



NEW! PROFESSIONAL CIRCULATION PUMP
INTELLIGENT CIRCULATOR
FOR COMMERCIAL



GEM CIRCULATION PUMP

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CIRCULATION PUMP

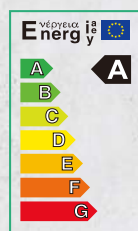
PRODUCT SERIES



INTELLIGENT CIRCULATOR FOR COMMERCIAL

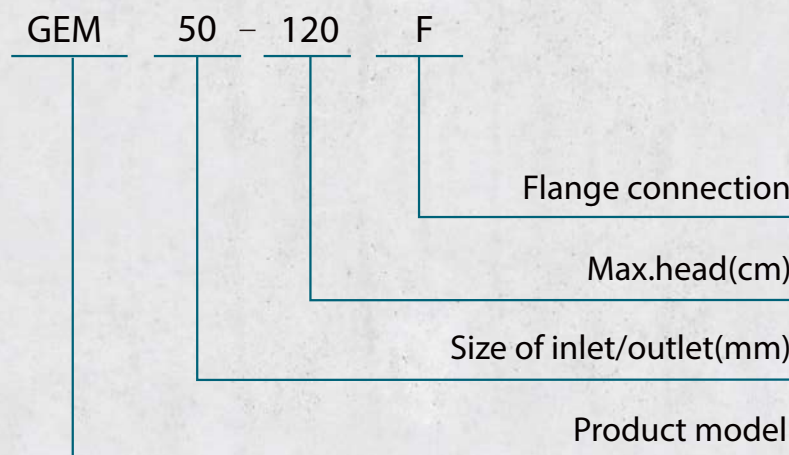
INTELLIGENT CIRCULATOR FOR COMMERCIAL

GEM series are intelligent efficiency circulation pump. Equipped with permanent magnet motor and intelligent pressure control system. It adopts canned structure, the motor stator is completely canned, the rotating parts are immersed in the conveying liquid, the liquid plays the role of cooling the motor and lubricating the bearings. The product has the characteristics such as no leakage, super quiet, energy saving, high efficiency etc.



EER 0.23

MODEL INSTRUCTION



TECHNICAL SPECIFICATIONS

Max.Power Up to 1523W	Max.Flow 68 m ³ /h	Max.Head 18 m	System pressure 10 Bar	Liquid temperature UP to +110°C
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INTRODUCING:

PRECISION COMPUTING, MULTIPLE PROTECTION

High accuracy of the algorithm

THD (Total Harmonics Distortion) 8%, power factor > 98%, power detection accuracy $\pm 3\%$



Memroy with
power restart



Fault
detection



Anti-seize
design



Overheat
protection



Overcurrent
protection

PUMP CONFIGURATION

- Motor: **High efficiency permanent magnet motor**;
- Pump shaft: **Stainless steel** shaft + **Tungsten carbide** spray treatment or brown **ceramic** shaft;
- Bearing: **Ceramic**;
- Thrust bearing: **Graphite carbon**;
- Impeller: PES + 30GF%/brass insert.

PUMP FEATURES

- Class A energy efficiency, **EEL ≤ 0.23** ;
- Permanent magnet motor intelligent frequency control;
- Proportional pressure mode;
Constant pressure mode;
Constant speed mode;
- Low noise, No leakage.

APPLICATION LIMITS

- Installed in the heating circulation system;
- Operating conditions:
Ambient temperature: **0~40°C**;
Ambient humidity: **<95%**;
Liquid temperature: **2°C~110°C**;
The ambient temperature is lower than the liquid temperature to prevent condensate liquid inside the motor;
- Liquid material: non-corrosive, non-explosive liquid, no solid particles, fiber and mineral oil;
- Use requirements: Running can not no more than **10s** without water;

INTRODUCING: YOUR PERFECT CONTROL MODE



3 Modes

Intelligent control
saves time and energy

Constant pressure mode

Moves on a constant pressure curve on demand
Maintains constant pressure, independent of flow requirements



Proportional pressure mode

on the proportional pressure curve
Adjust the pump supply pressure according to the system needs

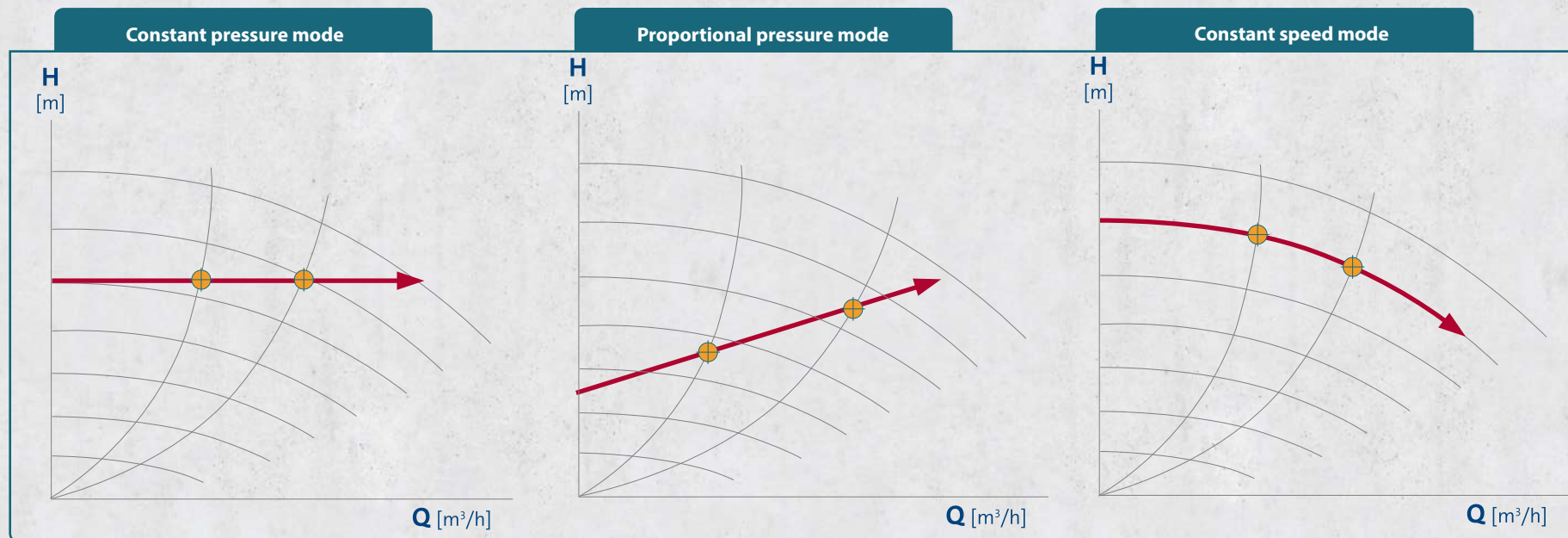


Constant speed mode

with a constant speed
operates on a constant curve



INTRODUCING: YOUR PERFECT CONTROL MODE



Constant pressure control is used to adjust pump performance based on actual system heat demand, but the pump performance curve will depend on the desired pump curve.

Proportional pressure control is used to adjust the pump performance according to the actual system heat demand, but the pump performance depends on the desired pump curve PP1, PP2 or PP3. Three gears are adjustable, namely small, medium and large.

At constant speed, the pump runs at a constant speed, independent of the actual flow demand of the system, and the performance of the pump is determined according to the required power curve.



LCD DISPLAY

Convenient human-computer interaction function



HD display



LCD human-computer interaction interface



Convenient and clear human-computer interaction

INTRODUCING: LCD HUMAN-COMPUTER INTERACTION INTERFACE

Home menu

Home Status Settings Assist

Control mode
Constant Pressure

Running mode
Stop

Estimated flow
Low flow

Head
0.0m

Running Date:2022-08-18 Time:16:30:00

Status menu

Home Status Settings Assist

Running status

Performance parameter

Warning and alarm

Running Date:2022-08-18 Time:16:30:00

Setting menu

Home Status Settings Assist

Running mode

Control mode

Language set

Default set

LCD off time

Running Date:2022-08-18 Time:16:30:00

Assist menu

Home Status Settings Assist

Date Time set

Control mode instructions

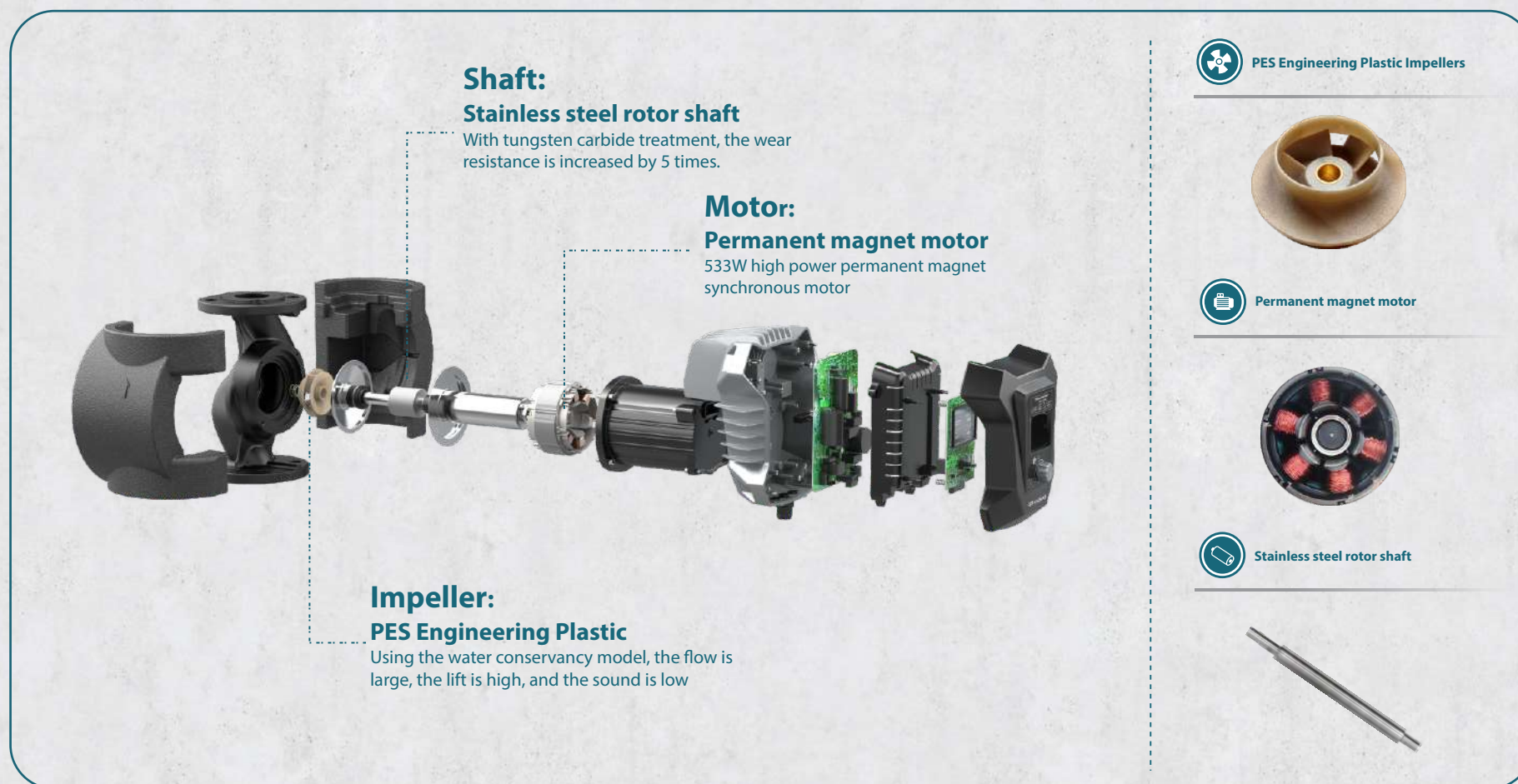
Assisted fault advice

Version

Running Date:2022-08-18 Time:16:30:00

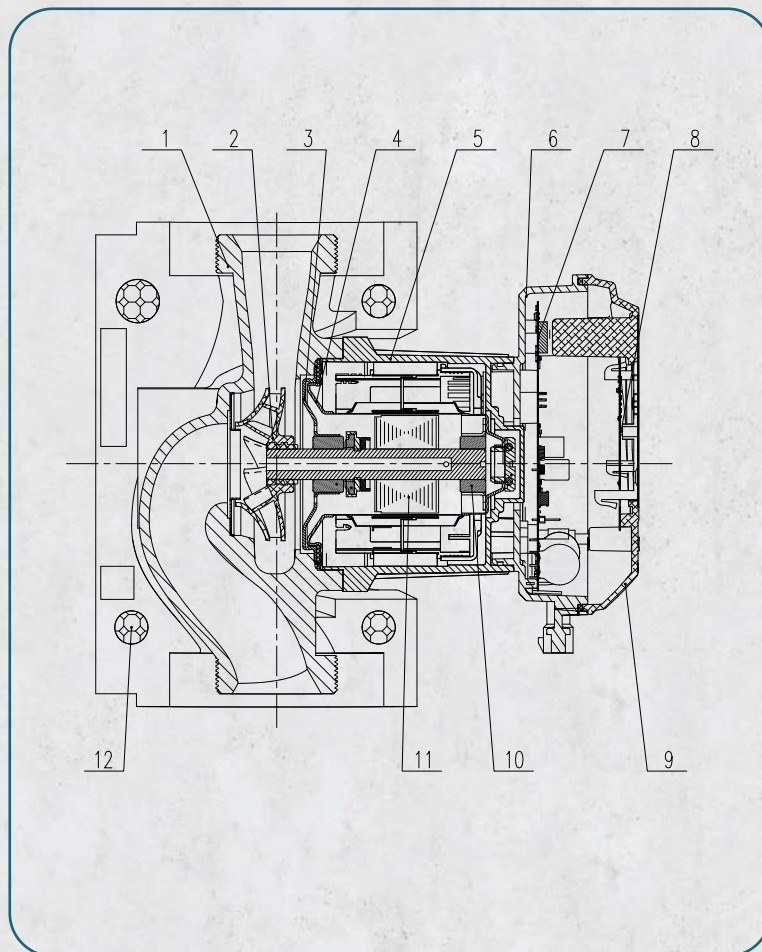
INTRODUCING: PUMP CONFIGURATION

This product has three advantages: PES engineering plastic impeller, tungsten carbide treated stainless steel rotor shaft, and high power permanent magnet synchronous motor.



INTRODUCTION:

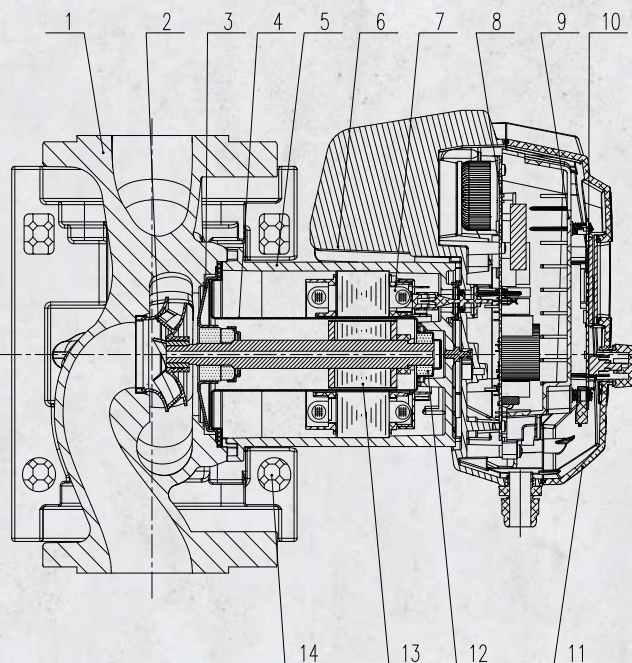
25/32 CALIBRE SERIES PRODUCT PARAMETERS



POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS
1	PUMP HEAD	Cast iron surface electrophoresis treatment, exterior painting treatment
2	IMPELLER	Hydraulic model, equipped with PES engineering plastic impeller
3	STAINLESS STEEL COVER	Stainless steel material
4	SHIELDING SLEEVE	Stainless steel material, the inner wall is mirror-finished
5	BARREL	Aluminum alloy barrel, the surface is treated with black electrophoresis.
6	CASING	Plastic spray outside
7	DRIVER	Electronic device
8	CONTROL BOARD	Electronic device
9	Cover	Using high-strength plastic, surface skin texture treatment, secondary vulcanization treatment of sealant, beautiful and fashionable appearance
10	BEARING	Brown ceramic
11	ROTOR	Brown ceramic
12	FOAM	Black EPP material, with the characteristics of heat preservation and safety protection.

INTRODUCTION:

32/40/50/60/80/100 CALIBRE SERIES PRODUCT PARAMETERS



POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS
1	PUMP HEAD	Cast iron surface electrophoresis treatment, exterior painting treatment
2	IMPELLER	Hydraulic model, equipped with PES engineering plastic impeller
3	STAINLESS STEEL COVER	Stainless steel material
4	SHIELDING SLEEVE	Stainless steel material, the inner wall is mirror-finished
5	BARREL	Aluminum alloy barrel, the surface is treated with black electrophoresis.
6	CASING	Plastic spray outside
7	STATOR	Full copper wire
8	DRIVER	Electronic device
9	CONTROL BOARD	Electronic device
10	ISOLATION SHIELD	Black plastic
11	Cover	Using high-strength plastic, surface skin texture treatment, secondary vulcanization treatment of sealant, beautiful and fashionable appearance
12	BEARING	Brown ceramic
13	ROTOR	Stainless steel shaft + tungsten carbide spray treatment
14	FOAM	Black EPP material, with the characteristics of heat preservation and safety protection.

INTRODUCTION: PERFORMANCE CHART

Model	Rated voltage(V)	Power frequency	Input power	Max. Current	Max. Flow (m³/h)	Max. head (m)	Max. perssure	Port-to-port l. [mm]	G.W (kg)	N.W (kg)	Outer box L × W × H(cm)
GEM25-40	1 x 230 V	50 / 60 Hz	9 .. 56 W	0.09 .. 0.45 A	6.2	4	10 bar	180	4.7	3.7	230×220×295
GEM25-60	1 x 230 V	50 / 60 Hz	9 .. 92 W	0.09 .. 0.74 A	7.5	6	10 bar	180	4.7	3.7	230×220×295
GEM25-80	1 x 230 V	50 / 60 Hz	9 .. 128 W	0.09 .. 1.03 A	8.5	8	10 bar	180	4.7	3.7	230×220×295
GEM25-100	1 x 230 V	50 / 60 Hz	9 .. 176 W	0.09 .. 1.42 A	9.4	10	10 bar	180	4.7	3.7	230×220×295
GEM25-120	1 x 230 V	50 / 60 Hz	8 .. 188 W	0.08 .. 1.51 A	9.7	12	10 bar	180	4.7	3.7	230×220×295
GEM32-40	1 x 230 V	50 / 60 Hz	9 .. 73 W	0.09 .. 0.59 A	7.7	4	10 bar	180	4.7	3.7	230×220×295
GEM32-60	1 x 230 V	50 / 60 Hz	9 .. 111 W	0.09 .. 0.9 A	9.1	6	10 bar	180	4.7	3.7	230×220×295
GEM32-80	1 x 230 V	50 / 60 Hz	9 .. 151 W	0.09 .. 1.22 A	10.1	8	10 bar	180	4.7	3.7	230×220×295
GEM32-100	1 x 230 V	50 / 60 Hz	8 .. 175 W	0.08 .. 1.41 A	10.5	10	10 bar	180	4.7	3.7	230×220×295
GEM32-120	1 x 230 V	50 / 60 Hz	8 .. 188 W	0.08 .. 1.51 A	9.7	12	10 bar	180	4.7	3.7	230×220×295
GEM32-40F	1 x 230 V	50 / 60 Hz	9 .. 73 W	0.09 .. 0.59 A	7.7	4	10 bar	220	7.5	6.5	240×220×320
GEM32-60F	1 x 230 V	50 / 60 Hz	9 .. 111 W	0.09 .. 0.9 A	9.1	6	10 bar	220	7.5	6.5	240×220×320
GEM32-80F	1 x 230 V	50 / 60 Hz	9 .. 151 W	0.09 .. 1.22 A	10.1	8	10 bar	220	7.5	6.5	240×220×320
GEM32-100F	1 x 230 V	50 / 60 Hz	8 .. 175 W	0.08 .. 1.41 A	10.5	10	10 bar	220	7.5	6.5	240×220×320

■ Communication interface: optional with PWM control

INTRODUCTION: INSTALLATION DIMENSIONS

Model	Rated voltage(V)	Power frequency	Input power	Max. Current	Max. Flow (m ³ /h)	Max. head (m)	Max. pressure	Pressure rating	G.W (kg)	N.W (kg)	Outer box L × W × H(cm)
GEM 32-120 F	1 x 230 V	50 / 60 Hz	15 .. 329 W	0.17 .. 1.48 A	11	12	10 bar	PN6/10	16.4	15.1	295×249×420
GEM 40-40 F	1 x 230 V	50 / 60 Hz	12 .. 90 W	0.11 .. 0.72 A	13	4	10 bar	PN6/10	16.8	15.5	295×249×423
GEM 40-60 F	1 x 230 V	50 / 60 Hz	12 .. 194 W	0.11 .. 1.56 A	16.8	6	10 bar	PN6/10	16.8	15.5	295×249×423
GEM 40-100 F	1 x 230 V	50 / 60 Hz	17 .. 370 W	0.19 .. 1.65 A	22	10	10 bar	PN6/10	17.2	15.9	295×249×423
GEM 40-120 F	1 x 230 V	50 / 60 Hz	15 .. 463 W	0.18 .. 2.05 A	24	12	10 bar	PN6/10	17.2	15.9	310×249×423
GEM 40-150 F	1 x 230 V	50 / 60 Hz	16 .. 615 W	0.18 .. 2.71 A	26.2	15	10 bar	PN6/10	17.2	15.9	310×249×423
GEM 40-180 F	1 x 230 V	50 / 60 Hz	16 .. 615 W	0.22 .. 2.71 A	26.2	18	10 bar	PN6/10	17.2	15.9	310×249×423
GEM 50-60 F	1 x 230 V	50 / 60 Hz	21 .. 252 W	0.22 .. 1.15 A	24.5	6	10 bar	PN6/10	18.7	17.4	305×285×428
GEM 50-80 F	1 x 230 V	50 / 60 Hz	21 .. 331 W	0.22 .. 1.48 A	27	8	10 bar	PN6/10	18.7	17.4	305×285×428
GEM 50-100 F	1 x 230 V	50 / 60 Hz	21 .. 425 W	0.22 .. 1.9 A	30	10	10 bar	PN6/10	18.8	17.3	325×285×430
GEM 50-120 F	1 x 230 V	50 / 60 Hz	20 .. 533 W	0.22 .. 2.37 A	33	12	10 bar	PN6/10	19	17.5	325×285×430
GEM 50-150 F	1 x 230 V	50 / 60 Hz	22 .. 649 W	0.24 .. 2.87 A	35	15	10 bar	PN6/10	19.7	18.2	325×285×430
GEM 50-180 F	1 x 230 V	50 / 60 Hz	22 .. 769 W	0.24 .. 3.4 A	37.5	18	10 bar	PN6/10	19.7	18.2	325×285×430

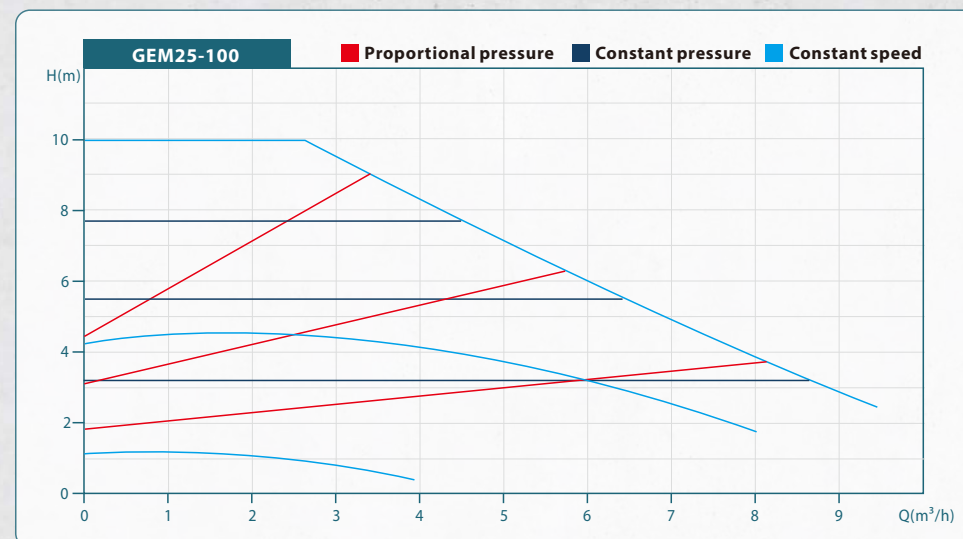
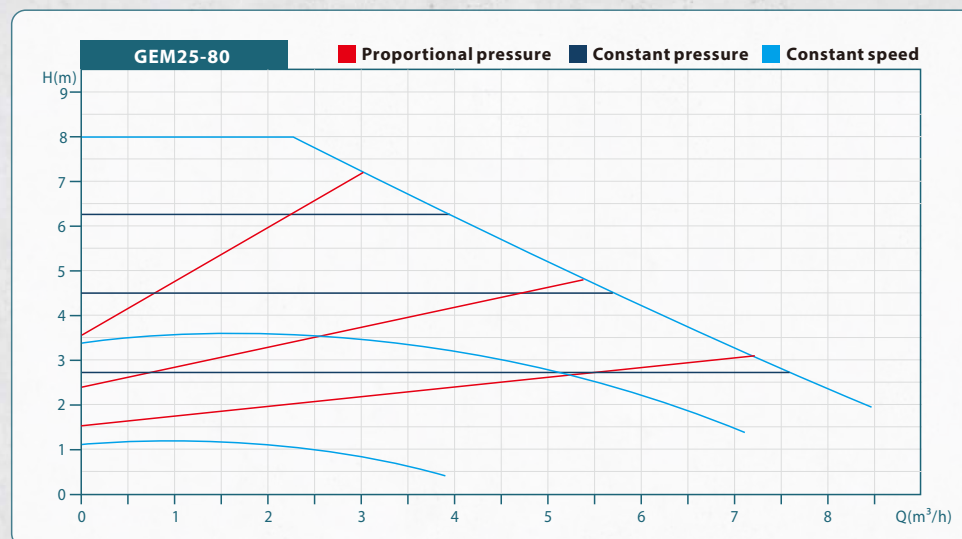
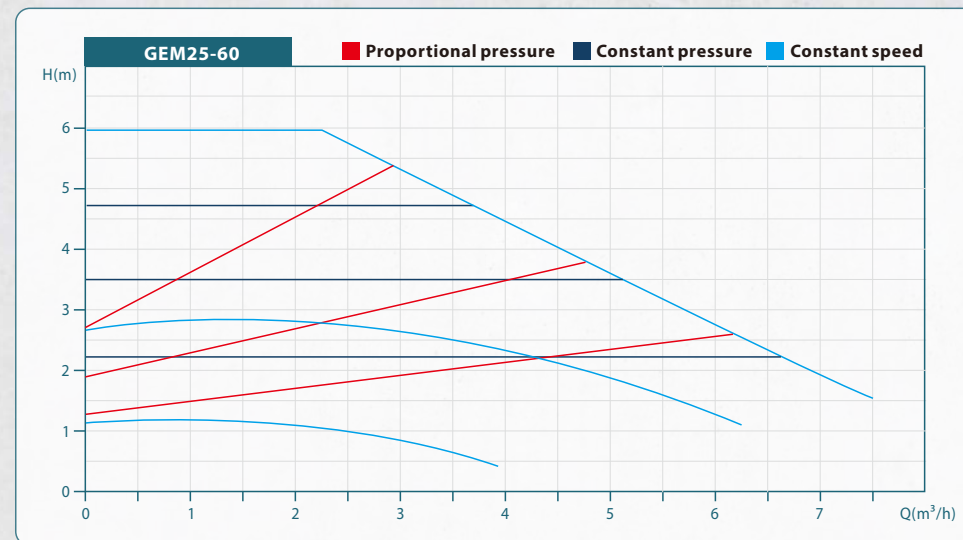
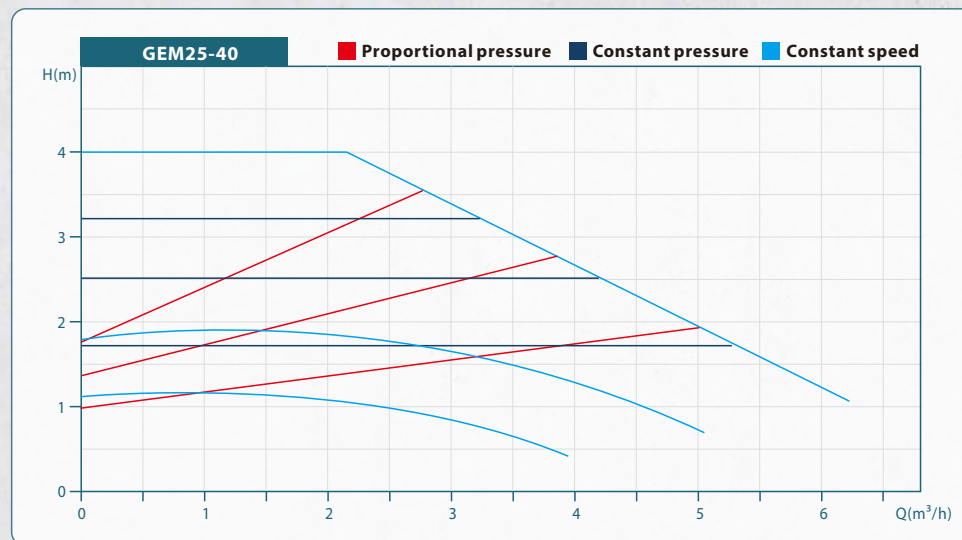
■ Communication interface: with Serial Communication

INTRODUCTION: INSTALLATION DIMENSIONS

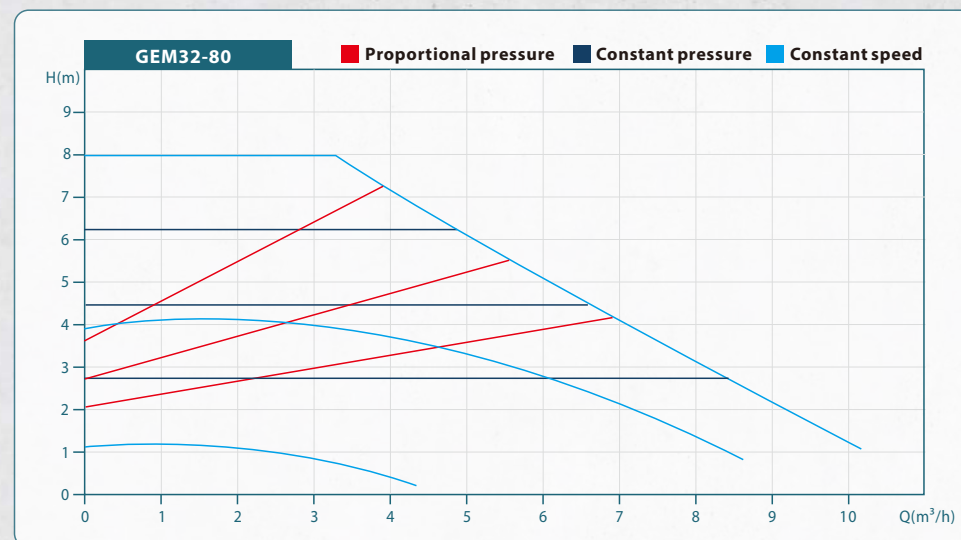
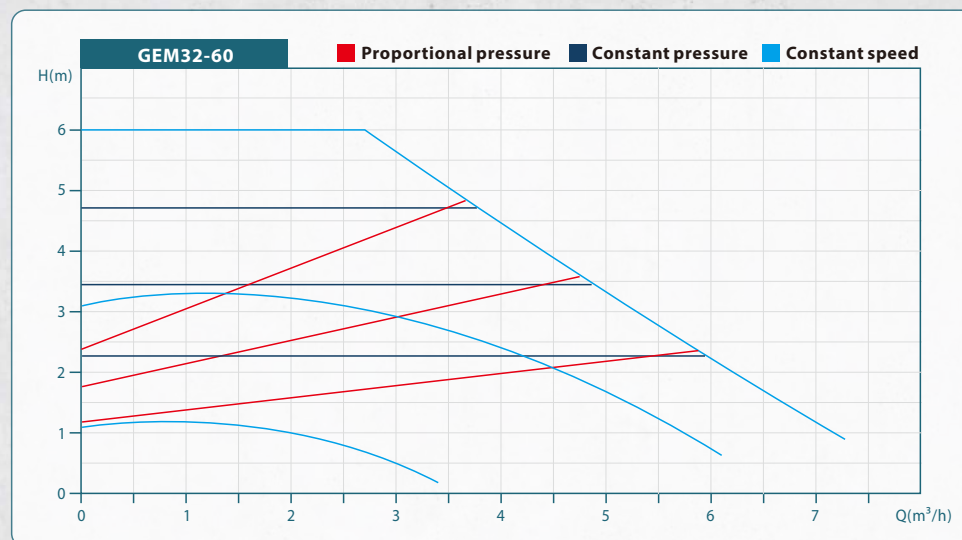
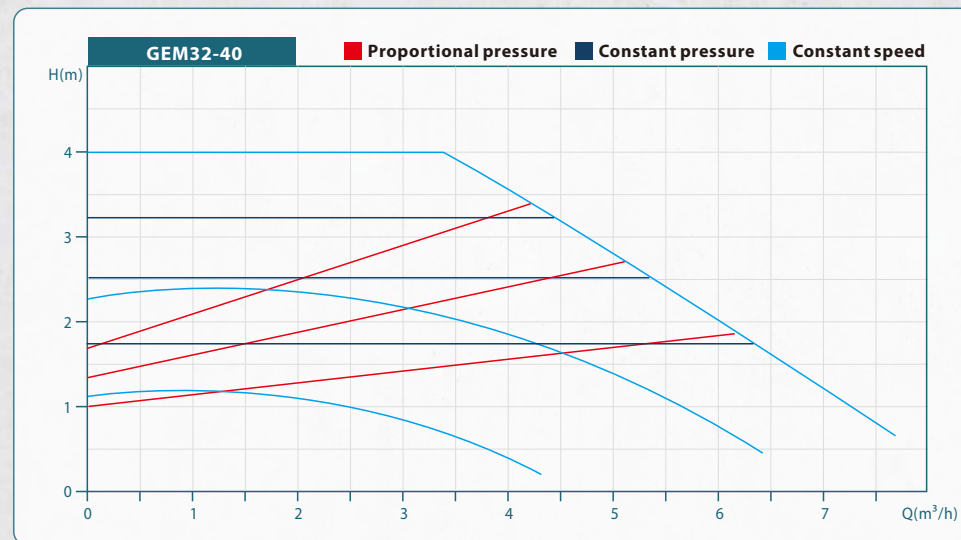
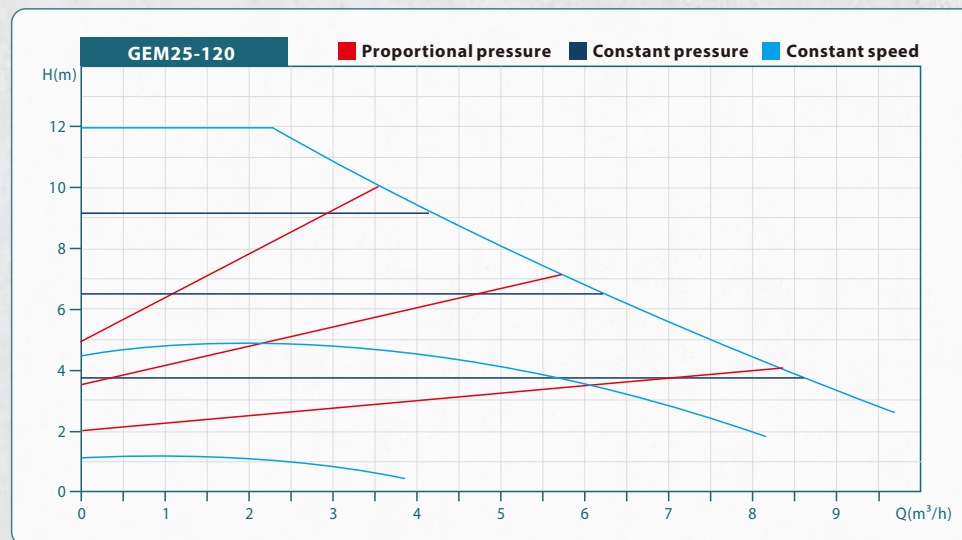
Model	Rated voltage(V)	Power frequency	Input power	Max. Current	Max. Flow (m ³ /h)	Max. head (m)	Max. perssure	Perssure rating	G.W (kg)	N.W (kg)	Outer box L × W × H(cm)
GEM 65-40 F	1 x 230 V	50 / 60 Hz	23 .. 190 W	0.24 .. 0.9 A	28.5	4	10 bar	PN6/10	22.2	20.4	355×303×440
GEM 65-60 F	1 x 230 V	50 / 60 Hz	23 .. 365 W	0.24 .. 1.64 A	36	6	10 bar	PN6/10	22.2	20.4	355×303×440
GEM 65-80 F	1 x 230 V	50 / 60 Hz	24 .. 476 W	0.26 .. 2.11 A	40	8	10 bar	PN6/10	23.1	21.3	355×303×440
GEM 65-100 F	1 x 230 V	50 / 60 Hz	25 .. 619 W	0.26 .. 2.73 A	44	10	10 bar	PN6/10	23.1	21.3	355×303×440
GEM 65-120 F	1 x 230 V	50 / 60 Hz	24 .. 774 W	0.26 .. 3.42 A	47	12	10 bar	PN6/10	23.1	21.3	355×303×440
GEM 65-150 F	1 x 230 V	50 / 60 Hz	31 .. 1263 W	0.31 .. 5.53 A	56	15	10 bar	PN6/10	25.8	24	355×303×440
GEM 80-60 F	1 x 230 V	50 / 60 Hz	24 .. 533 W	0.24 .. 2.37 A	44	6	10 bar	PN6	28.3	26.5	365×363×467
GEM 80-80 F	1 x 230 V	50 / 60 Hz	26 .. 715 W	0.28 .. 3.14 A	49.5	8	10 bar	PN6	28.8	27	365×363×467
GEM 80-100 F	1 x 230 V	50 / 60 Hz	31 .. 1014 W	0.28 .. 3.15 A	55	10	10 bar	PN6	30.6	28.8	365×363×467
GEM 80-120 F	1 x 230 V	50 / 60 Hz	31 .. 1277 W	0.28 .. 3.16 A	60	12	10 bar	PN6	30	28.2	365×363×467
GEM 100-40 F	1 x 230 V	50 / 60 Hz	26 .. 521 W	0.28 .. 3.17 A	50	4	10 bar	PN6	35.7	33.9	410×393×487
GEM 100-60 F	1 x 230 V	50 / 60 Hz	26 .. 708 W	0.28 .. 3.18 A	56	6	10 bar	PN6	35.7	33.9	410×393×487
GEM 100-80 F	1 x 230 V	50 / 60 Hz	31 .. 1067 W	0.28 .. 3.19 A	66	8	10 bar	PN6	36.3	34.5	410×393×487
GEM 100-100 F	1 x 230 V	50 / 60 Hz	31 .. 1413 W	0.28 .. 3.20 A	68	10	10 bar	PN6	36.3	34.5	410×393×487
GEM 100-120 F	1 x 230 V	50 / 60 Hz	31 .. 1523 W	0.28 .. 3.21 A	68	12	10 bar	PN6	36.3	34.5	410×393×487

■ Communication interface: with Serial Communication

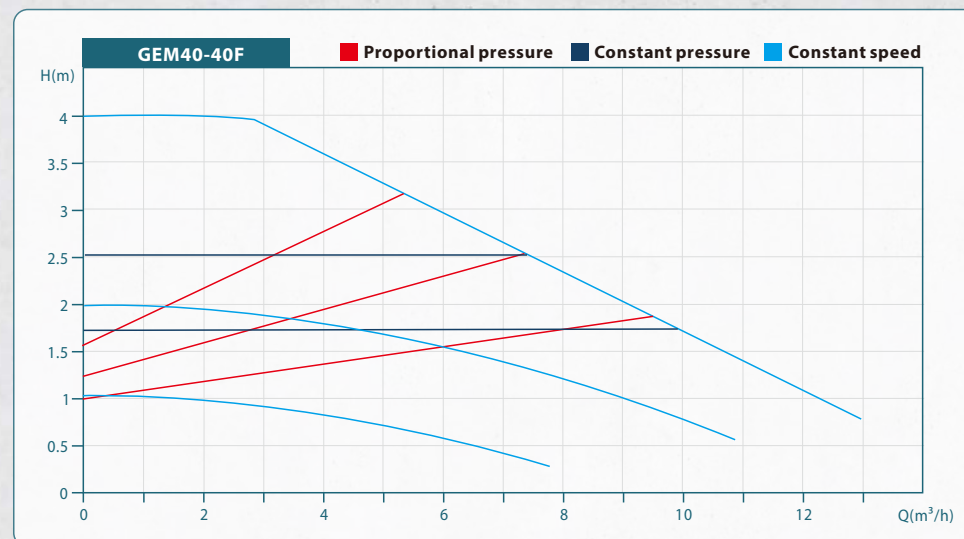
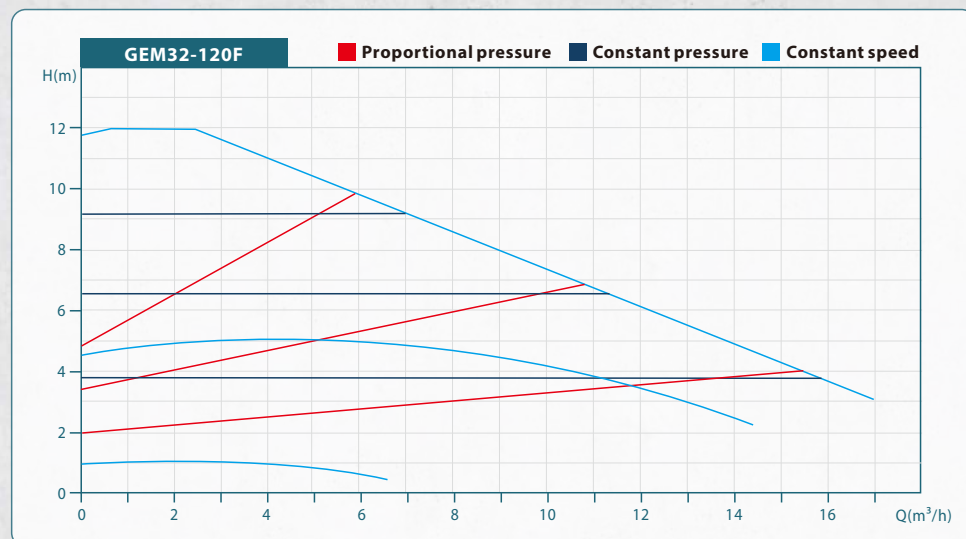
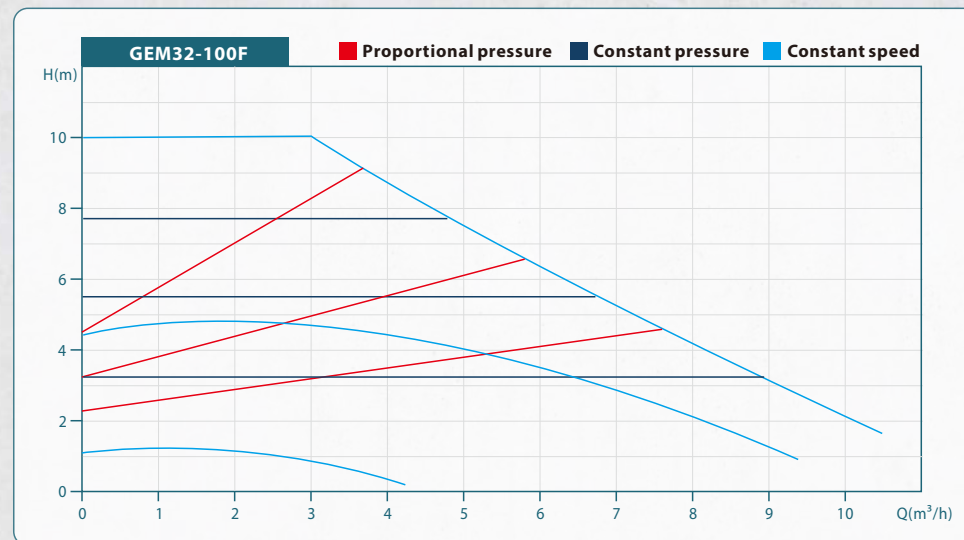
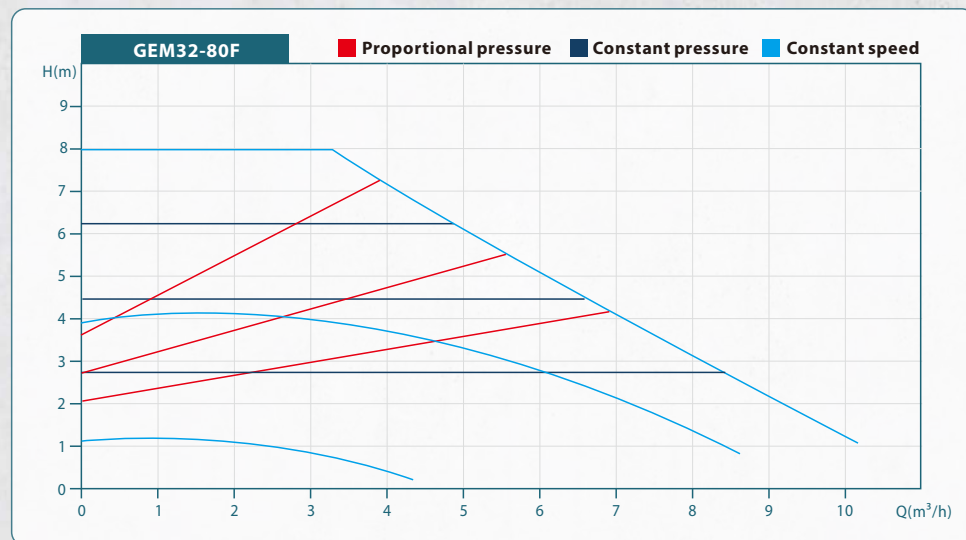
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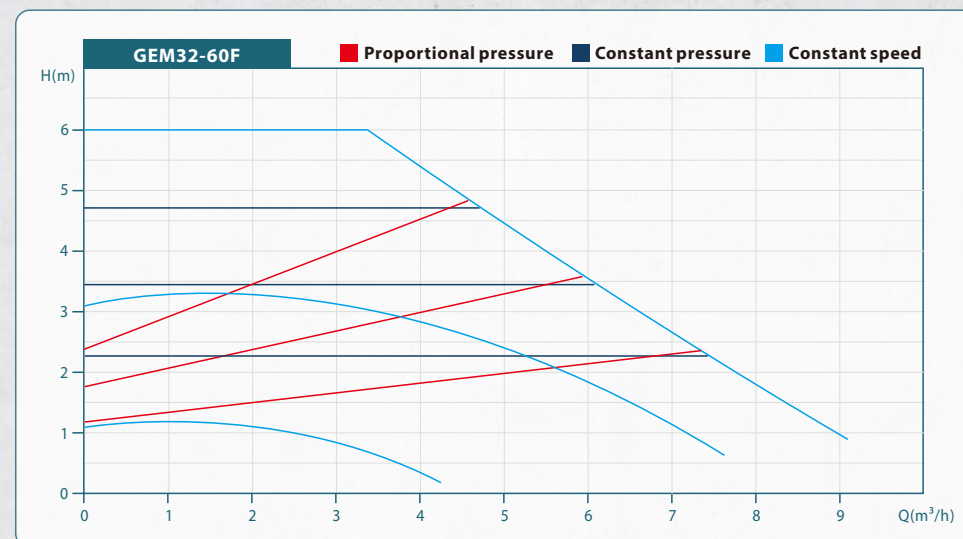
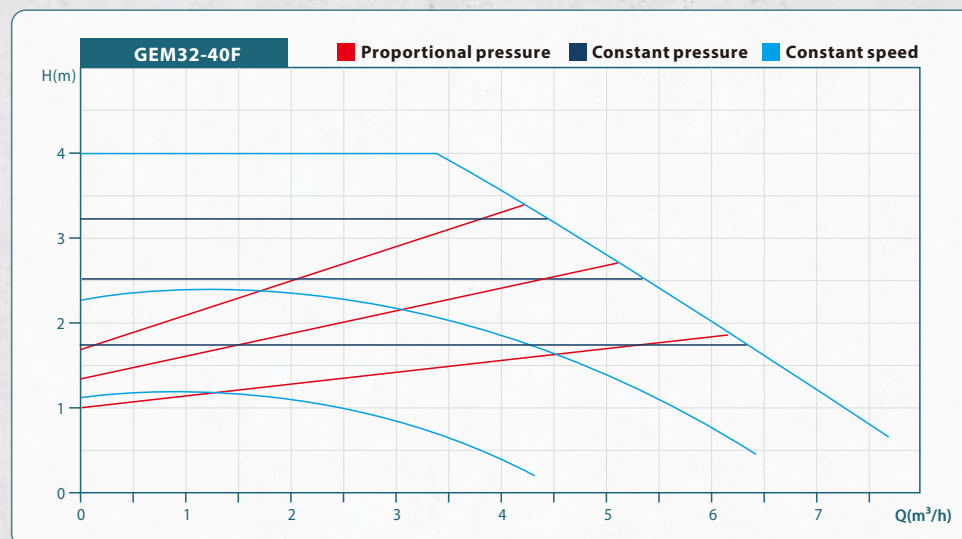
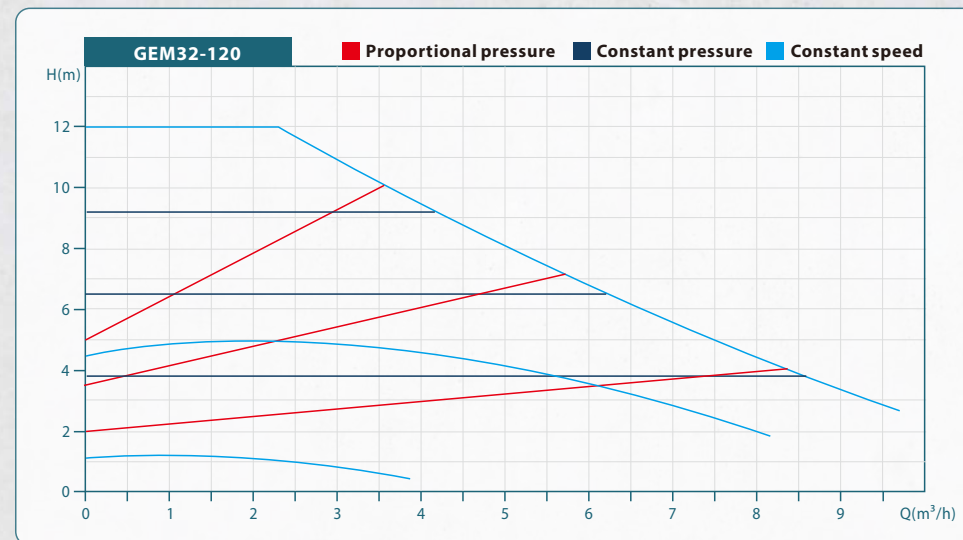
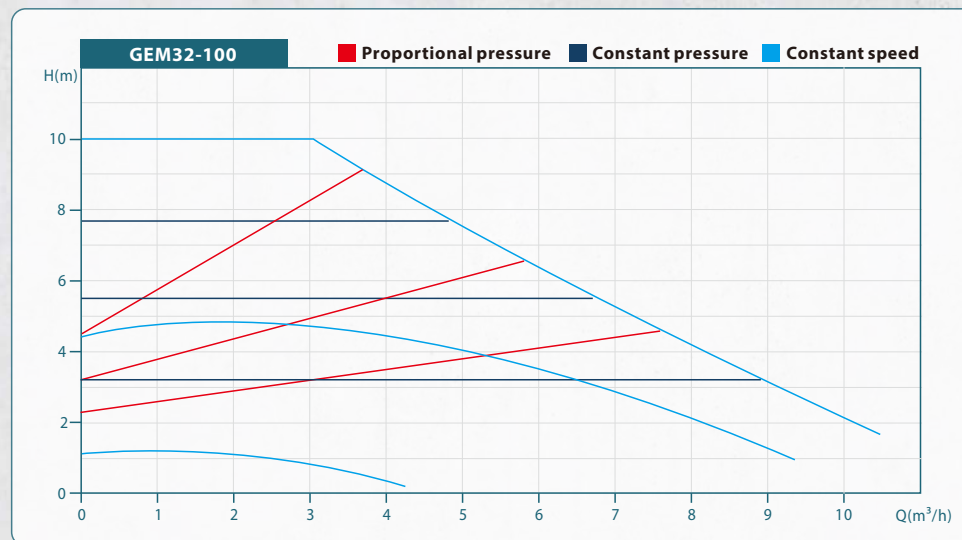
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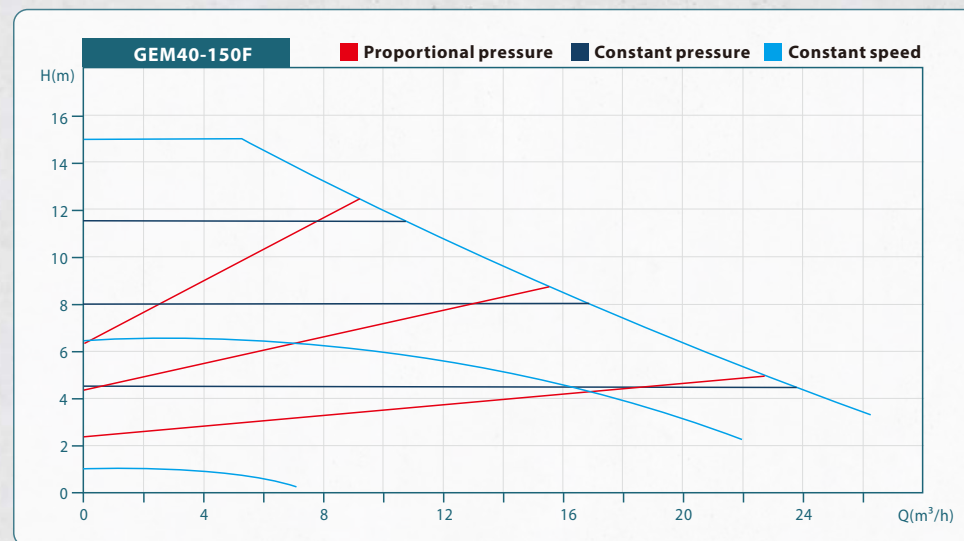
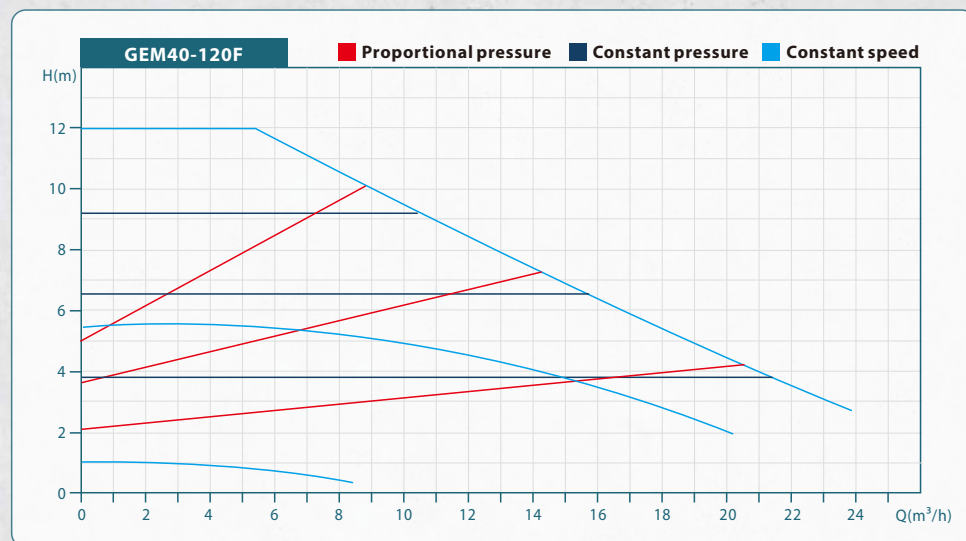
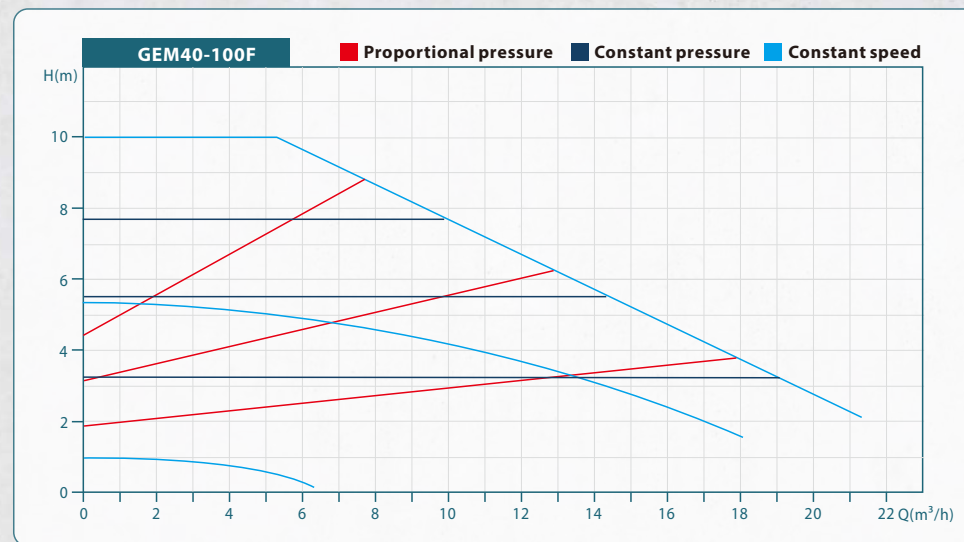
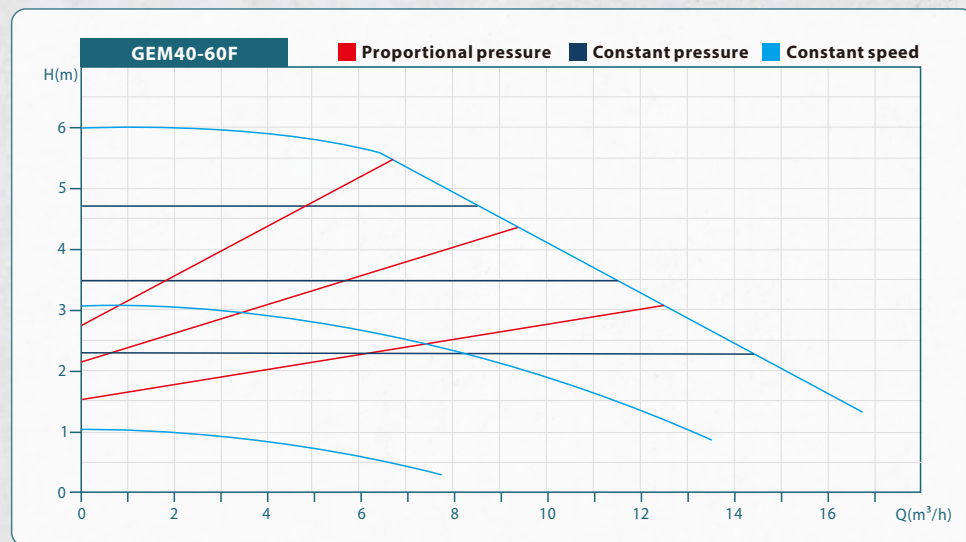
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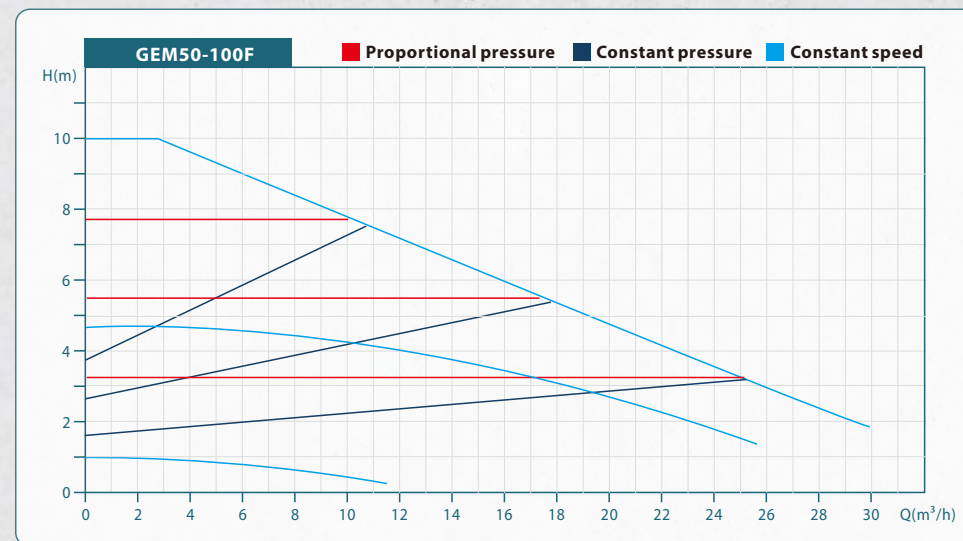
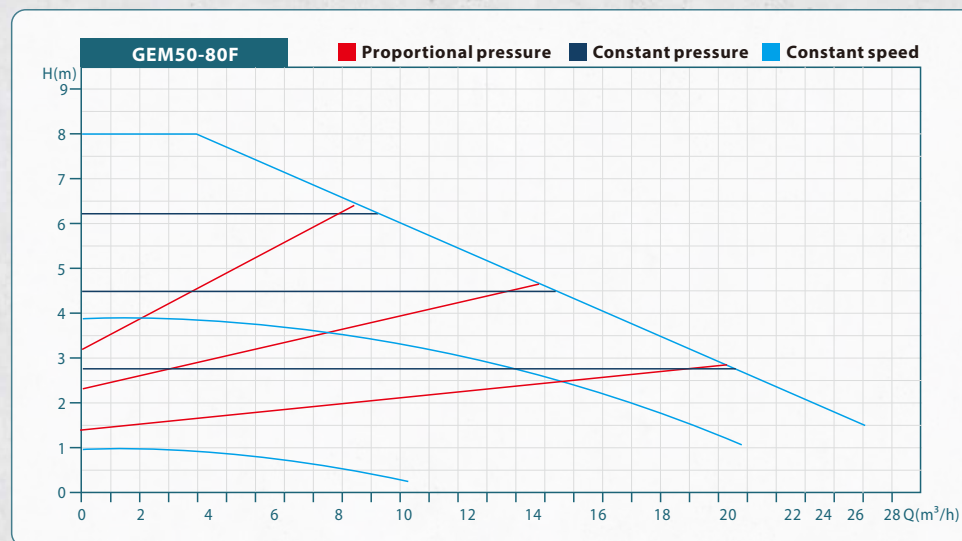
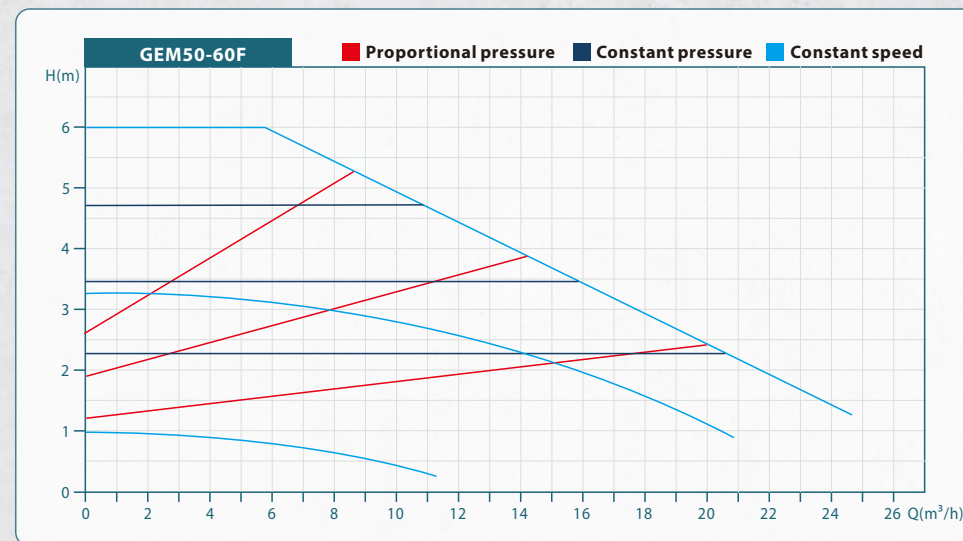
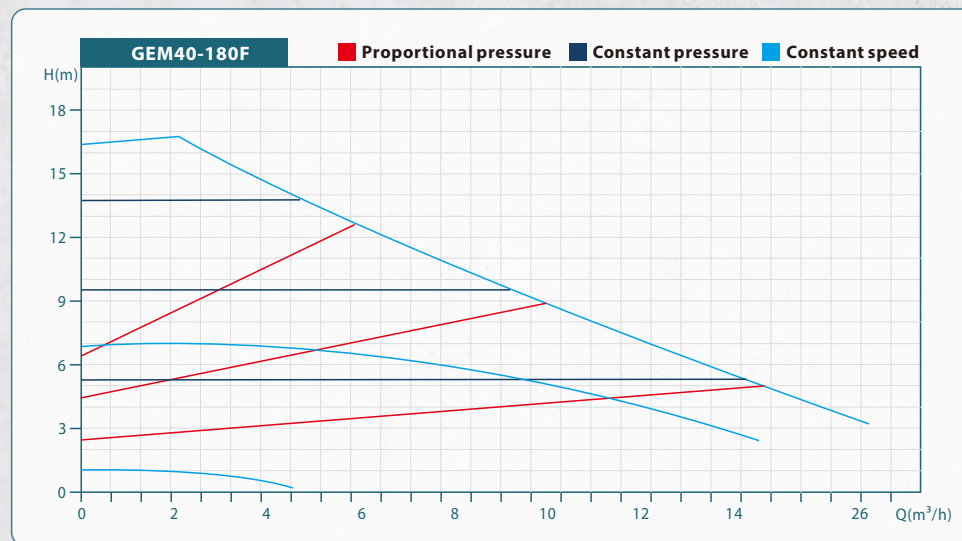
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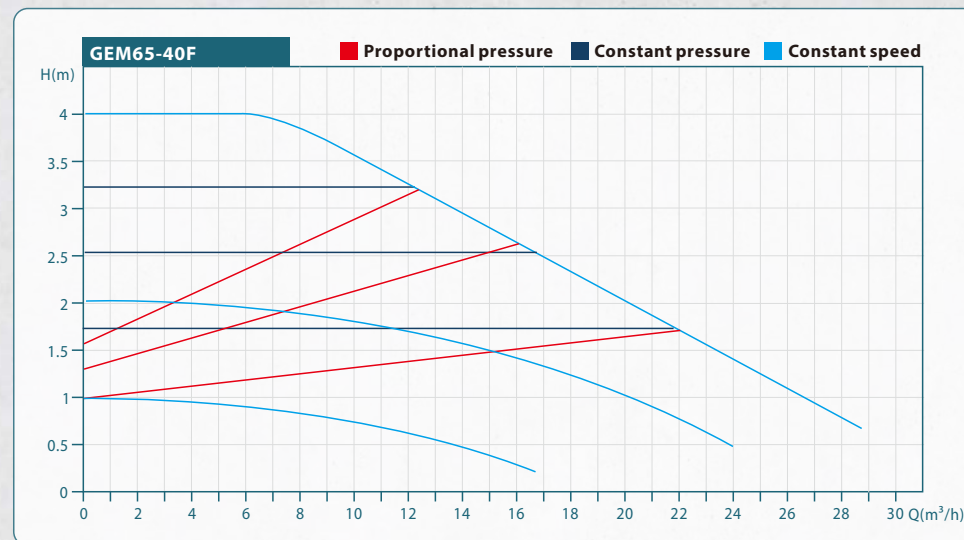
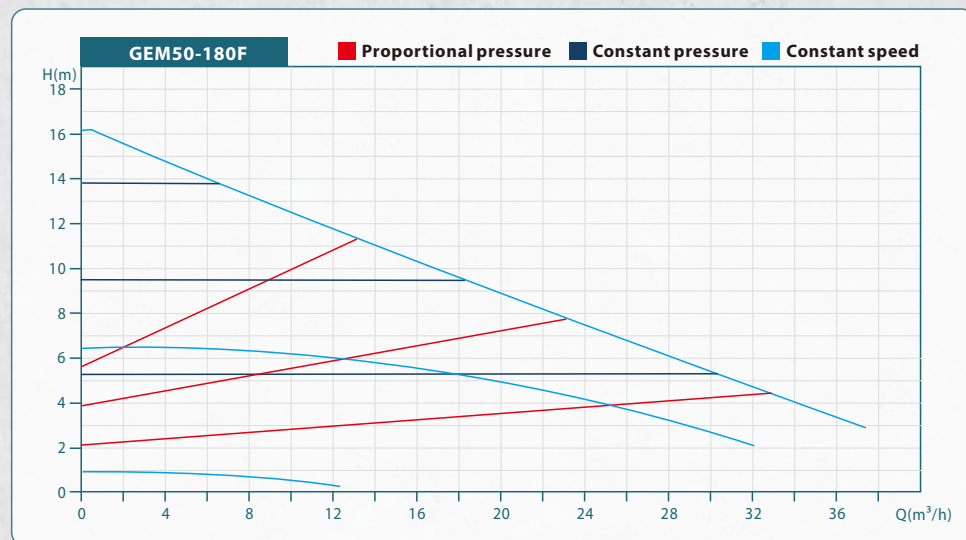
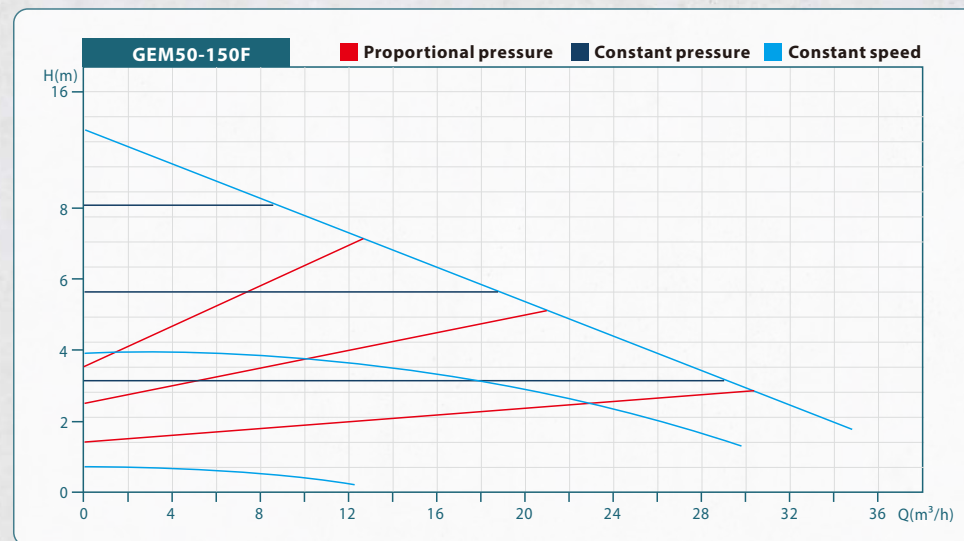
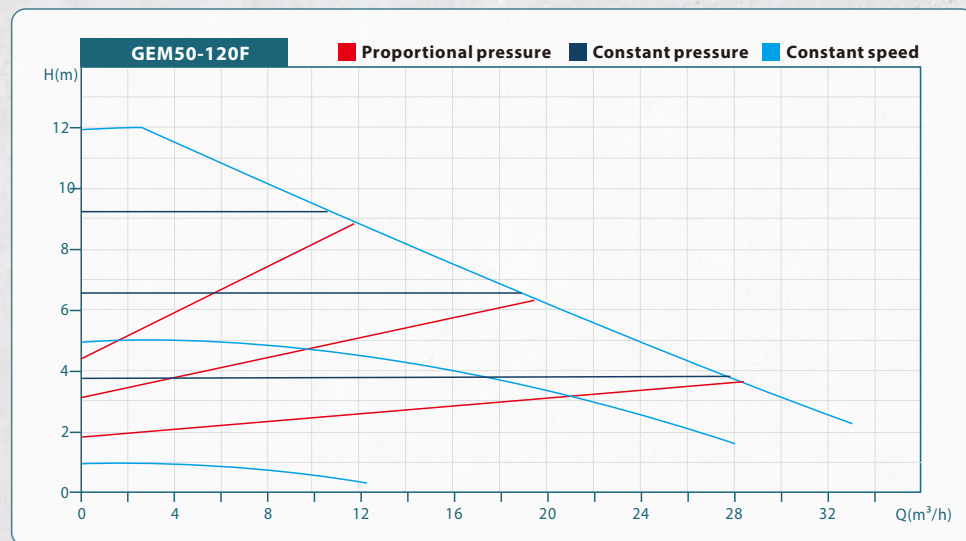
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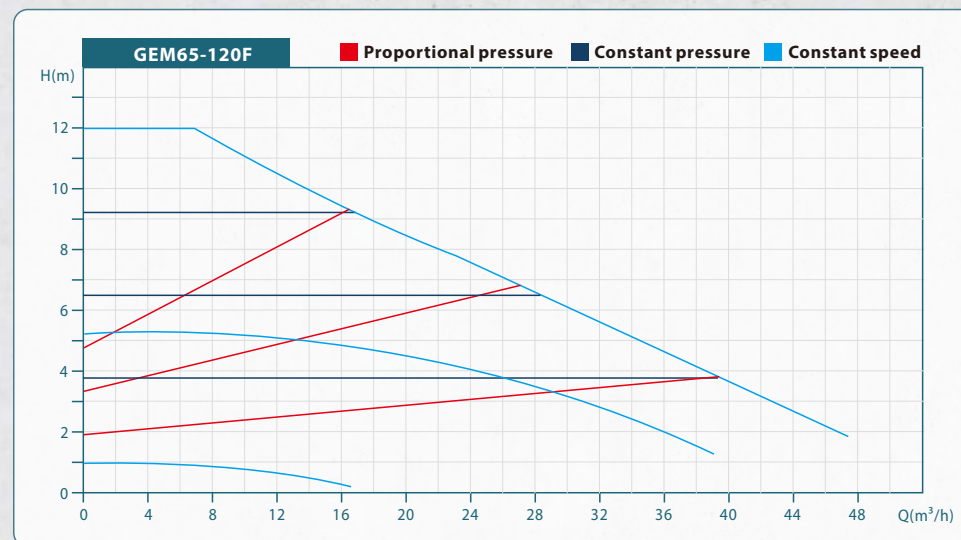
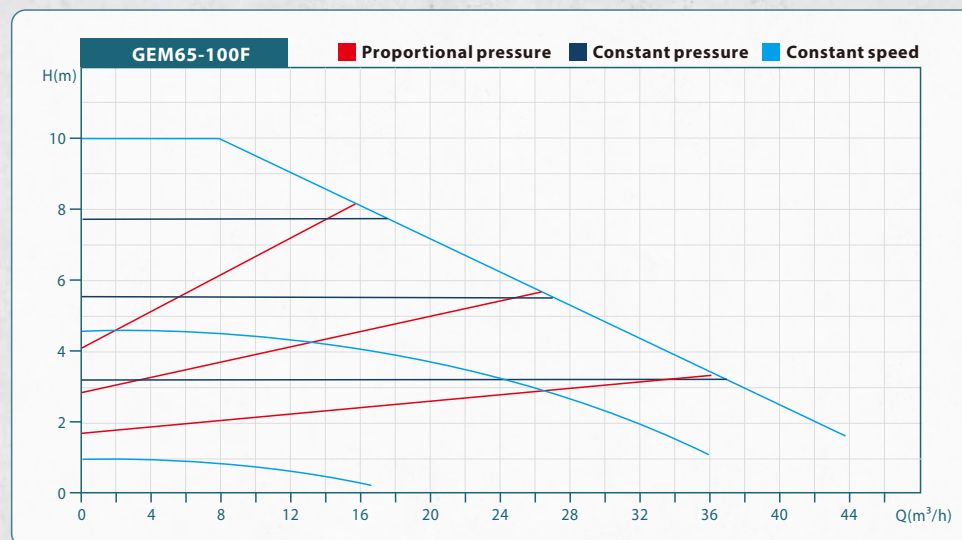
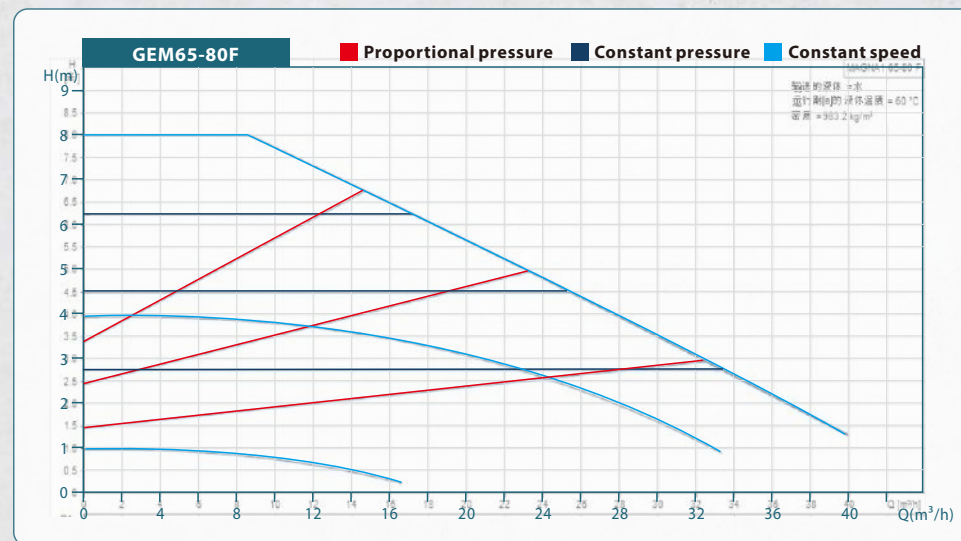
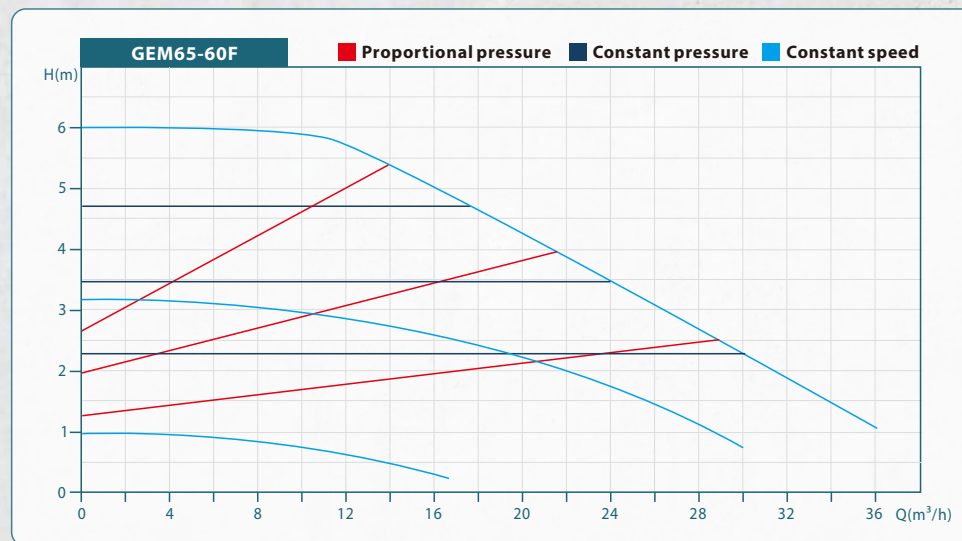
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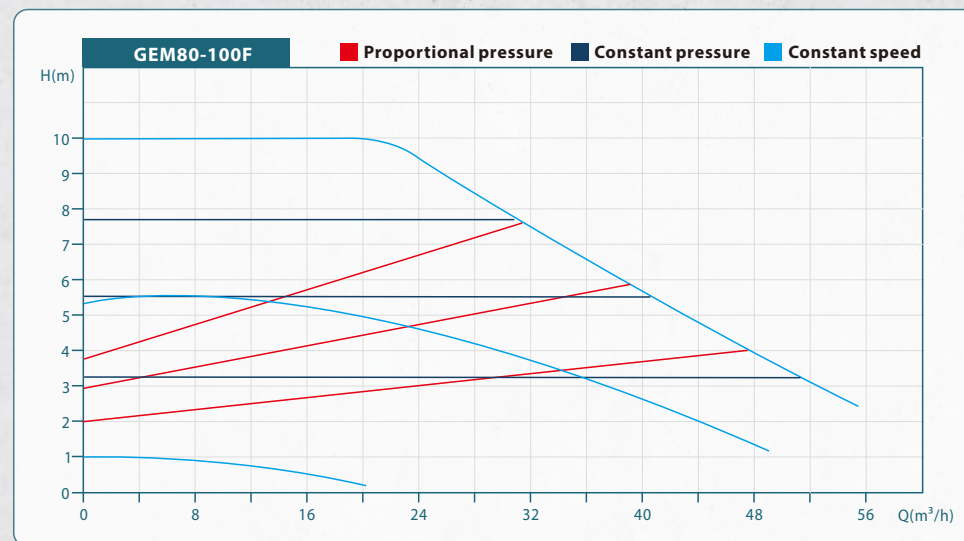
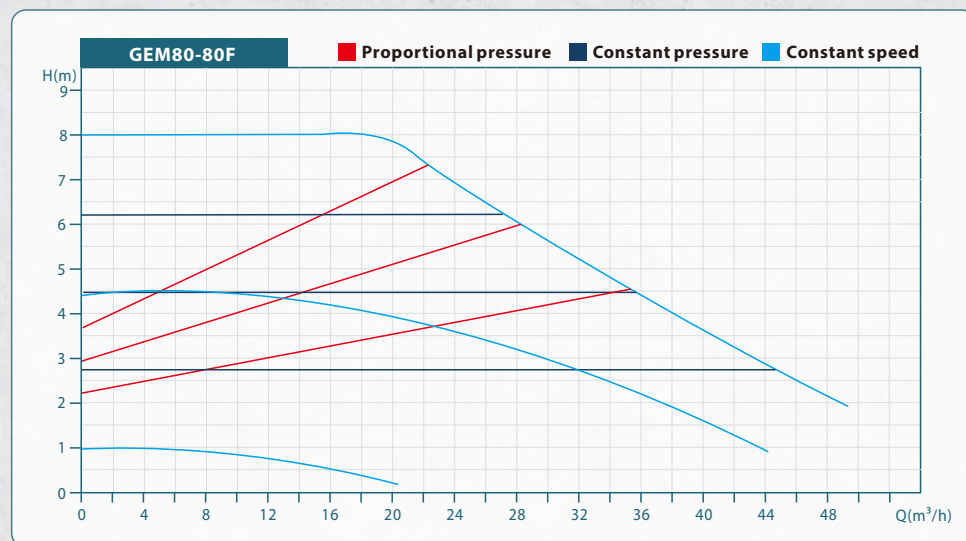
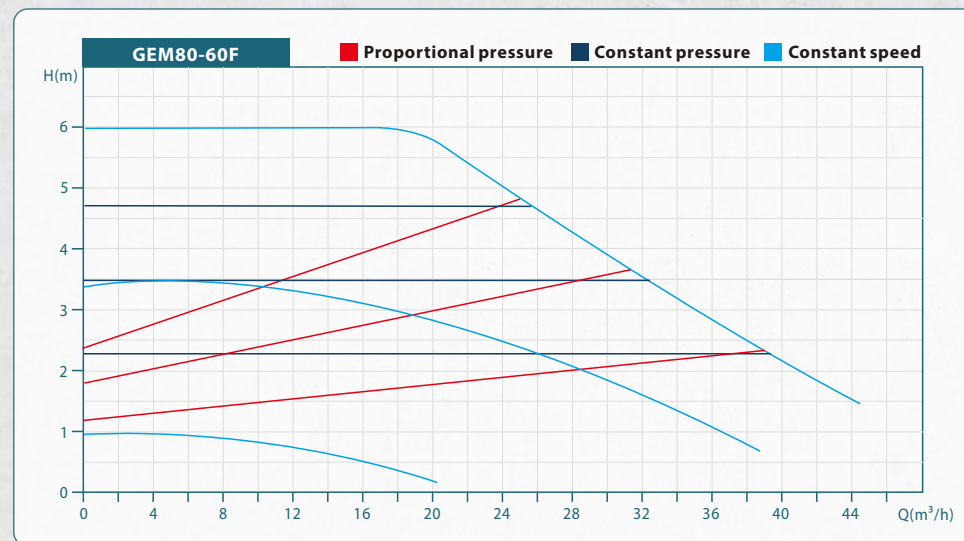
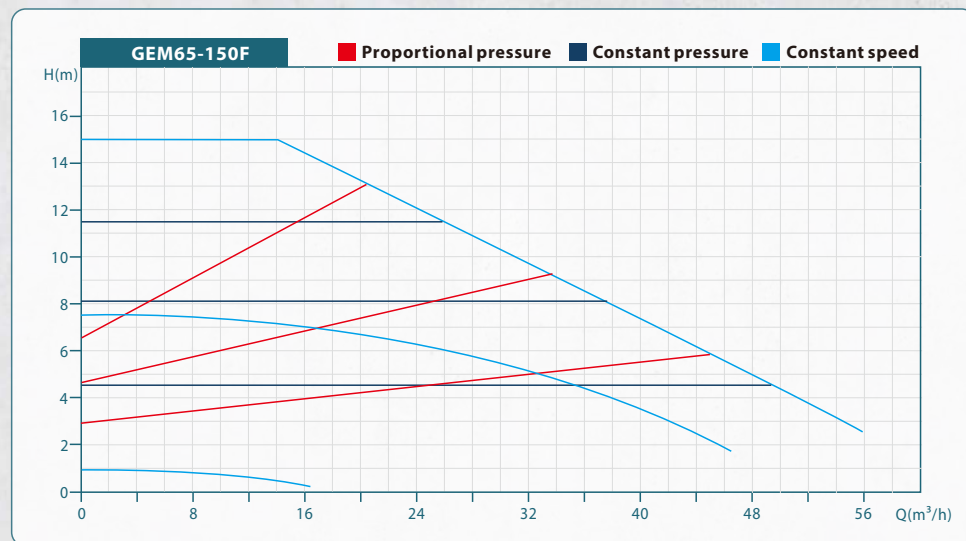
PERFORMANCE CHART



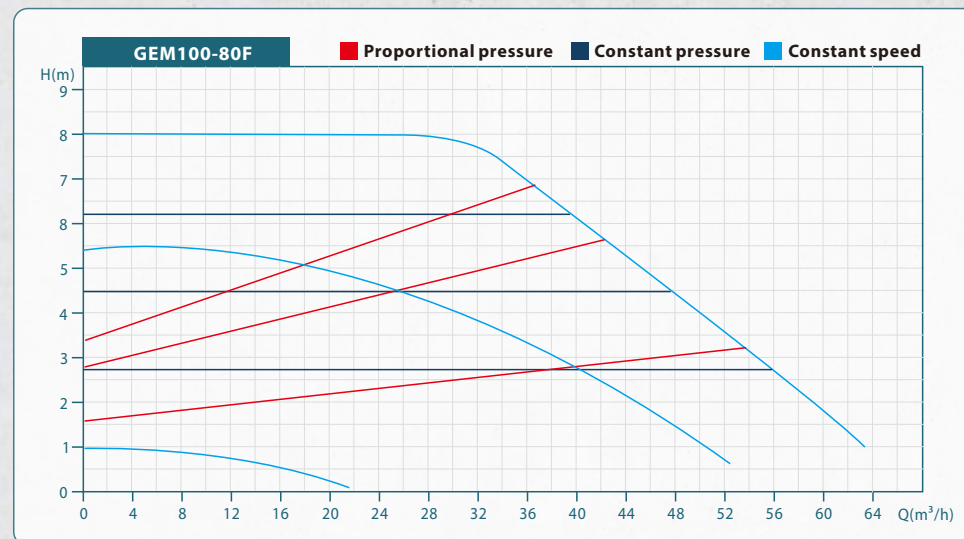
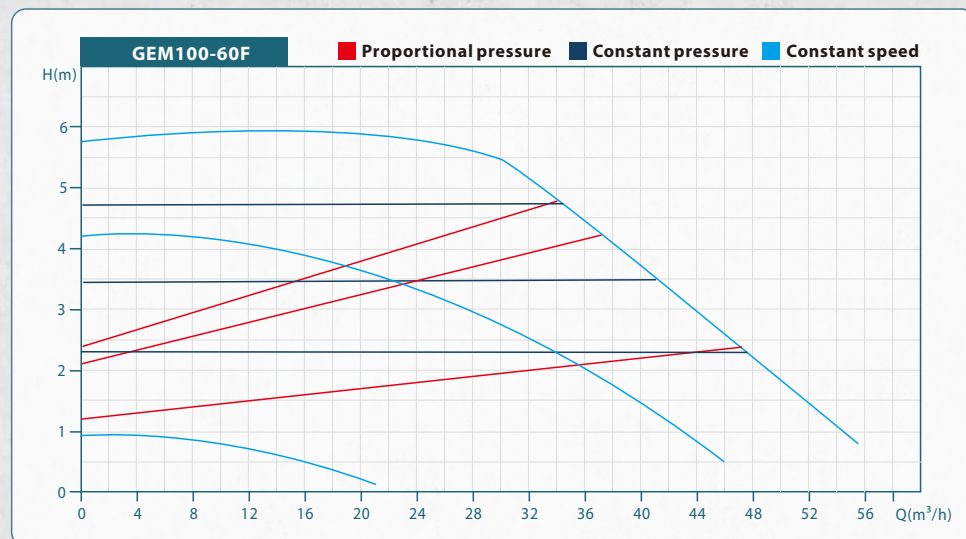
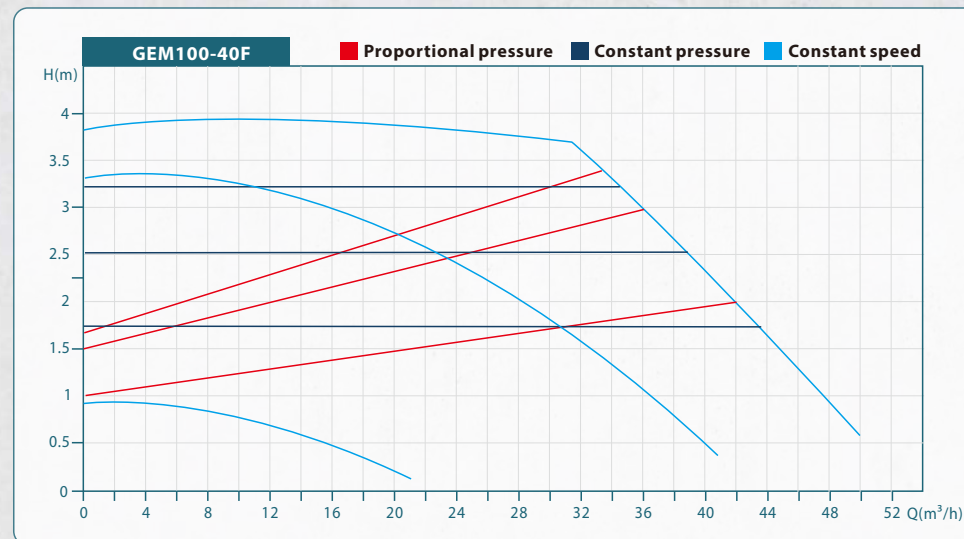
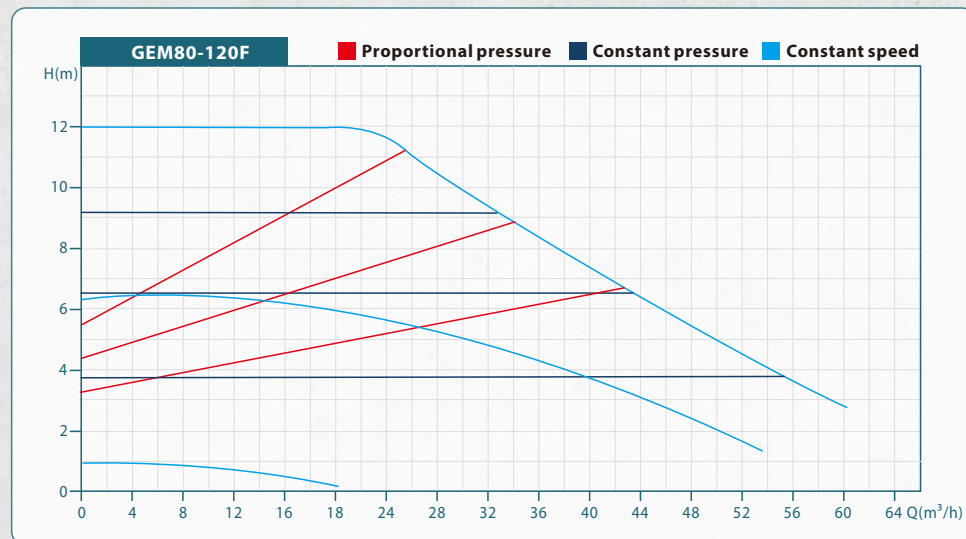
PERFORMANCE CHART



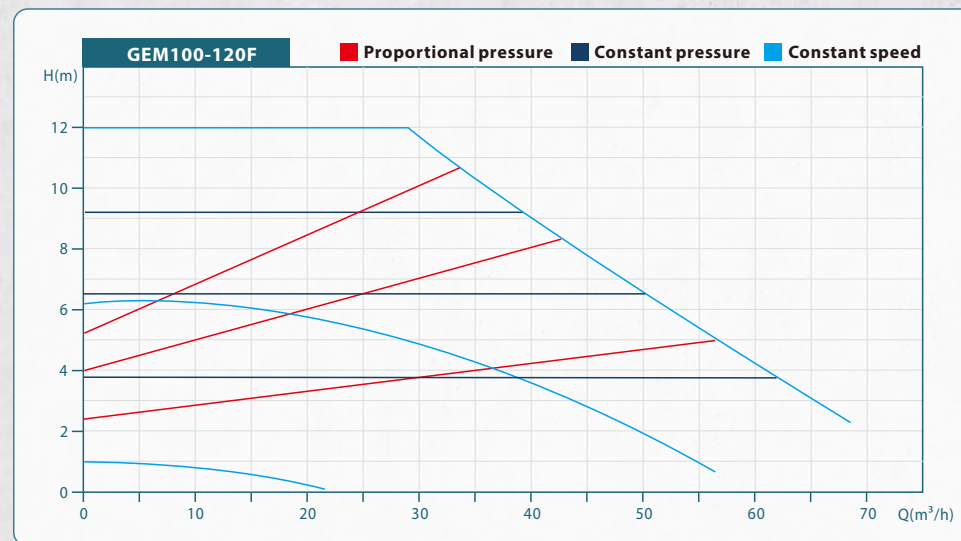
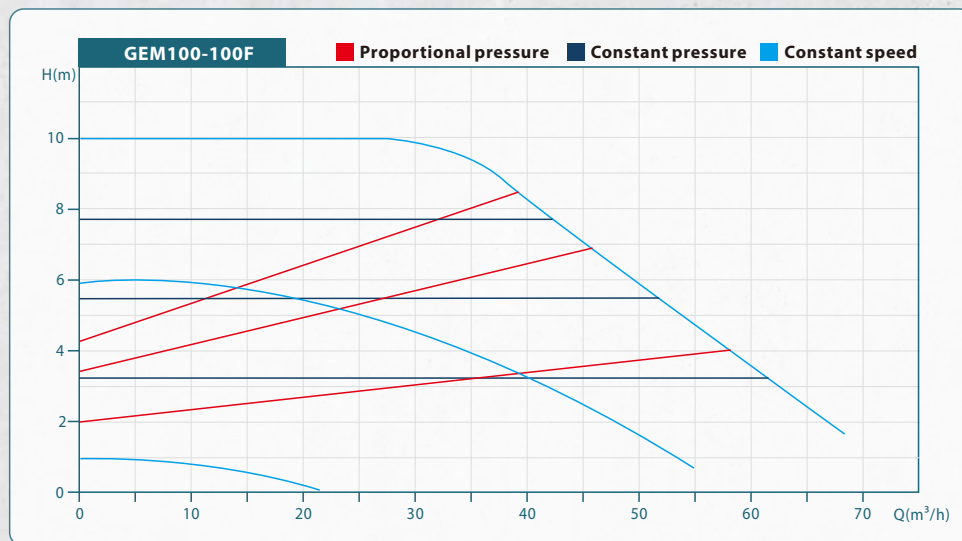
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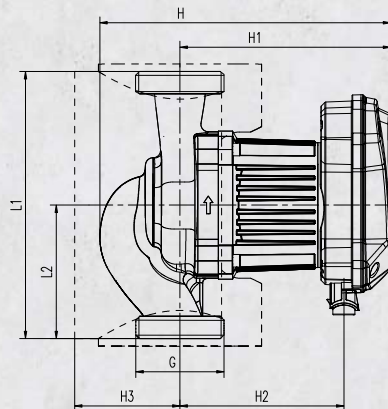
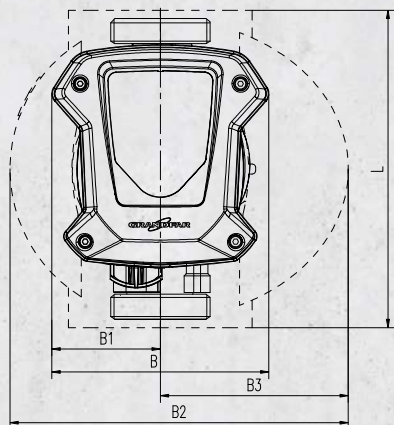
PERFORMANCE CHART



PERFORMANCE CHART

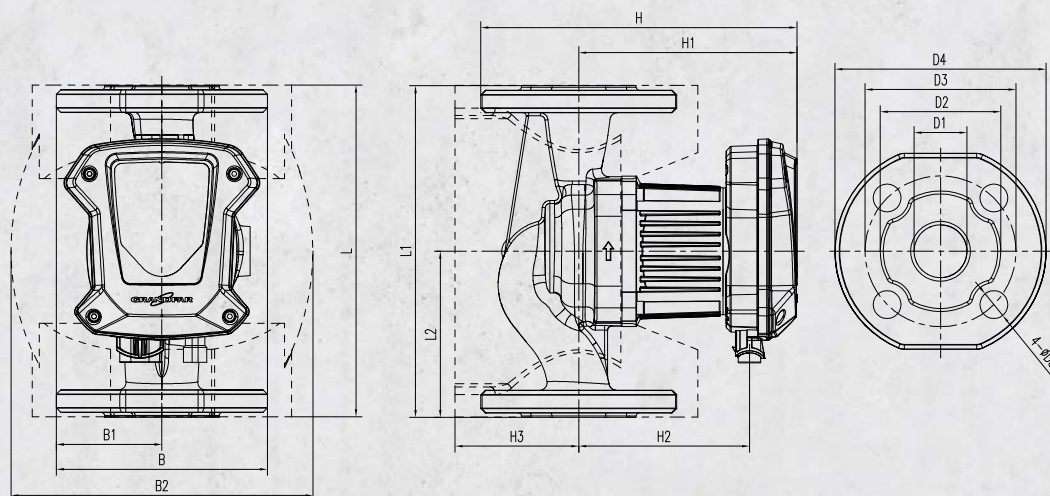


INTRODUCTION: INSTALLATION DIMENSIONS



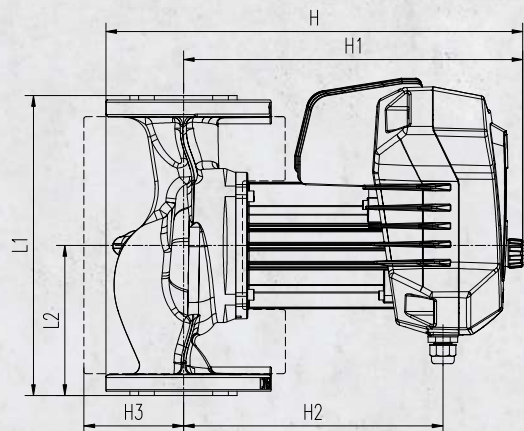
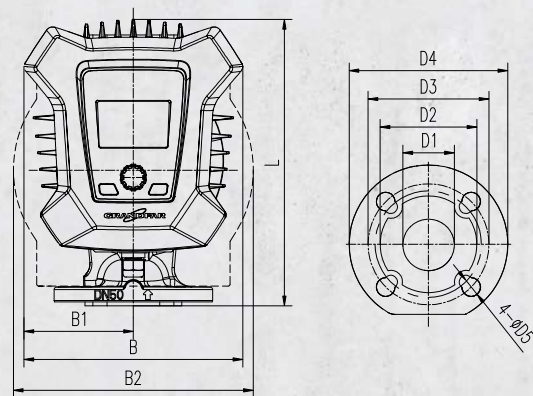
Model	Pump body material	Dimensions(mm)											
		L	L1	L2	B	B1	B2	B3	H	H1	H2	H3	G
GEM25-40-180	Cast iron	190	180	90	130	142	65	202.5	112.5	196	110.5	71	1.5"
GEM25-60-180	Cast iron	190	180	90	130	142	65	202.5	112.5	196	110.5	71	1.5"
GEM25-80-180	Cast iron	190	180	90	130	142	65	202.5	112.5	196	110.5	71	1.5"
GEM25-100-180	Cast iron	190	180	90	130	142	65	202.5	112.5	196	110.5	71	1.5"
GEM25-120-180	Cast iron	190	180	90	130	142	65	202.5	112.5	196	110.5	71	1.5"
GEM32-40-180	Cast iron	190	180	90	130	142	65	202.5	112.5	196	110.5	71	2"
GEM32-60-180	Cast iron	190	180	90	130	142	65	202.5	112.5	196	110.5	71	2"
GEM32-80-180	Cast iron	190	180	90	130	142	65	202.5	112.5	196	110.5	71	2"
GEM32-100-180	Cast iron	190	180	90	130	142	65	202.5	112.5	196	110.5	71	2"
GEM32-120-180	Cast iron	190	180	90	130	142	65	202.5	112.5	196	110.5	71	2"

INTRODUCTION: INSTALLATION DIMENSIONS



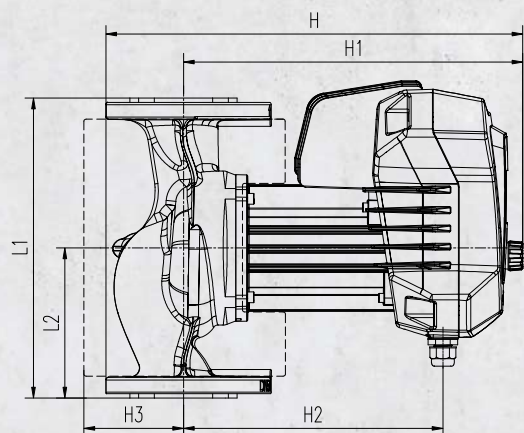
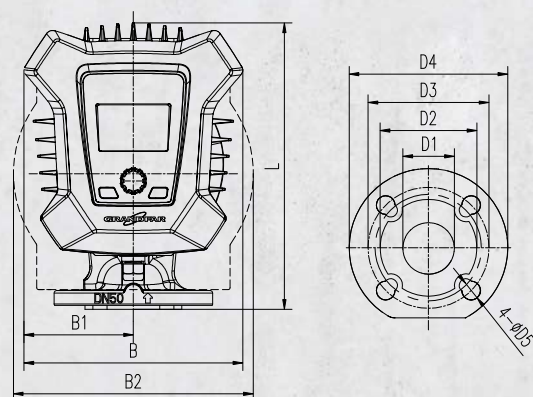
Model	Pump body material	Dimensions(mm)														
		L	L1	L2	B	B1	B2	H	H1	H2	H3	D1	D2	D3	D4	D5
GEM32-40F-220	Cast iron	220	220	110	140	70	200	210	145	113	82	32	80	100	140	19
GEM32-60F-220	Cast iron	220	220	110	140	70	200	210	145	113	82	32	80	100	140	19
GEM32-80F-220	Cast iron	220	220	110	140	70	200	210	145	113	82	32	80	100	140	19
GEM32-100F-220	Cast iron	220	220	110	140	70	200	210	145	113	82	32	80	100	140	19

INTRODUCTION: INSTALLATION DIMENSIONS



Model	Pump body material	Dimensions(mm)														
		L	L1	L2	B	B1	B2	H	H1	H2	H3	D1	D2	D3	D4	D5
GEM 32-120 F	Cast iron	266	220	110	226	113	212	379	312	242	79	32	76	90/100	140	14/19
GEM 40-40 F	Cast iron	266	220	110	226	113	212	382	312	242	79	40	84	100/110	150	14/19
GEM 40-60 F	Cast iron	266	220	110	226	113	212	382	312	242	79	40	84	100/110	150	14/19
GEM 40-100 F	Cast iron	266	220	110	226	113	212	382	312	242	79	40	84	100/110	150	14/19
GEM 40-120 F	Cast iron	281	250	125	226	113	212	382	312	242	79	40	84	100/110	150	14/19
GEM 40-150 F	Cast iron	281	250	125	226	113	212	382	312	242	79	40	84	100/110	150	14/19
GEM 40-180 F	Cast iron	281	250	125	226	113	212	382	312	242	79	40	84	100/110	150	14/19
GEM 50-60 F	Cast iron	276	240	120	226	113	248	387	312	242	93	50	102	110/125	164	14/19
GEM 50-80 F	Cast iron	276	240	120	226	113	248	387	312	242	93	50	102	110/125	164	14/19
GEM 50-100 F	Cast iron	296	280	140	226	113	248	389	312	242	93	50	102	110/125	164	14/19
GEM 50-120 F	Cast iron	296	280	140	226	113	248	389	312	242	93	50	102	110/125	164	14/19
GEM 50-150 F	Cast iron	296	280	140	226	113	248	389	312	242	93	50	102	110/125	164	14/19
GEM 50-180 F	Cast iron	296	280	140	226	113	248	389	312	242	93	50	102	110/125	164	14/19

INTRODUCTION: INSTALLATION DIMENSIONS



Model	Pump body material	Dimensions(mm)														
		L	L1	L2	B	B1	B2	H	H1	H2	H3	D1	D2	D3	D4	D5
GEM 65-40 F	Cast iron	326	340	170	226	113	266	399	320	250	90	65	119	130/145	185	14/19
GEM 65-60 F	Cast iron	326	340	170	226	113	266	399	320	250	90	65	119	130/145	185	14/19
GEM 65-80 F	Cast iron	326	340	170	226	113	266	399	320	250	90	65	119	130/145	185	14/19
GEM 65-100 F	Cast iron	326	340	170	226	113	266	399	320	250	90	65	119	130/145	185	14/19
GEM 65-120 F	Cast iron	326	340	170	226	113	266	399	320	25	90	65	119	130/145	185	14/19
GEM 65-150 F	Cast iron	326	340	170	226	113	266	399	320	250	90	65	119	130/145	185	14/19
GEM 80-60 F	Cast iron	336	360	180	226	113	326	426	326	256	111	80	128	150/160	200	19
GEM 80-80 F	Cast iron	336	360	180	226	113	326	426	326	256	111	80	128	150/160	200	19
GEM 80-100 F	Cast iron	336	360	180	226	113	326	426	326	256	111	80	128	150/160	200	19
GEM 80-120 F	Cast iron	336	360	180	226	113	326	426	326	256	111	80	128	150/160	200	19
GEM 100-40 F	Cast iron	381	450	225	226	113	356	446	338	268	116	100	160	170	220	19
GEM 100-60 F	Cast iron	381	450	225	226	113	356	446	338	268	116	100	160	170	220	19
GEM 100-80 F	Cast iron	381	450	225	226	113	356	446	338	268	116	100	160	170	220	19
GEM 100-100 F	Cast iron	381	450	225	226	113	356	446	338	268	116	100	160	170	220	19
GEM 100-120 F	Cast iron	381	450	225	226	113	356	446	338	268	116	100	160	170	220	19

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