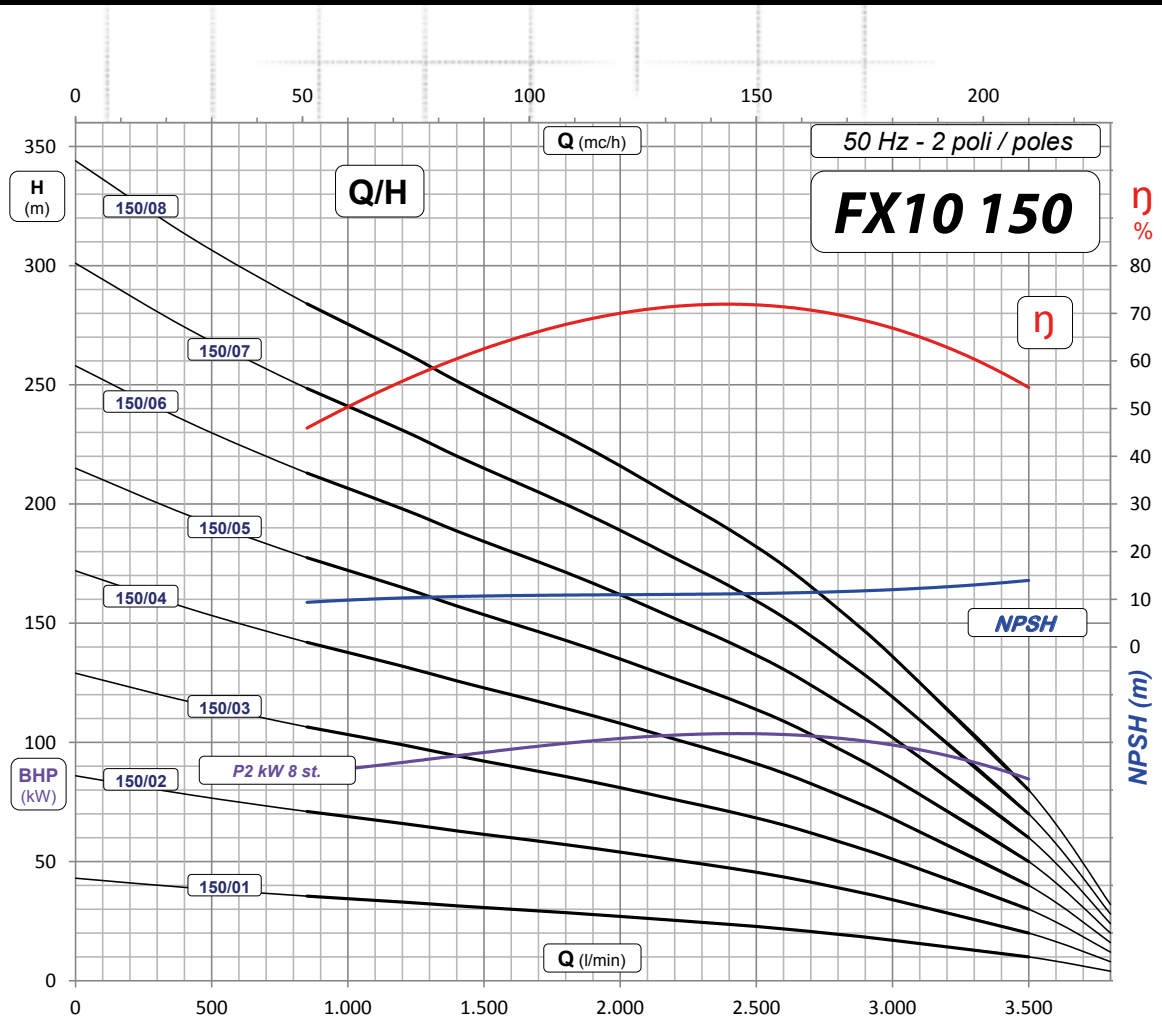

Q/H
FX8 130
50 Hz - 2 poli / poles
H (m)
Q (mc/h)
Q (l/min)
η
%
NPSH
NPSH (m)
BHP (kW)
P2 kW 10 st.
130/16
130/15
130/14
130/13
130/12
130/11
130/10
130/09
130/08
130/07
130/06
130/05
130/04
130/03
130/02
130/01

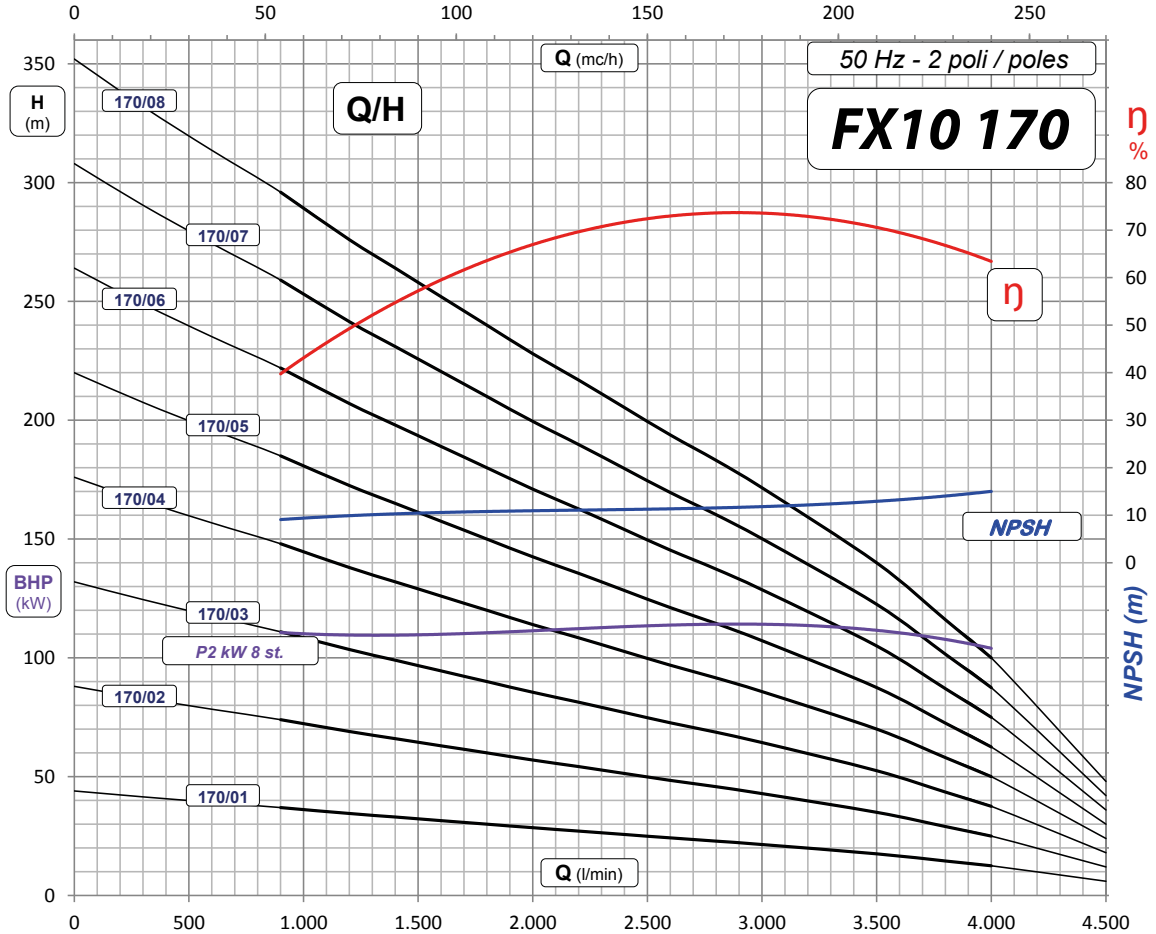
IBO ITALY FX"10

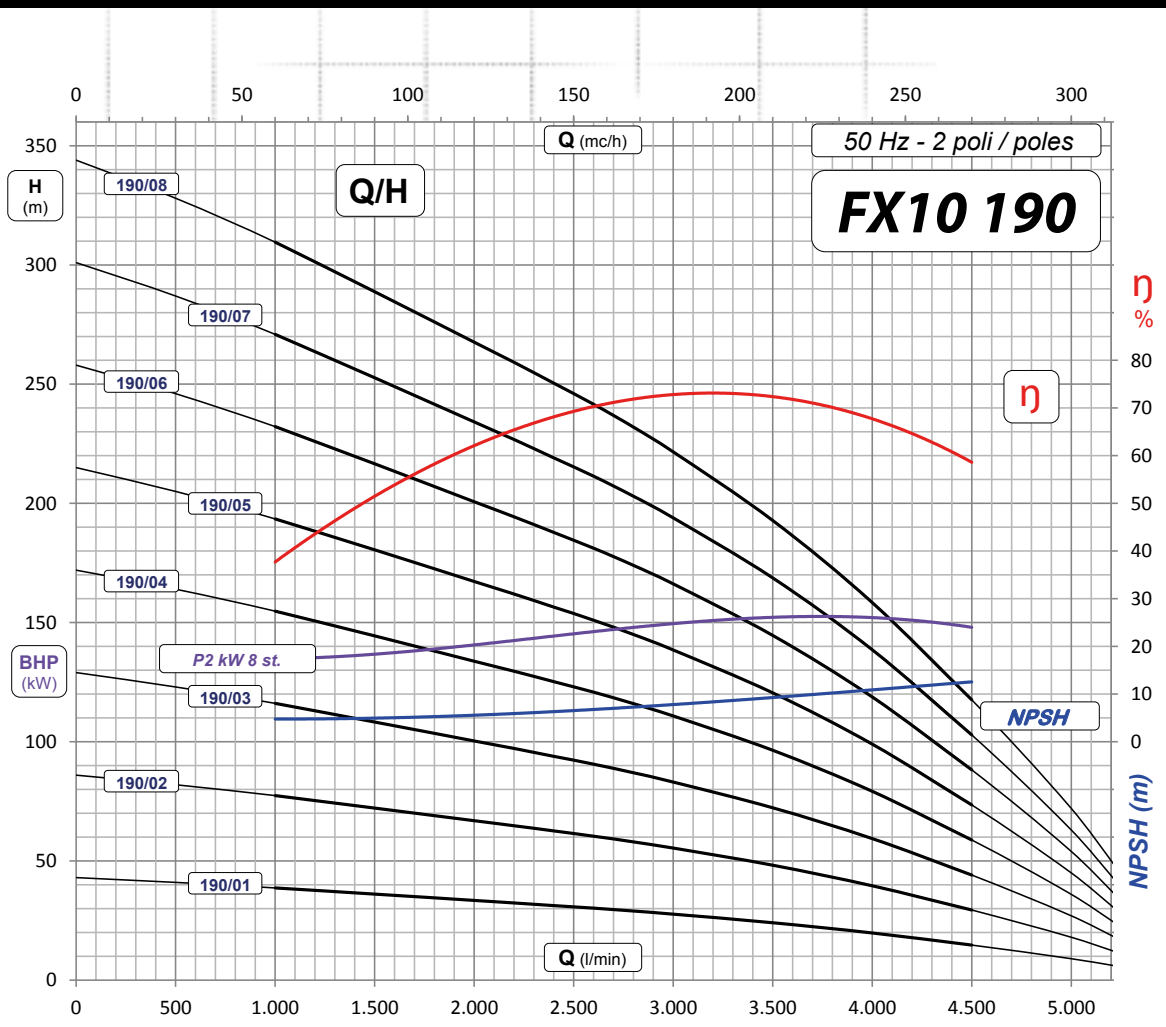
TYPE	Power (kW)	Power (hp)	Stages	Amperage (A)	Thrust load (N)	Motor diameter	Height L(mm)	Weight (kg)
FX10 150/01	13	17,5	1	30	5 590	6"	870	59
FX10 150/02	26	35	2	57	11 180	6"	1 040	80
FX10 150/03	45	60	3	87	16 770	8"	1 210	101
FX10 150/04	52	70	4	100	22 360	8"	1 380	122
FX10 150/05	67	90	5	130	27 950	8"	1 550	143
FX10 150/06	85	110	6	158	33 540	8"	1 720	164
FX10 150/07	92	125	7	184	39 130	8"	1 890	185
FX10 150/08	110	150	8	217	44 720	10"	2 060	206
FX10 170/01	15	20	1	34	5 720	6"	870	59
FX10 170/02	30	40	2	62	11 440	8"	1 040	80
FX10 170/03	45	60	3	87	17 160	8"	1 210	101
FX10 170/04	59	80	4	113	22 880	8"	1 380	122
FX10 170/05	75	100	5	143	28 600	8"	1 550	143
FX10 170/06	92	125	6	184	34 320	8"	1 720	164
FX10 170/07	110	150	7	217	40 040	10"	1 890	185
FX10 170/08	132	180	8	257	45 760	10"	2 060	206
FX10 190/01	18,5	25	1	41	5 590	6"	870	59
FX10 190/02	37	50	2	77	11 180	8"	1 040	80
FX10 190/03	59	80	3	113	16 770	8"	1 210	101
FX10 190/04	81	110	4	158	22 360	8"	1 380	122
FX10 190/05	110	150	5	217	27 950	10"	1 550	143
FX10 190/06	132	180	6	257	33 540	10"	1 720	164
FX10 190/07	132	180	7	257	39 130	10"	1 890	185
FX10 190/08	170	230	8	348	44 720	10"	2 060	206
FX10 210/01	22	30	1	57	5 525	6"	870	59
FX10 210/02	45	60	2	87	11 050	8"	1 040	80
FX10 210/03	67	90	3	130	16 575	8"	1 210	101
FX10 210/04	92	125	4	184	22 100	8"	1 380	122
FX10 210/05	110	150	5	217	27 625	10"	1 550	143
FX10 210/06	132	180	6	257	33 150	10"	1 720	164
FX10 210/07	147	200	7	300	38 675	10"	1 890	185
FX10 210/08	184	250	8	405	44 200	10"	2 060	206

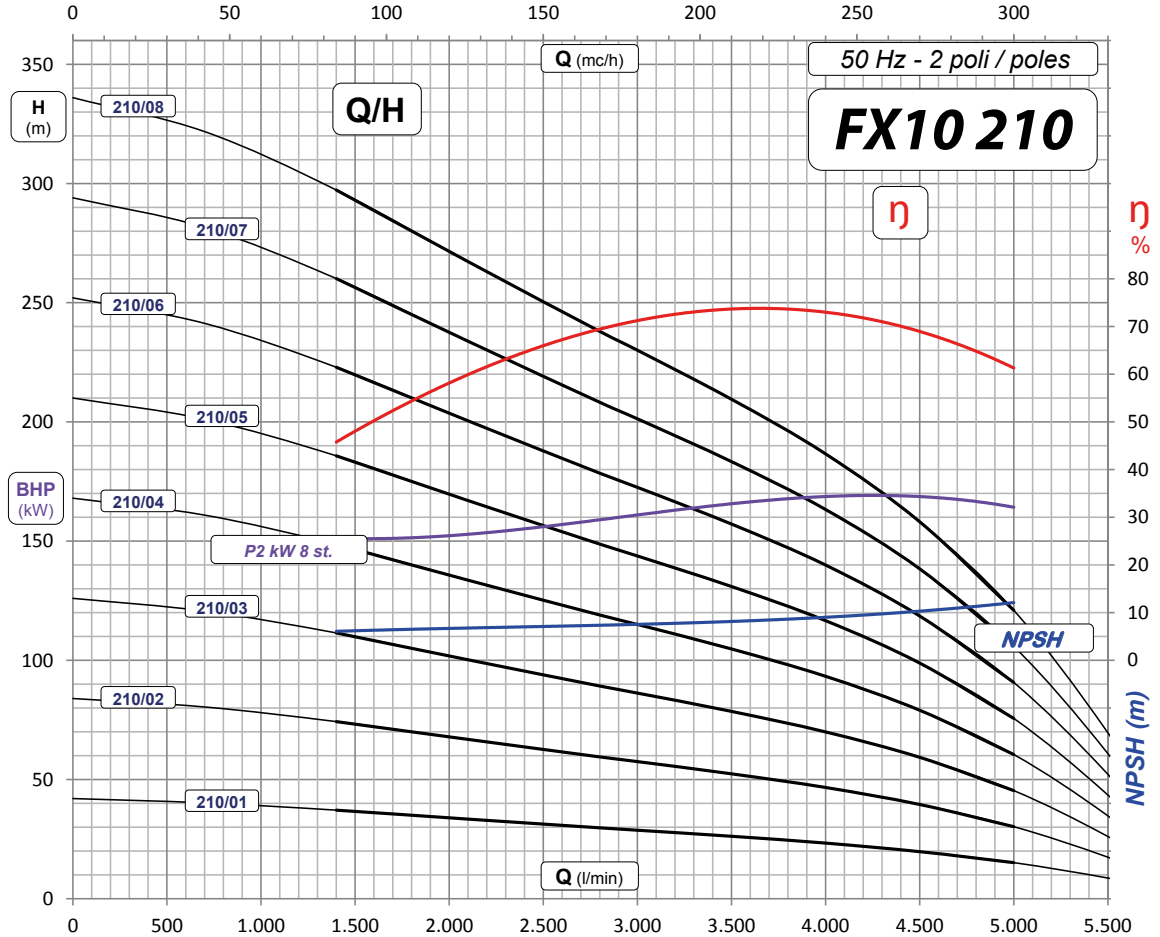
IBO ITALY FX"10 c.d.

TYPE	HP	kW	m3/h	0	72	84	96	108	120	132	144	156	168	180	210	240	270	300	330
			l/min	0	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3500	4000	4500	5000	5500
			l/sec	0	20,0	23,3	26,7	30,0	33,3	36,7	40,0	43,3	46,7	50,0	58,3	66,7	75,0	83,3	91,7
FX10 150/01	17,5	13		43	33	31	30	29	27	25	24	22	20	17	10				
FX10 150/02	35	13		86	66	63	60	57	54	51	47	44	39	34	20				
FX10 150/03	60	13		129	99	94	90	86	81	76	71	65	59	51	30				
FX10 150/04	70	13		172	132	126	120	114	108	101	95	87	78	68	40				
FX10 150/05	90	13		215	165	157	150	143	135	127	118	109	98	85	50				
FX10 150/06	110	13		258	198	189	180	171	162	152	142	131	117	102	60				
FX10 150/07	125	13		301	231	220	210	200	189	177	166	152	137	119	70				
FX10 150/08	150	13		344	264	252	240	228	216	203	189	174	156	136	80	10	6		
FX10 170/01	20	13		44			32	30	29	27	26	24	23	21	18	13	6		
FX10 170/02	40	13		88			63	60	57	54	51	48	46	43	35	25	12		
FX10 170/03	60	13		132			95	90	86	81	77	73	69	64	53	38	18		
FX10 170/04	80	13		176			126	120	114	108	103	97	92	86	70	50	24		
FX10 170/05	100	13		220			158	150	143	136	128	121	114	107	88	63	30		
FX10 170/06	125	13		264			189	180	171	163	154	145	137	129	105	75	36		
FX10 170/07		13	H (m)	308			221	210	200	190	180	170	160	150	123	88	42		
FX10 170/08	180	13		352			252	240	228	217	205	194	183	172	140	100	48	9	
FX10 190/01	25	13		43					33	32	31	30	29	28	24	20	15	9	
FX10 190/02	50	13		86					67	65	63	60	58	55	48	40	29	18	
FX10 190/03	80	13		129					100	97	94	91	87	83	72	59	44	27	
FX10 190/04	110	13		172					134	130	125	121	116	111	96	79	59	36	
FX10 190/05	150	13		215					167	162	157	151	145	139	121	99	74	45	
FX10 190/06	180	13		258					201	194	188	181	174	166	145	119	88	54	
FX10 190/07	180	13		301					234	227	219	211	203	194	169	139	103	63	9
FX10 190/08	230	13		344					268	259	250	242	232	222	193	158	118	72	18
FX10 210/01	30	13		43							32	31	30	29	27	24	20	15	9
FX10 210/02	60	13		85							64	62	60	58	53	47	40	31	18
FX10 210/03	90	13		128							97	93	90	87	80	71	60	46	26
FX10 210/04	125	13		170							129	124	120	116	106	94	80	61	35
FX10 210/05	150	13		213							161	156	151	146	133	118	100	77	44
FX10 210/06	180	13		255							193	187	181	175	159	142	120	92	53
FX10 210/07	200	13		298							225	218	211	204	186	165	140	107	62
FX10 210/08	250	184		340							258	249	241	233	212	189	160	122	70


Q/H
FX10 150
50 Hz - 2 poli / poles
Q (mc/h)
H (m)
BHP (kW)
ŋ %
NPSH (m)
NPSH
P2 kW 8 st.
150/08
150/07
150/06
150/05
150/04
150/03
150/02
150/01
Q (l/min)


Q/H
FX10 170
50 Hz - 2 poli / poles
Q (mc/h)
H (m)
BHP (kW)
ŋ %
NPSH (m)
NPSH
P2 kW 8 st.
170/08
170/07
170/06
170/05
170/04
170/03
170/02
170/01
Q (l/min)


Q/H
FX10 190
50 Hz - 2 poli / poles
Q (mc/h)
Q (l/min)
H (m)
BHP (kW)
η %
NPSH (m)
190/08
190/07
190/06
190/05
190/04
190/03
190/02
190/01
P2 kW 8 st.
NPSH
η


Q/H
FX10 210
50 Hz - 2 poli / poles
Q (mc/h)
Q (l/min)
H (m)
BHP (kW)
η %
NPSH (m)
210/08
210/07
210/06
210/05
210/04
210/03
210/02
210/01
P2 kW 8 st.
NPSH
η

DEEP WELL MOTORS

OIL-FILLED MOTORS IBO 3”/4”/6”
4IOM ITALY - OIL
6IOM IBO ITALY - OIL
6IMW IBO ITALY
8IWM ITALY
10IWM ITALY

3"/ 4" / 6" IBO DEEP WELL OIL-FILLED MOTORS

High-quality, 3, 4, 6 inch diameter deep well oil-filled motors manufactured to NEMA standard.

Top quality materials used to manufacture the motors guarantee their long-term and reliable operation. High mechanical resistance and very good electrical properties. Maximum diameter of motors: 3" - 75 mm / 4" – 98 mm / 6" – 145 mm.

OUTER CASING AND BASEPLATE:
Made of AISI 304 stainless steel.

UPPER BEARING RETAINER:
Durable cast iron protected with AISI 304 stainless steel cover. The outer tube is secured by 4 bolts.

MECHANICAL SEAL:
Graphite/ceramics.

BALL BEARINGS:
Properly sized to ensure the motor's long lifespan.

STATOR:
The design provides maximum electrical efficiency. Filled with white, highly refined mineral oil.

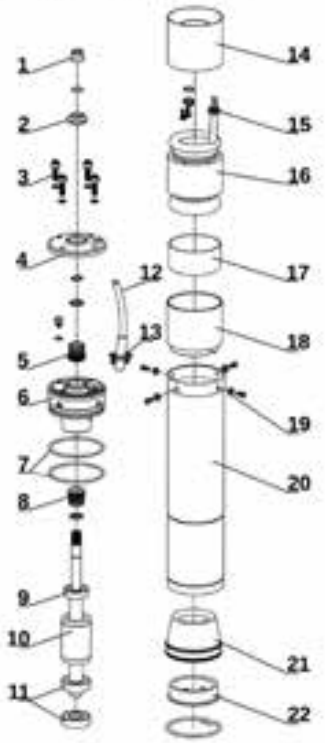
SHAFT:
The outer part of the shaft and the splines are made of AISI 304 stainless steel, which provides excellent corrosion resistance and high mechanical resistance required under high dynamic loads.

CABLE GLAND:
The design of the gland prevents the ingress of motor oil into the cable's outer sheath.

100% TESTED:
All engines are tested at the end of the production process. Tests include electrical and mechanical properties, and tightness tests.

TECHNICAL DATA:

- Rotational speed: **2850 RPM**
- Ingress Protection: **IP 68**
- Winding insulation class: **B / F**
- Maximum immersion depth: **100 m**
- Maximum number of motor starts: **20 times per hour**
- Permissible voltage fluctuation: **+ 6 % / - 10 %**
- Maximum water temperature: **35°C**
- Cooling oil used: **non-toxic oil**



Depending on the production batch, the device parameters may differ from the data provided in the table

PARAMETERS

Name	Power (kW)	Voltage (V/Hz)	Thrust load (N)	Weight (kg)	Amperage (A)
3" 0,55	0,55	1 ~ 230/50	1000	8	4,2
3" 0,75	0,75	1 ~ 230/50	1500	8,5	5,4
3" 1,1	1,1	1 ~ 230/50	1500	9,5	7,7
4" 0,75	0,75	1 ~ 230/50 lub 3 ~ 400/50	1500	9,5	6,5/3,1
4" 1,1	1,1	1 ~ 230/50 lub 3 ~ 400/50	1500	10,8	8,5/4,0
4" 1,5	1,5	1 ~ 230/50 lub 3 ~ 400/50	1500	12,5	10,5/5,0
4" 2,2	2,2	1 ~ 230/50 lub 3 ~ 400/50	1500	13,9	15,5/6,3
4" 3	3	3 ~ 400/50	2500	14,8	7,2
4" 4	4	3 ~ 400/50	2500	18	9,2
4" 5,5	5,5	3 ~ 400/50	2500	22	12,9
4" 7,5	7,5	3 ~ 400/50	2500	28	18,5
6" 7,5	7,5	3 ~ 400/50	5500	38	17,5
6" 9,2	9,2	3 ~ 400/50	5500	42	21,5
6" 11	11	3 ~ 400/50	10000	47	24,5
6" 13	13	3 ~ 400/50	10000	52	27,5
6" 15	15	3 ~ 400/50	10000	58	31,5

4" ITALIAN DEEP WELL MOTORS
4IOM ITALY - OIL

3 YEAR WARRANTY

4" diameter Italian deep well oil-filled motors. High-quality original Italian materials, demanding tests at every stage of manufacturing process, and the expertise of Italian engineers guarantee high mechanical resistance and very good electrical properties of the product. Power cable terminated with removable cable gland provides excellent tightness. Motors diameter: 4" - 95 mm.

OUTER CASING AND BASEPLATE: Made of AISI 304 stainless steel. Outer tube made of AISI 304L (low carbon) steel for greater corrosion protection at the welded joints.

UPPER BEARING RETAINER: Cast iron treated by means of cataphoresis (4 inch motors are additionally protected with AISI 304 stainless steel cover).

MECHANICAL SEAL: Graphite/ceramics standard version or SIC-SIC (silicon carbide/silicon carbide)

BALL BEARINGS: Properly sized to ensure the motor's long lifespan.

STATOR: Special design for maximum electrical efficiency. Filled with white, highly refined mineral oil approved for use in contact with drinking water (F.F.A. approval)

SHAFT: The inner part of the rotor is made of carbon steel alloy in order to improve the electrical properties of the motor. The outer part of the shaft and the splines are made of DUPLEX stainless steel. Such combination provides excellent corrosion resistance and high mechanical resistance required under high dynamic loads.

REMOVABLE CABLE GLAND: It provides perfect sealing under the toughest conditions and makes it easier to remove cable for maintenance purposes. Power cable is terminated with a removable cable gland for perfect sealing. Power cable is compliant with main drinking water quality standards (KTW, ACS, WRAS)

100% TESTED: All motors are tested at the end of the manufacturing process. Tests include electrical and mechanical properties, and tightness tests.

TECHNICAL DATA:

- Rotational speed: **2850 RPM**
- Ingress Protection: **IP 68**
- Winding insulation class: **F**
- Maximum immersion depth: **200 m**
- Maximum number of motor starts: 3**0 times per hour**
- Permissible voltage fluctuation: + 10 % / - 10 %
- Maximum water temperature: 35°C
- Cooling oil used: non-toxic oil
- Installation: horizontal / vertical
- Can be used with inverters.

PARAMETERS

Name	Power (kW)	Voltage (V/Hz)	Thrust load (N)	Height (mm)	Weight (kg)	In[A] 230V/400V	
4 IOM-S/T 050	0,37	1 ~ 230/50 lub 3 ~ 400/50	2000	311,3	6,45	3,6	1,8
4 IOM-S/T 075	0,55	1 ~ 230/50 lub 3 ~ 400/50	2000	331,3	7,2	4,7	2
4 IOM-S/T 100	0,75	1 ~ 230/50 lub 3 ~ 400/50	2000	356,3	8,45	5,9	2,5
4 IOM-S/T 150	1,1	1 ~ 230/50 lub 3 ~ 400/50	2000	386,3/371,1	10,2/9,35	8,3	3,4
4 IOM-S/T 200	1,5	1 ~ 230/50 lub 3 ~ 400/50	2000	436,3/386,3	11,65	10,7	4,8
4 IOM-S/T 300*	2,2	1 ~ 230/50 lub 3 ~ 400/50	2000	481,3/436,3	14,9/11,65	15,2	6,1
4 IOM-S/T 400	3	3 ~ 400/50	3000	481,3	14,9	-	7,1
4 IOM-S/T 550	4	3 ~ 400/50	5000	609,5	20,05	-	9,2
4 IOM-S/T 750	5,5	3 ~ 400/50	5000	699,5	24,65	-	11,7
4 IOM-S/T 1000	7,5	3 ~ 400/50	5000	799,5	28,95	-	16,4

6" ITALIAN DEEP WELL MOTORS
6IOM ITALY - OIL

3 YEAR WARRANTY

MOTORS FOR 6" WELLS OR LARGER.
High-quality original Italian materials, demanding tests at every stage of manufacturing process, and the expertise of Italian engineers guarantee high mechanical resistance and very good electrical properties of the product. All components that coin contact with water are made of AISI 304 stainless steel. Power cable terminated with removable cable gland provides excellent tightness.
PRODUCT FEATURES:
OUTER CASING AND BASEPLATE: made of AISI 304 stainless steel Outer tube made of AISI 304L (low carbon) steel for greater corrosion protection at the welded joints.
UPPER BEARING RETAINER: cast iron treated by means of cataphoresis, protected with AISI 304 stainless steel cover. Secured to the outer tube with 8 bolts.
MECHANICAL SEAL: graphite/ceramics standard version: SIC-SIC (silicon carbide/silicon carbide). Special versions on request.
BALL BEARINGS: properly sized to ensure the motor's long lifespan.
STATOR: Special design for maximum electrical efficiency. Filled with white, highly refined mineral oil approved for use in contact with drinking water
(F.F.A. approval).
REMOVABLE CABLE GLAND: it provides perfect sealing under the toughest conditions and makes it easier to remove cable for maintenance purposes. The design of the gland prevents the ingress of motor oil into the cable's outer sheath. Power cable is compliant with main drinking water quality standards (KTW, ACS, WRAS).
SHAFT: the inner part of the rotor is made of carbon steel alloy to improve the electrical properties of the motor. The outer part of the shaft and the splines are made of DUPLEX stainless steel. Such combination provides excellent corrosion resistance and high mechanical resistance required under high holding torque.
100% TESTED: all motors are tested at the end of the manufacturing process. Tests include electrical and mechanical properties, and tightness tests.

TECHNICAL DATA:
- Rotational speed: 2850 RPM
- Ingress Protection: IP 68
- Winding insulation class: F
- Maximum immersion depth: 200 m
- Maximum number of motor starts: 30 times per hour
- Permissible voltage fluctuation: + 10 % / - 10 %
- Maximum water temperature: 35°C
- Cooling oil used: non-toxic oil
- Installation: horizontal / vertical
- Can be used with inverters.

Upon request, 6" 6IOM motors are also available as Y-Δ versions.

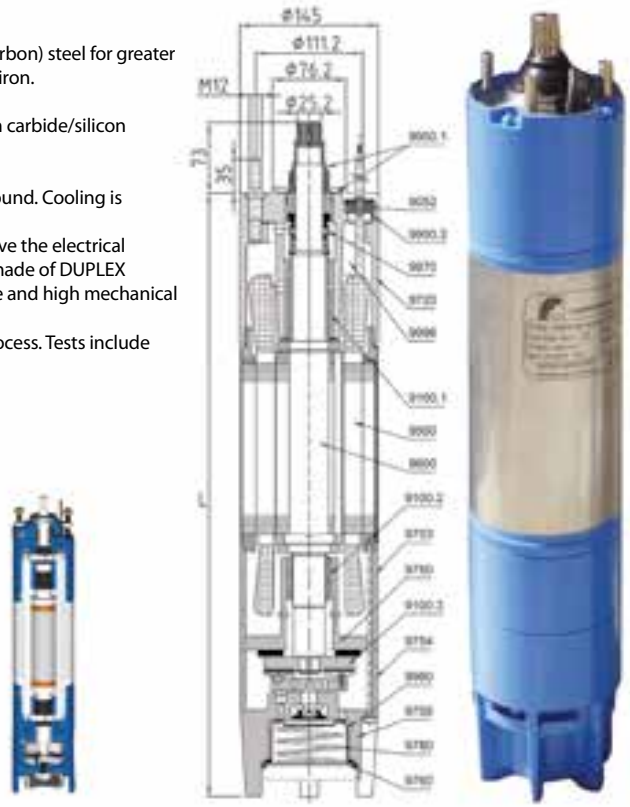
PARAMETERS

Name	Power (kW)	Voltage (V/Hz)	Thrust load (N)	Height (mm)	Weight (kg)	I_n (A)	η%	rpm	cos φ	Cable diameter (mm^2)	Cable length (m)
6 IOM-750	5,5	3 ~ 400/50	10000	698	41	9,1	74	2840	0,86	4x4	3
6 IOM-1000	7,5	3 ~ 400/50	10000	733	46	12,8	78	2850	0,83	4x4	3
6 IOM-1250	9,2	3 ~ 400/50	10000	773	48	16,8	81	2880	0,77	4x4	3
6 IOM-1500	11	3 ~ 400/50	10000	832	52	21,2	85	2850	0,82	4x4	3
6 IOM-1750	13	3 ~ 400/50	10000	893	57	22,9	84	2860	0,80	4x4	3
6 IOM-2000	15	3 ~ 400/50	10000	893	64	27,6	82	2840	0,86	4x8	4
6 IOM-2500	18,5	3 ~ 400/50	20000	956	64	30,7	84	2850	0,84	4x8	4
6 IOM-3000	22	3 ~ 400/50	20000	1023	79	38	84	2850	0,83	4x8	4
6 IOM-3500	26	3 ~ 400/50	20000	1091	79	52	85	2850	0,85	4x8	3
6 IOM-4000	30	3 ~ 400/50	20000	1171	87	61,5	85	2860	0,83	4x8	4
6 IOM-5000	37	3 ~ 400/50	20000	1306	99	76	84	2840	0,84	4x8	4

6" ITALIAN WATER-COOLED DEEP WELL MOTORS

MOTORS FOR 6" WELLS OR LARGER.
High quality 6 "water-cooled motors made in Italy under the IBO ITALY brand. Their durable design guarantees long-term operation without the need for any maintenance. High-quality original Italian materials, demanding tests at every stage of manufacturing process, and the expertise of Italian engineers guarantee high mechanical resistance and very good electrical properties of the product.
PRODUCT FEATURES:
OUTER CASING AND BASEPLATE: Outer tube made of AISI 304L (low carbon) steel for greater corrosion protection at the welded joints. The baseplate is made of cast iron.
UPPER BEARING RETAINER: cast iron treated by means of cataphoresis.
MECHANICAL SEAL: graphite/ceramics standard version: SIC-SIC (silicon carbide/silicon carbide). Special versions on request.
BALL BEARINGS: properly sized to ensure the motor's long lifespan.
STATOR: special design for maximum electrical efficiency. It can be rewound. Cooling is provided by water. The winding is Class Y insulated.
SHAFT: the inner part of the rotor is made of carbon steel alloy to improve the electrical properties of the motor. The outer part of the shaft and the splines are made of DUPLEX stainless steel. Such combination provides excellent corrosion resistance and high mechanical resistance required under high holding torques.
100% TESTED: all motors are tested at the end of the manufacturing process. Tests include electrical and mechanical properties, and tightness tests.

TECHNICAL DATA:
- Rotational speed: 2850 RPM
- Ingress Protection: IP 68
- Winding insulation class: F
- Maximum immersion depth: 100 m
- Maximum number of motor starts: 20 times per hour
- Permissible voltage fluctuation: + 5 % / - 5 %
- Maximum water temperature: 30°C
- Cooling liquid: water
- Installation: horizontal / vertical
- Can be used with inverters.



PARAMETERS

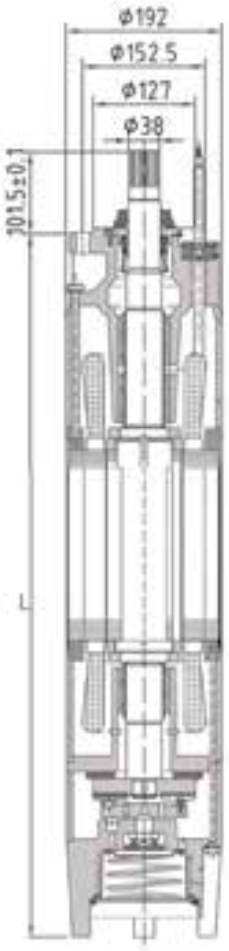
Name	Power (kW)	KW	I_n (A)	Height (mm)	Weight (kg)	Max. water temperature (C)	Maximum number of motor starts: per hour	Thrust load (N)	cos Ø	η%
6IWM-550	5,5	4	10	565	41	30	12	25000	80	79
6IWM-750	7,5	5,5	12,5	590	44				81,5	80
6IWM-1000	10	7,5	17	620	48				81,5	81
6IWM-1250	12,5	9,2	21	670	53				82	82
6IWM-1500	15	11	24,5	730	60				82	83
6IWM-1750	17,5	13	28	760	63				82,5	84
6IWM-2000	20	15	32	850	72				83	84
6IMW-2500	25	18,5	40	910	78				83,5	84
6IWM-3000	30	22	47,5	990	88	30	10	25000	83,5	85
6IWM-3500	35	26	55	1100	100				84	85
6IMW-4000	40	30	62,5	1170	107				85	85,5
6IWM-5000	50	37	78	1260	115				85	85

8" DEEP WELL WATER-COOLED MOTORS 8IWM ITALY

High quality 8" water-cooled motors made in Italy under the IBO ITALY brand. Their durable design guarantees long-term operation without the need for any maintenance.

PRODUCT FEATURES
OUTER CASING AND BASEPLATE: Outer tube made of AISI 304L steel for greater corrosion protection at the welded joints. The baseplate is made of cast iron.
UPPER BEARING RETAINER: G25 cast iron
MECHANICAL SEAL: standard version: SIC-NBR-AISI304
BALL BEARINGS: carbon graphite, properly sized to ensure the motor's long lifespan.
STATOR: Special design for maximum electrical efficiency. It can be rewound. Cooling is provided by water. The winding is Class Y insulated.
SHAFT: the inner part of the rotor is made of carbon steel alloy to improve the electrical properties of the motor. The outer part of the shaft and the splines are made of DUPLEX stainless steel. Such combination provides excellent corrosion resistance and high mechanical resistance required under high holding torque.
100% TESTED: all motors are tested at the end of the manufacturing process. Tests include electrical and mechanical properties, and tightness tests.

TECHNICAL DATA:
- Rotational speed: 2850 RPM
- Ingress Protection: IP 68
- Winding insulation class: Y
- Maximum immersion depth: 100 m
- Maximum number of motor starts: 7 times per hour
- Permissible voltage fluctuation: + 10 % / - 10 %
- Maximum water temperature: 30°C
- Cooling liquid: water
- Maximum flow: 0.5 m/s
- Installation: vertical
- Can be used with inverters.



PARAMETERS

Name	Power (HP)	Power (kW)	Voltage (V)	Thrust load (N)	Length L(mm)	Weight (Kg)	Amperage In(A)	rpm	cos φ	η%	Cable diameter (mm^2)	Cable length (m)
8IMW 30	30	22	3~400	38.000	861	121	48	2900	0,85	81	3x4	4
8IMW 40	40	30		38.000	1.075	142	62	2925	0,85	85	3x10	4
8IMW 50	50	37		38.000	1.102	148	77	2900	0,86	85	3x10	4
8IMW 60	60	45		38.000	1.160	159	87	2900	0,87	85	3x10	4
8IMW 70	70	52		38.000	1.152	178	100	2915	0,86	86	3x16	4
8IMW 75	75	55		38.000	1.282	183	110	2910	0,87	86	3x16	4
8IMW 80	80	60		38.000	1.315	188	113	2915	0,88	86	3x16	4
8IMW 90	90	66		45.000	1.393	203	130	2910	0,87	86	3x25	4
8IMW 100	100	75		45.000	1.464	217	143	2910	0,87	86	3x25	4
8IMW 110	110	81		45.000	1.535	232	158	2915	0,86	88	3x25	4
8IMW 125	125	92		45.000	1.650	256	184	2930	0,85	86	3x25	4
8IMW 150	150	110		45.000	1.845	295	212	2845	0,87	89	3x35	4

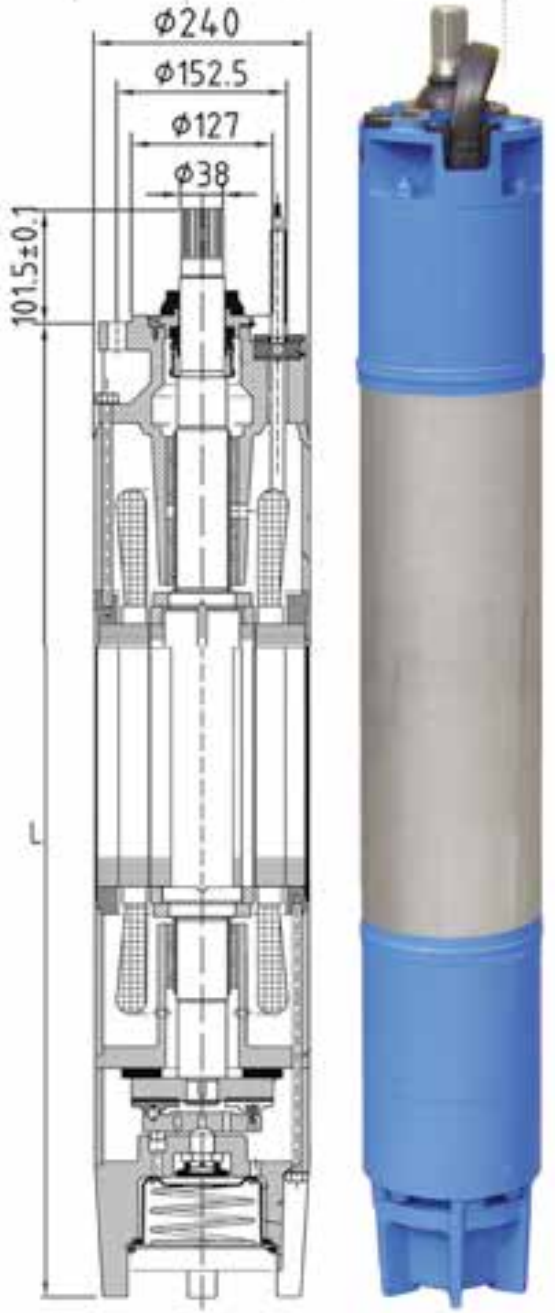
10" DEEP WELL WATER-COOLED MOTORS 10IWM ITALY

MOTORS FOR 10" WELLS OR LARGER.
Top-quality original Italian materials, demanding tests at every stage of manufacturing process, and the expertise of Italian engineers guarantee high mechanical resistance and very good electrical properties of the product. All components that come in contact with water are made of AISI 304 stainless steel. Power cable terminated with removable cable gland provides excellent tightness.

PRODUCT FEATURES
OUTER CASING AND BASEPLATE: made of AISI 304 stainless steel Outer tube made of AISI 304L (low carbon) steel for greater corrosion protection at the welded joints.
UPPER BEARING RETAINER: cast iron treated by means of cataphoresis, protected with AISI 304 stainless steel cover. Secured to the outer tube with 8 bolts.
MECHANICAL SEAL: graphite/ceramics standard version: SIC-SIC (silicon carbide/silicon carbide). Special versions on request.
BALL BEARINGS: properly sized to ensure the motor's long lifespan.
STATOR: Special design for maximum electrical efficiency. Filled with white, highly refined mineral oil approved for use in contact with drinking water (F.F.A. approval)
REMOVABLE CABLE GLAND: it provides perfect sealing under the toughest conditions and makes it easier to remove cable
for maintenance purposes. The design of the gland prevents the ingress of motor oil into the cable's outer sheath. Power cable is compliant with main drinking water quality standards (KTW, ACS, WRAS).
SHAFT: the inner part of the rotor is made of carbon steel alloy to improve the electrical properties of the motor. The outer part of the shaft and the splines are made of DUPLEX stainless steel. Such combination provides excellent corrosion resistance and high mechanical resistance required under high holding torque.
100% TESTED: all motors are tested at the end of the manufacturing process. Tests include electrical and mechanical properties, and tightness tests.

TECHNICAL DATA:

- Rotational speed: 2850 RPM
- Ingress Protection: IP 68
- Winding insulation class: F
- Maximum immersion depth: 100 m
- Maximum number of motor starts: 5 times per hour
- Permissible voltage fluctuation: + 10 % / - 10 %
- Maximum water temperature: 25°C
- Cooling liquid: water
- Maximum flow: 0.5 m/s
- Installation: vertical
- Can be used with inverters.



PARAMETERS

Name	Power (HP)	kW Power (kW)	Voltage (V)	Thrust load (N)	Length L(mm)	Weight (Kg)	Amperage In(A)	rpm	cos Ø	η%	Cable diameter (mm2)	Cable length (m)
FME 10 125T	125	92	3 ~ 400/50	60000	1316	285	181	2910	0,84	84	3x35	5
FME 10 150T	150	110		60000	1446	330	220	2915	0,87	85	3x35	5
FME 10 180T	180	132		60000	1546	365	265	2920	0,85	85	3x50	5
FME 10 200T	200	147		60000	1682	400	300	2925	0,86	86	3x50	5
FME 10 250T	250	185		60000	1880	460	370	2930	0,85	86	3x50	5

TANKS

VERTICAL-HORIZONTAL PRESSURE TANKS WITH PRESSURE GAUGE
STAINLESS STEEL (INOX) HORIZONTAL PRESSURE TANKS
GALVANIZED TANKS
IBO ITALY FIX MEMBRANE TANKS
CWU IBO ITALY PRESSURE VESSELS
IBO ITALY FIX MEMBRANE PRESSURE VESSELS
CO IBO HEATS PRESSURE VESSELS

PRESSURE TANKS HORIZONTAL / HORIZONTAL WITH PRESSURE GAUGE

The 24 -150 horizontal pressure tanks for storing water in water supply systems. IBO pressure vessels are used to stabilize water pressure and increase the live volume of water supply systems. Designed to operate with pumps with parameters matching the tank parameters. The tanks are made of thick carbon steel and coated with a special anti-corrosion varnish. There are EPDM rubber diaphragms inside the tanks creating a membrane between the water inside it and the outer jacket of the tank. Compressed air between the membrane and the tank body releases water from the tank under pressure. By using tanks in booster sets, the number of pump starts in a given period of time can be limited, which results in the extended lifespan of the entire system. Additionally, 50 and 100 tank models are available with a built-in pressure gauge. The volume of water inside the tank is the difference between the tank body volume and the volume of air around the membrane.

The tanks are equipped with a special valve for filling or releasing air from the tank - the same valve as the one used in car tyres is located at the rear of the tank, under the cover.
IBO pressure vessels are pressure equipment compliant with requirements of Directive 2014/68/EU.

APPLICATION:
Connected with surface or deep-well pumps, they create booster sets for supplying water to allotments, single and multi-family houses, farms and enterprises from their own intakes.

PARAMETERS

MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. tested PT pressure (bar)	Precharge pressure (bar)	Dimension D (mm)	Dimension H (mm)
HORIZONTAL PRESSURE TANK 24	1	0 - 60	8	1,7 +/- 10%	28,7x42,5	440
HORIZONTAL PRESSURE TANK 50	1	0 - 60	8	1,7 +/- 10%	38x55	525
HORIZONTAL PRESSURE TANK 50 WITH PRESSURE GAUGE	1	0 - 60	8	1,7 +/- 10%	48x61	525
HORIZONTAL PRESSURE TANK 80	1	0 - 60	8	1,7 +/- 10%	48x61	595
HORIZONTAL PRESSURE TANK 100	1	0 - 60	8	1,7 +/- 10%	46x70	645
HORIZONTAL PRESSURE TANK 100 WITH PRESSURE GAUGE	1	0 - 60	8	1,7 +/- 10%	64x51	645
HORIZONTAL PRESSURE TANK 150	1	0 - 60	8	1,7 +/- 10%	85x53	870

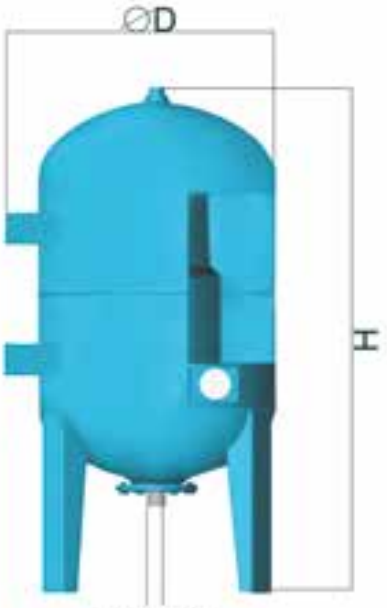
PRESSURE TANKS VERTICAL / HORIZONTAL WITH PRESSURE GAUGE

The 24 - 150 horizontal pressure tanks for storing water in water supply systems. IBO pressure vessels are used to stabilize water pressure and increase the live volume of water supply systems. Designed to operate with pumps with parameters matching the tank parameters. The tanks are made of thick carbon steel and coated with a special anti-corrosion varnish. There are EPDM rubber diaphragms inside the tanks creating a membrane between the water inside it and the outer jacket of the tank. Compressed air between the membrane and the tank body releases water from the tank under pressure. By using tanks in booster sets, the number of pump starts in a given period of time can be limited, which results in the extended lifespan of the entire system. Additionally, the 50 and 100 tank models are available with a built-in pressure gauge. The volume of water inside the tank is the difference between the tank body volume and the volume of air around the membrane.

The tanks are equipped with a special valve for filling or releasing air from the tank - the same valve as the one used in car tyres is located at the rear of the tank, under the cover.

IBO pressure vessels are pressure equipment compliant with requirements of Directive 2014/68/EU.

APPLICATION:
Connected with surface or deep-well pumps, they create booster sets for supplying water to allotments, single and multi-family houses, farms and enterprises from their own intakes.



PARAMETERS

MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. tested PT pressure (bar)	Precharge pressure (bar)	Dimension D (mm)	Dimension H (mm)
VERTICAL/HORIZONTAL PRESSURE TANK TYPE 50	1	0 - 60	8	1,7 +/- 10%	380	620
VERTICAL/HORIZONTAL PRESSURE TANK TYPE 80	1	0 - 60	8	1,7 +/- 10%	480	680
VERTICAL/HORIZONTAL PRESSURE TANK TYPE 100	1	0 - 60	8	1,7 +/- 10%	480	760
VERTICAL/HORIZONTAL PRESSURE TANK TYPE 150	1	0 - 60	8	1,7 +/- 10%	550	1040

STAINLESS STEEL INOX HORIZONTAL PRESSURE TANKS

The 24 - 100 horizontal pressure tanks made of AISI 304 stainless steel for storing water in water supply systems. Tank jacket and flange are made of stainless steel. IBO pressure vessels are used to stabilize water pressure and increase the live volume of water supply systems. Designed to operate with pumps with parameters matching the tank parameters. Due to the stainless steel finish, the tanks can be installed in wells and wet rooms without the risk of early corrosion. There are EPDM rubber diaphragms inside the tanks creating a membrane between the water inside it and the outer jacket of the tank. Compressed air between the membrane and the tank body releases water from the tank under pressure.
By using tanks in booster sets, the number of pump starts in a given period of time can be limited, which results in the extended lifespan of the entire system. Additionally, the 50 and 100 tank models are available with a built-in pressure gauge. The volume of water inside the tank is the difference between the tank body volume and the volume of air around the membrane.

The tanks are equipped with a special valve for filling or releasing air from the tank - the same valve as the one used in car tyres is located at the rear of the tank, under the cover.

IBO pressure vessels are pressure equipment compliant with requirements of Directive 2014/68/EU.

APPLICATION:
Connected with surface or deep-well pumps, they create booster sets for supplying water to allotments, single and multi-family houses, farms and enterprises from their own intakes

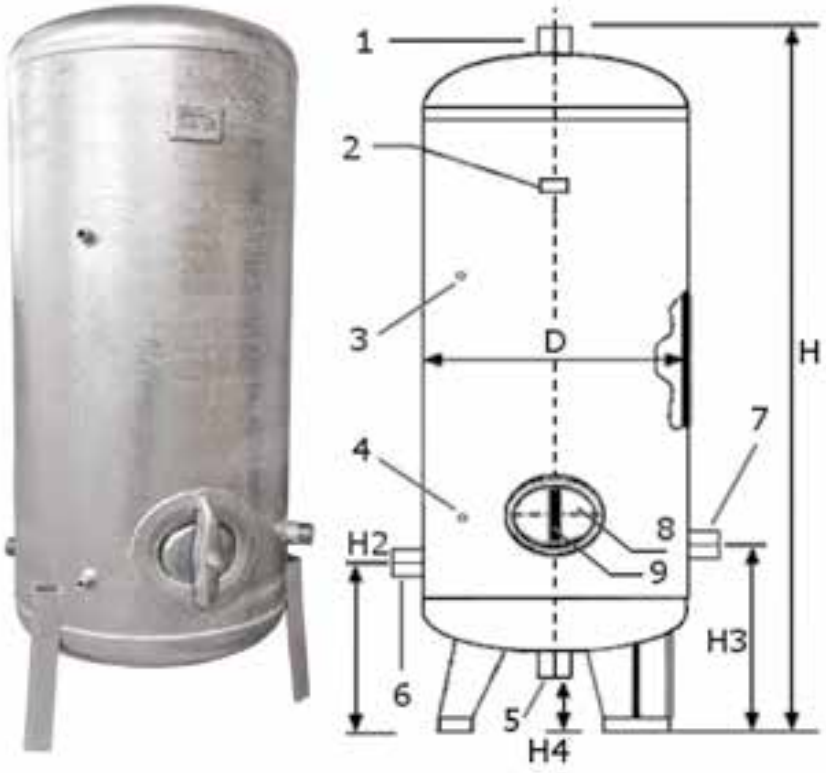
PARAMETERS

MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. tested PT pressure (bar)	Precharge pressure (bar)	Dimension D (mm)	Dimension H (mm)
HORIZONTAL INOX PRESSURE TANK TYPE 24	1	0 - 60	8	1,7 +/- 10%	300	450
HORIZONTAL INOX PRESSURE TANK TYPE 50	1	0 - 60	8	1,7 +/- 10%	380	530
HORIZONTAL INOX PRESSURE TANK TYPE 80	1	0 - 60	8	1,7 +/- 10%	470	590
HORIZONTAL INOX PRESSURE TANK TYPE 100	1	0 - 60	8	1,7 +/- 10%	480	670

GALVANIZED TANKS

Corrosion-resistant vertical air-over-water tanks made of zinc-coated low-carbon sheet metal. Tank jacket and flange are made of galvanized steel. Galvanized tanks are designed to stabilize water pressure and increase the live volume of water supply systems. Designed to operate with pumps with parameters matching the tank parameters. Due to the galvanized steel finish, the tanks can be installed in wells and wet rooms, and even externally without the risk of early corrosion. The tanks are available in capacity from 100 to 2000 litres. Maximum permissible pressure in the tank is 6 bar. Our offer also includes fittings for galvanized tanks.

APPLICATION:
Water storage. In combination with surface or deep-well pumps used to supply water to single and multi-family houses, farms and in industrial applications. As the only tanks, air-over-water tanks are suitable for installation in water supply systems with block filters and where additional water oxygenation is required.



1 - G 2" connection
2 - Rating plate
3 - G ½" water gauge connection
4 - G ½" Water gauge connection
5 - G 2" Connection
6 - for sizes: 100L, 500L
- G 1 ¼" inlet (outlet) pipe (1" for 100L)
6 - for sizes: 150L, 200L, 300L
– G 1 ¼" Inlet
6 - for sizes: A-1000L, B-1500L, C-2000L - Flow pipe with flange A-DN50/B-DN80/C-DN100
7 - G 1 ¼" inlet (outlet) pipe (1" for 100L)

8 - Cleaning hatch
9 - Clamp

PARAMETERS

MODEL	H	H2	H3	H4	D	Operating pressure (bar)	Max. temperature (°C)	Weight (kg)
100 L	767	360	360	78	500	6	20	28
150 L	967	360	360	72	500	6	20	45
200 L	1066	360	360	84	550	6	20	48
300 L	1354	360	360	84	550	6	20	57
500 L	1439	370	360	91	750	6	20	115
1000 L	1952	638	638	202	908	8	20	208
1500 L	2335	700	638	240	1010	8	20	340
2000 L	2200	660	638	160	1210	10	20	435

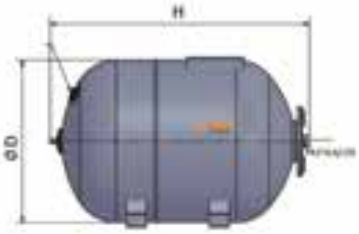
IBO ITALY PRESSURE TANKS

High-quality original materials, demanding tests at every stage of manufacturing process, and the expertise of engineers guarantee high resistance to wear. The 24L - 100L horizontal and 150L - 10000L vertical pressure tanks for storing water in water supply systems. IBO ITALY PRZEPONA pressure vessels are used to stabilize water pressure and increase the live volume of water supply systems. Designed to operate with pumps with parameters matching the tank parameters. The tanks are made of thick carbon steel and coated with a special anti-corrosion varnish. There are EPDM rubber diaphragms (manufactured in Italy) inside the tanks creating a membrane between the water inside it and the outer jacket of the tank. Compressed air between the membrane and the tank body releases water from the tank under pressure. By using tanks in booster sets, the number of pump starts in a given period of time can be limited, which results in the extended lifespan of the entire system. Tank volume refers to the body size - the volume of water inside the tank is the difference between the tank body volume and the volume of air around the membrane.

The tanks are equipped with a special valve for filling or releasing air from the tank - the same valve as the one used in car tyres is located at the rear of the tank, under the cover.

IBO pressure vessels are pressure equipment compliant with requirements of Directive 2014/68/EU.

APPLICATION:
Connected with surface or deep-well pumps, they create booster sets for supplying water to allotments, single and multi-family houses, farms and enterprises from their own intakes.



PARAMETERS

MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. operating pressure (bar)	Max. testing pressure (bar)	Precharge pressure (bar)	Dimension D (mm)	Dimension H (mm)
ZBIORNIK IBO ITALY POZIOMY 24L	1	(-10°C) -100°C	10	15	2 +/- 10%	335	465
ZZBIORNIK IBO ITALY POZIOMY 50L	1	(-10°C) -100°C	10	15	2 +/- 10%	385	590
ZBIORNIK IBO ITALY POZIOMY 80L	1	(-10°C) -100°C	10	15	2 +/- 10%	445	650
ZBIORNIK IBO ITALY POZIOMY 100L	1	(-10°C) -100°C	10	15	2 +/- 10%	550	680
ZBIORNIK IBO ITALY POZIOMY 150L	1	(-10°C) -100°C	10	15	3 +/- 10%	920	500
ZBIORNIK IBO ITALY PIONOWY 150L	1	(-10°C) -100°C	10	15	3 +/- 10%	510	1090
ZBIORNIK IBO ITALY PIONOWY 200L	1¼	(-10°C) -100°C	10	15	3 +/- 10%	590	1100
ZBIORNIK IBO ITALY PIONOWY 300L	1¼	(-10°C) -100°C	10	15	4 +/- 10%	640	1250
ZBIORNIK IBO ITALY PIONOWY 500L	1¼	(-10°C) -100°C	10	15	4 +/- 10%	750	1550
ZBIORNIK IBO ITALY PIONOWY 1000L	2	(-10) - (+100)	10	15	4 +/- 10%	800	2200
ZBIORNIK IBO ITALY PIONOWY 1500L	2	(-10) - (+100)	10	15	4 +/- 10%	960	2350
ZBIORNIK IBO ITALY PIONOWY 2000L	2	(-10) - (+100)	10	15	4 +/- 10%	1100	2450
ZBIORNIK IBO ITALY PIONOWY 3000L	3	(-10) - (+100)	10	15	4 +/- 10%	1200	2700
ZBIORNIK IBO ITALY PIONOWY 5000L	3	(-10) - (+100)	10	15	4 +/- 10%	1450	3400
ZBIORNIK IBO ITALY PIONOWY 10000L	3	(-10) - (+100)	10	15	4 +/- 10%	1600	5900

IBO ITALY CWU PRESSURE VESSELS

High-quality original materials, demanding tests at every stage of manufacturing process, and the expertise of engineers guarantee high resistance to wear. IBO CWU 8L-50L expansion vessels for hot and cold drinking water supply systems, designed to maintain and stabilize the system pressure changes resulting from the increase in water volume. The tanks are made of thick carbon steel and coated with a special anti-corrosion varnish. There are rubber diaphragms (manufactured in Italy) inside the tanks creating a membrane between the water inside it and the outer jacket of the tank. The long-lasting maximum liquid operating temperature is 110°C, and up to 130°C for a period of 2 hours.
The tanks are equipped with a special valve for filling or releasing air from the tank - the same valve as the one used in car tyres is located at the rear of the tank, under the cover.

- The outer surface is coated with epoxy powder paint.
- IBO pressure vessels are pressure equipment compliant with requirements of Directive 2014/68/EU
- The vessels can be used with mixtures of ethylene or propylene glycol.
- They have very low gas permeability

APPLICATION:
In hot and cold drinking water supply system to maintain and stabilize the system pressure changes resulting from the increase in water volume.

PARAMETERS

MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. operating pressure (bar)	Max. testing pressure (bar)	Precharge pressure (bar)	Dimension D (mm)	Dimension H (mm)
C.W.U ITALY VESSEL 8L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	200	330
C.W.U ITALY VESSEL 12L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	240	360
C.W.U ITALY VESSEL 19L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	300	365
C.W.U ITALY VESSEL 24L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	300	430
C.W.U VESSEL 36L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	350	760
C.W.U VESSEL 50L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	380	870

IBO ITALY SOLAR DIAPHRAGM EXPANSION VESSELS

High-quality original materials, demanding tests at every stage of production and the expertise of engineers ensure high resistance to wear.
IBO Solar diaphragm expansion vessels with capacities of 8L-50L are designed for use in solar installations in order to maintain and equalise pressure in them, changes of which result from an increase in water volume. The tanks are made of thick carbon steel and coated with a special anti-corrosion varnish. Inside the tanks there are rubber diaphragms made of EPDM (made in an Italian factory) forming a membrane between the water inside and the outer shell of the tank.
The long-term maximum working temperature of the fluid is 110°C and up to two hours even 130°C. The tanks use a special valve for adding or draining air from the tank - a valve identical to that in car wheels, located in the rear part of the tank, under the cover.

- External surface with epoxy powder paint
- IBO diaphragm expansion vessels are pressure equipment complying with the requirements of Directive 2014/68/EU
- Suitable for use with ethylene or propylene glycol mixtures
- Characterised by very low gas permeability

APPLICATION:
In hot and cold potable water systems to maintain and equalise the pressure in the water, the variations of which are caused by the increase in water volume.

PARAMETERS

MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. operating pressure (bar)	Max. testing pressure (bar)	Precharge pressure (bar)	Dimension D (mm)	Dimension H (mm)
VESSEL IBO SOLAR 8L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	200	360
VESSEL IBO SOLAR 12L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	240	380
VESSEL IBO SOLAR 19L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	270	390
VESSEL IBO SOLAR 24L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	300	440
VESSEL IBO SOLAR 36L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	350	440
VESSEL IBO SOLAR 50L	¾	(-0°C) -100(130)°C	10	15	2,5 +/- 10%	350	720

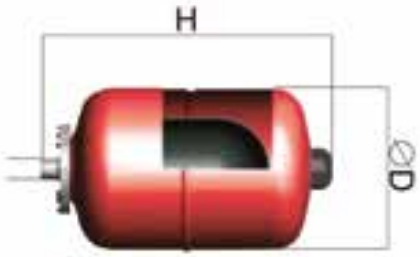
IBO HEATS PRESSURE VESSELS FOR CENTRAL HEATING SYSTEMS

IBO HEATS pressure vessels are designed for heating and solar systems to maintain and stabilize the system pressure changes resulting from the increase in fluid volume and temperature.
The main function of pressure vessels is to prevent excessive pressure increase in closed systems.

Pressure vessels use air cushion to compensate for changes of the heating medium volume in closed circuits. Inside the steel vessel there is a replaceable EPDM (synthetic rubber) membrane with high tensile strength and high temperature resistance, separating the liquid from the air. The tanks are equipped with a pressure valve to regulated the pressure inside the vessel and a replaceable flange made of galvanized steel with 3/4" inlet/outlet connection.

The vessels are intended for systems with the maximum 50% glycol content.
Vessels for suspension: 8L / 12L / 19L / 24L
Free-standing vessels: 36L / 50L / 80L / 100L

IBO HEATS pressure vessel are compliant with the Pressure Equipment Directive (PED) 2014/68/UE of the European Parliament and of the Council, as amended.



PARAMETERS

Model	Operating temperature	Max. operating pressure	Max. Pressure	Precharge pressure	Intel/outlet (inch)	Dimension D (mm)	Dimension H (mm)
IBO HEATS 8L	0-99°C	8 bar	12 bar	1.7 bar +/- 10%	¾"	20	33
IBO HEATS 12L	0-99°C	8 bar	12 bar	1.7 bar +/- 10%	¾"	27	31
IBO HEATS 19L	0-99°C	8 bar	12 bar	1.7 bar +/- 10%	¾"	27	40
IBO HEATS 24L	0-99°C	8 bar	12 bar	1.7 bar +/- 10%	¾"	27	46
IBO HEATS 36L	0-99°C	8 bar	12 bar	1.7 bar +/- 10%	¾"	35	44
IBO HEATS 50L	0-99°C	8 bar	12 bar	1.7 bar +/- 10%	¾"	35	55
IBO HEATS 80L	0-99°C	8 bar	12 bar	1.7 bar +/- 10%	¾"	45	59
IBO HEATS 100L	0-99°C	8 bar	12 bar	1.7 bar +/- 10%	¾"	45	65

CIRCULATION PUMPS

MAGI 2
MAGI MAX
MAGI-H
AMG
NOVA
NOVA MAX
IVO
BETA 2
OHI PRO
OHI PRO MAX
DN25 manifold
DN25 coupling
OHI
OHI MAX
Magnetic Filter
S-150 Controler
W15 IH-10
CIRCULATION PUMPS BETA BR/OHI
BR
CPI 15-15
E-IBO 15-14
IPML

MAGI 2

Energy-saving electronic circulation pumps which meet the requirements of A-rated pumps.

3 YEAR WARRANTY

The energy efficiency index of pumps from the MAGI series is:

EEI<=0,23

which according to the Commission Regulation (EU) No. 622/2012 is the reference criterion for: **the most energy-efficient circulation pumps.**

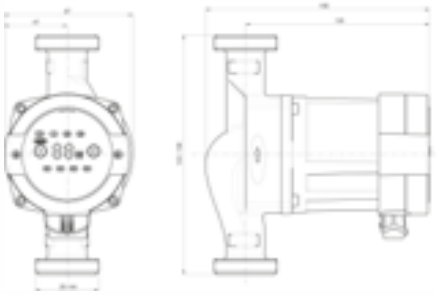
The MAGI series circulation pump is equipped with a permanent magnet motor and a differential pressure controller which automatically and continuously adjusts the pump performance to meet the actual needs of the system. The pump control panel is placed on the top of the motor, which makes it easy to operate by the user. The current consumption of electricity is displayed on its dial. The pump set includes a set of screw connections with an adapter for connecting the cable.

- **The pump has 8 operating modes:**
- **AUTO (factory default)** - High to low proportional pressure characteristic curve
- **LPP / HPP** - Proportional pressure curves
- **LCP / HCP** - Constant pressure curves
- **I/II/III** - Constant speed curves.

APPLICATION:

The MAGI series circulation pump is best suited for the following systems:

- Equithermic heating systems with variable flow
- Heating systems with variable pipeline temperature
- Heating systems with night mode
- Air conditioning systems
- Industrial circulation systems
- Home central heating systems and home hot water systems



SPECIFICATIONS		
Electrical supply	1×230V +6%/-10%, 50Hz	
Motor protection	There is no need for an additional motor protection.	
Ingress Protection Code	IP 44	
Insulation class	H	
Maximum ambient relative humidity	≤ 95%	
Maximum pressure in the central heating system	1 Mpa	
Minimum inlet suction pressure depending on heating medium temperature	Medium temperature	
	≤ 85 °C	0.005 MPa
	≤ 90 °C	0.028 MPa
	≤ 110 °C	0.100 MPa
EMC compliance	EN61000-6-1; EN61000-6-3	
Running pump sound pressure	43 dB (A)	
Allowable ambient temperature	0~+40°C	
Maximum heating medium temperature	TF110	
Maximum heat of pump surface	≤ 115°C	
Fluid temperature range	2~+110°C	

PARAMETERS

Name	*Operation mode (x1)*	*Lift (m)*	*Capacity (l/min)*	*Motor power (W)*	*Connector diameter (cale)*	*Connector spacing (mm)*	*Dimensions*						
							L1	*L2*	*B1*	*B2*	*H1*	*H2*	*G*
MAGI 25-40/180	8	4	50	5-22	1½ x 1	180	90	180	52	99	129	169	11/2″
MAGI 25-60/130 MAGI 25-60/180	8	6	55	5-45	1½ x 1	130	65	130	52	99	129	169	11/2″
						180	90	180	52	99	129	169	
MAGI 25-80/180 MAGI 32-80/180	8	8	90	5-70	1½ x 1 2 x 1½	180	90	180	52	99	129	169	11/2″ 2″

MAGI MAX

Energy-saving electronic circulation pumps with A energy-efficiency rating.

Energy Efficiency Index for MAGI pumps is:

EEI<=0,23

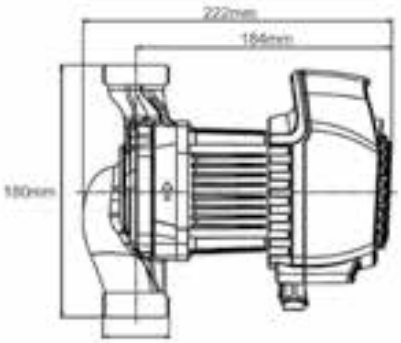
The MAGI circulating pump is equipped with a permanent magnet motor and a pressure differences regulator for automatic and continuous pump capacity adjustment to the actual requirements of the system. The pump control panel is located on top of the motor for easier operation by the user. Current power consumption is displayed on its panel.
The pump is supplied with union joints and cable adapter.

The pump provides 9 operating modes:

- **ECO (factory setting)**
  - From highest to lowest proportional pressure characteristic curve
- **PP2/PP3/PP4/PP5** - Proportional pressure curves
- **CP2/CP3/CP4/CP5** - Constant pressure curves.

APPLICATION:
Magi circulation pump is intended for the following systems:

- Constant temperature variable flow heating system
- Variable pipe temperature heating system
- Heating system with night mode
- Air conditioning system
- Industrial circulation system
- Domestic central heating system and domestic hot water system.



TECHNICAL DATA		
Supply voltage	1×230V +6%/-10%, 50Hz	
Motor protection	No additional motor protection is required	
Ingress Protection	IP 44	
Insulation class	F	
Maximum ambient relative humidity	≤ 95%	
Maximum central heating system pressure	1 Mpa	
Maximum suction-side inflow pressure depending on the heating medium temperature	Medium temperature	
	≤ 85 °C	0.005 MPa
	≤ 90 °C	0.028 MPa
	≤ 95 °C	0.100 MPa
Compliance with the EMC standard	EN61000-6-1; EN61000-6-3	
Operating pump sound pressure	43 dB (A)	
Permissible ambient temperature	0~+40°C	
Maximum heating medium temp.	TF110	
Maximum pump surface temperature	≤ 110°C	
Pumped liquid temperature range	2~+95°C	
Automatic venting function	YES	

PARAMETERS

MODEL	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter (cale)	Connector spacing (mm)	Weight (kg)
MAGI 25-100/180	9	10	170	10-180	1½ x 1	180	4,5
MAGI 32-100/180	9	10	180	10-180	2 x 1½	180	4,6

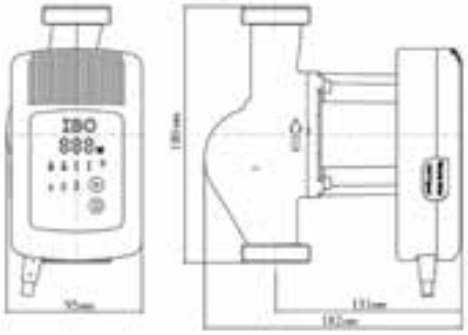
MAGI-H

Energy-saving electronic circulation pumps with A energy-efficiency rating.

Energy Efficiency Index for MAGI-H pumps is

EEI<=0,23

The MAGI circulating pump is equipped with a permanent magnet motor and a pressure differences regulator for automatic and continuous pump capacity adjustment to the actual requirements of the system. The pump control panel is located on top of the motor for easier operation by the user. Current power consumption is displayed on its panel.
The pump is supplied with union joints and cable adapter



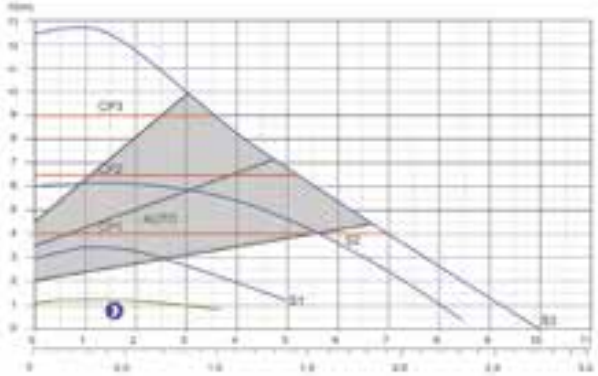
The pump provides 12 operating modes:

- **AUTO (factory setting)** - From highest to lowest proportional pressure characteristic curve
- **I / II / III** - Constant rotational speed curves
- **PP1/PP2/PP3/PP4** - Proportional pressure curves
- **CP1/CP2/CP3/CP4** - Constant pressure curves.

APPLICATION:

MAGI-H circulation pump is intended for the following systems:

- Constant temperature variable flow heating system
- Variable pipe temperature heating system
- Heating system with night mode
- Air conditioning system
- Industrial circulation system
- Domestic central heating system and domestic hot water system.



TECHNICAL DATA		
Supply voltage	1×230V +6%/-10%, 50Hz	
Motor protection	No additional motor protection is required	
Ingress Protection	IP 42	
Insulation class	H	
Maximum ambient relative humidity	≤ 95%	
Maximum central heating system pressure	1 Mpa	
Maximum suction-side inflow pressure depending on the heating medium temperature	Medium temperature	Min. inflow pressure
	≤ 75 °C	0.005 MPa
	≤ 90 °C	0.028 MPa
	≤ 110 °C	0.100 MPa
Compliance with the EMC standard	EN61000-4-4	
Operating pump sound pressure	43 dB (A)	
Permissible ambient temperature	0~+40°C	
Maximum heating medium temp.	TF110	
Maximum pump surface temperature	≤ 120°C	
Pumped liquid temperature range	2~+110°C	
Automatic venting function	YES	

PARAMETERS

MODEL	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter (cale)	Connector spacing (mm)	Weight (kg)
MAGI H 25-120/180	12	12	160	14-185	1½ x 1	180	4,9
MAGI H 32-120/180	12	12	160	14-185	2 x 1½	180	5,1

AMG

Energy-saving electronic circulation pumps which meet the requirements of A-rated pumps.

PWM CONTROL

The energy efficiency index of pumps from the AMG series is:

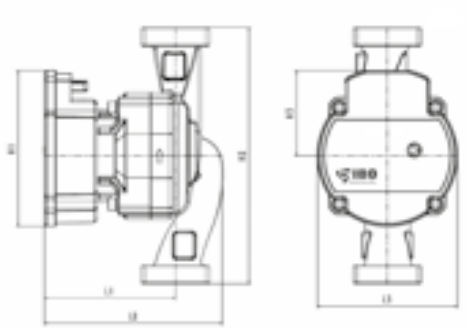
EEI<=0.20

The pumps are designed to force circulation in systems equipped with an electronic processor, which automatically controls the operation of the pumps. This feature, in combination with a frequency converter, allows for significant savings in electricity consumption. This solution is used in central heating and solar installations. The equipped processor enables the pump to choose one of 8 modes of operation as needed per installation. The power consumption is from 1/10 to 1/3 lower than in classic pumps. The pump set includes a set of screw connections and a power cord

APPLICATION:

The AMG series circulation pump is best suited for the following systems:

- Equithermic heating systems with variable flow
- Heating systems with variable pipeline temperature
- Heating systems with night mode
- Air conditioning systems
- Industrial circulation systems
- Home central heating systems and home hot water systems



Model	Dimensions (mm)					
	L1	L2	L3	H1	H2	H3
AMG XX-XX/130	93	126	99	110	130	60
AMG XX-XX/180					180	

SPECIFICATIONS		
Electrical supply	1×230V +6%/-10%, 50Hz	
Motor protection	There is no need for an additional motor protection.	
Ingress Protection Code	IP 44	
Insulation class	E	
Maximum ambient relative humidity	≤ 95%	
Maximum pressure in the central heating system	1 Mpa	
Minimum inlet suction pressure depending on heating medium temperature	Medium temperature	Min. inlet pressure
	≤ 85 °C	0.005 MPa
	≤ 90 °C	0.028 MPa
	≤ 110 °C	0.100 MPa
EMC compliance	EN61000-6-1; EN61000-6-3	
Running pump sound pressure	43 dB (A)	
Allowable ambient temperature	0~+40°C	
Maximum heating medium temperature	TF 110	
Maximum heat of pump surface	≤ 125°C	
Fluid temperature range	2~+110°C	

MODEL	*Operation mode (x1)*	*Lift (m)*	*Capacity (l/min)*	*Motor power (W)*	*Connector diameter (mm)*	*Connector spacing (mm)*	*Weight (kg)*
AMG 25-40/180	8	4,5	42	22	15	180	2,1
AMG 15-60/130	8	6	48	45	158	130	2,0
AMG 25-60/130	8	6	55	45	25	130	2,0
AMG 25-60/180	8	6	55	45	25	180	2,3
AMG 25-80/180	8	8	65	65	25	180	2,8
AMG 32-80/180	8	8	70	65	32	180	2,8

NOVA

Energy-saving electronic circulation pumps with A energy-efficiency rating

Energy Efficiency Index for NOVA pumps is

EEI<=0,23

The NOVA circulating pump is equipped with a permanent magnet motor and a pressure differences regulator for automatic and continuous pump capacity adjustment to the actual requirements of the system. The pump control panel is located on top of the motor for easier operation by the user. Current power consumption is displayed on its panel. The pump is supplied with union joints and cable adapter.

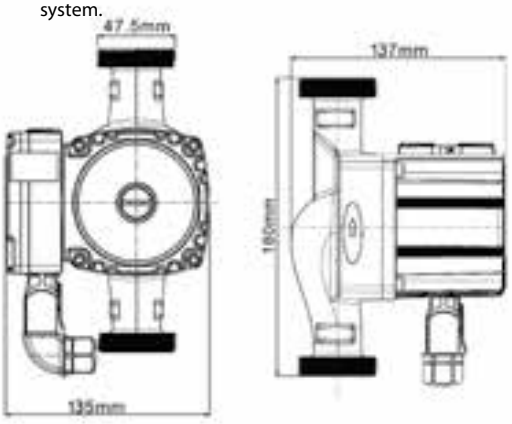
The pump provides 8 operating modes:

- **AUTO (factory setting)**
  - From highest to lowest proportional pressure characteristic curve
- **BL1 / BL2** - Proportional pressure curves
- **HD1 / HD2** - Constant pressure curves
- **HS1/HS2/HS3** - Constant rotational speed curves

APPLICATION:

NOVA circulation pump is intended for the following systems:

- Constant temperature variable flow heating system
- Variable pipe temperature heating system
- Heating system with night mode
- Air conditioning system
- Industrial circulation system
- Domestic central heating system and domestic hot water system.



TECHNICAL DATA		
Supply voltage	1×230V +6%/-10%, 50Hz	
Motor protection	No additional motor protection is required	
Ingress Protection	IP 44	
Insulation class	F	
Maximum ambient relative humidity	≤ 95%	
Maximum central heating system pressure	1 Mpa	
Maximum suction-side inflow pressure depending on the heating medium temperature	Medium temperature	Min. inflow pressure
	≤ 85 °C	0.005 MPa
	≤ 90 °C	0.028 MPa
	≤ 95 °C	0.050 MPa
Compliance with the EMC standard	EN61000-6-1; EN61000-6-3	
Operating pump sound pressure	43 dB (A)	
Permissible ambient temperature	0~+40°C	
Maximum heating medium temp.	TF 95	
Maximum pump surface temperature	≤ 110°C	
Pumped liquid temperature range	2~+95°C	

PARAMETERS

MODEL	*Operation mode (x1)*	*Lift (m)*	*Capacity (l/min)*	*Motor power (W)*	*Connector diameter (cale)*	*Connector spacing (mm)*	*Weight (kg)*
20-40/180	8	4	50	5-22	1½ x 1	180	3
25-60/180	8	6	55	5-45	2 x 1½	180	3
25-60/130	8	6	55	5-45	1½ x 1	130	2,9

NOVA MAX

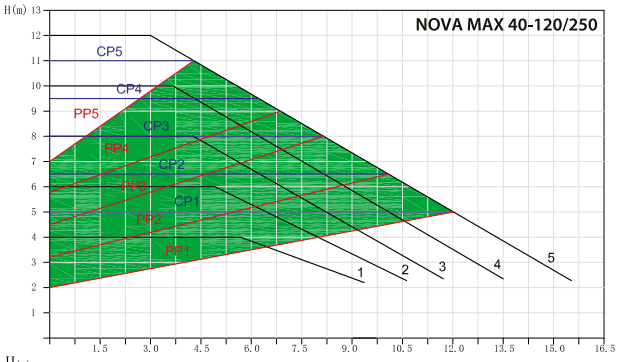
Energy-saving electronic circulation pumps that meet the requirements for A class pumps.

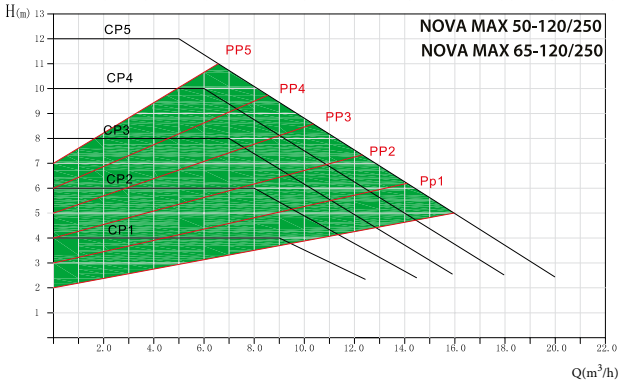
The NOVA circulation pump is fitted with a permanent magnet motor and differential pressure controller that automatically and continuously adjusts the pump capacity to meet the actual needs of the system. The pump control panel is placed on the top of the motor for easy operation by the user. Its dial displays the current electricity consumption. A set of threaded unions is supplied with the pump, including an adapter for cable connection

- **The pump features 16 operation modes:**
- **AUTO (factory setting)** - The curve of proportional pressure characteristics – from highest to lowest
- **PP1 / PP2 / PP3 / PP4 / PP5** - proportional pressure curves
- **CP1 / CP2 / CP3 / CP4 / CP5** - constant pressure curves
- **I / II / III / IV / V** - constant rotational speed curves

APPLICATION:
The NOVA series circulation pump is best suited for the following systems:

- Fixed temperature heating system with variable flow rate
- Heating system with variable pipeline temperature
- Heating system with night mode
- Air-conditioning system
- Industrial circulation system
- CH and DHW systems.





The energy efficiency coefficient for NOVA pumps is:

EEI<=0,23

TECHNICAL DATA		
Supply voltage	1×230V +6%/-10%, 50Hz	
Motor protection	No additional motor protection is required	
Ingress Protection	IP 44	
Insulation class	H	
Maximum ambient relative humidity	≤ 95%	
Maximum central heating system pressure	1 Mpa	
Maximum suction-side inflow pressure depending on the heating medium temperature	Medium temperature	Min. inflow pressure
	≤ 85 °C	0.005 MPa
	≤ 90 °C	0.028 MPa
	≤ 95 °C	1.000 MPa
Compliance with the EMC standard	EN61000-6-1; EN61000-6-3	
Operating pump sound pressure	43 dB (A)	
Permissible ambient temperature	0~+40°C	
Maximum heating medium temp.	TF 95	
Maximum pump surface temperature	≤ 115°C	
Pumped liquid temperature range	2~+110°C	

PARAMETERS

MODEL	*Operation mode (x1)*	*Lift (m)*	*Capacity (l/min)*	*Motor power (W)*	*Connector diameter (cale)*	*Connector spacing (mm)*	*Weight (kg)*
NOVA MAX 40-120/250	16	12	275	15-600	1½	250	17,30
NOVA MAX 50-120/250	16	12	350	15-600	2	250	17,75
NOVA MAX 65-120/250	16	12	350	15-600	2½	250	17,95

IVO

Energy-saving electronic circulation pumps that meet the requirements for A class pumps.

SERWIS 48

The energy efficiency coefficient for MAGI pumps is:

EEI<=0,23

which, according to Commission Regulation (EU) no. 622/2012 is the reference criterion for the **most energy-efficient circulation pumps**

The MAGI series circulation pump is equipped with a permanent magnet motor and a differential pressure regulator, which automatically and continuously adjust the pump capacity to meet the actual needs of the system. The pump control panel is placed on the top of the motor for easy operation. Its dial displays the current electricity consumption. The pump is supplied with a set of threaded unions, including an adapter for cable connection

The pump features 8 operation modes:

- **AUTO (factory setting)** - The curve of proportional pressure characteristics – from highest to lowest
- **LPP / HPP** - Proportional pressure curves
- **LCP / HCP** - Constant pressure curves
- **I/II/III** - Constant rotational speed curves

APPLICATION:

The MAGI series circulation pump is best suited for the following systems:

- Fixed temperature heating system with variable flow rate
- Heating system with variable pipeline temperature
- Heating system with night mode
- Air-conditioning system
- Industrial circulation system
- Household CH and DHW systems

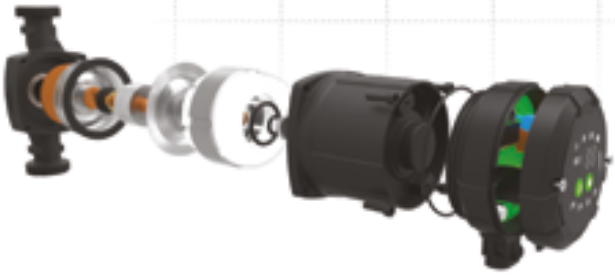
TECHNICAL DATA		
Supply voltage	1×230V +6%/-10%, 50Hz	
Motor protection	No additional motor protection is required	
Ingress Protection	IP 44	
Insulation class	H	
Maximum ambient relative humidity	≤ 95%	
Maximum central heating system pressure	1 Mpa	
Maximum suction-side inflow pressure depending on the heating medium temperature	Medium temperature	Min. inflow pressure
	≤ 85 °C	0.005 MPa
	≤ 90 °C	0.028 MPa
	≤ 110 °C	0.050 MPa
Compliance with the EMC standard	EN61000-6-1; EN61000-6-3	
Operating pump sound pressure	43 dB (A)	
Permissible ambient temperature	0~+40°C	
Maximum heating medium temp.	TF 110	
Maximum pump surface temperature	≤ 115°C	
Pumped liquid temperature range	2~+110°C	

PARAMETERS

Name	*Operation mode (x1)*	*Lift (m)*	*Capacity (l/min)*	*Motor power (W)*	*Connector diameter (cale)*	*Connector spacing (mm)*	*Dimensions*						
							L1	*L2*	*B1*	*B2*	*H1*	*H2*	*G*
IVO 25-40/180	8	4	50	5-22	1½ x 1	180	90	180	52	99	129	169	11/2"
IVO 25-60/180	8	6	55	5-45	1½ x 1	180	90	180	52	99	129	169	11/2"

BETA 2

Energy-saving electronic circulation pumps with A energy-efficiency rating



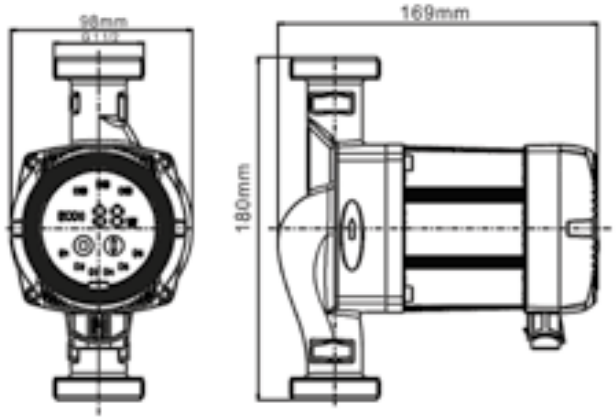
Energy Efficiency Index for BETA 2 pumps is

EEI<=0,23

The pumps are designed for forcing circulation in central heating systems and solar systems. The pumps are equipped with an electronic processor for automatic pump control, which together with a frequency converter allows for significant energy savings. The processor provides 11 operating modes depending on the system requirements. The power consumption is from 1/10 to 1/3 of conventional pumps.
The pump is supplied with union joints and power cable.

APPLICATION:
BETA 2 circulation pump is intended for the following systems:

- Constant temperature variable flow heating system
- Variable pipe temperature heating system
- Heating system with night mode
- Air conditioning system
- Industrial circulation system
- Domestic central heating system and domestic hot water system.



TECHNICAL DATA		
Supply voltage	1×230V +6%/-10%, 50Hz	
Motor protection	No additional motor protection is required	
Ingress Protection	IP 42	
Insulation class	H	
Maximum ambient relative humidity	≤ 95%	
Maximum central heating system pressure	1 Mpa	
Maximum suction-side inflow pressure depending on the heating medium temperature	Medium temperature	Min. inflow pressure
	≤ 85 °C	0.005 MPa
	≤ 90 °C	0.028 MPa
	≤ 110 °C	0.100 MPa
Compliance with the EMC standard	EN61000-6-1; EN61000-6-3	
Operating pump sound pressure	43 dB (A)	
Permissible ambient temperature	0~+40°C	
Maximum heating medium temp.	TF 110	
Maximum pump surface temperature	≤ 125°C	
Pumped liquid temperature range	2~+110°C	

PARAMETERS

MODEL	*Operation mode (x1)*	*Lift (m)*	*Capacity (l/min)*	*Motor power (W)*	*Connector diameter (cale)*	*Connector spacing (mm)*	*Weight (kg)*
BETA 25-40/180	8	4,5	48	22	1½ x 1	180	3,1
BETA 25-60/130	8	6	55	45	1½ x 1	130	3,1
BETA 25-60/180	8	6	55	45	1½ x 1	180	3,0

OHI PRO

OHI PRO series are seal-less circulation pumps with increased durability.
The pumps have a higher density ceramic shaft and plain bearings. Motor durability and better electrical parameters are achieved by using stronger Class F insulation winding. All processes during the manufacture of OHI PRO pumps are carried out by robots. The robots also check the quality of the intermediate products after each stage of production. At the end, the pumps are electrically and hydraulically tested. Due to the automation of the manufacturing process, the final product is of the top quality that is reproducible in every unit. All these actions have allowed us to extend the warranty period to 3 years. The pumps are supplied with union joints and a cable with a plug.

By default, the pumps have 3 speed levels for adjusting operating parameters depending on the user's and system's requirements. Due to the design and high quality materials used, the pumps are very quiet during operation.
The idea behind the creation of the OHI PRO pump was based on the belief that it is necessary to build a device with a more durable and reliable design compared to generally available circulation pumps, as well as a change in the price underselling trends.

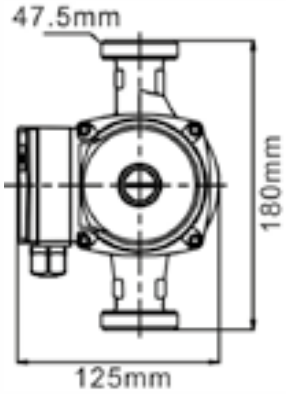
All OHI pumps have PZH (National Institute of Hygiene) approval.

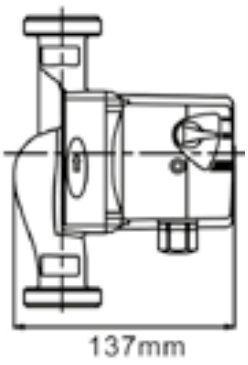
PARAMETERS

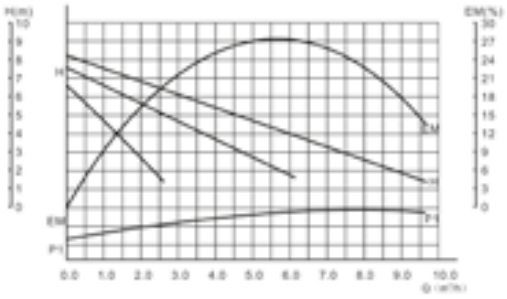
Name	Speed level	Head (m)	Flow (l/min)	Motor power (W)	Pump inlet/outlet diameter/Union joint diameter (inch)	Inlet/outlet spacing (mm)
OHI PRO 15-60/130	1	3	22	46	1 x ¾	130
	2	5	38	63		
	3	6	55	93		
OHI PRO 25-40/180	1	3	18	38	1½ x 1	180
	2	4	36	53		
	3	4,5	48	71		
OHI PRO 25-60/130 OHI PRO 25-60/180	1	3	22	46	1½ x 1	130 180
	2	5	38	63		
	3	6	55	93		
OHI PRO 32-60/180	1	3	22	46	2 x 1¼	180
	2	5	38	63		
	3	6	55	93		

OHI PRO MAX

3 YEAR WARRANTY







OHI PRO MAX series are seal-less circulating pumps with increased durability. The MAX pumps have higher operating parameters than the OHI PRO pumps.
The pumps have a higher density ceramic shaft and plain bearings. Motor durability and better electrical parameters are achieved by using stronger Class F insulation winding. All processes during the manufacture of OHI PRO pumps are carried out by robots. The robots also check the quality of the intermediate products after each stage of production. At the end, the pumps are electrically and hydraulically tested. Due to the automation of the manufacturing process, the final product is of the top quality that is reproducible in every unit. All these actions have allowed us to extend the warranty period to 3 years.

By default, the pumps have 3 speed levels for adjusting operating parameters depending on the user's and system's requirements. Due to the design and high quality materials used, the pumps are very quiet during operation.

The idea behind the creation of the OHI PRO pump was based on the belief that it is necessary to build a device with a more durable and reliable design compared to generally available circulation pumps, as well as a change in the price underselling trends.

All OHI pumps have PZH (National Institute of Hygiene) approval.

PARAMETERS

Name	Speed level	Lift (m)	Capacity (l/min)	Motor power (W)	Pump inlet/outlet diameter/Union joint diameter (inch)	Inlet/outlet spacing (mm)
OHI PRO 25-80/180	1	6,5	43	150	1½ x 1	130
	2	7,5	103	220		
	3	8	160	270		
OHI PRO 32-80/180	1	6,5	43	150	2 x 1¼	180
	2	7,5	103	220		
	3	8	160	270		

GP-SIŁ-DN25 pump group with a 3-way mixing valve
The version without a pump includes an electric actuator.
It is equipped with:
- ball valve integrated with the thermometer (power supply: red),
- ball valve with integrated check valve and thermometer (check: blue),
- adjustable bypass,
- EPP insulation.
A standard 180 mm long circulation pump can be used.
- Irreversible pump group (see: the manual).

SPECIFICATIONS	
material	steel, brass, EPP insulation
max. KVS groups with mixer	6 , 6 m3/h
max. working temp:	110°C
max pressure:	PN 6
upper connection:	G1"
lower connection:	female thread GZ 1½"
length (pump connection):	180 mm/GZ (male thread) 1½"

GGP-B-DN25 pump group with a direct heating circuit. Version without pump and 3-way mixing valve.
It is equipped with:
- ball valve integrated with the thermometer (power supply: red),
- ball valve with integrated check valve and thermometer (check: blue),
- EPP insulation.
A standard 180 mm long circulation pump can be used.
- Irreversible pump group (see: the manual).

SPECIFICATIONS	
material	steel, brass, EPP insulation
max. KVS groups with mixer	6.6 m3/h
max. working temp:	110°C
max pressure:	PN 6
upper connection:	G1"
lower connection:	female thread GZ 1½"
length (pump connection):	180 mm/GZ (male thread) 1½"

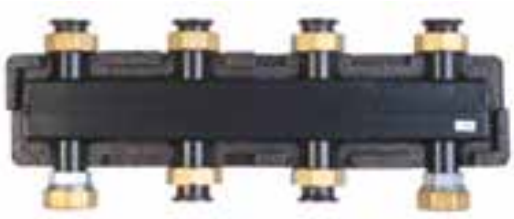
Electric actuator
3-point control, 5 or 6 Nm torque
(depending on the model), turning time by 90 ° — 135 s/2 minutes,
power cable: length depends on the model, power supply: 230 V,
Ingress Protection Code IP40.

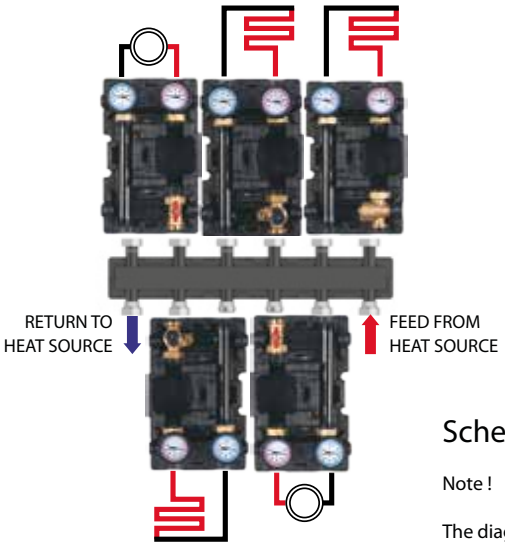
* The manufacturer's installation, operating, and warranty guidelines apply to the pump (check before installing in the pump group).
Verify whether it is possible to correctly install the hydraulic and electrical equipment of a given manufacturer's pump in the pump group.
* The product is not included in the current catalogue price list
* Non-standard goods, made to order
* The photos and diagrams contained in this leaflet are for reference only.

DN25 manifold

DN25 manifold (up to 70 kW) for working with central heating pump groups (standard)

The manifold is used to expand heating circuits, save space, and quickly build a comfortable heating system.
The distributor manifold block has a connector with flat sealing connections. You can install pump groups in the upper and lower part of the manifold. Wall console included in the price of the manifold. The models of individual manifolds may differ in terms of the pump group assembly method (see the manual).





SPECIFICATIONS	
Power in kW at ΔT = 20 K	up to 70 kW
Upper connection	½" GW (female thread)
Lower connection	½" GW (female thread)
Pattern	125 mm
Size (including insulation):	
2 + 1 (number of heating circuits)	500 × 178 × 135 mm (W/H/D)
3 + 2 (number of heating circuits)	750 × 178 × 135 mm (W/H/D)
4 + 3 (number of heating circuits)	1000 × 178 × 135 mm (W/H/D)
Materials	brass/steel/EPP
Sealing type	EPDM
Max. operating temperature	up to 110°C
Max. operating pressure	6 bar
Kvs	3 m^3/h

Schematic diagram

Note !

The diagram cannot replace the technical design prepared by an authorised designer. Read the instructions and warranty conditions before installation.

3-way mixing valves
4-way mixing valves

Application for electric actuators and constant temperature controller or as a manual mixing valve.

TECHNICAL DATA	
Spindle rotation torque	< 1 Nm
Type of fluid	woda, glikol (≤50%)
Max. working pressure	1,0 Mpa (10 bar)
Working temperature range	-10°C ÷ 110°C

WARIANT

DN	Kvs
20	6,3 m^3/h
25	12 m^3/h
32	16 m^3/h
40	25 m^3/h
50	40 m^3/h

DN25 coupling

DN25 GW vertical hydraulic coupling (up to 70 kW) with EPP insulation

The task of the hydraulic coupling is to separate the boiler circuit from the heating circuit, balance the flows, and keep the pumps running smoothly. Additionally, the coupling protects the boiler against return temperature which is too low.
Chamber with a separation net and welded connectors:
- four 1" connectors for heating circuit pipes,
- single ½" connector for the temperature sensor,
- single ½" connector on the top for the air vent,
- single ½" connector at the bottom to the drain-fill valve. Includes:
- EPP insulation,
- single 1½" plug,
- single automatic vertical air vent,
- single ½" drain-fill valve.

SPECIFICATIONS	
Power in kW at ΔT = 20 K	up to 67 kW
Connections of the heating system	4 × 1" GW (female thread)
Temperature sensor connector	½" GW (female thread)
Size (including insulation)	368 × 113 × 106 (H/W/D)
Materials	brass/steel/EPP
Max. operating temperature	up to 110°C
Max. operating pressure	6 bar
Max. Kvs	3 m^3/h

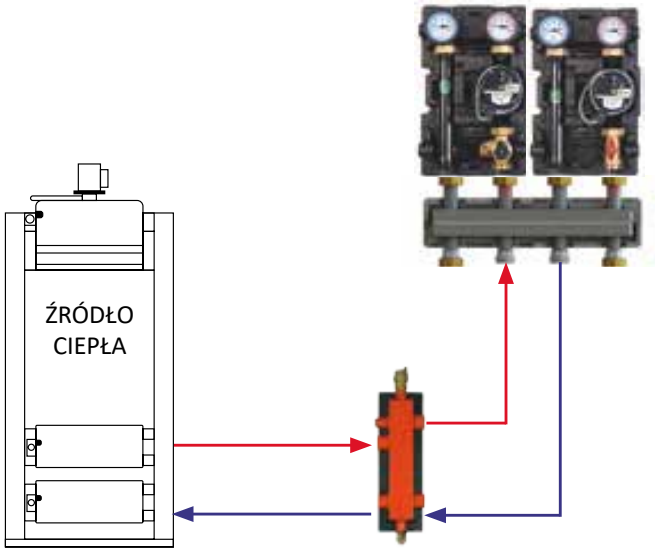
Schematic diagram

Note!

The diagram cannot replace the technical design prepared by an authorised designer. Read the instructions and warranty conditions before installation.

Note!

- The coupling can be installed together with the DN25 standard distributor (up to 70 kW).
- The coupling cannot be installed with a decoupling distributor or with an integrated coupling and guard.
- The coupling does not contain any mounting elements.



OHI

The pumps have 3-speed motors for adjusting operating parameters depending on the user's requirements. The pumps are available with bodies made of bronze or cast iron. Due to the design and high quality materials used, the pumps are very quiet during operation.
All OHI pumps have PZH (National Institute of Hygiene) approval.

PARAMETERS

Name	Bieg	Lift (m)	Capacity (l/min)	Motor power (W)	Pump inlet/outlet diameter/Union joint diameter (inch)	Inlet/outlet spacing (mm)
OHI 15-60/130	1	3	22	46	1 x ¾	130
	2	5	38	63		
	3	6	55	93		
OHI 25-40/130	1	3	18	38	1½ x 1	130
	2	4	36	53		
	3	4,5	48	71		
OHI 25-40/180	1	3	18	38	1½ x 1	180
	2	4	36	53		
	3	4,5	48	71		
OHI 25-60/130 OHI 25-60/180	1	3	22	46	1½ x 1	130 180
	2	5	38	63		
	3	6	55	93		
OHI 25-80/180	1	6,5	43	150	1½ x 1	130
	2	7,5	103	220		
	3	8	160	270		
OHI 32-60/180	1	3	22	46	2 x 1¼	180
	2	5	38	63		
	3	6	55	93		
OHI 32-80/180	1	6,5	43	150	2 x 1¼	180
	2	7,5	103	220		
	3	8	160	270		

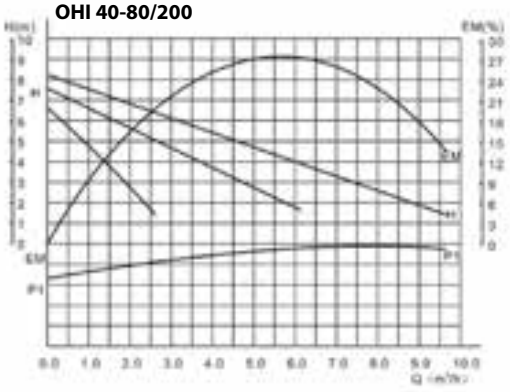
OHI MAX

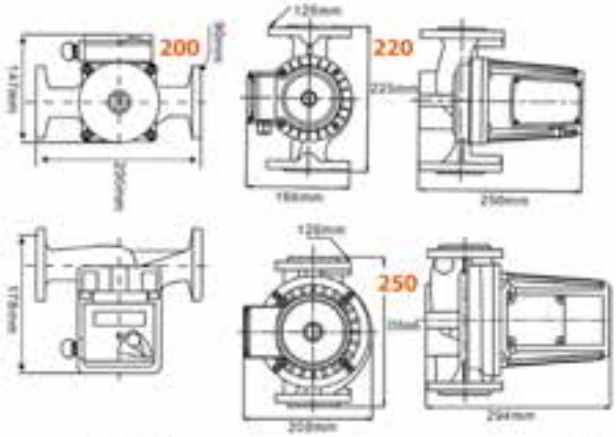
OHI 50-170/250

OHI 40-80/200

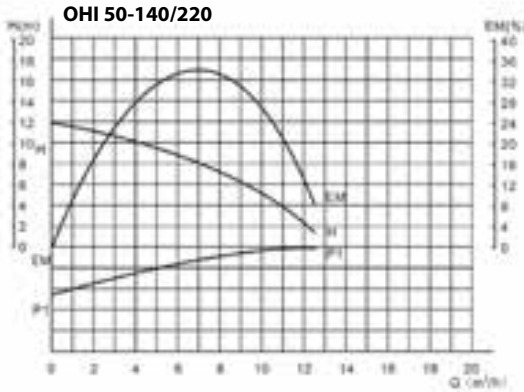
The pumps are made of high quality materials. The pumps are complete with connecting flanges. 550W and 750W seal-less pumps for larger systems. **All OHI pumps have PZH (National Institute of Hygiene) approval.**

OHI 40-80/200

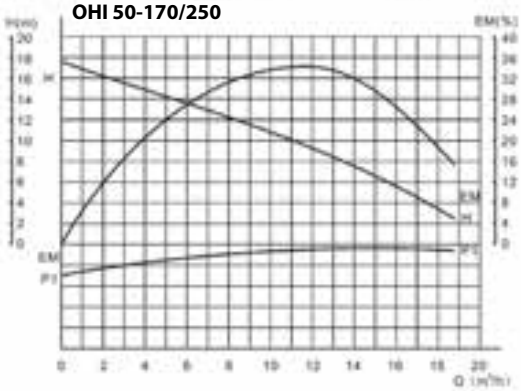




OHI 50-140/220



OHI 50-170/250



PARAMETERS

MODEL	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Flange diameter (inch)	Flange spacing (mm)	Weight (kg)
OHI 40-80/200	1/2/3	6,5/7,5/8	43/103/160	150/220/270	1½	200	6
OHI 50-140/220	1	12	210	550	2	220	16
OHI 50-170/250	1	16	320	750	2	250	17

S-150 CONTROLER

The S-150 CONTROLLER is designed to control the central heating water pump. The controller is tasked with switching on the pump if the temperature exceeds the set value, and switching it off if it drops below the set value. This prevents unnecessary operation of the pump, which allows you to save electricity (savings depending on the degree of use of the furnace can reach up to 60%) and extends the life of the pump. As a result, its reliability increases and operating costs decrease. The switch-on and switch-off temperature can be set in the range of 0–99°C. Hysteresis has been replaced with the possibility of any switch-off temperature setting.

Example: Set temperature of 34°C (lower display), switch-off temperature of 31°C
If the sensor temperature reaches 34°C, the pump turns on at 34°C and continues to work until the sensor temperature drops to 31°C, the controller turns the pump off.

The controller is equipped with 2 LED displays. The current temperature measured by the sensor is displayed as standard on the upper one, while the lower one shows the switch-off temperature. The MENU button toggles the controller into preview mode and switch-on/switch-off temperature settings, as well the anti-stop function setting.

THERMOSTAT FUNCTION
The controller has also a built-in thermostat function. It is possible to set the temperature at which the controller turns off the controlled devices, and then, after lowering it to the required value, it starts the device.

ANTI-FREEZE FUNCTION
The controller is equipped with the ANTI-FREEZE function, which starts the pump when the ambient temperature drops below 5°C to prevent the controller from freezing.

SPECIFICATIONS	
Temperature adjustment range (set temp)	0 - 99°C
Supply voltage	230V/50Hz±10%
Power consumption	< 5W
Max. operating temperature	- 10°C to + 40°C
Temperature sensor	RESISTANT
Sensor cable length	ca. 1 m
Mains cable length	ca. 1 m
Pump power cord length	ca. 1 m
Output	230V/50Hz
Max output load current	pump 1 A (load resistance)

Magnetic filter

The magnetic filter is designed to trap impurities found in central heating systems. Modern systems equipped with highly efficient boiler feed installations are exposed to breakdowns and reduction of performance and efficiency due to contamination with iron oxides, the main component of rust, which are generated by corrosion and deposited in the form of sludge.
Iron oxide particles circulate throughout the heating circuit, depositing in the critical points of the installation and exposing the entire system to the failure of pumps, valves or heat exchangers etc., and the heating efficiency of the boiler is reduced, which translates into increased heating costs.

The use of magnetic filters / dirt separators improves the protection of the entire heating system, by removing most of the solid particles, which include iron or iron oxides suspended in the heating system fluid. The filters can be used in systems with continuous circulation of the heating medium. The heating medium may consist of water-glycol solution, with the glycol content not exceeding 50%..The filters can also be used in solar systems and cooling systems, trapping impurities such as sand.

CHARACTERISTICS:

- For use in central heating and solar systems
- Double filtration method
- Easy removal of impurities
- High magnetic force
- Top quality materials
- 24 months warranty
- Warranty and post-warranty service

TECHNICAL DATA:

- Material: PA66 + glass fibre /copper, stainless steel
- Maximum operating pressure 6 bar/ 0,6Mpa
- Maximum liquid temperature 90°C
- Filtration efficiency ≥500µm
- Maximum flow 30 l/min
- Magnetic force 9000 Gauss
- Connection ¾" or 1"

I–002

I–003

PARAMETERS

MODEL	I-002	I-003
Dimensions	114 x 190mm	149 x 213 mm
Max. working pressure	6 Bar / 0,6 Mpa	6 Bar / 0,6 Mpa
Max. liquid temperature	90ºC	90ºC
Filtering	≥500µm	≥500µm
Maximum flow	30 l/min	30 l/min
The strength of the magnet	9000 Gauss	9000 Gauss
Connections	3/4"	3/4" lub 1"
Material	PA66 + fiberglass / copper stainless steel	PA66 + fiberglass / copper
Weight	750g	1480g

W15 IH-10

Surface pump designed for increasing pressure in hydraulic systems. The pump can be used as a circulator for some industrial equipment, such as machines, laser devices, injection moulding machines, food processing machinery, and can also supply water to small boilers. The pump is designed to operate with cold and hot water. The set includes an automatic switch for pump operation control. The pump inlet/outlet and impeller are made of brass. An important advantage of the pump is its low-noise operation and compact size, therefore it can be installed in residential premises.

APPLICATION:

- Increasing pressure in systems with water heaters.
- Increasing pressure in water supply systems.
- By using the pump, regardless of the pressure and its changes in the water supply system, it is possible to increase the pressure and keep it constant.
- Increasing pressure in multi-storey water systems.
- Aeration and water circulation in fish keeping.

PARAMETERS

MODEL	Max performance (l/min)	Max. head (m)	Power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Max. temperature (C°)
W15IH-10	20	10	90	230	0,45	¾ - ½	110
W15IH-10 economy	20	10	90	230	0,45	¾ - ½	110

CIRCULATION PUMPS

Circulation pumps with brass body

BETA 25-60/130

BETA 25-60/130 BR

Circulation pumps with brass body

Energy-saving electronic circulation pumps with A energy-efficiency rating with brass body.

The pumps are equipped with an electronic processor for automatic pump control, which together with a frequency converter allows for significant energy savings. Energy Efficiency Index for BETA pumps is EEI<=0.23. The pumps are equipped with an electronic display showing current energy consumption.

OHI 15-60/130 BR

OHI 25-60/130 BR

Circulation pumps for hot water systems

Seal-less 3-speed circulation pumps designed for forcing domestic hot water circulation in larger systems.
The pump is usually installed upstream the boiler or hot water tank.

OHI 15-60/130

The pumps have PZH (National Institute of Hygiene) approval.

PARAMETERS

Name	*Bieg / Tryb (x1)*	*Lift (m)*	*Capacity (l/min)*	*Motor power (W)*	*Voltage (V)*	*Inlet/outlet diameter (inch)*	*Inlet/outlet spacing (mm)*
BETA 25-60/130 BR	11	6	55	45	230	1½ x 1	130
OHI 15-60/130 BR	1/2/3	3/5/6	22/38/55	46/63/93	230	1 x ¾	130
OHI 25-60/130 BR	1/2/3	3/5/6	22/38/55	46/63/93	230	1½ x 1	130

CPI 15-15

Circulation pumps for hot water systems

Seal-less circulation pumps designed for forcing hot water circulation. In systems without hot water pumps, after opening the tap, before the hot water starts flowing, cool water remaining in the pipeline will flow first. If a hot water pump is installed, hot water will flow almost immediately after opening the tap. The pump is usually installed upstream the boiler or hot water tank. With years of experience, we have been able to improve previous designs and create the top quality pump.

Using the latest technology, the efficiency and, consequently, the energy consumption have been improved compared to older designs.

Brass body and ceramic shaft guarantee the pump is almost faultless.

The pumps have PZH (National Institute of Hygiene) approval.

ADVANTAGES:

- Robust design
- Low-noise operation
- Hassle-free control
- Easy installation
- Complete with cable and plug.

TECHNICAL DATA	
TYP:	CPI 15-15
Motor power	28 W
Voltage	230V~ / 50Hz
Motor rpm	2600 obr/min
Amperage	0,3 A
Ingress Protection	IP42
Maximum operating pressure	10 bar (1 000 000 Pa)
Flow (l/min)	7,5
Head (m)	1,7
Liquid temperature	2 - 95°C
Min. suction pressure	0,4 bar(40 000Pa) dla 95°C 0,2bar(20 000 Pa) dla 65°C
Face-to-face length	85 mm
Inlet/outlet (for union joints)	½"

PARAMETERS

Name	*Speed level (x1)*	*Lift (m)*	*Capacity (l/min)*	*Motor power (W)*	*Voltage (V)*	*Inlet/outlet diameter (inch)*	*Inlet/outlet spacing (mm)*
CPI 15-15	1	1,7	7,5	28	230	½	85

E-IBO 15-14

Compared to traditional circulation pumps, the energy consumption of the E-IBO pumps can be as low as 3W depending on the system.

Energy-saving electronic hot water circulation pumps with A energy-efficiency rating.

The E-IBO 15-14 pumps are designed for continuous operation forcing the hot water circulation, and in small heating systems. The pumps can be used in ventilation and air-conditioning systems. By using circulation pumps, water consumption is significantly reduced.

Compared to traditional circulation pumps, using the permanent magnet motor allows to reduce the energy consumption of the E-IBO pumps to as low as 3W depending on the system. The pumps are equipped with a spherical impeller operating in various planes.

FEATURES:
- Pump parameters can be automatically or manually adjusted to the system requirements.
- A spherical Noryl impeller moves in various planes.
- Wear-resistant ceramic shaft .
- Stainless steel pump body.
- Power cable with a plug.

ADVANTAGES:
- Easy installation and start up
- Low power consumption
- High energy efficiency has been achieved by using the permanent magnet motor.
- Maximum usability
- Robust design
- Low-noise level of the pump and the entire system.

TECHNICAL DATA	
SUPPLY VOLTAGE	1×230V +6% / -10%, 50Hz PE
POWER CONSUMPTION	3 - 9 W
MOTOR PROTECTION	No additional motor protection is required
INGRESS PROTECTION	IP 44
INSULATION CLASS	H
MAXIMUM AMBIENT RELATIVE HUMIDITY	≤ 95%
MAXIMUM CENTRAL HEATING SYSTEM PRESSURE	1 MPa
MAXIMUM SUCTION-SIDE INFLOW PRESSURE	2 m H_2O
OPERATING PUMP SOUND PRESSURE	43 dB (A)
PERMISSIBLE AMBIENT TEMPERATURE	0 ~ + 40°C
MAXIMUM HEATING MEDIUM TEMP.	TF95
PUMPED LIQUID TEMPERATURE RANGE	2 ~ + 95°C
INLET/OUTLET	½"
INLET/OUTLET SPACING	85 mm

PARAMETERS

Name	*Speed level (x1)*	*Lift (m)*	*Capacity (l/min)*	*Motor power (W)*	*Voltage (V)*	*Inlet/outlet diameter (inch)*	*Inlet/outlet spacing (mm)*
E-IBO 15-14	AUTO	1,2	12	9	230	½	85

IPML

INDUSTRIAL CIRCULATION PUMPS FOR CIRCULATING COLD AND HOT WATER.

Pumps designed for constant or variable flow water supply systems with the medium temperature not exceeding 100°C (80°C) and the pressure not exceeding 0.6 MPa. Pumps are most often used in heating and cooling systems. The smallest of the series, the IPML 25/125 pump can also be used to fill solar systems. The IPML 50/1100 and 50/2200 water circulation pumps are intended for water containing non-abrasive and non-absorbent solid impurities of 0.27 kg/m3.

OPERATING CONDITIONS:

- Maximum liquid temperature 80 /100°C
- Maximum ambient temperature 40°C
- Class B/F Insulation
- Operating mode - continuous
- Protection - IP44
- Protection for 230V motors
- Rotational speed of the electric motor: 2850RMP

MATERIALS:

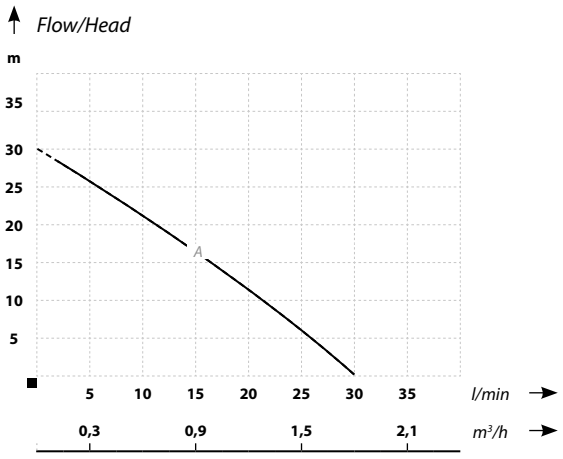
- Pump body: cast iron
- Bearing retainer: cast iron
- Motor housing: aluminium
- Shaft and rotor: stainless steel AISI 304
- Impeller: brass (to IPML 50/1100)
- Impeller: cast iron (from IPML 50/1500))
- Mechanical seal: ceramics/graphite/NBR

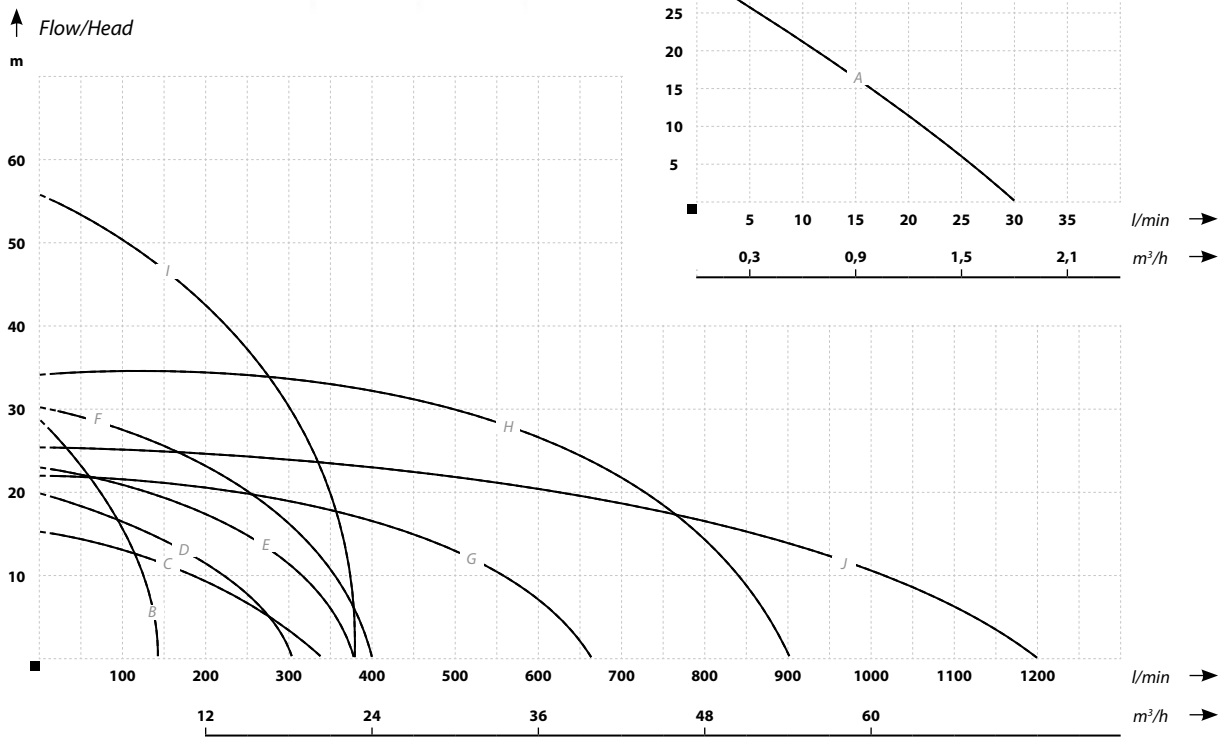
PARAMETERS

Name	*Motor power (W)*	*Lift (m)*	*Capacity (l/min)*	*Voltage (V)*	*Inlet/outlet (inch)*	*Inlet/outlet spacing (mm)*	*Curve no.*	*Max temp madium (°C)*
IPML 25/125	125	30	30	230	½	-	A	100
IPML 25/750	750	28	140	230	1	280	B	100
IPML 50/750	750	14	340	230	2	280	C	100
IPML 50/1100	1100	20	300	230	2	280	D	100
IPML 50/1500	1500	22	380	400	2	312	E	80
IPML 50/2200	2200	30	400	400	2	312	F	80
IPML 50/5500	5500	55	380	400	2	343	I	80
IPML 65/3000	3000	22	660	400	2½	343	G	80
IPML 65/4000	4000	34	900	400	2½	343	H	80
IPML 80/5500	5500	25	1200	400	3	343	J	80

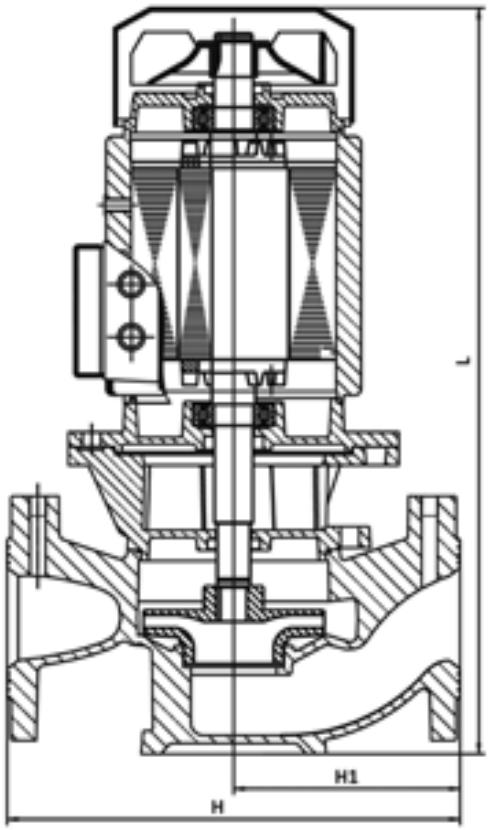
IPML

INDUSTRIAL CIRCULATION PUMPS
FOR CIRCULATING COLD AND HOT WATER.





Name	Curve no.	H	H1	L	Weight (kg)
IPML 25/125	A	255	160	219	7,8
IPML 25/750	B	282	141	372	16,1
IPML 50/750	C	280	140	372	20,1
IPML 50/1100	D	280	140	372	29,4
IPML 50/1500	E	312	156	397	34,6
IPML 50/2200	F	312	156	397	36,8
IPML 50/5500	G	360	180	610	58
IPML 63/3000	H	343	171,5	565	66
IPML 65/4000	I	356	178	615	70,5
IPML 80/5500	J	400	200	640	76



SPECIAL PUMPS

PR – 50
PR – AUTO
AOP – PUMPS / OIL SETS
BZP / H-BZP
PRO / PRN
PRT TRACTOR PUMPS - MADE IN ITALY
PRT TRACTOR PUMPS
PISTON PUMPS
CLASSIC / DECORATIVE ABYSSINIAN PUMP
SEMI ROTARY PUMP
SBAW

PR – 50

HAND HYDRAULIC PRESSURE TEST PUMP

The PR-50 hand pump is a piston pump designed for pressure testing of system tightness and for filling solar system. The main advantage of the pump is that it can be used without access to electric power.

Due to its open design, the pump can also be used as a 12 L vessel. The proven and durable design make the pump very popular among installers.

OPERATING INSTRUCTIONS:
Connect the end of the pressure hose to the tested system, then filled the pump tank with clean, preferably filtered water. Next, fill the system with water. The test pump is only used to fill the final amount of liquid required to achieve the desired pressure. Open V1 valve and close V2 valve.

After connecting the pump, filling the pump and the tested system with water, opening the V1 valve and closing the V2 valve, pump the water with a lever while checking the pressure gauge reading. Once the required pressure has been achieved, close the V1 valve. If, by mistake, the test pressure is slightly exceeded after closing the V1 valve, slightly open the V2 valve. The pressure will then start to drop.

APPLICATION:
- Tightness testing of pipe systems (water supply systems, central heating, compressed air, and oil systems).
- Tightness testing in the production of boilers and pressure vessels.
- Filling solar systems.
- Injecting antifreeze agents into existing central heating systems.

ADVANTAGES:
- 1.3m steel braided discharge hose - reduction of flow losses and limiting measurement errors.
- Durable piston lever - resistant to torsion, can be used as a pump carrying handle.
- The double cut-off valve system in the
- monobloc body guarantees a constant pressure and eliminates the leaks at union joints.

PARAMETERS

Name	Working volume/piston travel (ml/stroke)	Tank capacity litre (l)	Max. pressure MPa/bar/kg) (cm2)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
PR – 50	45	12	5/50/50	1	49/16,5/16,5	7,8

PR – AUTO

ELECTRIC HYDRAULIC PRESSURE TEST PUMP

IMAGE: PR AUTO

Electric pump designed for pressure testing of system tightness and for filling solar system. The pump's electric motor makes its use exceptionally easy and comfortable. The pump comes with a liquid container, suction hose, high pressure hose, overflow hose and suction filter. Unlike the PR AUTO hand pump, it can also be used to fill the systems with water.

OPERATING INSTRUCTIONS:
Connect the suction to the filter and then connect it the pump along with the overflow and high pressure hose.

Loosen the pressure adjustment screw to prevent the sudden pressure increase after starting the pump.

When the suction hose with the connected filter and the overflow hose are placed in a container with water, close the valve to which the high pressure hose (black) is connected.

After setting the desired pressure with the pressure adjusting screw, you can start filling the system.

APPLICATION:
- Tightness testing of pipe systems (water supply systems, central heating, compressed air, and oil systems).
- Tightness testing in the production of boilers and pressure vessels.
- Filling solar systems.
- Injecting antifreeze agents into existing central heating systems.

ADVANTAGES:
- Can be used to fill the system
- Automatic operation - pump equipped with an electric motor
- The pump packaging can also be used as a water tank
- All hoses and filter included
- Easy-to-use

PARAMETERS

Name	Voltage (V)	Flow (l/h)	Max. pressure MPa/bar/kg (c^m2)	Motor power (W)	Dimensions L/H/W (cm)	Weight (kg)
PR – AUTO	230	174	6/60/60	250	39/29/29	14

AOP - PUMPS / OIL SETS

IMAGE: AOP60

IMAGE: AOP55

IMAGE: AOP60 E Set

IMAGE: AOP60 Set

AOPs are displacement vane pumps designed for pumping diesel fuel, heating oil and bio-diesel fuel. The pumps are equipped with thermal protection mounted in the motor winding.

AOP 60 and AOP 55 pumps are powered by 230 V/50 Hz single-phase AC. AOP40 - 12 V and AOP70 - 12/24 V pumps are power by 12 V or 24 V DC batteries. The pumps are equipped with a by-pass excess flow valve.

APPLICATION:
The pumps are used in industrial, agriculture and domestic applications.
AOP 60 pumps are also available in professional pump sets with complete fittings.

The set includes:

- AOP pump
- Frame for transporting and stable installation of the set.
- Oil filter to prevent solid particles such as sand, filings etc. from getting into a pump.
- Gun (filler nozzle) with automatic flow cut-off and swivel connector. The gun returns when a tank is fully filled.
- Mechanical flow meter (AOP 60, AOP 80 set, accuracy ± 1%) with a three-digit erasable dial and non-erasable total meter.
- Electronic flow meter (AOP 60E set, accuracy ± 0.5%) with a seven-digit erasable display and non-erasable total meter.
- 4 m delivery-side oil-resistant rubber hose.
- 2 m suction-side oil-resistant rubber hose with non-return valve and a suction strainer.

APPLICATION:
Transport companies, agriculture farms, industrial plants. Its handy housing ensures comfortable handling between the barrels, tanks or stationary installation.

PARAMETERS

Name	Lift (m)	Capacity (l/min)	Motor power (W)	Voltage (V)	Inlet/outlet (inch)
AOP 40 - 12 V	10	40	160	12	¾"
AOP 70 - 12 V	20	55	550	12/24	¾"
AOP 55 / AOP 55 Set	15	55	155	230	¾"
AOP 60 / AOP 60 Set	30	60	370	230	1"
AOP 60 E Set	30	60	370	230	1"

BZP / H-BZP

INTERNAL COMBUSTION PUMPS

IMAGE: BZP-10

IMAGE: BZP-20

Pumps mounted on a metal support frame. Used for draining and irrigation. The pumps are designed for pumping clean and dirty water with solids of a maximum size permissible in accordance with technical parameters. The pumps are an excellent solution for civil engineering, fire services and agriculture farms. The pumps with internal combustion engines are fully independent of the electricity network, therefore they are very popular among the customers. The set includes a metal frame holding the entire internal combustion system, i.e. a petrol engine, fuel tank and pump with inlets and outlets.

General purpose SAE 10W-30 oil should be used with the BZP pump motor;

Two types of hoses are required for the pump:

- The suction hose must be leak-proof along its entire length and should have a rigid braid to prevent it from sucking in / jamming during operation. The hose diameter must match the pump inlet diameter, the hose diameter must not be smaller. Mount a suction strainer with a non-return valve at the end of the suction hose.
- The discharge hose diameter should match the outlet diameter. Woven (fire) hoses can be used as discharge hoses.

PARAMETERS

Name	Engine type (strokes)	Engine rotational speed (rpm)	Fuel/oil tank capacity (L)	Fuel type	Power (HP)	Weight (kg)
BZP-10	2	6500	1,2	**PB95**	2	9
BZP-20	4	3600	3,6 / 0,6	**PB95**	6,5	23
BZP-30	4	3600	3,6 / 0,6	**PB95**	6,5	26
H-BZP-20	4	3600	3,6 / 0,6	**PB95**	6,5	28
H-BZP-30	4	3600	6,5 / 0,6	**PB95**	13	53

Name	Max. flow [l/min]	Max. head [m]	Max. suction depth [m]	Maximum liquid temperature (°C)	Maximum pressure	Inlet/outlet	Dimensions
BZP-10	200	33	7	35	3	1 x 1	340x250x340
BZP-20	600	30	7	35	3	2 x 2	510x390x465
BZP-30	1000	30	7	35	3	3 x 3	510x390x465
H-BZP-20	600	70	7	35	7	2 x 2	510x390x465
H-BZP-30	700	95	7	35	9,5	3 x 3	530x410x470

PRO / PRN

TRACTOR PUMPS

IMAGE: PRO

IMAGE: PRN

Depending on the tractor type, it is possible to install a frame extension.

Tractor pumps mounted on painted steel frames equipped with a three-point suspension system on the tractor.
Depending on the tractor type, it is possible to install a frame extension.
The pumps are driven by a power take-off shaft (PTO). Required tractor PTO shaft revolutions are 540 rpm. Via the PTO shaft (shaft included), the revolutions from the PTO are transferred to a 6.6 gear ratio gearbox that drives the pump. The minimum tractor power required to drive the pump is 15 HP, the maximum 125 HP.

PRO
Single-stage, self-priming PRO tractor pumps are designed for drainage and irrigation. They can pump dirty water (including slurry). The maximum suction capacity of the pump after priming is 7 m. The pumps are ideal for fighting floods.

PRN
Single-stage centrifugal non-self-priming PRN tractor pumps (before starting, the pump and the suction hose must be primed) can be used for pumping water from ponds, lakes, rivers, impounding reservoir and wells, where the water level during pumping does not fall below 6 m from pump inlet. The pumped water must be clean, without solid impurities. The pump is designed to supply water to all types of irrigation systems that require higher pressure. It can be used in vegetable farming, horticulture, tree nurseries and other agricultural production.

The PTO shaft is supplied with the pump.

SPECIFICATION	
TRACTOR POWER DEMAND [HP]	15-125
REQUIRED PTO REVOLUTION [RPM]	540
PTO SHAFT	Diameter: 1-3/8" 6-Spline
REDUCER'S REDUCTION STAGES	Single-stage reduction
REDUCTION RATIO	1 to 6.67
RECOMMENDED GEARBOX OIL	SAE 90 gearbox oil
PTO GREASE	Lithium grease

PARAMETERS

Name	*Lift (m)*	*Capacity (l/min)*	*Outlet (inch)*	*Outlet (inch)*	*Suction capacity (m)*	*PTO revolutions / pump revolutions (1/min)*	*Net weight (kg)*
PRO	30	1000	3	3	7	540/3600	50
PRN	70	750	3	3	6	540/3600	65

PRT TRACTOR PUMPS — MADE IN ITALY

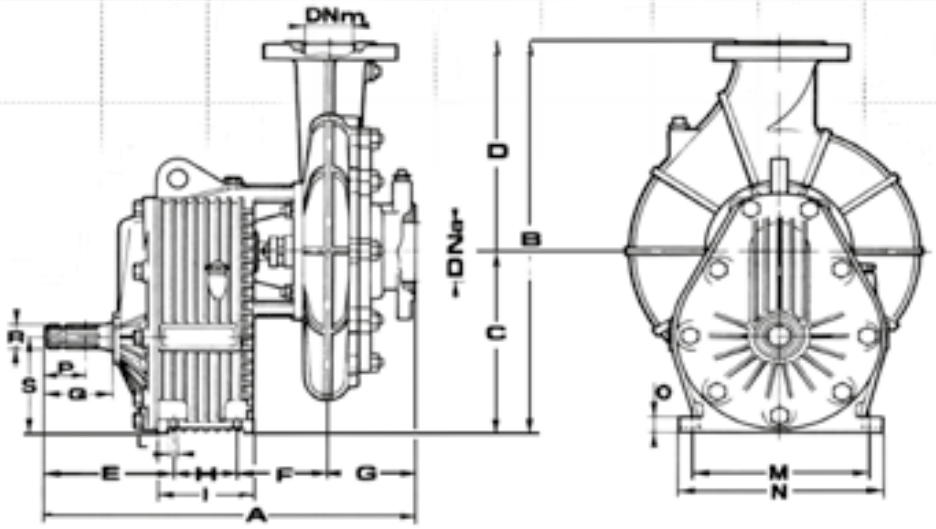
Single-stage, centrifugal tractor pumps driven by a power take-off (PTO) shaft, designed to be combined with tractors with 10 HP to 200 HP of power.

The pumps are mounted on a painted, steel frame equipped with a three-point linkage on the tractor. The required PTO revolutions of the tractor are 459 rpm. Through the PTO shaft, the revolutions from the PTO are transmitted to the gearbox which drives the pump.

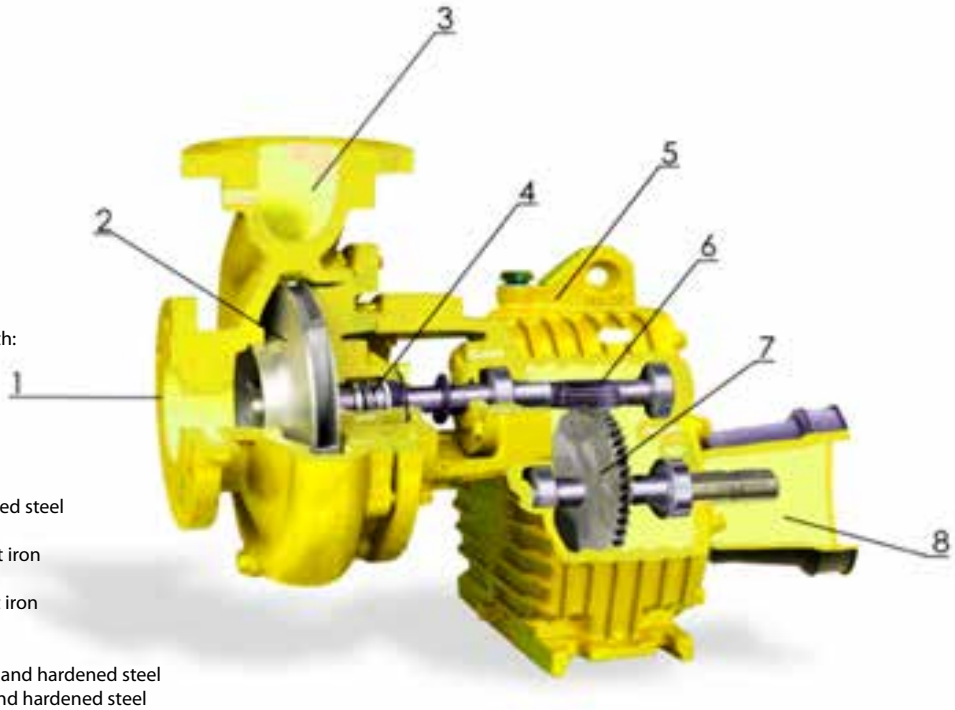
Pumps from the PRT series are non-self-priming pumps (prior to start-up, the pump must be primed with a suction hose), however, they are equipped with an additional suction system. They can be used in agriculture to supply any irrigation systems which require more pressure, they can be used in vegetable crops, horticulture, nursery, and other agricultural production. In addition, the range of use of the pump includes: pumping water from ponds, lakes, rivers, storage reservoirs and from wells where the water level during pumping does not drop below 6 m from the pump inlet. Pumped water must be clean, free from solid contamination.

Model	Rotor		Inlet		PTO shaft speed RPM	Gear ratio	Pump speed RPM	Performance chart		Tractor power HP
	ø mm	opening	DNa	DNm				Capacity l/min	Lift height (m)	
65/50-35	200		65 mm	50 mm	542	1:7,41	4000	400 500 600 700 800 900	88 85,7 83,6 81,5 77,9 73,7	35
80/65-35	170		80 mm	65 mm	638	1:6,28	4000	800 900 1000 1200 1300 1500	66,7 66,0 65,0 62,3 60,5 56,7	35
80/65-60	250		80 mm	65 mm	459	1:7,41	3400	900 1000 1100 1200 1300 1400	95 93 90 88 85 82	60
100/85-65	200		100 mm	80 mm	459	1:7,41	3400	1500 1600 1800 2000 2250 2500	73,8 72,5 71,0 69,5 66,0 62,5	65

PRT TRACTOR PUMPS

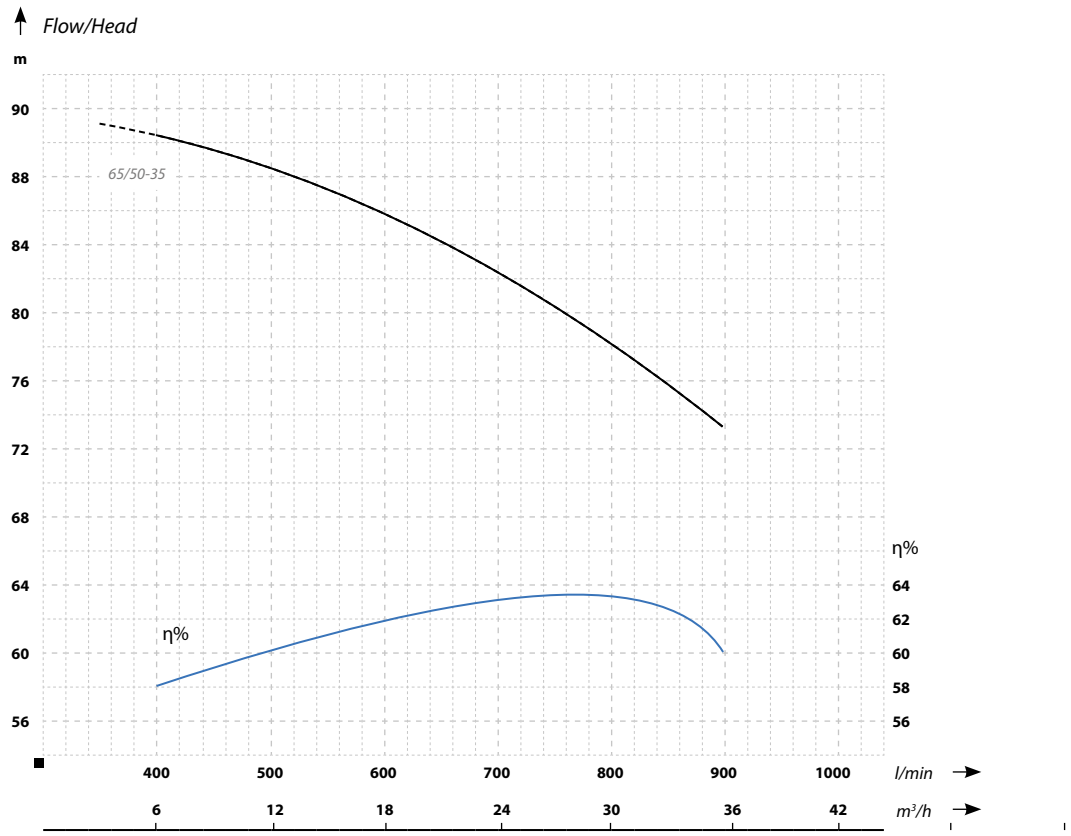


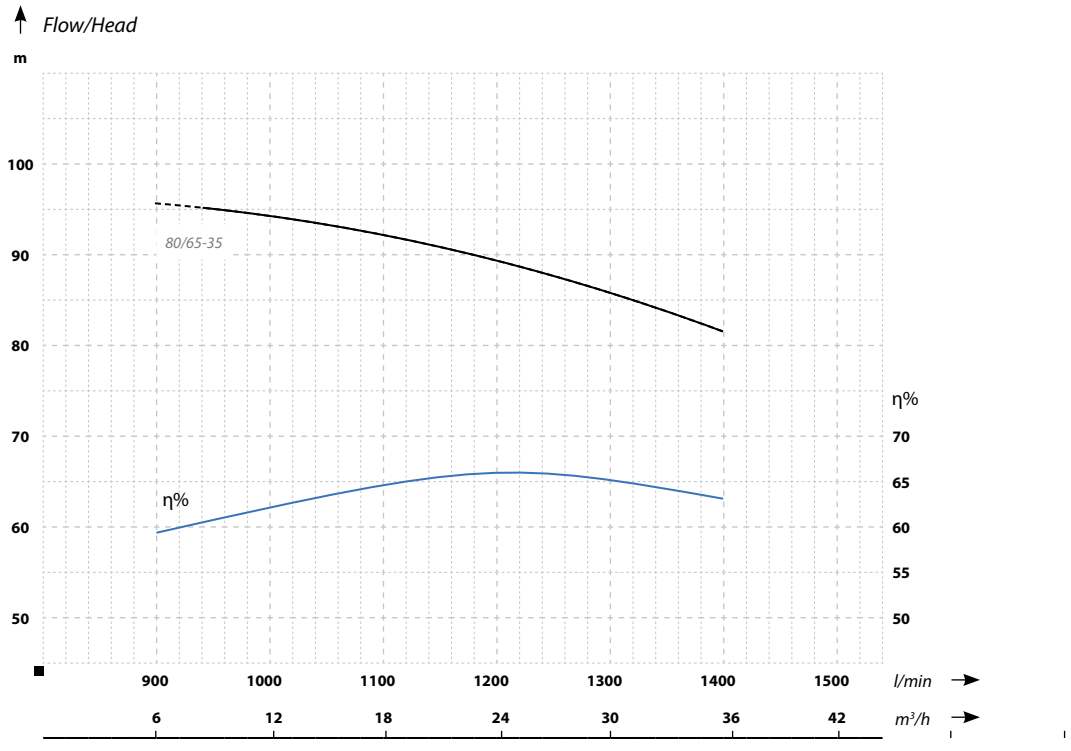
Model	Dimensions (mm)																			
	A	B	C	**D**	E	F	G	H	I	L	M	N	O	P	Q	R	S	Dna	DNm	WEIGHT KG
65/50	461	418	236	**182**	189	125	87	60	102	14	190	220	20	62	98	1 3/8"	125	65	50	50
80/65	482	494	247	**247**	172	142	98	70	112	14	220	250	20	62	84	1 3/8"	130	80	65	71
100/85	490	494	247	**243**	172	141	107	70	112	14	220	250	20	62	84	1 3/8"	130	100	80	68



The pump comes complete with:
- 3-point base
- Suction pump
- Suction hose (1")
- Ball valve
- Spool valve
- Band, bracket, connector
- Connectors made of galvanised steel

1. SUCTION COVER — Gray cast iron
2. ROTOR — Gray cast iron
3. PUMP HOUSING — Gray cast iron
4. MECHANICAL SEALING
5. GEARBOX — Gray cast iron
6. PINION SHAFT — Cemented and hardened steel
7. HANDLEBAR — Cemented and hardened steel
8. PROTECTION SLEEVE — Nylon


Flow/Head
m
90
88
84
80
76
72
68
64
60
56
65/50-35
η%
η%
64
62
60
58
56
400
500
600
700
800
900
1000
l/min
6
12
18
24
30
36
42
m³/h


Flow/Head
m
100
90
80
70
60
50
80/65-35
η%
η%
70
65
60
55
50
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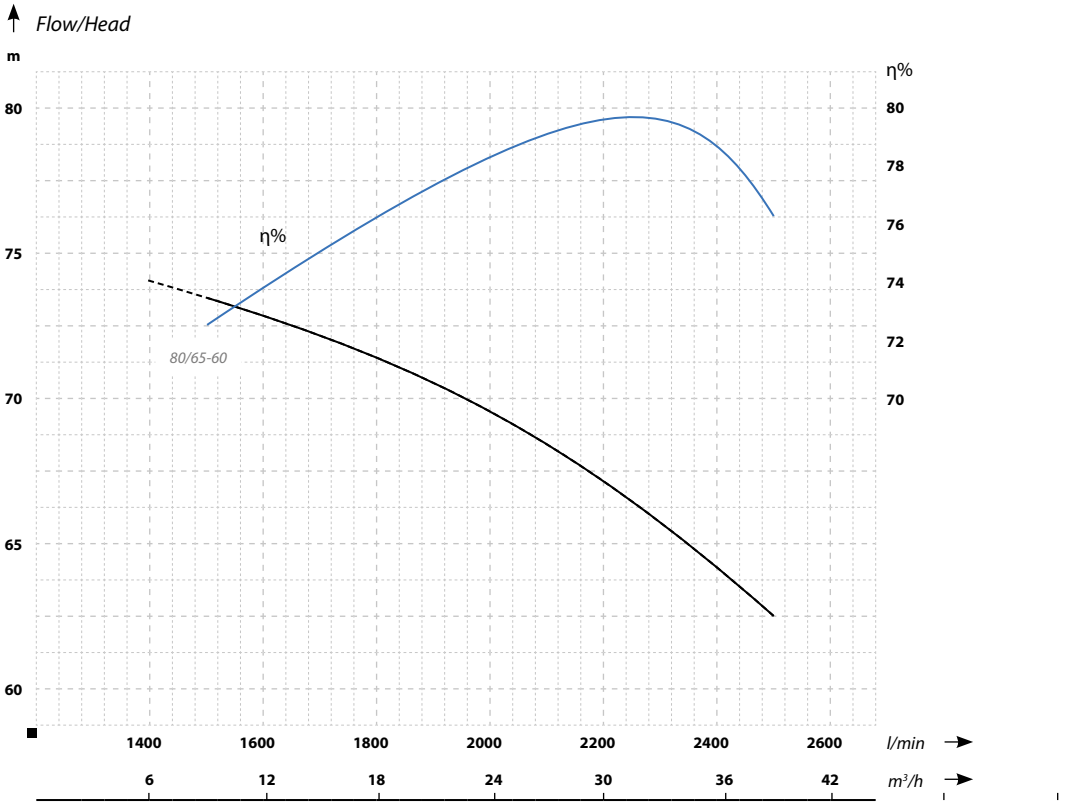
l/min
6
12
18
24
30
36
42
m³/h


Flow/Head
m
80
75
70
65
60
η%
80
78
76
74
72
70
η%
80/65-60
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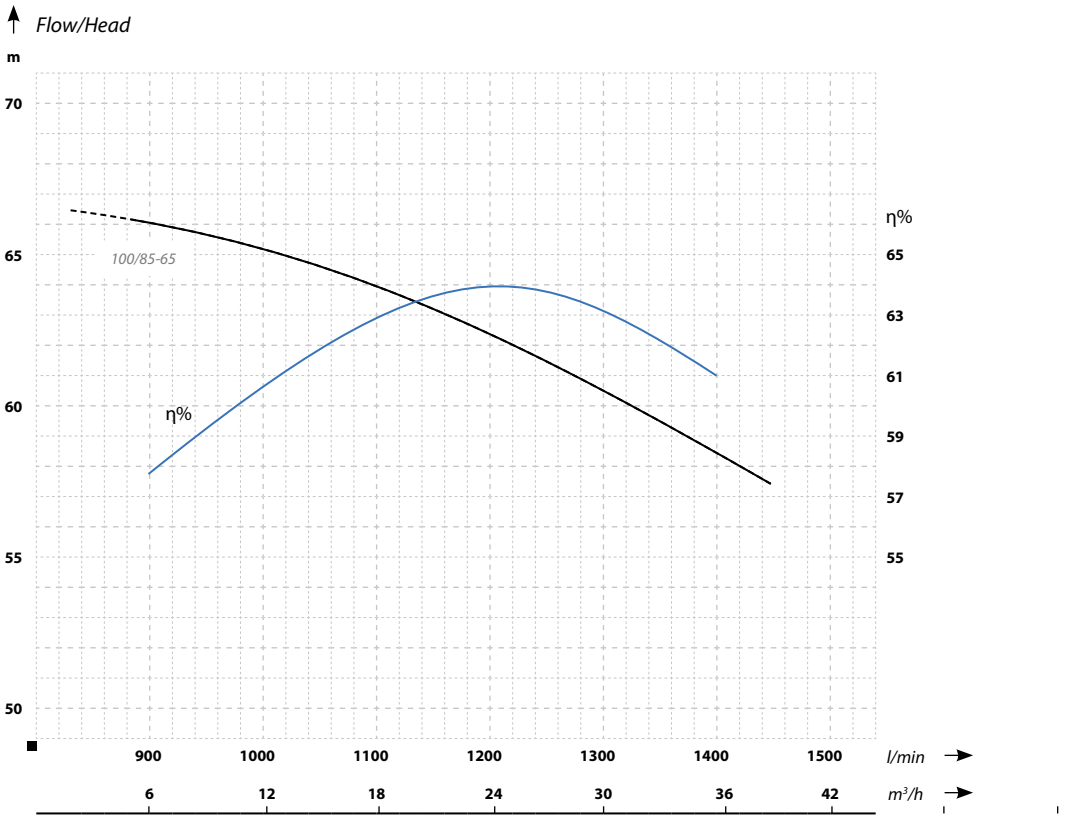
l/min
6
12
18
24
30
36
42
m³/h


Flow/Head
m
70
65
60
55
50
η%
65
63
61
59
57
55
100/85-65
η%
900
1000
1100
1200
1300
1400
1500
l/min
6
12
18
24
30
36
42
m³/h

PISTON PUMPS
CLASSIC / DECORATIVE ABYSSINIAN PUMP
SEMI ROTARY PUMP

IMAGE: Baseplate / Classic Abyssynian Pump

IMAGE: Baseplate / Decorative Abyssinian Pump

IMAGE: Semi Rotary Pump

Hand cast iron pumps intended for pumping clean cold water from underground intakes.

The pumps have a simple and durable design with resistance to wear and tear.

Pumping is done by means of a piston with cup leather packing mounted in the pump body. The piston is human-powered via a rod and external lever.

Abyssinian pumps are used mostly in places where electricity is not available. Pumps are available in two versions: classic - green and decorative with ornaments - black.

Both versions are available in sets with cast iron baseplates.

Application (the same for both pumps):
Supply of water from underground intakes to allotments, gardens, and in places where electricity is not available. Due to their attractive design, the pumps can be decorative features in the garden.

TECHNICAL DATA:
- Casting: cast iron
- Piston: cast iron with cup leather packing
- Body: vertical orientation with pressing
- Non-return valve: yes

ADVANTAGES:
- Robust design
- Easy water suction
- Simple design
- Faultless
- Easy installation and removal
- Attractive design
- Cost-free use

K-type cast iron semi-rotary hand pumps designed for pumping clean liquids, such as water, gasoline or diesel fuel. The pumps are mainly used on recreational plots, in gardens, holiday houses and in any other places without electricity or where there is a risk of its failure - the semi-rotary pump can act as an alternative water supply. K-type pumps can also be used as booster pumps for power operated non-self-priming pumps. Maximum suction head of semi-rotary pumps is 7 metres.
All pumps are equipped with a drain plug to drain water in case of potential freezing.
The pump body is mounted with flanges, so it can be easily removed if necessary.

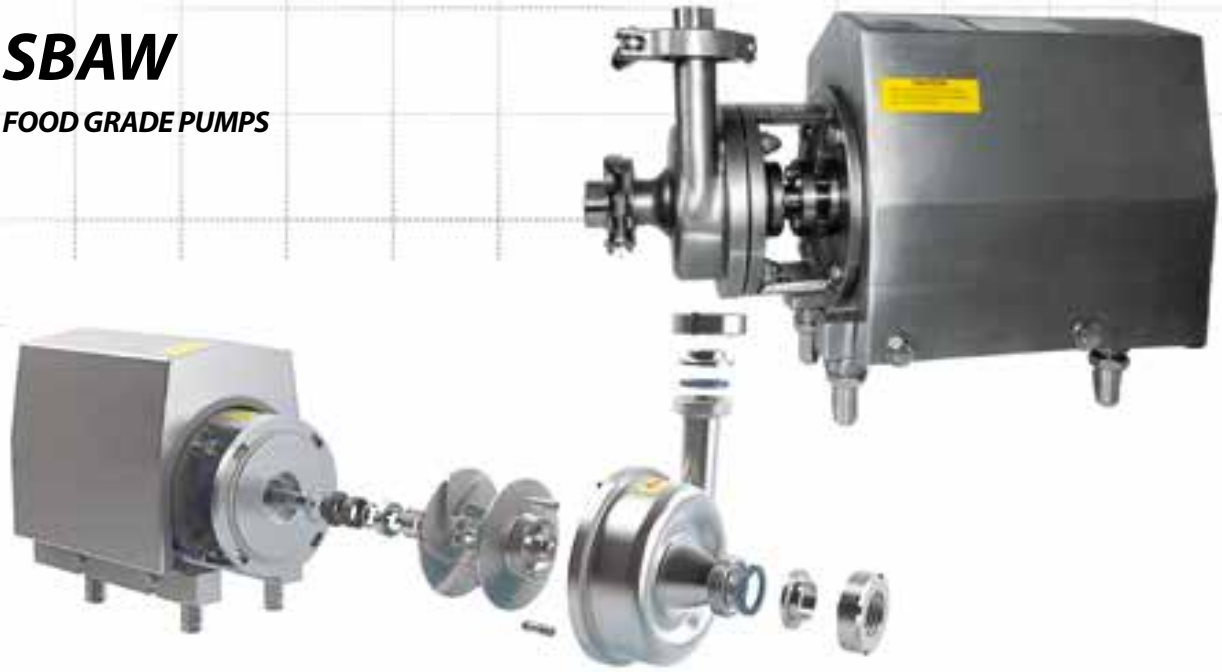
TECHNICAL DATA					
MODEL	K0	K1	K2	K3	K4
SIZE	1/2"	3/4"	1"	1-1/4"	1-1/4"
WEIGHT (KG)	5	6	8	11	13
FLOW (l/min)	11.5	17.25	22.5	29	43
HEAD (m)	25	25	25	22	22

PARAMETERS

Name	*Suction capacity (m)*	*Flow (l/min)*	*Piston diameter (mm)*	*Suction pipe diameter (inch)*	*Pump height (cm)*	*Base plate height (cm)*	*Weight (kg)*
ABYSSINIAN PUMP	7	28	75	1¼	68	67	15
DECORATIVE ABYSSINIAN PUMP	7	28	75	1¼	68	67	15

SBAW

FOOD GRADE PUMPS



Pumps designed for transporting concentrated or non-concentrated food liquids with up to 50% dry matter content or other food products with a temperature up to 75°C. Centrifugal pumps with open impeller, enclosed motor, and distanced hydraulic body. Inlet/outlet are complete with connections for easy installation. The device has four adjustable legs. SIC/WC (EPDM) mechanical seal. VMQ body seal/

APPLICATION:

- dairy production sector (fresh and pasteurized milk, whey, ice mixtures),
- fruit processing (nectar juices, clarified juices, fruit and vegetable drinks, wines and fruit liquors),
- alcohol production (mashes, spirits),
- transport of cleaning liquids in CIP systems.

Certificate of Health Quality has been issued for the device by
THE NATIONAL INSTITUTE OF PUBLIC HEALTH – NATIONAL INSTITUTE OF HYGIENE - FOOD SAFETY DEPARTMENT (PZH).

PARAMETERS

Name	Head (m)	Flow (l/min)	Motor power (W)	Inlet/outlet (mm)
SBAW 1 - 10	10	120	370	32/25
SBAW 15 - 24	24	250	2200	50/38

Models available on request subject to arrangements with the sales department

Name	Motor power (W)	Max Head (m)	Max. flow (m^3/h)	Inlet/outlet (mm)
SBAW 3 - 16	750	18	3	38/32
SBAW 5 -24	1500	24	5	38/38
SBAW 5 - 32	2200	32	5	38/38
SBAW 10 - 36	3000	36	10	50/40
SBAW 15 - 24	2200	24	15	50/50
SBAW 20 - 24	3000	24	20	50/50
SBAW 20 - 25	4000	25	20	50/50
SBAW 30 - 25	5500	25	30	50/50
SBAW 20 - 36	5500	36	20	50/50
SBAW 40 - 24	5500	24	40	65/50
SBAW 40 - 24	5500	24	40	80/65
SBAW 30 - 36	7500	36	30	65/50
SBAW 40 - 36	7500	36	40	80/65
SBAW 80 - 30	15000	30	80	100/100
SBAW 80 - 40	18500	40	80	100/100

SANITARY PUMPS

CONIBO / CONAQUA
AQUASAN MINI
SANIBO MINI
AQUASAN PRO
SANIBO 1
SANIBO 4
SANIBO 5
SANIBO B
SANIBO 6

CONIBO / CONAQUA

IMAGE: Conibo

fot.CONAQUA

IMAGE: Wąż Conio

fot.CONAQUA

CONIBO
The CONIBO pump is a compact device designed for pumping condensate. The pump is fully automatic. After filling the tank, the pump automatically starts, and after draining the condensate it automatically stops. 3/8 inch diameter and 6 m long transparent discharge hose is supplied with the pump. The pump is suitable for short-time pumping of water at 50°C. The pump can operate with water with pH range from 2.5 to 10. The pump has been designed for faultless operation in professional air conditioning systems. Its most important features are low-noise operation and compact size. The pump is fully automatic and maintenance free, which guarantees comfort of use. The condensate draining cycles are automatic and depend on the condensate level in the tank. The pump is mostly used in applications where condensate flows below the level of its drainage from premises or systems.

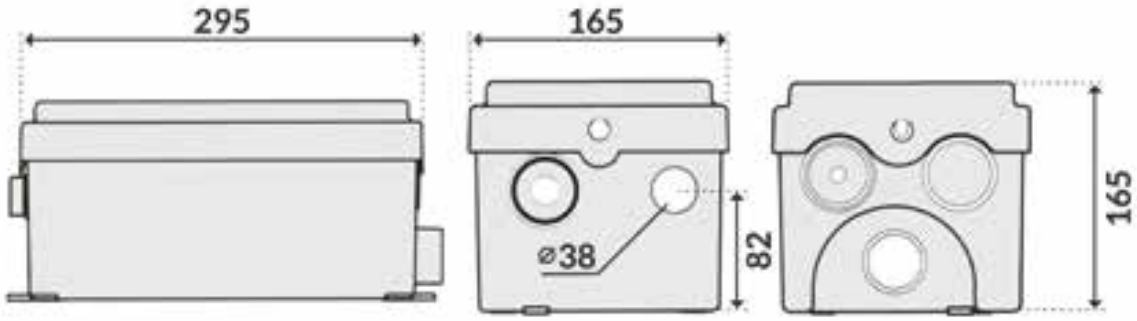
CONAQUA
The CONAQUA pump has a similar design to CONIBO, it also operates in a fully automatic cycle.
The pump is suitable for pumping water at temperatures from 1°C to 25°C. For short time, it can pump water at 50°C, however, the operating time may not exceed 90s, and the stand-by time must be at least 600s. The pump is suitable for pumping condensate to a height of up to 5m and a maximum horizontal distance of 20 m (each elbow and valve must be counted as 1 m discharge height). During installation, horizontal sections should be sloped by 1%. CONI pumps are designed for pumping water condensate from cooling units, air conditioning units and condensing furnaces. The pump is a compact-size device. The pump is fully automatic and maintenance free, which guarantees comfort of use. After filling the tank with condensate, the pump starts automatically, and after draining the condensate it stops automatically until the next cycle. The pump is mostly used in applications where condensate flows below the level of its drainage from premises or systems.

APPLICATION:
Pumping water condensate from cooling units, air conditioning units and condensing furnaces.

PARAMETERS

Name	Lift (m)	Capacity (l/min)	Voltage (V)	Weight (kg)	Motor power / nominal (W)	Dimensions D/H/W (cm)	Tank capacity (l)
CONIBO	4,5	330	230	2,2	80	28/17/13,5	1,9
CONAQUA	5,1	250	230	1,7	58	28/15/13	1,7

AQUASAN MINI



Sanitary pumping station for bathrooms and kitchens.
The pump is similar to the Sanibo mini pumping station. The switch makes the pump a fully automatic device intended for use in bathrooms to drain water from wash basins, shower cabins or from washing machines or sinks installed in kitchens. It is an excellent solution for bathrooms where the wash basins or shower bases are installed outside the stack and riser or below the sewage discharge level. Bathtubs, washing machines, wash basins, shower bases, sinks etc. can be connected to the pumping station.
Its compact size and low-noise makes the pump operation discreet and suitable for installation e.g. in under-sink cabinets.

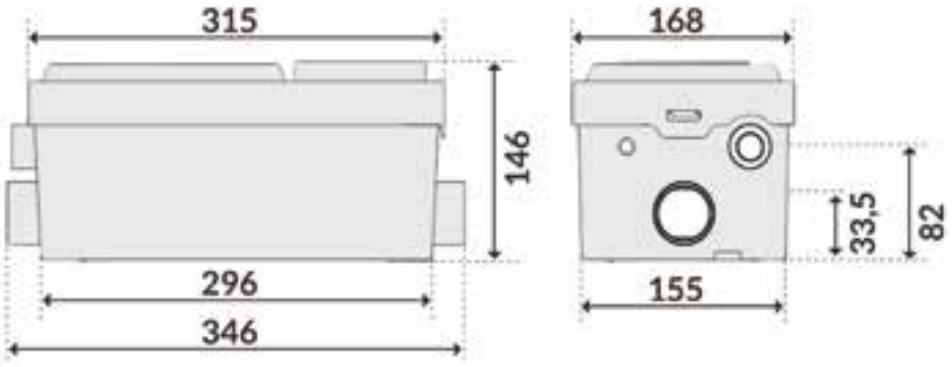
The pump is supplied with:
- End plugs: 2 pcs x 40 mm,
- Stainless steel clamping rings: 3 pcs.

APPLICATION:
Domestic premises without technical means to connect sanitary facilities to gravity sanitary sewage system - basements, attics and other rooms converted for sanitary purposes.

PARAMETERS

Name	Lift (m)	Capacity (l/min)	Voltage (V)	Motor power (W)	Dimensions L/H/W (cm)	Weight (kg)	Max. temperature (°C)
AQUASAN MINI	4	40	230	250	30/17/16,5	4	40(90)*

SANIBO MINI

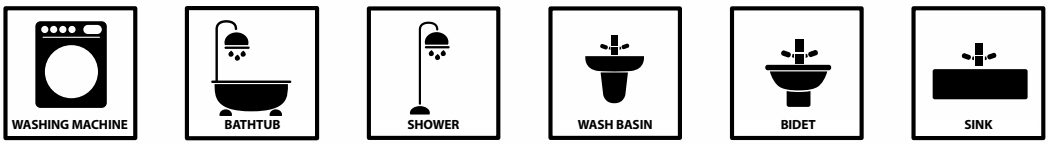


Sanibo mini is a sanitary pump designed for bathrooms and kitchens. The pumping station has one of the most advanced and reliable design available on the market. The pump is fully automatic and intended for use in bathrooms to drain water from wash basins, shower cabins or from washing machines or sinks installed in kitchens. The pump will automatically start when the liquid level is 55mm and stop when it falls to 25mm. It is an excellent solution for bathrooms where the wash basins or shower bases are installed outside the stack and riser or below the sewage discharge level. Bathtubs, washing machines, wash basins, shower bases, sinks, and even bidets can be connected to the pumping station. Its compact size and low-noise makes the pump operation discreet and suitable for installation e.g. in under-sink cabinets. The pump has two inlets for connecting for example shower base and sink.

The pump is supplied with:

- End plugs: 40mm
- 28mm/32mm elbow non-return valve
- Stainless steel clamping rings

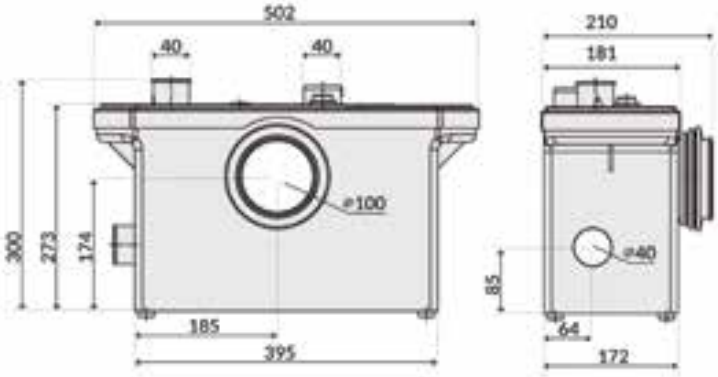
APPLICATION:
Domestic premises without technical means to connect sanitary facilities to gravity sanitary sewage system - basements, attics and other rooms converted for sanitary purposes.



PARAMETERS

Name	Lift (m)	Capacity (l/min)	Voltage (V)	Motor power (W)	Dimensions L/H/W (cm)	Weight (kg)	Max. temperature (°C)	Liquid PH
AQUASAN MINI	6,5	100	230	300	35/15/16	4,5	45	4-10

AQUASAN PRO



As a toilet pump, the Aquasan has been available on the market for many years. It is an economical version of Sanibo series. The pump has three inlets - 100 mm main inlet for toilets, two 40mm for shower bases or wash basins, and one 40mm outlet. It is an excellent solution for bathrooms where the toilet is installed outside the stack and riser or below the sewage discharge level. It has a switch for automatic pump control - the pump automatically stops after filling the device. Additionally, the pump can be started manually.
Its low-noise operation makes the pump ideal for domestic applications. An additional advantage of the device is the ability to pump liquids below 90°C for up to 1 minute.
Bathtubs, toilets, washing machines etc. can be connected to the pumping station, and unused inlets can be closed with end caps.
The pump is supplied with a set of stainless steel clamping rings and end caps, which makes it suitable for various applications.

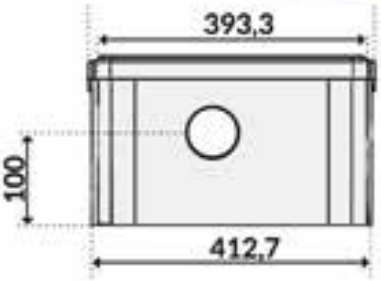
The set includes:
- WC pump
- End plugs: 2 x small (40 mm), 1 x large (100 mm).
- Clamping rings

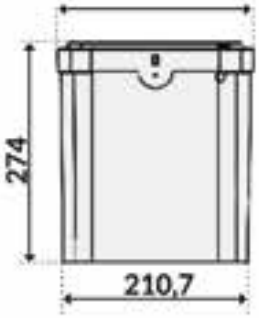
APPLICATION:
Domestic premises without technical means to connect sanitary facilities to gravity sanitary sewage system - basements, attics and other rooms converted for sanitary purposes.

PARAMETERS

Name	Lift (m)	Capacity (l/min)	Tank capacity (l)	Voltage (V)	Motor power (W)	Dimensions L/H/W (cm)	Weight (kg)	Temp max (°C)	Ingress Protection	Liquid PH
AQUASAN PRO	6,5	140	6	230	600	51x32x22	8,5	50(90)*	IP 44	4 - 10

SANIBO 1





The Sanibo 1 WC pump is a fully automatic device designed for draining sewage from toilets, wash basins and sinks. Its low-noise operation makes the pump ideal for domestic applications. Sanibo 1 has a three-blade impeller
with six cutting edges that perfectly fight impurities that enter the pump. Additionally, the pump has three inlets - 100 mm main inlet for toilets, two 40mm for shower bases or wash basins, and one 40mm outlet. It is an excellent solution for bathrooms where toilets are installed outside the stack and riser or below the sewage discharge level. It has a switch for automatic pump control - the pump automatically stops after filling the device. Additionally, the pump can be started manually.
An additional advantage of the device is the ability to pump liquids below 90°C for up to 2 minutes. Due to the 7 metre head vertically and 70 metre horizontally, there is no need for gravity sewage disposal. Its operating cycle is approx. 8 seconds.
The pump is supplied with a set of stainless steel clamping rings and end caps, which makes it suitable for various applications.

The set includes:

- WC pumps with cutting system
- End caps: x 2 (40mm), x 1 (100mm).
- Non-return valves x 2
- Clamping rings

APPLICATION:
Domestic premises without technical means to connect sanitary facilities to gravity sanitary sewage system - basements, attics and other rooms converted for sanitary purposes.

PARAMETERS

Name	Lift (m)	Capacity (l/min)	Tank capacity (l)	Voltage (V)	Motor power (W)	Dimensions L/H/W (cm)	Weight (kg)	Temp max (°C)	Ingress Protection	Liquid PH
SANIBO 1	7	120	6	230	600	51x32x22	8,5	60 (90)*	IP 44	4 - 10

SANIBO 4

SANIBO 4 is a high quality fully automatic toilet pump for pumping sewage, equipped with three inlets for draining sewage from toilets and wash basins/sinks - one main 100 mm inlet for toilets, 40mm for shower bases or wash basins, and one 40mm outlet. It has a switch for automatic pump control - the pump automatically stops after filling the device. Additionally, the pump can be started manually.
Its low-noise operation makes the pump ideal for domestic applications. Long blades used in the Sanibo 4 impeller provide increased pump flow up to 300 l/min.
and excellent performance when dealing with impurities flowing into the pump. An additional advantage of the device is the ability to pump liquids below 90°C. Due to the 9 metre head vertically and 90 metre horizontally, there is no need for gravity sewage disposal. Its operating cycle is approx. 6 seconds.

The set includes:

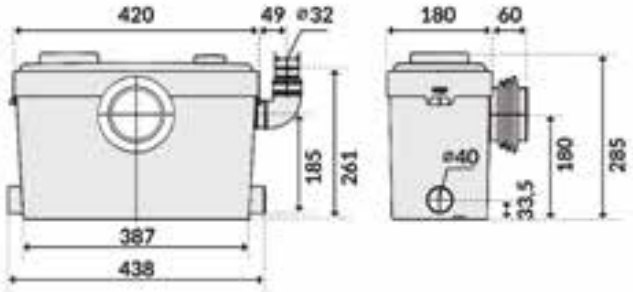
- WC pump
- End caps: x 2 (40mm), x 1 (100mm).
- Non-return valves x 2
- Clamping rings x 8

APPLICATION:
Domestic premises without technical means to connect sanitary facilities to gravity sanitary sewage system - basements, attics and other rooms converted for sanitary purposes.

PARAMETERS

Name	Lift (m)	Capacity (l/min)	Tank capacity (l)	Voltage (V)	Motor power (W)	Dimensions L/H/W (cm)	Weight (kg)	Temp max (°C)	Ingress Protection	Liquid PH
SANIBO 4	9	300	6	230	600	51x32x22	9,5	90	IP 44	4 - 10

SANIBO 5



Bathroom sewage pumping station. Many years of experience allowed us to design a top quality device for a wide range of applications. The main application of the pump is to remove sewage from toilets, however use of three inlets allows to collect sewage from, e.g. bath, washing machine and toilet - one main 100 mm inlet for toilets, 40mm for shower bases or wash basins, and one 40mm outlet. The pump is exceptionally quiet so it is an ideal solution for domestic applications. SANIBO 5 is equipped with end caps to cover unused inlets. The pump can also be used in kitchens or laundry rooms, without connecting to the toilet. It has a float switch for automatic pump control - the pump automatically stops after filling the device. Additionally, the pump can be started manually. An additional advantage of the device is the ability to pump liquids of up to 40°C (short-term 60°C) for up to 2 minutes. Due to the 9.5 metre head vertically and 100 metre horizontally, there is no need for gravity sewage disposal. Its operating cycle is approx. 8 seconds. Sanibo 5, as the only branded pump available on the market has stainless steel motor housing, strainer and cutting system providing for guaranteed reliability,
and a powerful pump motor is provided with built-in thermal protection. The device is designed according to the most demanding European standards.

The set includes:

- WC pumps with cutting system
- End caps: x 2 (40mm), x 1 (100mm).
- Non-return valves x 1
- Clamping rings x 8

WATCH THE PUMP OPERATION AND DESIGN ON:
http://bit.ly/sanibo

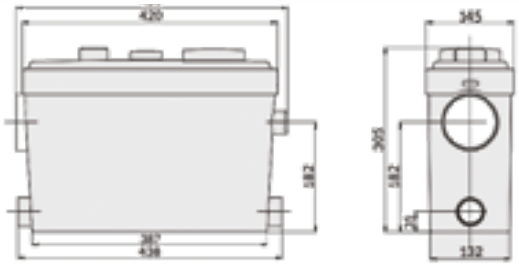
APPLICATION:
Domestic premises without technical means to connect sanitary facilities to gravity sanitary sewage system
- basements, attics and other rooms converted for sanitary purposes. Water and sewage pumping in places where toilets, wash basins or shower bases are installed outside the stack and riser or below the sewage discharge level.

Link to the video:
https://www.youtube.com/watch?v=dofSLSY6tns

PARAMETERS

Name	Lift (m)	Capacity (l/min)	Tank capacity (l)	Voltage (V)	Motor power (W)	Dimensions L/H/W (cm)	Weight (kg)	Temp max (°C)	Ingress Protection	Liquid PH
SANIBO 5	9,5	150	6	230	600	44x29x24	8,5	40 (60)*	IP 44	4 - 10

SANIBO 6



Sanibo 4 pump is a new version of the most popular SANIBO 5 pumping station. Also, it is the highest quality automatic pumping and cutting system equipped with three inlets for removing sewage - one main 100 mm inlet for toilets, two 40mm inlets for shower bases or wash basins, and one 40mm outlet. Ingress protection increased to IP 55 is an important improvement.
The pumps has a switch for automatic pump control - the pump automatically stops after filling the device. The pump is exceptionally quiet, so it is an ideal solution for domestic applications.
An additional advantage of the device is the ability to pump liquids of up to 40°C (short-term 60°C) for up to 2 minutes. Its operating cycle is approx. 8 seconds.

SANIBO 6, along with SANIBO 5, as the only branded pumps have stainless steel motor housing, strainer and cutting system for guaranteed reliability.
The pump motor is provided with built-in thermal protection.

The set includes:
- WC Pump
- End caps: x 2 (40mm), x 1 (100mm)
- Non-return valves x 2
- Clamping rings x 8

APPLICATION:
Domestic premises without technical means to connect sanitary facilities to gravity sanitary sewage system - basements, attics and other rooms converted for sanitary purposes.

PARAMETERS

Name	Lift (m)	Capacity (l/min)	Tank capacity (l)	Voltage (V)	Motor power (W)	Dimensions L/H/W (cm)	Weight (kg)	Temp max (°C)	Ingress Protection	Liquid PH
SANIBO 6	9,5	150	6	230	600	51x32x22	9,5	90	IP 44	4 - 10

SANIBO B

SANIBO B is a toilet pump and cutting system with side inlet. The main application of the pump is to remove sewage from toilets, however, use of three inlets allows to collect sewage from, e.g. bath, washing machine and toilet - one main 100 mm inlet for toilets, two 40mm for shower bases or wash basins, and one 40mm outlet. The pump is exceptionally quiet, so it is an ideal solution for domestic applications. Due to its narrow design, SANIBO B is a perfect solution for concealed frames.
The pump has a float switch for automatic pump control - it is the same system as used in SANIBO 5 and 6 pumping stations. An additional advantage of the device is the ability to pump liquids of up to 40°C (short-term 60°C) for up to 2 minutes. Due to the 9.5 metre head vertically and 100 metre horizontally, there is no need for gravity sewage disposal. Its operating cycle is approx. 8 seconds. SANIBO 5, as the only branded pump available on the market, has stainless steel motor housing, strainer and cutting system for guaranteed reliability, and a powerful pump motor is provided with built-in thermal protection. The device is designed according to the most demanding European standards.

The set includes:
- WC pump with cutting system
- End caps: x 2 (40mm), x 1 (100mm)
- Non-return valves x 1
- Clamping rings x 8

APPLICATION:
Domestic premises without technical means to connect sanitary facilities to gravity sanitary sewage system - basements, attics and other rooms converted for sanitary purposes. Water and sewage pumping in places where toilets, wash basins or shower bases are installed outside the stack and riser or below the sewage discharge level.

PARAMETERS

Name	Lift (m)	Capacity (l/min)	Tank capacity (l)	Voltage (V)	Motor power (W)	Dimensions L/H/W (cm)	Weight (kg)	Temp max (°C)	Ingress Protection	Liquid PH
SANIBO B	6,5	125	4	230	450	45x31x15	6,5	40 (60)*	IP 55	4 - 10

RAIN SYSTEM

IBO RAIN SYSTEM

IBO RAIN SYSTEM

rainwater pumping set

Automatic pumping set designed for water intake from multiple sources using a single pump with simultaneous replenishment of the source via the water mains in case of lack of water in the tank. Thanks to the use of floats and electro-valves and a computer controlling the entire system, the entire process of water intake, tank change and its replenishment with municipal water takes place automatically.

Basic features of IRS sets:

One pump - multiple sources
The pump included in the IRS set can draw water from one, two or even three different tanks located on the same plot of land.

Automatic change of water intake source
A float included in the set continuously monitors the water level in the tank from which the IRS draws water. When the water level approaches the bottom of the tank, the float sends a signal to the solenoid valve, which changes the source of water intake or, as a last resort, opens the valve that replenishes the rainwater tank with water from the mains water supply or a deep well.

Automatic pump operation
The applied controllers - IBOPRESS10 and IVR10 - control the pump on the basis of the pressure prevailing in the network. The controllers switch the pump on when the pressure drops (turning on the tap in the garden - starting watering, flushing the toilet, starting the washing machine) and switch it off when the pressure rises (turning off the tap).

Suction capacity of the pump up to a depth of 7 metres
The pumps used in IRS sets are self-priming devices, which means that they can draw water from sources below where the pump is installed. This parameter gives you the possibility to draw water not only from rainwater tanks, but also from wells with the water table falling to a maximum depth of 7 metres from the place where the pump is installed. An additional advantage of the pumps used in the sets is their ability to self-deaerate the system in suction.

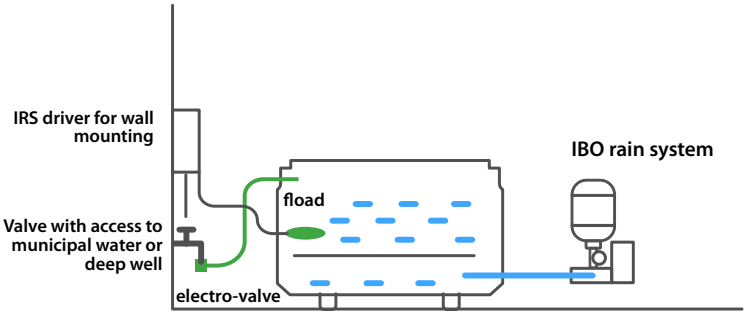
Eco-friendly
Drawing water from multiple sources with a single pump gives you the opportunity to store large amounts of rainwater in several tanks, minimising the use of municipal water. The water supply network is only activated when there is no water in all available reservoirs. In addition, the PRO version of the device is equipped with a frequency converter, thanks to which current consumption is reduced by up to 60%.

The system proposed in the IRS sets for refilling the tanks with municipal water complies with the PN-EN 1717 standard.

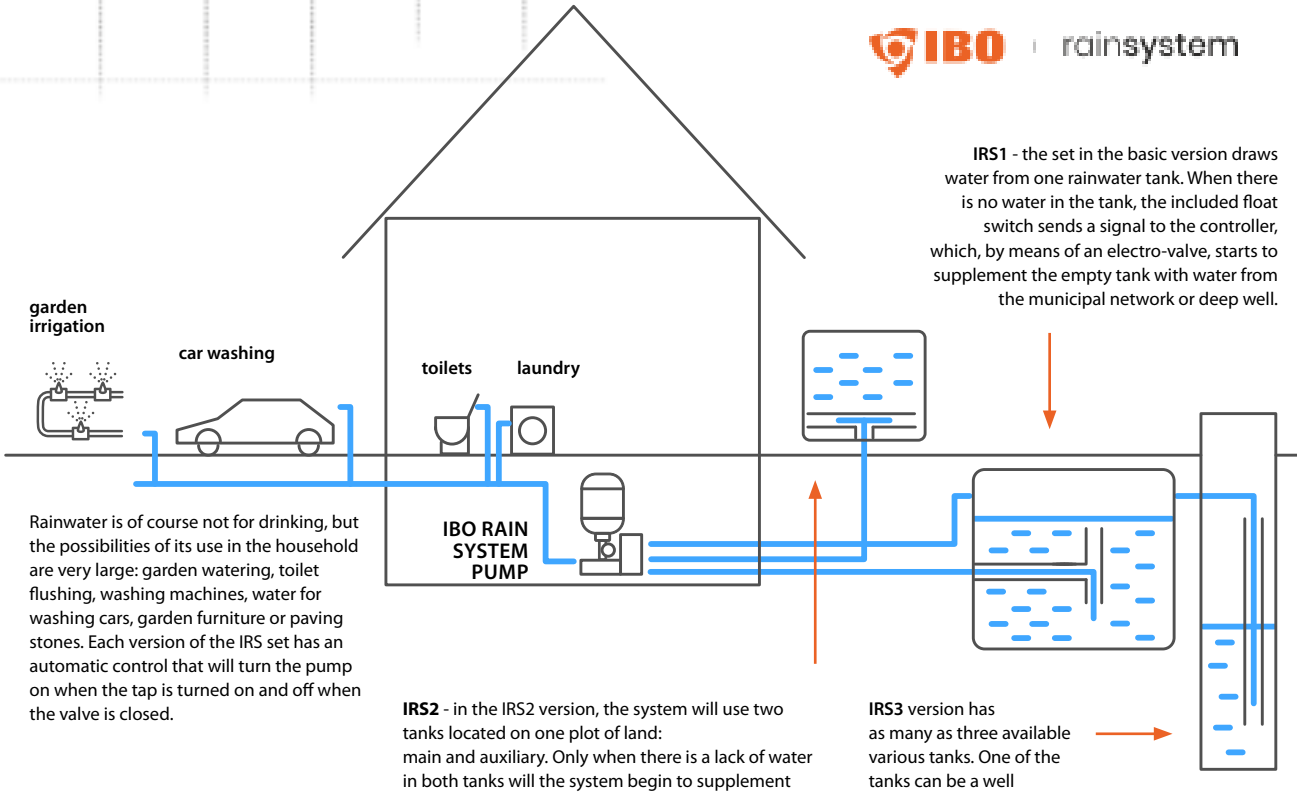
IRS sets consist of:
- High-quality **IPRO self-priming pumps** guaranteeing trouble-free operation for many years of use;
- **Pump controller** for automatic operation of the system;
- **The electro-valves**, 20 m floats and controller - the system is programmed and ready to go;
- Mounting plate.

fot. IBO RAIN SYSTEM 2 (wersja ze sterownikiem IBOPRESS10)

fot. IBO RAIN SYSTEM 2 PRO (wersja z falownikiem IVR 10)



The rainwater tank is topped up using an electro-valve and a garden hose connected to it. The solenoid valve is screwed directly into a valve with access to municipal water or from a deep well. A float installed in the tank will be responsible for opening and closing the solenoid valve. On the controller that connects the float to the solenoid valve you will see two LEDs: red - no rainwater, mains open and green - tank full, mains closed.



IRS1 - the set in the basic version draws water from one rainwater tank. When there is no water in the tank, the included float switch sends a signal to the controller, which, by means of an electro-valve, starts to supplement the empty tank with water from the municipal network or deep well.

Rainwater is of course not for drinking, but the possibilities of its use in the household are very large: garden watering, toilet flushing, washing machines, water for washing cars, garden furniture or paving stones. Each version of the IRS set has an automatic control that will turn the pump on when the tap is turned on and off when the valve is closed.

IRS2 - in the IRS2 version, the system will use two tanks located on one plot of land: main and auxiliary. Only when there is a lack of water in both tanks will the system begin to supplement one of them with municipal water or a pump installed in a deep well.

IRS3 version has as many as three available various tanks. One of the tanks can be a well vertebrate with a water table not falling below 7 meters from the surface.

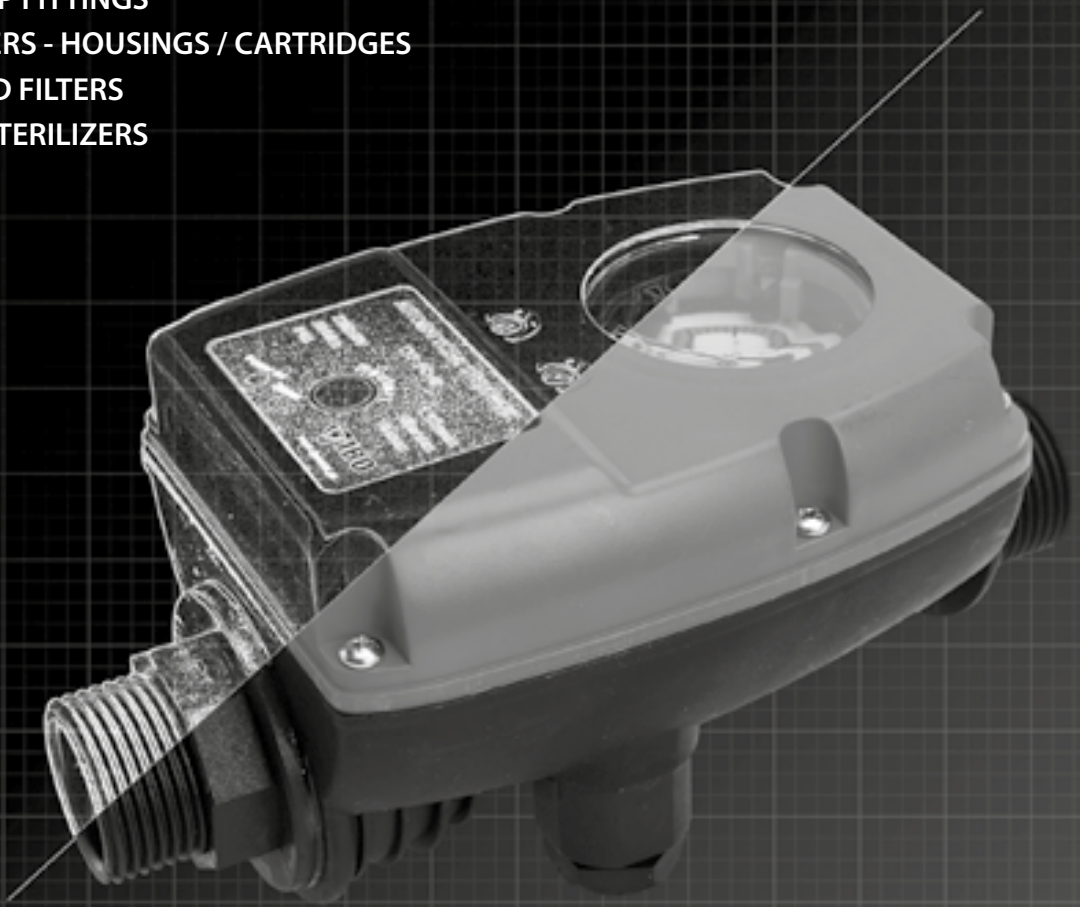
The sets are available in several configurations. When selecting a set, it is important to consider:
- the number of tanks from which the system is to draw water
- pump capacity - this should be matched to the amount of water stored or the demand of the garden irrigation system
- type of control: IBOPRESS automation or IVR10 frequency converter; the frequency converter is ideal for pumps with higher capacity (HP1500INOX)

PARAMETERS

Set Type (numbers = tanks quantity)	*Pump type*	*Q – max*	*H – max*	*Engine power*	*Power supply power consumption*	*Type of control*
IRS 1, 2 or 3	IWH 2-03	75 L	42m	750W	230v 5,2A	IBOPRESS 10
	S-MCI 4-5	100 L	48m	1100W	230v 5,8A	IBOPRESS 10
	HP1500 INOX	110 L	62m	1500W	230v 9,6A	IBOPRESS 10
IRS PRO 1, 2 or 3	IWH 2-03	75 L	42m	750W	230v 5,2A	IVR10 15S
	S-MCI 4-5	100 L	48m	1100W	230v 5,8A	IVR10 15S
	HP1500 INOX	110 L	62m	1500W	230v 9,6A	IVR10 30S

CONTROLLERS / PROTECTIONS

M111/M121/M131/M141
M21/M31
IBOPRESS 10
DIG-IBO 1
HYDRO-BLOCK (SK-13)
AUTOMATIC PUMP CONTROLLERS
PRESSURE SWITCHES
SOLENOID VALVES
ASSEMBLY ADHESIVE FOR FITTINGS
FLOAT SWITCHES
FLANGE
MEMBRANES
COUPLINGS
CONNECTORS
CONTROL BOXES
PUMP FITTINGS
FILTERS - HOUSINGS / CARTRIDGES
SAND FILTERS
UV STERILIZERS



M111/M121/M131/M141

Professional pump protections

The M121 and M131 Intelligent Pump Controller is an easy-to-use control and protection device for direct connection of deep well pumps, submersible pumps and surface pumps:

- M-121 for single-phase pumps from 0.75 kW to 2.2 kW (from 1 HP to 3 HP)
- M-131 for 3-phase pumps from 0.75 kW to 4kW (from 1 HP to 5 HP)
  5.5 kW - 7.5 kW (from 7.5 HP do 10 HP).

IMAGE: M31

CONTROLLER OPERATING FUNCTIONS

- Automatic re-start attempt after emergency stop enforced by one of the protection functions. Different self-activation timers for different emergency conditions.
- Possibility to calibrate the controller and change its calibration to match the pump parameters.
- Activating and deactivating the pump depending on:
  - water levels in the tank from which water is pumped,
  - water levels in the tank to which water is pumped,
  - pressure in the tank to which water is pumped.
- Manual or automatic operating mode.

CONTROLLER PROTECTION FUNCTIONS

- Double dry run protection by means of:
  - Liquid level probes/ sensors
  - Analysis of current consumption during pump operation
- Overload protection
- Phase failure protection (M31)
- Voltage drop protection
- Voltage surge protection
- High voltage protection
- Short circuit protection
- Overvoltage protection

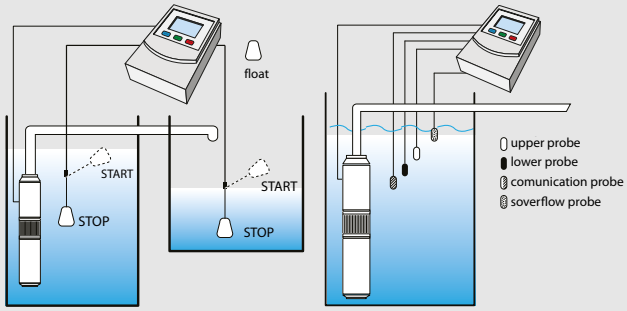
M21/ M31

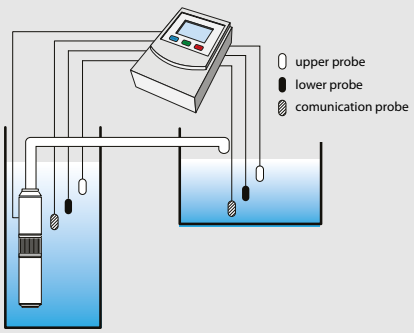
OPTIONS:

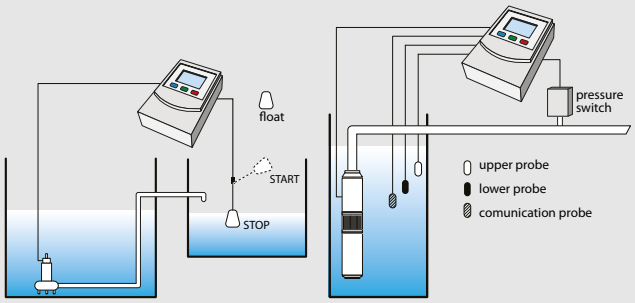
In addition to the M121 and M131 controller, M-21 and M-31 controllers are available with additional features, such as:

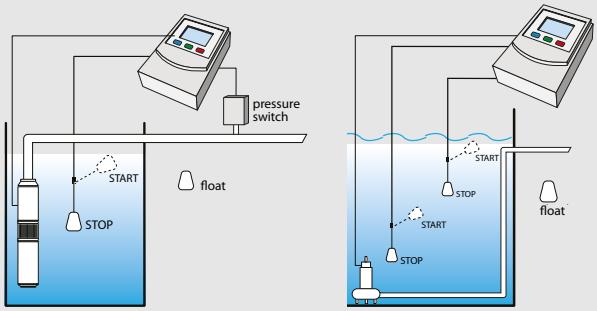
- Displaying of total pump operation time
- Displaying history of the last five failures when the protections have been activated
- Dynamic LCD screen displaying the current status of the pump.

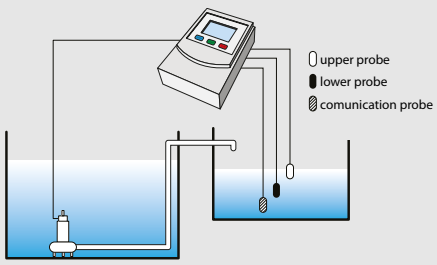
EXAMPLES OF INTELLIGENT CONTROLLER APPLICATION











IBOPRESS 10

A series of electronic pressure switches for controlling the pump operation and protecting it against overload and dry run.

The IBOPRESS is a device used for control of operation of any pump type. Depending on the pressure in the system, it switches the pump on or off. The on and off pump pressure can be set.

The IBOPRESS is a cutting-edge electronic controller whose operation is based on a ceramic pressure sensor.

All IBOPESS models have protection functions: it allows setting the maximum current consumption by the pump and protecting it against overload. It is possible to set the minimum pressure at which the controller will switch the pump off, protecting it against a dry run.
The IBOPRESS 10 and IBOPRESS 30 devices have an automatic restart function after an emergency shutdown after the set time.

The IBOPRESS 10 and SX switches are used to control the single-phase pumps and are equipped with a cable with a plug and the second cable with an electric socket allowing a very easy connection to the pump control system. The IBOPRESS 30 has an additional cable with a pressure sensor and is used to control the operation of three-phase pumps. High measuring accuracy allows the device to be installed in systems that require constant, unchanging operating conditions.

IBOPRESS 10 SX

IBOPRESS 10 - 1/4"

IBOPRESS 30

	IBOPRESS 10SX	IBOPRESS 10 - 1/4"	IBOPRESS 30
Pressure range in the controlled system	***0,5-10 Bar***	***0-10 Bar***	***3-20 Bar***
Indication accuracy	0,1 Bar	***0,01 Bar***	***0,01 Bar***
Displayed units to be selected by the user	Bar, kg/cm2, PSI		
Port size	¼" integrated	¼" integrated	¼" integrated
Max. medium temperature	80°C	90°C	90°C
Max. ambient temperature	40°C		
Power supply	Single phase AC 50 Hz	Single phase AC 50 Hz	Three phase AC 50 Hz
Power supply voltage	220-240V	220-240V	380-400V
Max. pump power	1,5 kW	2,2 kW	7,5 kW
Max. current consumption	12A	20A	20A
Degree of protection	IP 55		
Protection functions	Dry run protection		
	Overload protection		
Display	LED	Colour, LCD	Colour, LCD
Live	1 000 000 cycles		

DIG-IBO 1

DIGIBO 1

Intelligent pressure switch for pump operation control. DIG - IBO is an electronic device with two main functions:

- PUMP OPERATION CONTROL (cut-in and cut-out pressure can be set from an electronic display panel)
- DRY RUN PROTECTION AGAINST (if the function is active and the pump operates without water for more than 20 seconds, the device will stop the pump. Dry run protection is active by default - if for any reason, the user does not want to leave this function active, it can be disabled by pressing and holding buttons 2 and 4 together for 3 seconds - "F0" (function disabled) or F1 (function enabled by default) will be displayed on the panel. If no operation is performed within 3 seconds, data will be automatically saved and the device will return to the operating mode.

The controller activates the pump when water pressure in the water system drops below the minimum pressure set on the display, and water starts flowing in the pipe on which the controller is installed. When no flow is detected by the controller, the pump will be stopped.

TECHNICAL DATA

- Operating range 0-10 bar
- Supply voltage: 230V, 50Hz
- Ingress Protection: IP66
- Maximum pump power: 1.5kW
- Maximum water temperature: 80 °C

Cut-out pressure setting - H Cut-in pressure setting - L

Use the buttons (arrow) to set the limit, the up arrow - to increase, the down arrow - to decrease. When finished, the switch will save the settings automatically and return to the operating mode.

HYDRO-BLOCK (SK-13)

HYDRO-BLOCK (SK-13)

Devices protecting the pump against damage caused by dry running. The device will automatically stop the pump if the water pressure in the system drops below the cut-out level - 0.7 bar. The device has the RESET button. The pump is first activated by pressing the RESET button. When the system pressure exceeds 1.1 bar, the device will start operating in automatic mode. The device should operate in water supply systems with a pressure tank. The device can be directly connected to single-phase motor pumps. It can be connected three-phase motor pumps via a contactor.
The device is suitable for surface pumps only. Warning!!! The HYDRO-BLOCK pressure controller cannot be used instead of a pressure switch.

PC-13

PC-15

PC-59

AUTOMATIC PUMP CONTROLLERS

PC-13

The PC-13 automatic pump controller provides start and stop control functions. The automatic pump controller starts the pump when water pressure in the water system drops below the minimum pressure set on the automatic pump controller, and when water starts flowing in the pipe on which the PC-13 is installed. The controller stops when water flow in the pipe on which the PC controller is installed is stopped. The controller starts the pump when a tap or sprinklers are opened, and stops the pump when they are closed. The controller has a dry-run protection function (pump operation without water). If no water is detected, the controller will stop the pump to protect it against damage. The controller can be connected directly to pumps with motor electrical demand not greater than 10 A (16 A at starting). The controller protects the system against flooding resulting from minor leaks. Leaks cause pressure drops in the system, but the controller will not start because it does not detect water flow (with small leaks, the water flow is insignificant). The device is supplied with a 1 m long cable with a plug and a 60 cm long cable with a socket.

PC-15

Automatic pump controller for up to 1300 W surface and deep well pumps. It can be used instead of a pressure switch and pressure tank. When the tap is opened, a signal is sent to the PC-15 controller and it starts the pump. When the tap is closed, the PC-15 controller stops the pump. The automatic pump controller can operate with single-phase pumps with current draw not exceeding 10A during operation. The device is supplied with dry run protection. When no water is detected in the well, the device will stop the pump. The device is equipped with a 60 cm long cable for connection with the pump and a 1 m long power cable with a plug. The PC-15 automatic pump controller is equipped with 1" inlet and outlet.

PC-59

The PC-59 controller is an electronic device for pump control.
It controls the pump operation by monitoring pressure changes in the pipeline and the water flow through the pipeline. With user-adjustable cut-in and cut-out pressure, the device can be used instead of traditional pressure switches. It also protects against dry running. A built-in non-return valve prevents water backflow to the pump. The pressure gauge with marked cut-in and cut-out pressure levels provides accurate and easy adjustment of the device according to user requirements. The device can operate with and without a pressure tank. The PC-59 automatic pump controller is equipped with 1" inlet and outlet. The device is supplied with a 60 cm long cable for connection with the pump and a 1 m long power cable with a plug.

PC-59	PC-15P	PC-13	Functions / Construction Characteristics:	Technical Data:
X	X	X	Inlet (suction) connection: 1″	• Power supply voltage ~ 220/240V • Protection class: IP 65 • Maximum water temperature: 40oC • Cut-in pressure: 1.5 - 3 bar • Maximum permissible pressure • in the system 10 bar • Maximum current 16(10) A
X	X	X	Outlet (pressure) connection: 1″	
X	X	X	Built-in check valve	
X	X	X	Dry-running protection system	
X	X	X	Built-in pressure gauge	
X	X	X	Manual start button - RESET	
X	X	X	POWER ON LED	
X	X	X	Pump operation ON LED	
X	X		Pump failure LED	
X			Operation with pressure tank	
			Automatic restart	

Sk-15

PC-10P

PC-16

AUTOMATIC PUMP CONTROLLERS

SK-15

Automatic pump controller for surface and deep well pumps.
It can be used instead of a pressure switch and pressure tank. When the tap is opened, a signal is sent to the SK-15 controller and it starts the pump. When the tap is closed, the SK-15 controller stops the pump. The automatic pump controller can operate with up to 1300 W single-phase pumps with current draw not exceeding 10A during operation. The device is supplied with dry run protection. When no water is detected in the well, the device will stop the pump. The SK-15 automatic pump controller is equipped with 1" inlet and outlet. The device is supplied with a 1 m long cable with a plug and a 60 cm cable with a socket.

PC-10P

Automatic pump controller for surface and deep well pumps. It can be used instead of a pressure switch and pressure When the tap is opened, a signal is sent to the PC-10P controller and it starts the pump. When the tap is closed, the PC-10P controller stops the pump. Compared to the other device, this automatic pump controller can operate with up to 2200 W single-phase pumps with current draw not exceeding 16 A during operation. The device is supplied with dry run protection. When no water is detected in the well, the device will stop the pump. The PC-10P automatic pump controller is equipped with 1" inlet and outlet. The device is supplied with a 1 m long power cable with a plug and a 60 cm long cable with a socket for connection with the pump

PC-20P

Flow switch equivalent to PC-10P but equipped with 1 ¼ "connections

PC-30P

PC-30P - an analogous device for the PC-20P equipped with the automatic restart function

PC-16

Automatic pump controller for surface and deep well pumps.
It can be used instead of a pressure switch and pressure tank. When the tap is opened, a signal is sent to the PC-16 controller and it starts the pump. When the tap is closed, the PC-16 controller stops the pump. The automatic pump controller can operate with up to 1300 W single-phase pumps with current draw not exceeding 10A during operation. The device is supplied with dry run protection. When no water is detected in the well the device will stop the pump. Compared to other controllers, the PC-16 has the restart function. The PC-16 has an automatic restart function. The device makes attempt to automatically restart the pump after stopping caused by dry running. If no water flows into the well, the device will stop the pump again. The cycle will be repeated several times a day from the first activation of the pump. This solution is best suited for automatic irrigation.
Easy-to-install. Supplied with a 1 m long power cable with a plug and a socket for connecting the pump. The PC- 16 automatic pump controller is equipped with 1" inlet and outlet.

SK-15	*PC-10P*	*PC-16*	*PC-20P*	*PC-30P*	Functions / Construction Characteristics:	Technical Data:
X	X	X			Inlet/Outlet connection: 1”	• Power supply voltage ~ 220/240V • Protection class: IP 65 • Maximum water temperature: 40oC • Start pressure: 1,5 - 3 bar • Maximum operating system pressure: 10 bar • Max. current draw for SK-15 i PC-16: 16(10)A • Max. current draw for PC-10P: 16A
			X	X	Inlet/Outlet connection: 1 ¼”	
X	X	X	X	X	Built-in check valve	
X	X	X	X	X	Dry-running protection system	
X		X	X	X	Built-in pressure gauge	
X	X	X	X	X	Manual start button - RESET	
X	X	X	X	X	POWER ON LED	
X	X	X	X	X	Pump operation ON LED	
X	X	X	X	X	Pump failure LED	
					Operation with pressure tank	
		X	X	X	Automatic restart	

PRESSURE SWITCHES

HYDRO-BLOCK (SK-13)

Devices protecting the pump against damage caused by dry running. The device will automatically stop the pump if the water pressure in the system drops below the cut-out level - 0.7 bar. The device has the RESET button. The pump is first activated by pressing the RESET button. When the system pressure exceeds 1.1 bar, the device will start operating in automatic mode. The device should operate in water supply systems with a pressure tank. The device can be directly connected to single-phase motor pumps. It can be connected three-phase motor pumps via a contactor.
The device is suitable for surface pumps only. Warning!!! The HYDRO-BLOCK pressure controller cannot be used instead of a pressure switch.

Pressure switches are designed for automatic starting and stopping booster sets with surface and deep well pumps equipped with electric motors.

The switches control the operation of the devices depending on the cut-in and cut-out pressure settings.

Switch body is made of durable plastic with copper or silver contacts. Depending on the model, the switches have different values of possible operating modes in a specified pressure range.

The PC-2 switch is additionally equipped with a pressure gauge and its design is based on a five-way discharge outlet so it can be used as a complete booster set fitting. PC-2 has 1" inlet and outlet.

The LCI and LCA switches can be used with 400 V ~ 3/50 Hz three-phase AC motors. In addition, the LCI is available with a nipple with 1/2" outer thread.

LCA switches are made by Polish manufacturer of pumps in Grudziądz

LCI 2

LCA

PC 9

PC-SK2

PC 2

PARAMETERS

Name	Pressure range (Bar)	Max. amperage (1f/3f)	Voltage (V)	Inlet/outlet diameter (inch)	Thread type
LCI 2	1,0 - 6,0	16A	230/400	¼ / ½	GW / GZ
LCA 1	1,0 - 4,0	16A / 10A	230/400	½	GW
LCA 2	2,0 - 8,0	16A / 10A	230/400	½	GW
LCA 3	3,0 - 11,0	16A / 10A	230/400	½	GW
PC - SK/2	1,6 - 4,6	12A	230/400	¼	GW / GZ
PC - 2	1,6 - 4,6	12A	230/400	1	GZ
PC - 9	1,6 - 4,6	12A	230/400	¼	GW

SOLENOID VALVES

VT series solenoid valves are suitable for controlling water flow in irrigation, heating and air conditioning systems. The solenoid consists of a ball valve and an actuator. The actuator is driven by a synchronous motor that controls the operation of the ball valve with rotation up to 90 degrees. The ball valves are available in two-way versions with diameters DN15, DN20 and DN25. The actuators are equipped with an indicator of open/close position.

SCOPE:

- 3 different connection diameters
- Use in various types of water installations
- High quality product
- Warranty: 24 months
- Warranty and post-warranty service

TECHNICAL DATA:

- Electric driver equipment: AC 220-240V / 50Hz
- Power consumption: 6W (when the valve is open or closed)
- Motor type: synchronous motor
- Open/closed position switching time: 6~15s
- Operating pressure 1.6Mpa
- Closing differential pressure: < 0,2Mpa
  Ambient temperature < 40°C
- Isolation class: IP54
- Temperature of the medium: 2-80°C
- Casing material: PA
- Medium: Cold/warm water or ethylene glycol solution 50%

IMAGE: Assembly adhesive

ASSEMBLY ADHESIVE FOR FITTINGS

The adhesive for sealing all connections and joints between metal parts.

IMAGE: Float switch

FLOAT SWITCHES

Electromechanical switches for controlling electrical equipment operation that depends on the liquid level. The switches are made of durable plastic and rubber electric wire (H07RN-F). The float switches are supplied with 60 cm, 5 m (with weight), and 10 m (with weight) power cables.

IMAGE: Flange

FLANGE

Galvanized steel spare part for pressure tanks

IMAGE: Membrane

MEMBRANES

EPDM synthetic rubber membranes for pressure tanks. The membrane separates water and air part of the tank.
The membranes are made in Italy in accordance with the most demanding European. All membranes are certified for food contact.
Sizes available: 24 L, 35 - 50 L, 80 L, 100 L, 150 L.

IMAGE: Couplings

COUPLINGS

Aluminium couplings for connecting hoses.

IMAGE: Control box

CONNECTORS

Aluminium connectors for connecting pumps with hoses

CONTROL BOXES

Enclosed plastic control box for starting single-phase motors. The boxes have a built-in capacitor, over-current protection and a cable with a plug. Depending on type, the boxes are intended for 0.75kW/ 1.1kW/ 1.5kW/ 2.2kW 230V ~ / 50Hz motors.

Name	Capacitor	Protection
0,75kW	35uF	8A
1,1kW	40uF	11A
1,1kW	45uF	12A
1,5kW	55uF	14A
1,5kW	60uF	15A
2,2kW	70uF	20A
2,2KW	80uF	20A

IMAGE. Pump fittings

PUMP FITTINGS

Fittings available in cast iron or steel in sizes 1 ½" and 2 "

FILTERS - HOUSINGS / CARTRIDGES

In-line filters for purification and treatment of water from own intakes and water supply networks. Universal filters made of durable materials to guarantee long-term and faultless operation. Each housing is equipped with a clamp wrench. Available types of cartridges: ceramic, carbon,
mesh, string wound and foam. Housings and cartridges are available in sizes of 5/2.5"and 10"/2.5".

Depending on the system requirements, the housings have the following inlets/ outlets: 1"/3/4"/1/2".

Application: Households

TECHNICAL DATA	
Mesh filter	Mesh filter cartridge for filtering mechanical impurities, such as sand, rust and various types of sediments found in water.
String wound	String wound filter cartridge for filtering mechanical impurities. The cartridges are made of polypropylene string. Degree of filtration - 5um.
Ceramic filter	Ceramic filter cartridge for filtering mechanical impurities, such as sand, rust and various types of sediments found in water. Higher filtration accuracy compared to string and foam filters.
Foam filter	Foam filter cartridge for filtering mechanical impurities, such as sand, rust and various types of sediments found in water. Degree of filtration - 5um.
Carbon filter	Carbon filter block cartridge. Filter designed to reduce chemical compounds. It Improves the taste of water and removes any unpleasant odours

Features:
- Housing made of reinforced polypropylene;
- Two O-rings to ensure leak-tightness;
- The transparent housing for visual assessment of contamination;
- Complete with clamp wrench and mounting bracket:
- Max. pressure 8 bar;
- Temperature range 2- 45°C.

Available sizes make the housings suitable for most standard cartridges.
Our housings are suitable for the following cartridges:
- mechanical cartridges: foam and string;
- reusable mechanical cartridges: mesh;
- Active cartridges: carbon block, carbon granulate, softening and ceramic.

APPLICATION:
- mechanical cartridges: main water supply pipes in apartments and small houses;
- carbon and softening cartridges: single water intake points, such as taps.

SAND FILTERS

Filters designed to remove mechanical impurities with minimum particle size of 120 microns. The filter is usually installed downstream the water supply point upstream the main water intake in the building.

These filters are often installed with surface pumps in order to protect the hydraulic components against abrasive mechanical impurities.

The disk cartridge protects against mechanical impurities such as sand and dust, but not against water deposits such as iron.

The main advantage is the durable design so both the housing and the cartridge can be used for many years. The filters have reusable cartridges that should be cleaned, e.g. by rinsing - the cartridge can be removed and rinsed under pressure.

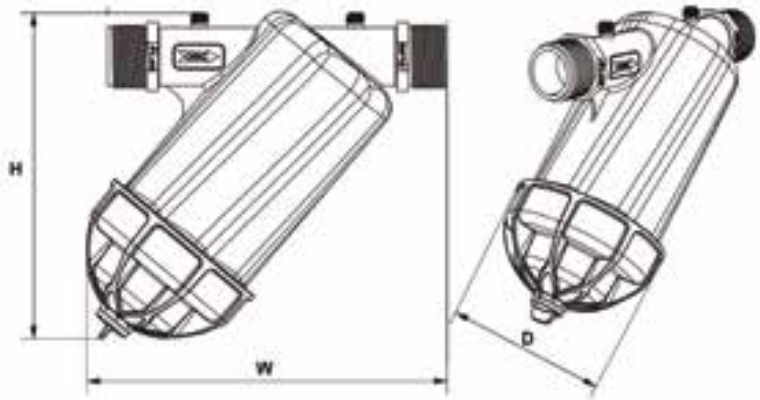
The housing is made of impact and chemical resistant plastic.

Disk and mesh filters are used in agriculture, irrigation, gardening and domestic use to protect the pump and water supply system against contamination.

In addition to disk cartridges,
mesh cartridges are available upon request.

FEATURES AND ADVANTAGES

- Compact size
- Micron rating precise filtration
- Chemical resistance
- Drain valve
- High efficiency
- Durability



Name	Q max	Max. pressure	Filtration	Filtration area	Dimensions(mm)
¾" Disc Filter	75 l/min	8bar	120	160	130/ 176/ 83
1" Disc Filter	100 l/min	8bar	120	160	173/ 190/ 89
1 ¾" Disc Filter	200 l/min	8bar	120	265	230/ 250/ 120
1 ½" Disc Filter	200 l/min	8bar	120	265	230/ 250/ 120

UV STERILIZERS

UV sterilizers are used to purify/disinfect water from bacteriological contamination that may exist in water sources, e.g. shallow wells or surface intakes. Disinfection is based on the bactericidal effect of the UV lamps in the sterilizer. The principle of their bactericide action is the absorption of UV light by the DNA structures of microorganisms. Proper selection of UV rays strength and exposure time can kill almost all microorganisms by destroying their DNA.

Water treatment with UV Irradiation is one of the most effective and safest methods of water purification because water is not purified by chemical compounds. Another advantage is the lack of influence on water taste and smell. Depending on the water demand, sterilizers can be equipped with 1 to up to 8 lamps. Lamps used in IBO sterilizers are manufactured by Philips and their service life is 8000h. The smallest sterilizers are designed for 1 l/min. flow, the largest available on request for flow up to 3600l/min. When using sterilizers with UV lamps, it is important to leave the lamps on even if there is no water flow because frequent on/off switching significantly reduces their life.

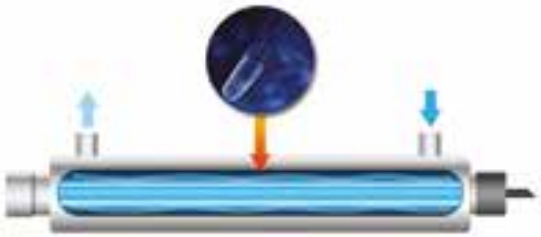
It should be remembered that the efficiency of the sterilizer depends largely on the quality of the water that flows through it, so we recommend to install in-line filters upstream the sterilizer to remove any mechanical impurities, such as sand. Moreover, the iron content and water hardness also affect the effectiveness of water purification. The iron in the water should not exceed 0.1mg/l while the hardness of the water should be less than 110 CaCo3mg/l.

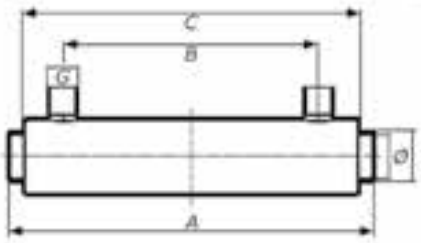
APPLICATION:

- Filtration of utility water
- Filtration of water in fish keeping
- Filtration of water in garden ponds
- Filtration of water in swimming pools

DETAILS:

- Protective tube made entirely of quartz for low suppression of radiation.
- Simple operation and quick radiator replacement
- Lamp life time: over 8000h
- Transformer with grounding cable (230 V), O-rings and adapters included
- AISI 304 stainless steel body
- Working pressure up to 10 bar
- Inlet/outlet type - outer thread.





Flow l/min	Power (W)	Quartz body	UV Lamp	Lamp head diameter	Number of lamps	Lamp	Dimensions (mm)				
							A	B	C	G	Ø
1	4	230	150	16	1	PHILIPS	236		164	1/4"	2"
2	6	230	227	16	1	PHILIPS	236		164	1/4"	2"
4	11	296	227	16	1	PHILIPS	300		227	1/4"	2"
8	16	360	303	16	1	PHILIPS	330	305	260	1/2"	2 1/2"
24	25	498	452	26	1	PHILIPS	470	448	378	1/2"	2 1/2"
40	30	955	895	26	1	PHILIPS	927	905	835	3/4"	2 1/2"
48	55	955	895	26	1	PHILIPS	927	905	835	3/4"	2 1/2"
90	110	955	895	26	2	PHILIPS	927	905	835	1"	5"
135	165	955	895	26	3	PHILIPS	927	905	835	1 1/2"	5"

WELL FITTINGS / HOSES

CABLE CONNECTION
INOX STEEL WIRE ROPE
POLYPROPYLENE ROPE
WELL TOP PLATES
WELL COUPLING
CENTRALIZER / TORQUE ARRESTOR
PRESSURE REGULATORS
NON-RETURN VALVES
FIVE-WAY DELIVERY OUTLET
PRESSURE GAUGE
WELL FILTERS
ELECTRICAL CABLES
GARDEN HOSES
FLEXIBLE GARDEN HOSE
ANTI-VIBRATION HOSES/CONNECTORS
SUCTION HOSES – REINFORCED
SUCTION HOSES - HELIX
DISCHARGE HOSES
SWIMMING POOL HOSES

CABLE CONNECTION

When purchasing deep well and submersible pumps, our customers can choose to extend the electric cable by any length using a sealed cable connection. Depending on:

- pump motor power
- number of wires
- cable length to be connected,

our consultants will find the power cable with proper cross-section.

Each connection is manufactured in three stages:

1. Each wire is soldered separately to ensure proper current flow.
2. After soldering, each wire is sealed with a heat-shrink tubing filled with glue. Then, the tubing is heat-sealed.
3. During the last stage, outer heat-shrink insulation is applied with more glue, which when heated fills the entire cable connection.

This procedure of connecting the cable guarantees long-term tightness and faultless operation.
All connectors made by Dambat are covered by our warranty conditions.

INOX STEEL WIRE ROPE, POLYPROPYLENE ROPE

INOX ROPE: 7x7 stainless steel strand cores. The ropes can be used to suspend deep well pumps in wells and boreholes. The rope is made of AISI 304 stainless steel what makes is fully resistant to weather conditions. The ropes are supplied with stainless steel brackets and aluminium clamps.

PP ROPE: braided ropes made of polypropylene are flexible and lightweight alternatives to steel ropes. PP ropes are rotproof, resistant to oil, water, petrol and most chemicals. Polypropylene ropes are the only ropes that are not submersible. Ropes are available in sizes: 6mm, 8mm, 10mm.

PARAMETERS

Name	Diameter (mm)	Cross-section	Max. Load (m)	Tensile strength (N/mm2)	Weight (kg)	Breaking load (kN)
3mm INOX Rope	3	7x7	520	1770	0,037	5,07
6mm PP Rope	6	oplot	500	21%	0,017	5,0
8mm PP Rope	8	oplot	900	21%	0,030	9,0
10mm PP Rope	10	oplot	1200	21%	0,045	12,0

WELL TOP PLATES

Covers used for tight closing of deep well casing pipes through which the discharge pipes go in. Tight closing is provided by the gasket forced against the casing pipe. Tightly sealed well is protected against contamination and penetration of surface water. The well top plates are available in three versions made of plastic, steel and galvanized cast iron. All well top plates are equipped with a metal hook to support the pump, and a cable gland for tight routing of the power cable. Different sizes of connection threads allow the connection of pipes of different diameters. Depending on the design, well top covers are suitable for 110mm to 160mm casing pipes, i.e. for 4" and 6" wells.

Well top cover includes:

- Hydraulic connection (gasket) for connecting the discharge pipe
- Cable gland for connecting and routin
  the power cable through the well top cover
- Metal hook for attaching the pump support rope.
- Male thread or access hole tightened with a gasket.
- Seal for tightening the discharge pipe and the casing pipe.

Well seal type			
SIZE	*Male thread (galvanized)*	*Access hole (galvanized)*	*Access hole (plastic)*
110/25 mm	x		
110/32 mm	x	x	
110/40 mm		x	
125/25 mm	x		
125/32 mm	x	x	
125/40 mm	x		
160/40 mm	x	x	x
160/50 mm	x	x	x
160/60 mm		x	

WELL COUPLING

The well coupling is an innovative solution for easy installation/removal of deep well pumps in wells.

The brass coupling allows the pump to be hung directly in the well hole without the need for discharge pipe to be extended above the surface. Thus, it protects the well against contamination or penetration of surface water. Also, there is no need to use a concrete well casing where a discharge
pipe and a casing pipe with a well top plate are mounted.

The water drainage pipe is located below frost point and has a direct connection to the housing via a brass adapter. The coupling thus makes installation of deep well pumps very easy. All components are buried.

COUPLING FEATURES

- no need to use a concrete well casing and a well seal.
- protection of the well against contamination
- easy access to the well
- very easy pump removal
- suitable for 2.5"/ 3" / 3.5"/ 4" pumps
- pipeline installed below the frost line
- available in 1"and 1 1/4" sizes

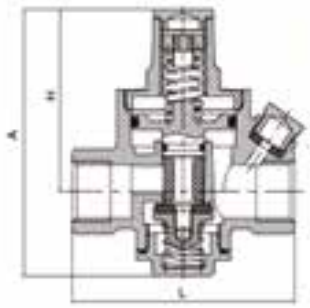
CENTRALIZER / TORQUE ARRESTOR

APPLICATION:
The centralizer is used to stabilize the pump inside the well pipe and to prevent the pump movement during the motor starting torque.

Design:
The centralizer is made of durable rubber, the shape of which can be adjusted depending on the size of the well. The centralizer is cut longitudinally and has two clamps on each end for mounting it on the discharge pipe. By bringing the centralizer clamps closer to each other, its diameter will increase and it will adapt to the diameter of the well.

Installation:
The centralizer should be mounted on the discharge pipe. To install it, tighten the clamps so it does not move along the discharge system.
It is important to tightened the top clamp more than the bottom clamp so that the pump can be easily removed if necessary. The bottom centralizer clamp should be 10-20 cm above the pump. The centralizer should be adjusted to the diameter of the well, but not too tight to allow easier lowering of the pump into the well.

Properties:
The centralizer is designed for systems with 1"to 11/4" discharge pipes and 4" to 8" casing pipes. The clamps included are made of stainless steel.



PRESSURE REGULATORS

Brass regulators designed to regulate input pressure in water and air systems. They also protect the systems against pressure spikes. Compact size and low-noise operation. Pressure regulators are available in sets with pressure gauges.

SIZE	Inlet/outlet (inch)	Weight (g)	Max. input pressure (bar)	Input pressure (bar)	Temperature (°C)	Insert	Filtr	L	H	A
DN15	½	510	16	1 - 6	0 - 85	Brass	ASI309 stainless steel	79,5	63	92
DN20	¾	530	16	1 - 6	0 - 85			79,5	63	92
DN25	1	786	16	1 - 6	0 - 85			85	78	112
DN32	1¼	830	16	1 - 6	0 - 85			85	78	115
DN40	1½	1603	16	1 - 6	0 - 85			96	102	150
DN50	2	1974	16	1 - 6	0 - 85			115	102	178

NON-RETURN VALVES

SIZE	Weight (g)	Temperature (°C)	Max. input pressure (bar)	Insert
½	130	(-15) - 120	16	Brass
¾	205	(-15) - 120	16	
1	250	(-15) - 120	16	
1¼	410	(-15) - 120	16	
1½	660	(-15) - 120	16	
2	1000	(-15) - 120	16	

FIVE-WAY DELIVERY OUTLET

Brass outlet for mounting pressure fittings.
Connection thread diameter: 1"- pump connection, 1" delivery system connection, 1"- anti-vibration hose connection to the tank, ¼" - pressure gauge connection, ¼"- pressure switch connection. Available outlets are 70 mm and 90 mm high.

Connection / height	70 mm	80 mm	90 mm	120 mm
Pump connection	1"	1 1/4"	1"	1"
Delivery system connection	1"	1 1/4"	1"	1"
Anti-vibration hose connection	1"	1 1/4"	1"	1"
Pressure gauge connection	1/4"	1/4"	1/4"	1/4"
Pressure switch connection	1/4"	1/4"	1/4"	1/4"

PRESSURE GAUGE

The pressure gauge is used to measure the pressure in the system. Operating range is from 0 to 10 bar, ¼" inlet/outlet with male thread.

STOP VALVE FOR PRESSURE VESSELS

The valve is intended for mounting pressure vessels in central heating and hot water systems. Pressure vessels can be quickly mounted or dismounted for maintenance or replacement. The valve prevents the liquid outflow from the system during vessel removal.
Max. pressure: 10 bar Max. temperature 100oC

FAST CLAW COUPLING

Couplings for installation with suction hoses. They are resistant to negative pressure created between the pump and the hose. Available sizes:

- 3/4"
- 1"
- 1 1/4"
- 1 1/2"

Couplings are made of brass and come with rubber seal.

WELL FILTERS

Drill pipe filters for dredging ring wells or used as an alternative, designed to protect pumps against damage caused by sand. The filters can be used with various types of pumps, from hand pumps to surface pumps and booster sets, both single-stage and multi-stage. The screen is not suitable for ramming; it should be anchored freely in the ground.

The filter consists of 3 components:

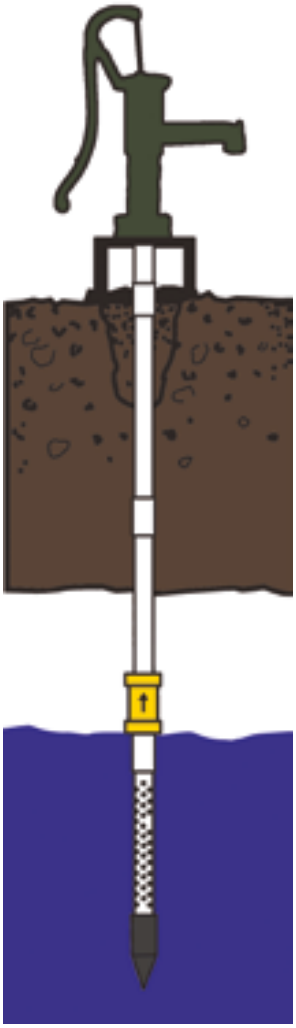
- A cast-iron mandrel with a point on one side
- Drill pipe made of galvanized steel
- Threaded end for water system connection

PARAMETERS

- Overall length: 130cm
- Point length: 20cm
- Filter diameter: 50 mm
- Connection diameter: 1¼"

APPLICATION

- Ring well dredging
- Ring well filtration
- An alternative for ring wells



ELECTRICAL CABLES

Nominal voltage	450/750V
Conductor material	copper
Number of conductors	3 / 4
Identification of conductors	Colour
Type of cores	Multi-strand (flexible)
Conductor insulation	Rubber (EPR)
Conductor class	Class 5 = flexible
Sheathing material	Rubber (EPR)
Permissible cable temperature	(-25) - (+60)
Sheathing colour	Black
Shape	Round
Sheating	chloroprene rubber, oil resistant, flame retardant

Model (number of conductors x conductor diameter) (mm²)	*Number of conductors/ Sheathing colour*	
	Service	Protective
	2 (brown, blue)	1 (yellow-green)
	Outer diamater (mm²)	
3 x 1,5mm²	9,5	
3 x 2,5mm²	10,5	
3 x 4mm²	13	
3 x 6mm²	14,5	
3 x 10mm²	22,4	

Model (number of conductors x conductor diameter) (mm²)	*Number of conductors/ Sheathing colour*	
	Service	Protective
	3 (brown, black, blue)	1 (yellow-green)
	Outer diamater (mm²)	
4 x 1,5mm²	10,5	
4 x 2,5mm²	12,5	
4 x 4mm²	14,5	
4 x 6mm²	16,2	
4 x 10mm²	21,5	

H07RN-F rubber heavy duty power and control cable 450/750 V, for in industrial and agricultural applications.
Class 5, from -25°C to 60°C, oil resistant, flame retardant

Compliance: PN-EN 60228 / PN-EN 60332-1

FEATURES
- Resistant to low temperatures
- Resistant to mechanical damage
- Oil resistant
- UV radiation resistant

APPLICATION:
- Hand and power operated equipment
- Medium mechanical loads
- Industrial and agricultural applications
- In dry, wet and humid environments

Depending on the batch, the dimensions may differ from the data specified below.

MOTOR TYPE	*Power (kW)*	*1 mm²*	*1,5 mm²*	*2,5 mm²*	*4 mm²*	*6 mm²*	*10 mm²*	*16 mm²*
230V	0,37	50m	75m	125m				
230V	0,55	38m	57m	95m	152m			
230V	0,75	30m	45m	45m	120m	175m		
230V	1,1	22m	33m	53m	85m	127m	210m	
230V	1,5	23m	38m	63m	92m	154m	246m	
230V	2,2	28m	45m	67m	112m	180m		
400V	0,37	240m						
400V	0,55	164m	246m					
400V	0,75	133m	200m	233m				
400V	1,1	97m	146m	244m	390m			
400V	1,5	72m	109m	180m	290m	435m		
400V	2,2	51m	78m	130m	207m	310m	516m	
400V	3	41m	62m	104m	167m	250m	416m	
400V	4	31m	46m	77m	124m	186m	310m	496m
400V	5,5	33m	56m	90m	135m	225m	360m	
400V	7,5	25m	66m	100m	165m	270m		

GARDEN HOSES IBO GARDEN

Garden hoses made of durable materials, with high resistance to mechanical damage and UV radiation. The hoses are resistant to various weather conditions. Due to their resistance over a wide temperature range, hoses can be used both in the summer and mild winter. An additional advantage of the hoses is their flexibility that prevents the hose from cracking and makes its operation much easier.

SPECIFICATION

- PVC materials
- Can be used all year round, operating temperature range –10/+50°C
- Three-layer green hose
- Cross-woven polyester braid
- Resistant to UV radiation
- Risk of settling of algae inside the hose has been eliminated
- Flexible structure
- Burst pressure: 20 bar

Hoses are made of high-quality PVC. It is strong and exceptionally durable, also in terms of resistance to high temperatures.

- Layer I - inner, protective layer made of black PVC, resistant to UV, prevents settling of algae inside the hose
- Layer II - cross-woven polyester braid
- Layer III - reinforced, transparent-green outer layer made of soft PVC

APPLICATION:

- for watering
- for pumping water
- for sprinkling

PARAMETERS

Diameter	Length		
½"	20 m	20 m	
¾"	30 m	30 m	30 m
1"	50 m	50 m	50 m

FLEXIBLE GARDEN HOSE

Flexible garden hose expands up to three times of its length under water pressure. Comes with a gun featuring 7 modes of operation and a trigger lock for continuous operation without holding the gun in your hand. The hose does not kink when expanding.
We offer three hose lengths:

- initial length 10m – expandable to 30m
- initial length 15m – expandable to 45m
- initial length 20m – expandable to 60m

ANTI-VIBRATION HOSES/CONNECTORS

IMAGE: Anti-vibration hose

IMAGE: Anti-vibration connection

Anti-vibration hoses with elbow:
Flexible anti-vibration hoses made of EPDM rubber approved for contact with drinking water, in a metal braid protecting the discharge pipe. Hoses have brass connections - an elbow with a rotary union and gasket on one end, and a nipple on the other end. The 30 cm hose has an external diameter of 19 mm and a female x male thread (1"x 1/2"). The 54 cm hose has an external diameter of 26 mm and a female x male thread (1"x 1"). The 60 cm, 70 cm and 80 cm hoses have an external diameter of 32 mm and a female x male thread (1"x 1").

APPLICATION:
Water distribution in heating and air-conditioning systems, domestic water systems. Flexible connections of pumps and pressure tanks, and all connections for distributing water of up to 90°C.

Anti-vibration connectors (straight)
Flexible anti-vibration connectors made of EPDM rubber approved for contact with drinking water,
in a metal braid protecting the discharge pipe. Connectors with brass connections - an union with a gasket on one end, and a nipple on the other end.
The offer includes 30, 40, 50, 60, 80, 100 cm connectors with female x male (1" x 1") threads.

APPLICATION:
Water distribution in heating and air-conditioning systems, domestic water systems. Flexible connections for distributing water of up to 90°C.

PARAMETERS

Elbow hoses	Diameter	Straight connectors	Diameter
30 cm	18 mm	30 cm	32mm
54 cm	27 mm	40 cm	
60 cm	32 mm	50 cm	
70 cm		60 cm	
80 cm		70 cm	
100 cm		80 cm	

SUCTION HOSES

4 and 7m plastic suction hoses for supplying water from various surface intakes using suction pumps.

The hose has a suction strainer on one end to prevent larger dirt, such as leaves from entering the system. On the other end, the hose has a 1" union joint to connect the hose to the pump inlet.

APPLICATION:
Water intake from dug and deep wells, lakes, rivers and reservoirs.

SUCTION HOSES – REINFORCED

Transparent light weight steel-wire-reinforced small-bend-radius hose. Reinforced hoses are used as suction and discharge hoses. They are resistant to negative pressure and can be used in adverse weather conditions.

APPLICATION:
Suitable for sucking and transporting water, oil and powder in manufacturing plants. Reinforced hoses are used in agriculture, civil engineering, irrigation, and industrial applications in systems supplying water and oil to installations and equipment. It can be used instead of rubber hoses and metal pipes.

Material: Helix PVC: steel wire
OPERATING TEMPERATURE: from -5 °C to +65 ° C

FEATURES:
- Very smooth inner wall and outer surface
- Reinforced with steel wire spiral
- Good resistance to crushing, abrasion and most chemicals
- Excellent resistance to pressure and negative pressure
- Non-toxic and odourless

PARAMETERS

Reinforced suction hose					
Diameter	*Inner (mm)*	*Outer (mm)*	*Length (m/roll)*	*Operating pressure (bar)*	*Test pressure (bar)*
3/4"	19	23	50	5	13
1"	25	30	50	5	13
1-1/4"	32	38	50	4	12
2"	50	58	50	4	12
3"	76	90	30	4	12

SUCTION HOSES - HELIX

Lightweight, flexible hose for delivery and suction with increased resistance to UV radiations.
Their important feature is resistance to negative pressure.
Helix hoses have lower weight compared to reinforced hoses.

APPLICATION:
In industrial applications, agriculture, for irrigation and civil engineering. It can be used instead of rubber hoses and metal pipes. It is suitable for transporting pellets, powder, grain, water in irrigation systems, as well as water and oil in industrial systems.

Material: Helix PVC: PVC wire
OPERATING TEMPERATURE: from -5 °C to +65 °C

FEATURES:
- Very smooth inner wall and outer surface
- Reinforced with steel wire spiral
- Good resistance to crushing, abrasion and most chemicals
- Excellent resistance to pressure and negative pressure
- Non-toxic and odourless

PARAMETERS

UV resistant helix suction hose						
Diameter	*Inner (mm)*	*Outer (mm)*	*Length (m/roll)*	*Operatin pressure (bar)*	*Test pressure (bar)*	*Negative operating pressure (bar)*
3/4"	19	21	30	6	18	1,5
1"	25	27,5	30	6	18	1,5
1-1/4"	32	34,5	30	6	18	1,5
1-1/2"	38	41	30	5	16	1,5

DISCHARGE HOSES

IMAGE: ECO Hose

IMAGE: Waven hose

IMAGE: PVC Hose

IMAGE: Woven hose with fast connection

Flexible discharge hoses for pumping water and sewage. Available versions:

- Eco flexible hose - blue discharge hose with a maximum permissible pressure of 2 bar, in 50m sections, available sizes: 1" / 2"
- PCV hose - blue discharge hose with a maximum permissible pressure of 2 bar, in 50m sections.
- Available sizes: 04/09/20172/2.5/3
- With the weave braid (fire hose) and the weave braid with fast connections - a white hose with a maximum permissible pressure of 8 bar. Available sizes: 1.5" / 2"

APPLICATION:
Drainage of excavations and flooded rooms, pumping sewage, water from lakes, ponds, rivers with submersible pumps.

PARAMETERS

Model	1"	1 1/4"	1 1/2"	2"	3"	Max. pressure
Eco rubber hose	50m	x	x	50m	x	2 bar
Blue rubber hose	50m	50m	50m	50m	50m	2 bar
Woven hose	30m	x	30m	20m / 30m	x	8 bar
Woven hose with fast connections	x	x	x	20m / 30m	x	8 bar
Woven hose with MAX fast connections	x	x	x	20m / 30m	x	8 bar

SWIMMING POOL HOSES

Swimming pool hoses - rolls:

Swimming pool hoses designed for connecting various pumping, filtering, vacuum and cleaning accessories and fittings. The hoses are made of high density polyethylene (HDPE), which provides flexibility, low weight and high durability. Material used ensure resistance to UV radiation, chlorine and adverse weather conditions.
Hoses are available in 50m rolls with 32mm and 38mm diameter, and any length being a multiple of 1m can be cut off.

Swimming pool hoses - sections:

Swimming pool hoses designed for connecting various pumping, filtering, vacuum and cleaning accessories and fittings. Hoses are available in 50m sections with 32mm and 38mm diameter with swivel connectors.
Operating temperature range: from -15 ° C to + 60 ° C Features:

- Very flexible and floating
- Smooth inner surface
- Crush resistant structure
- High tightness
- Small bend radius
- Tear resistance
- High tensile strength
- Available in rolls or 11m sections with adapters.

PARAMETERS

Model	Diameter	Length	Adaptery	Can be cut to length	Operating negative pressure	Test pressure
32 mm hose (roll)	1 1/4"	50m	No	Yes	0,8bar	4bar
38mm hose (roll)	1 1/2"	50m	No	Yes	0,8bar	4bar
11m/32 mm hose	1 1/4"	11m	Yes	No	0,8bar	4bar
11m/38mm hose	1 1/2"	11m	Yes	No	0,8bar	4bar

Hose diameter (mm)	Nozzle diameter (mm)	Pressure at the nozzle (bar)	Flow											
		atm	l/min	150m	200m	250m								
50	10	2	130	3,6	4	4,4								
		3	160	5,2	5,8	6,3								
	12	3	215	6,3	7,3	8,1								
		4	240	8,2	9,4	10,5								
	14	4	310	10,4	11,8	14								
		5	350	12,8	15,3	17,5								
		atm	l/min	200m	250m	300m								
63	14	2	200	3,5	3,8	4,1								
		3	245	4,9	5,4	5,8								
	16	3	310	5,6	6,5	7,2								
		4	360	7,8	8,4	9,4								
	18	4	440	9,7	10,5	12								
		5	500	11,5	12,9	14,7								
		atm	l/min	200m	250m	300m	330m	350m						
70	16	2	230	3,7	3,8	4,1	4,2	4,3						
		3	280	5,3	5,5	5,7	5,8	5,9						
	18	3	365	6,4	6,8	7,1	7,3	7,4						
		4	420	8,3	8,8	9,2	9,4	9,6						
	20	4	515	10,2	10,9	11,5	11,8	12						
		5	550	12,6	13,4	13,9	14,3	14,6						
		atm	l/min	200m	250m	300m	330m	350m	400m					
75	16	2	230	3	3,2	3,4	3,6	3,6	3,8					
		3	280	4,3	4,5	4,8	5	5,1	5,4					
	18	3	360	4,7	5,1	5,5	5,9	6,1	6,5					
		4	415	6,1	6,6	7,1	7,6	8	8,5					
	20	4	515	6,9	7,8	8,5	9,1	10	10,5					
		5	550	8,5	9,5	10,5	11,3	12	12,9					
		atm	l/min	200m	250m	300m	330m	350m	400m	420m				
82	18	2	290	3	3,2	3,4	3,6	3,7	3,9	4,1				
		3	350	4,2	4,5	4,8	5,1	5,3	5,6	5,9				
	20	3	440	4,7	5	5,4	5,9	6,3	6,7	7				
		4	515	6	6,4	7	7,6	8,2	8,7	9,2				
	22	5	680	8,2	9	10	11,1	12	13	13,8				
		6	750	9,7	10,6	11,8	13,2	14,2	15,4	16,4				
		atm	l/min	200m	250m	300m	330m	350m	400m	420m	450m			
90	22	3	550	4,5	4,8	5,2	5,3	5,5	5,8	6,1	6,3			
		4	620	5,8	6,3	6,7	6,9	7,1	7,6	7,9	8,1			
	24	4	750	6,3	7	7,6	7,8	8,2	8,8	9,2	9,6			
		5	820	8	8,6	9,3	9,6	10	10,9	11,4	11,8			
	26	5	950	8,7	9,7	10,7	11,1	11,7	12,8	13,5	14,1			
		6	1050	10,3	11,5	12,7	13,1	13,9	15,2	16	16,7			
		atm	l/min	200m	250m	300m	330m	350m	400m	420m	450m	500m		
100	26	3	750	4,7	5	5,3	5,6	5,7	6,1	6,3	6,5	6,9		
		4	850	6,1	6,4	6,9	7,2	7	7,9	8,1	8,5	9		
	28	4	1000	6,7	7,1	7,7	8,1	8,3	9	9,6	9,8	10,5		
		5	1120	8,2	8,7	9,4	9,9	10,2	11,1	11,8	12	12,9		
	30	5	1250	9	9,7	10,6	11,2	11,6	12,8	14,1	14	15,2		
		6	1400	10,7	11,5	12,6	13,4	13,8	15,2	16,7	16,6	18,1		
		atm	l/min	200m	250m	300m	330m	350m	400m	420m	450m	500m	550m	600m
110	28	3	850	4,5	4,7	4,9	5	5,3	5,6	5,8	6	6,5	7	7,4
		4	990	5,8	6,1	6,4	6,6	6,8	7,2	7,5	7,8	8,4	9,1	9,6
	30	4	1180	6,1	6,5	7	7,2	7,5	8,1	8,5	8,9	9,6	10,5	11,2
		5	1250	7,5	7,9	8,6	8,9	9,2	9,9	10,4	10,9	11,8	12,9	13,8
	32	6	1600	9,6	10,2	11,1	11,5	12,2	13,2	13,9	14,7	16,2	17,8	19,1
		7	1710	11,1	11,8	12,9	13,1	13,3	15,3	16	17	18,7	20,6	22,1
125	32	4	1290	5,7	5,9	6,2	6,4	6,6	6,9	7,1	7,3	7,9	8,3	8,9
		5	1450	7	7,3	7,7	7,8	8	8,5	8,8	9	9,6	10,3	10,9
	34	6	1750	8,7	9,2	9,8	10	10,3	11	11,4	11,8	12,7	13,7	14,7
		7	1920	10,1	10,6	11,3	11,6	12	12,8	13,2	13,6	14,7	15,8	17
	36	7	2155	10,7	11,5	12,2	12,6	13	14	14,5	15,1	16,5	17,8	19,3
		8	2315	12,1	12,9	13,8	14,2	14,8	15,9	16,5	17,1	18,7	20,2	22
140	34	5	1650	6,5	6,7	6,9	7,1	7,3	7,6	7,9	8,2	8,4	8,7	9,1
		6	1820	7,7	7,9	8,2	8,4	8,6	9	9,4	9,6	9,9	10,3	10,8
	36	6	2050	8,1	8,3	8,7	8,9	9,1	9,6	10	10,3	10,7	11,2	11,8
		7	2150	9,3	9,6	10	1,2	10,5	11,1	11,5	11,9	12,4	13	13,7
	38	7	2400	9,7	10,2	10,6	10,9	11,2	11,9	12,4	12,9	13,5	14,2	5,1
		8	2600	10,8	11,2	12	12,3	12,7	13,5	14,1	14,7	15,4	16,2	17,2
160	34	5	1650			6,4	6,5	6,6	6,7	6,8	6,9	7,1	7,2	7
		6	1820			7,5	7,7	7,8	8	8,1	8,2	8,4	8,6	8,9
	36	6	2000			7,8	7,9	8,1	8,3	8,4	8,6	9,1	9,3	9,6
		7	2150			8,9	9,1	9,3	9,6	9,8	9,9	10,2	10,5	10,9
	38	7	2450			9,3	9,5	9,8	10,1	10,3	10,5	11,1	11,4	11,9
		8	2700			10,7	11	11,2	11,5	11,7	11,9	12,6	13	13,5
	40	8	2800			10,2	10,8	11,2	12	12,8	13,2	14	15	16,2

The table shows pressure and flow losses taking into account the water discharge resistance of a rigid, horizontal metal pipeline.

WATER FLOW		NOMINAL DIAMETER in mm and inches																	
m^3/h	l/min	Loss pre 100 m	"15 1/2""	"20 3/4""	"25 1""	"32 1 1/4""	"40 1 1/2""	"50 2""	"65 2 1/2""	"80 3""	"100 4""	"125 5""	"150 6""	"175 7""	"200 8""	"250 10""	"300 12""	"350 14""	"400 16""
0,6	10	head loss (m)	17,0	4,0	1,5	0,5	0,2												
0,9	15		34,8	8,4	2,9	0,9	0,3												
1,2	20		58,6	14,5	4,9	1,6	0,5	0,2											
1,5	25		89,0	22,0	7,5	2,4	0,8	0,3											
1,8	30		125,0	31,0	11,0	3,3	1,2	0,4											
2,1	35		166,1	40,0	14,3	4,3	1,5	0,5											
2,4	40			52,0	18,1	5,3	1,9	0,7	0,2										
3	50			78,5	27,0	8,0	2,8	0,9	0,3										
3,6	60			110,2	37,2	11,9	3,9	1,4	0,4										
4,2	70			145,8	50,0	15,1	5,1	1,8	0,5										
4,8	80			188,3	64,1	19,5	6,5	2,3	0,6										
5,4	90				78,2	24,1	8,0	2,8	0,8	0,3									
6	100				95,4	29,0	9,9	3,4	0,9	0,4									
7,5	125				144,0	44,1	15,0	5,0	1,5	0,5									
9	150					60,5	20,8	7,0	2,0	0,7	0,3								
10,5	175					81,0	27,5	9,5	2,7	1,0	0,4								
12	200					105	35,0	12,1	3,4	1,3	0,5								
15	250					155,5	52,8	18,0	5,0	1,9	0,6	0,20							
18	300						73,9	25,2	7,0	2,6	0,9	0,3							
24	400						125	42,1	11,9	4,5	1,5	0,5	0,2						
30	500						189	63,9	18,3	6,5	2,3	0,8	0,3						
36	600							89,5	25,0	9,5	3,3	1,2	0,5	0,2					
42	700							119,5	33,5	12,0	4,3	1,4	0,6	0,3					
48	800							153,2	42,5	15,5	5,3	1,8	0,8	0,4					
54	900							189,3	54,0	19,5	6,5	2,3	0,9	0,5					
60	1000								64,0	24,0	7,9	2,8	1,1	0,6	0,3				
75	1250								97,0	35,6	12,0	4,0	1,7	0,8	0,4				
90	1500								135,0	50,0	16,9	5,7	2,4	1,1	0,6				
105	1750								180,0	65,0	22,4	7,5	3,2	1,5	0,8				
120	2000									85,0	29,0	9,8	4,0	1,9	1,0	0,4			
150	2500									128,0	43,0	14,9	6,0	2,9	1,5	0,5			
180	3000										60,0	20,5	8,5	4,0	2,2	0,7	0,3		
210	3500										80,0	27,5	11,5	5,3	2,9	1,0	0,4		
240	4000										103,0	35,5	14,5	6,9	3,5	1,3	0,5		
300	5000											52,5	22,0	10,5	5,4	1,9	0,8		
360	6000											74,0	30,0	14,5	7,5	2,6	1,1		
420	7000												40,0	19,0	10,0	3,4	1,4	0,7	
480	8000												52,0	24,0	13,0	4,4	1,8	0,9	
540	9000												65,0	30,5	14,0	5,4	2,2	1,1	0,6
600	10000													37,0	19,0	6,5	2,7	1,3	0,7

Component	*NOMINAL DIAMETER in mm and inches*												
	"25 1""	"32 1 1/4""	"40 1 1/2""	"50 2""	"65 2 1/2""	"80 3""	"100 4""	"125 5""	"150 6""		"200 8""	"250 10""	"300 12""
Valve			0,3	0,3	0,3	0,6	0,6	0,9	1,2		1,5	1,8	
Non-return valve	1,5	2,1	2,7	3,3	4,2	4,8	6,6	8,3	10,4		13,5	16,5	19,5
45° elbow	0,3	0,3	0,6	0,6	0,9	0,9	1,2	1,5	2,1		2,7	3,3	3,9
90° elbow	0,6	0,9	1,2	1,5	1,8	2,1	3	3,6	4,2		5,4	3,6	8,1

Pressure loss / discharge resistance when using galvanized steel pipeline.
Pressure losses along the 100 m horizontal section
Pressure loss when using a different pipeline (ratio) Cast iron pipeline x 1.4
Stainless steel pipeline x 0.8
Aluminium pipeline x 0.7
PE / PVC pipeline x 0.65

Pressure systems

IBO products are a reference for quality and reliability in the pump sector in Poland.

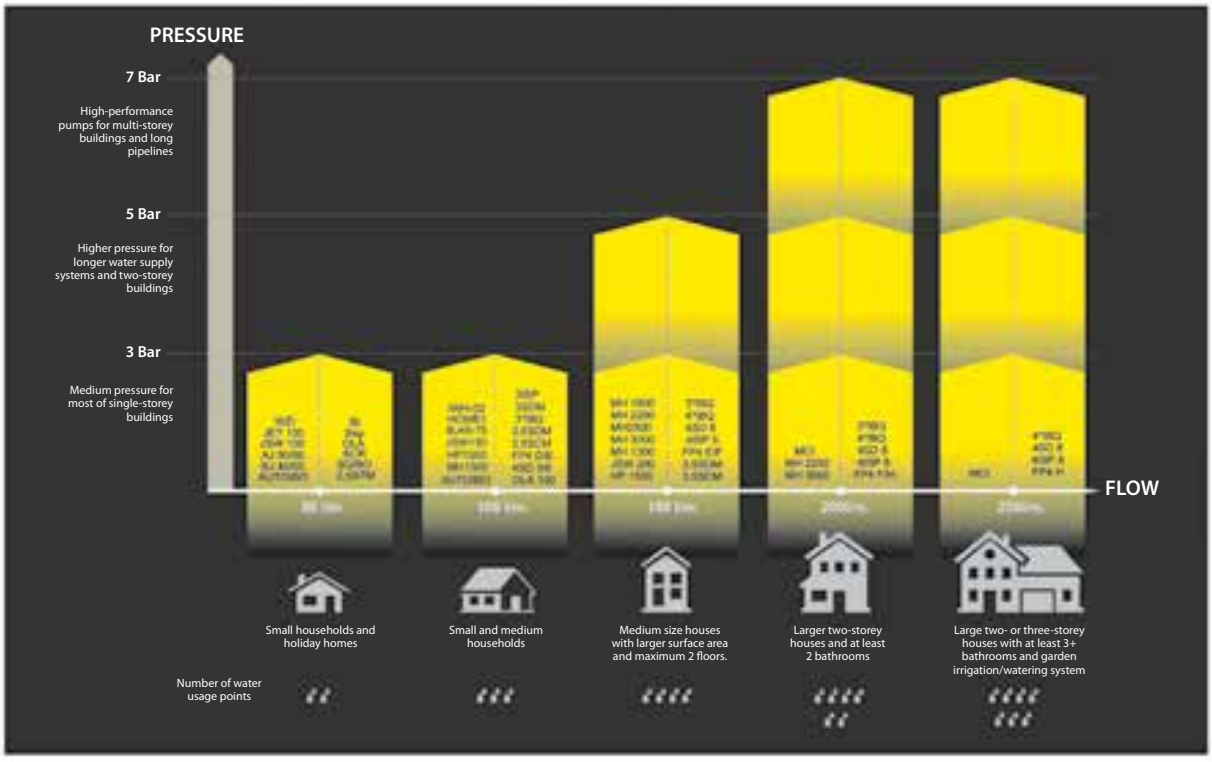
Dambat offers a wide range of pressure systems, therefore we are able to deliver products that are perfectly adapted to customer requirements. IBO products can be adapted to virtually every household application and budget.

The selection of a product that is the most suitable for a given application depends on many factors, including:

- **What is the water demand (flow in l/min. or m^3/h)?**
  The demand will largely depend on the number of taps or pressure points that can be used simultaneously.
- **What is the pressure demand?**
  Due to losses during pumping through both vertical and horizontal sections of the pipeline, as well as during supplying water at a certain pressure to higher floors or in larger systems, the demand for pressure generated by the pump will be greater than in case of single-family houses and small systems.

A simple diagram to assist in the selection of suitable pumps is presented below. It takes into account flow and pressure demand depending on the size of the building and the number of water usage points.

Diagram for selecting device parameters



Sewage pumps

Dambat offers a wide range of submersible pumps for individual, commercial, agricultural and industrial applications. IBO pumps are reliable devices monitored at every stage of manufacturing process, made of robust materials, which results in increased durability compared to competing products.

in order to make the installation of devices and their operation easy and faultless, Dambat offers a wide range of devices with various parameters and features suitable for different systems. Selected single-phase pumps are available with and without a float switch. Some sewage pumps can be installed with a guide rail system.

APLICATION

Type of impurities:	Pump type	Pumps for clean water	Pumps for slightly contaminated water (swimming pool, rainwater, drainage of flooded rooms)	Pumps for dirty water contaminated with solids of up to 30 mm diameter. (swimming pool, rainwater, drainage of flooded rooms)	Pumps for dirty water contaminated with solids with diameter from 30 mm to 50 mm (slurry, liquid waste, sewage)	Pumps with cutting system for domestic raw sewage (liquid waste, sewage)	Pumps for agricultural and industrial for raw sewage (slurry, liquid waste, sewage)	Pumps for dewatering and drainage (drainage ditches, construction sites, mines, tanks containing sand or sludge)	Pump for slurry contaminated with solids (raw sewage, tanks with sediments)
Water from wells, rivers, lakes	MULTI, IP, NEMO	√	◊	◊	◊	◊	◊	◊	◊
Rainwater	IP, IPE, IPK, IP INOX, H-SWQ, IPC	√	√	◊	◊	◊	◊	◊	◊
Drainage/ dewatering.	WQX, SWQ PRO, SWQ, F-SWQ, 25-KBFU-0,45	√	√	◊	◊	◊	◊	◊	◊
Dirty water Liquid waste	SN-450, MAGNUM, WQF	√	√	√	◊	◊	◊	◊	◊
Faecal matter Drainage/ dewatering	WQ PRO, SWQ SEPTIC, BIG, WQ PROFESIONAL	√	√	√	√	◊	◊	◊	◊
	CTR, FURIATKA, V, WQI, SWQ1300, SWQ2200	√	√	√	√	√	◊	◊	◊
	KRAKEN, UP, UP-H, ZWQ	√	√	√	√	√	√	◊	◊
	KBFU	√	√	√	◊	◊	◊	√	◊
Sediments Slurry	MWQ	√	√	√	√	◊	◊	◊	√

Useful information

If you need assistance in selecting a pump, please check the data below and contact us.

Most of our distributors are professional companies operating in the pumping sector and having proper knowledge in scope of the selection of pumping devices and equipment. However, if you have difficulties is selecting the right device, please answer the following questions and contact us, our technical advisers will try to find a product that suits your requirements.

Please answer the following questions

1. What will the pump be used for?

- ☐ • Increasing system pressure
- ☐ • Garden watering/sprinklers
- ☐ • Irrigation
- ☐ • Heating systems
- ☐ • Sewer system/liquid waste
- ☐ • Dewatering/drainage
- ☐ • Water transfer
- ☐ • Firewater systems
- • Other (please specify)

.....

2. Required operating pressure at specified flow ..... Bar

3. Required flow at specified pressure ..... l/min or

4. What is the planned or existing water intake?

- ☐ • Deep well
- ☐ • Ring well
- ☐ • Suction pit
- ☐ • Instalacje
- ☐ • Rainwater tank (foldable)
- ☐ • River, stream, canal
- ☐ • Lake
- ☐ • Water supply system
- ☐ • Excavations
- • Other (please specify)

.....

5. Water type

- ☐ • Clean water
- ☐ • Dirty water
- ☐ • Water with sand
- ☐ • Sewage/liquid waste
- • Other (please specify)

.....

6. Deep well

Internal diameter of the well pipe ..... (mm)

At what depth is the water surface? ..... (m)

Well output (we recommend to carry out survey) ..... (l/min)

Horizontal distance of the well to the pressure tank ..... (m)

Level difference between the well opening and the destination point ..... (m)

7. Ring well

At what depth is the water surface? ..... (m)

Well output (we recommend to carry out survey) ..... (l/min)

Horizontal distance of the well to the pressure tank ..... (m)

Level difference between the well opening and the destination point ..... (m)

7. Lake

- Horizontal distance from the well to the pressure tank ..... (m)
- Level difference between the well opening and the destination point ..... (m)

8. What is the pipeline made of?

- ☐ • Galvanized
- ☐ • PCV / PE
- ☐ • Stainless steel/copper
- ☐ • Discharge hose
- • Other (please specify)

.....

9. Discharge pipe diameter ..... (mm)

10. Required power source?

- ☐ • Electric motor (230V)
- ☐ • Electric motor (40OV)
- ☐ • Electric motor (12V)
- ☐ • Internal combustion engine
- ☐ • Piston (hand) pump
- ☐ • PTO shaft
- • Other (please specify)

.....

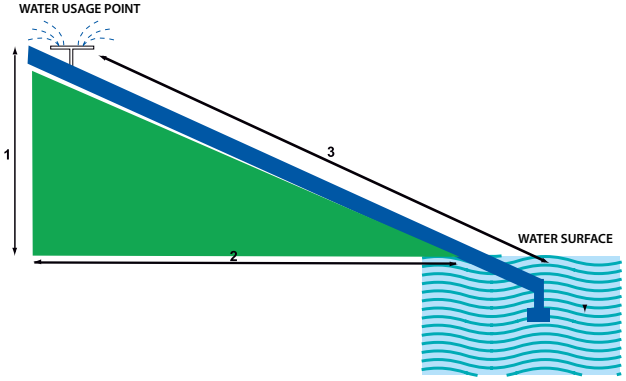
11. Is a pressure tank required? If yes, please specify what type.

- ☐ • 24
- ☐ • 50
- ☐ • 100
- ☐ • 150
- ☐ • 200
- ☐ • 300
- ☐ • 500
- ☐ • 1000

12. Is control required? If yes, please specify what type.

- ☐ • Frequency converter
- ☐ • Pressure switch
- ☐ • Automatic flow switch
- ☐ • Protection
- • Other (please specify)

.....



Sample water demand depending on application is shown below.
It should be taken into consideration that the demand may differ depending on the economic and geographical development, therefore the data presented below should be used for informative purposes to assist in the selection of the device. In order to pump water from intakes with surface pumps, negative pressure (so-called suction) is required.

In order to assist in the selection of the device, the factors that affect the suction height are presented below:

- Altitude: atmospheric pressure decreases with increasing altitude.
- Flow: the higher the flow rate through the pump, the lower the negative pressure created by the pump.
- Water temperature: the higher the water temperature, the lower the suction capacity.
- Losses: not only the vertical section on which the water surface is located but also the horizontal section should be taken into account.

The height above sea level at which the pump operates is also very important.

HOUSEHOLD	HOUSEHOLD
Shower: 8-10 l/m. at 1.4 bar	Cattle: 30-55 litres / day
Small lawn sprinkler: 15-20 l/m. at 1.4 bar	Dairy cows: 30-55 litres / day
1/2″ tap: 12-18 l/m. at 1.4 bar	Sheep: 30-55 litres / day
3/4" hose + 1/4″ nozzle: 40-50 l/m. at 2.1 bar	Pigs: 30-55 litres / day
1" hose + 3/8″ nozzle: 70-90 l/m. at 2.1 bar	Pigs: 30-55 litres / day Horses: 30-55 litres / day

WATER TEMPERATURE (° C)	HEAD LOSSES (m)
15	0
20	0,06
30	0,22
40	0,52
50	0,98
60	1,73
70	2,85
80	4,51

LENGHT		
inch	ft	cm
1,00	0,08	2,54
12,00	1,00	30,48
36,00	3,00	91,44
39,37	3,28	100,00

FLOW		
l/min	l/sec	m^3/h
10	0,17	0,60
16,7	0,28	1
60	1	3,60

VOLUME UNITS		
litre	m^3	gallon
1	0,001	0,22
1000	1	220
4,546	0,0045	1

PRESSURE			
m	kPa	bar	psi
1	9,81	0,10	1,42
10	98,1	0,98	14,2
10,2	100	1	14,5
70,4	690,8	6,9	100
101,9	999,6	10	144,7

LEVEL	*SUCTION CAPACITY*	*VOLUME*	
Sea level	6,7 m	litre	m^3
500m	6,1 m	1	0
700m	5,8 m	1000	1
1000m	5,5 m	40,546	0,0045
1500m	5,0 m	30,785	0,0038
2000m	4,5 m	280,32	0,0283

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SPARE PARTS

Full catalogue of spare parts for all IBO products can be found on **dambat.pl**,
under "**download; spare parts**" tab.
In case of any problems in finding a proper part, please contact our service centre.

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Operating parameters may vary by +/-10%.
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