THOMPSON MEAT MACHINERY

9000

9000 SERIES MIXER MINCERS

THOMPSON TOUGH • LEADING AUSTRALIAN MANUFACTURERS OF MEAT PROCESSING MACHINERY

About Thompson

Thompson Meat Machinery is a 100% Australian owned business that commenced manufacturing operations in 1981. Thompson's is the leading Australian Manufacturer of Meat Processing Machinery with a staff of 70 professionals, tradespersons and apprentices.

The Thompson range of machinery is large and varied and includes Mixer Mincers, Bandsaws, Mincers, Frozen Block Flakers, Sausage Fillers, Hoists and Vacuum Tumblers.

The Thompson philosophy has always followed two paths - the first one is to build strong and solid relationships with all customers both within Australia and overseas. The second is to be innovative and forward thinking with relation to the future wants and needs of the world market. Constant market surveillance ensures that Thompson's is always aware of future trends worldwide and is therefore able to gauge what new machines and models will be well received on the world stage.

Always mindful of safety requirements and customer satisfaction Thompson's has invested ever increasing funds each year in Research & Development.

Thompson machines have earned their reputation for reliable operations with ultra low maintenance requirements, with processing capabilities way beyond the limit of their original design characteristics. That's where the industry term "THOMPSON TOUGH" was forged. Thompson Tough Machines are now well recognized and they carry a reputation second to none.

Thompson's has been welcomed into major meat processing plants in North America, United Kingdom and Malaysia and of course in its home of Australia. The extensive distributor sales and service network has been boosted to now include Holland, Scandinavia, Iran, Thailand, Singapore, Japan and South Africa.

STAINLESS STEEL DIVISION

One question that the management and staff of Thompson Meat Machinery are frequently asked is how did you get from manufacturing machinery to fabricating stainless steel bench work. Because Thompson Meat Machinery is so focused on providing the ultimate solution to meat processors it follows that they would also be equipped and able to fabricate all your Stainless Steel benches and sinks. Thompson's Stainless Division also offers specifically designed food preparation counters and purpose built shop display units incorporating ovens, fridges, food preparation, pizza cooker and bain marie areas, these also are sold throughout Australia with a burgeoning market.

From their modern factory in Brisbane, Thompson's skilled craftsmen are able to take any plans and turn them into the ultimate stainless steel solution for you! Yes, stainless steel fabricated - THOMPSON TOUGH!

THE FUTURE OF THOMPSON MEAT MACHINERY

Thompson Meat Machinery will continue to cultivate new markets within Australia and overseas and by maintaining their two pathways to success will become a world leader in quality and performance. THOMPSON TOUGH MACHINES are set to become the name always associated with meat processing machinery throughout the World. When you think of meat machinery you think of Thompson

Thompson 9000 Series Mixer Mincers

Thompson 9000 Series Mixer Mincers – up to 21,000 kg/hour (46,300 lbs/hour) capabilities

Twin Shaft Mixer Mincers 1,000-3,750 kg (2,200-8,300 lbs) batch size

Pictured: *Thompson 91000 Mixer Mincer Inline*

Pictured: *Thompson 92500 Mixer Mincer Right Angle*

KEY FEATURES

- From 15,000 kg/hour (33,000 lbs/hour)
- 200 kg/minute, 12,000kg/hour (440 lbs/minute, 26,460 lbs/hour) 2nd cut through 4 mm (5/32") hole plate
- Exceptional production capacity and improved finished product quality
- 2 Speed 22 kW (30 hp) Mince Feedscrew Option
- Up to 21,000 kg/hr (46,300 lbs/hr) 1st cut with upgraded High Efficiency Cutting System
- Up to 12,000 kg/hr (26,460 lbs/hr) 2nd cut with upgraded High Efficiency Cutting System

Production rates are indicative and dependent upon machine model, the product and the temperature of the product.

Thompson 9000 Series Mixer Mincers Overview

THE 9000 SERIES IS A NEW ADDITION TO OUR VAST MIXER GRINDER RANGE.

The key point of difference apart from improvements in our gear motor drive technology is the feedscrew and cutting system enlargement.

The feedscrew diameter is increased to 170 mm (6.7") and on the HECS system this clears out to 250 mm (9.8") mince through an 280mm (11"), or 355 mm (14") diameter plate or Unger 280 mm (11") double cut system.

The 9000 series range of mixer grinders is made up of inline grinders whereby the feedscrew runs parallel with the mixing paddles and right mixer grinders with the feedscrew running at right angles to the paddles similar to the 5000 series.

There is no transfer screw feeding into a 2nd mincing feedscrew like the 6000 series.

This short 170 mm (6.7") diameter feedscrew provides much higher production output rates and with a High Efficiency Cutting System (HECS) addition is the ultimate grinding system.

9000 MIXER GRINDERS have been in operation since 2013 with the most recent developments of the 92500 Right Angle Mixer Grinder (2,500 kg (5,500 lbs) batch capacity) and 91000 Straight Mixer Grinder.

Beyond Spectacular Production output capacity is the 9000 series Mixer Mincer/Grinder Drive Train has also undergone significant engineering upgrades to ensure reliable, efficient and robust operation..

Pictured: *Thompson Twin Paddle Counter Rotating Heavy Duty Mirror Polished Mixing Paddles in Mirror Polished Hopper/Bowl*

Thompson Mincing Technology that is Quite Exceptional

In addition to achieving high production output rates, the Meat Particle Definition and Size produced through these systems is extremely distinct and consistent. When the product is examined it is easy to identify the extremely clear, distinctly separated meat and fat particles which are of consistent size.

Smearing of the meat particles is eliminated by the design characteristics of the cutting system which is more than just the knife and plate.

The High Efficiency Feedscrew and Barrel Design correctly proportion the product supply from the intake channel through to the cutting system with hole plate. By balancing the product input and output ratio with each revolution of feedscrew we minimise mechanical working of product which maintains the original meat structure through the transport system until it is cut between the knife and hole plate.

The benefits of this cutting system are finished product delivered with minimum temperature rise, particle definition that is clear with distinct separate meat and fat particles of consistent size.

A further important factor is that there is no excessive pressure from over extruding the product through the hole plate that can damage the meat structure.

PRODUCT TEMPERATURE REDUCTION THROUGH CO_2

Another very important technological advancement is our product temperature reduction rate through our CO_2 bottom injection manifold systems combined with our plenum CO_2 gas extraction system which minimises CO_2 energy loss.

Temperature reduction time through the Thompson CO_2 injection system is faster and more efficient than our competitors. This is a very important factor, not only in terms of reducing production times but also in reducing mix cycle times of product.

Agitation of the product is essential during CO_2 injection. Therefore if the CO_2 injection cycle were to take twice as long, or in some cases it has been reported 10 times as long, this will be extremely destructive to the finished product in terms of particle definition, protein extraction and excessive product smear.

- 400 kg (880 lbs) pre-minced meat temperature reduced from +8°C to -1°C (46.4°F to 30.2°F) in 60 to 80 seconds
- Injection nozzles on 510 L (135 gallons) capable of 5,500 kg/hour 5,500 kg/hour or 1.53kg/s (12,100 lbs/hour or 3.37 lbs/s) CO_2 injection
- Note: Sufficient CO_2 supply must be available to achieve temperature reduction time as stated

In addition, Thompson Mincers/Mixer Mincers/Mixers are extremely compact in size and cost competitive when compared to many other competitor brands yet offering:

SUPERIOR MINCE QUALITY & PARTICLE DEFINITION AND TEMPERATURE REDUCTION TECHNOLOGY

There are numerous beneficial options available that can enhance production output, product and production consistency including:

- Variable speed feedscrew control
- CO_2 bottom injection
- PLC control
- Weigh load cells
- Water injection

Pictured: *1st Cut Fresh 70CL Mince Meat*

Pictured: *1st Cut Fresh 80CL Mince Meat*

Pictured: *Cheese & Chive Meatball End Discharge after Mincing*

Thompson 9000 Mixer Mincer

Pictured: *Thompson 91000 Mixer Mincer Inline*

The Thompson 9000 Mixer Mincer HECS 170-250 Mincing System provides superior level of production output.

• Primary Cut: up to 15,000 to 21,000 kg/hr or 250 to 350 kg/min (33,000 to 46,300 lbs/hr or 550 to 770 lbs/min) through 13 mm (1/2") hole plate; and

• Secondary Cut: up to 12,000 kg/hr or 200 kg/min (26,500 lbs/hr or 440 lbs/min) through 4 mm (5/32") hole plate.

Production output rates are subject to Machine Specification & Product Temperature.

9000 Series Is A New Addition To Our Mixer Grinder Range. Key point of difference include:

- NEW Upgraded 280 mm (11") or 355 mm (14") "HIGH EFFICIENCY CUTTING SYSTEM" HECS:
- Feedscrew Diameter is 170 mm (6.7") with the "HECS" High Efficiency Cutting System Further increasing to 250 mm, 280 mm or 355 mm (9.8", 11" or 14") Ø.

Mincing/Grinding Systems include:

- "66" Enterprise 220 mm (8.7") Diameter Plates.
- "U 200" Double Cut Unger System.

HECS High Efficiency Cutting System Increasing from the previous 220mm (8 5/8") diameter Cutting System to:

- 11 inch Enterprise 280mm Diameter Plate.
- 14 inch Enterprise 355mm Diameter Plate.
- 280mm Diameter Unger Double or Triple Cut Mincing/ Grinding System.

The 9000 series Mixer Grinders are available in both Right Angle Feedscrew Design & In Line Feedscrew Design.

- In line Mixer Grinders Short Feedscrew operates parallel with the mixing paddles.
- Right Angle Mixer Grinders Short Feedscrew operates at right angles to the paddles.

No transfer screw feeding into a Mincing/Grinding Feedscrew providing full flow production performance.

The short 170 mm (6.7") standard diameter feedscrew high production output rates.

HECS 280 mm (11") or 355 mm (14") or 14 inch 355mm diameter Cutting Systems achieve the ultimate grinding system.

Thompson 9000 Mixer Mincer – Specifications & Options

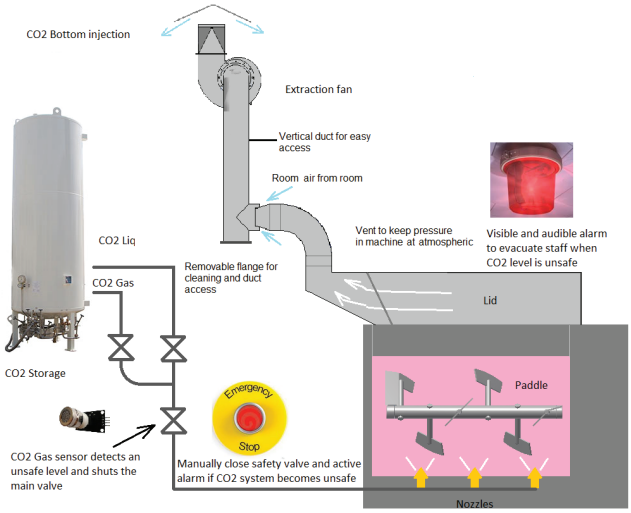
The Thompson 9000 Series Mixer Mincers Specifications:

- 400V, 50Hz, 3 Phase
- 66 Stainless Steel Barrel, Feedscrew, Lock Ring STD
- 11" 280mm HECS Stainless Steel Grind System Option
- 22kW Mince-Grind 2 Speed Helical Direct Drive
- 1110L Capacity to Top of Paddle 1000kg (2200 lbs) Mix Capacity
- 5 x 200 L (50 gallons) Bin Batch Capacity Fresh Trim
- 11 kW (15 hp) Mix Twin Paddle Helical Direct Drive System
- Reinforced Heavy Duty Twin Stainless Steel Paddles – Counter Rotating & Overlapping
- Programmed Reciprocating Mix Cycle
- Safety Interlocked Discharge Guard with Time Out Lock
- Pneumatic Feedscrew Ejector
- Full Stainless-Steel Construction
- S/S Stand with Levelling Pads - To Discharge into 200 L (50 gallons) Bins

Additional OPTIONS INCLUDE:

- 280 mm (11") High Efficiency Grind System
- 355 mm (14") High Efficiency Grind System
- 30 kW (40 hp) Mince Gear Motor Drive
- 37 kW (50 hp) Mince Gear Motor Drive
- End Discharge Chute
- Variable Frequency Drives (VFD) Mix Paddles
- Variable Frequency Drives (VFD) Mince Feedscrew
- PLC Program Logic Control with Human Machine Interface
- Polished Bowl and Paddles
- Pneumatic Feedscrew Ejector
- Step and Platform Assembly
- Hopper Swing Guard-Interlocked
- Inspection Mirror Feedscrew Trolley Remote Control on Inspection Step
- Scale Stand
- Interlocked Guard C/W Time Out Lock
- Safety Interlock Discharge Guard with Time Out
- Bone Elimination System Pneumatic Air Purge
- Auto Reverse Feedscrew
- Feedscrew Trolley
- CO_2 Bottom Cooling Injection and Top Injection through Snow Cones
- Hydraulic Operated Heavy-Duty Lid for CO_2
- Light Curtains
- Plenum To Rear of Machine for CO_2 Cross Flow Extraction
- Water Monitoring with PLC Control System
- Temperature Readout(Check Detail Of Existing)
- Scale Stand
- Grill Lid
- Lid Auto Release

Thompson 92500 Mixer Mincer



CARBON DIOXIDE (CO_2) OR NITROGEN () BOTTOM COOLING INJECTION AND CO_2 TOP INJECTION THROUGH SNOW CONES

Thompson Meat Machinery incorporates the CO_2 or injection cooling technologies in their mixer mincers, through a series of nozzles and manifold system which delivers efficient and consistent product temperature reduction technique coupled with perfect temperature controls.

CO_2 snow cones cooling system is used for processing batches of product less than 300 kg (660 lbs) through snow cones. This is a more effective and efficient cooling system than bottom injection for smaller batches. The bottom cooling injection system releases a great deal of CO_2 shooting at high pressure through the smaller batches of product resulting an high amount of wasted CO_2 which is exhausted through the plenum by exhaust the fan. The high pressure will also carry the product upwards covering the internal surface of the lid making it more difficult to clean. The CO_2 bottom cooling injection process requires an initial injection of CO_2 gas to pressurise the manifold system prior to the release of liquid CO_2 into the chamber and injected through the nozzles into the bowl. Once the liquid injection process is complete a third process of flushing out the manifold system with gas is necessary to complete the cycle.

It is important that the manifold system stays pressurized until all CO_2 liquid is ejected. If the CO_2 goes below the critical pressure point it will form into a solid (snow) and block the complete manifold system. It can take numerous hours to defrost a blocked manifold system and that is why it is imperative that it is designed correctly. Thompsons have never had the issue of a blocked manifold system.

The bottom cooling injection process releases small bursts of liquid nitrogen into the product. The large temperature difference causes the nitrogen to boil off as a gas which is used in the cooling process.

The program logic control (PLC) temperature monitoring and control is fitted to regulate CO_2 injection and maintain desired product temperature. PLC also monitors finished product temperature after mincing processes.

- 37kW (50 hp) Mince Drive Option,
- 3,500 L (920 gallons) Hopper Capacity, 2,500 kg (5500 lbs) Batch Mix Capacity (Fresh Meat).
- 170 mm (6.7”) Straight Feedscrew Diameter. 220 mm (8.7”) Mincer Plate System
- 280 mm (11”) or 355 mm (14”) “High Efficiency Cutting System” (HECS)
- Primary Cut: up to 15,000 to 21,000 kg/hr or 250 to 350 kg/min (33,000 to 46,300 lbs/hr or 550 to 770 lbs/min) through 13mm (1/2”) hole plate;
- Secondary Cut: up to 12,000 kg/hr or 200 kg/min (26,500 lbs/hr or 440 lbs/min) through 4 mm (5/32”) hole plate.

Mincer Cutting Systems, Enterprise & Unger

Thompson Meat Machinery solution for cutting system variations.

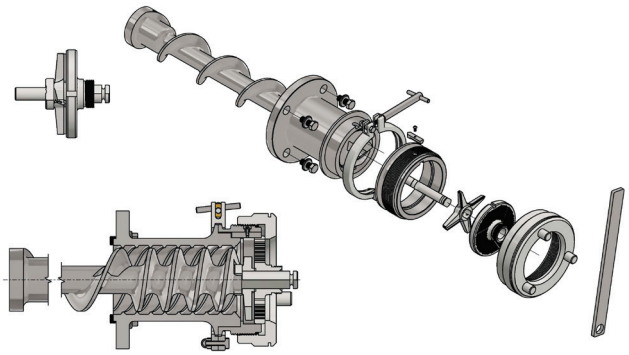
Beyond providing cutting systems that suits the customer, or the market whether that be enterprise or Unger, Thompson go one step further and provide interchangeability between Enterprise & Unger System allowing if necessary the use of both systems on the same machine without relying on spaces to take up compromise of removing knives and non-required knives & plates.

These additional spaces that are accumulated at the end of the cutting system can create smear from the discharged product running over the inside diameter of the spaces.

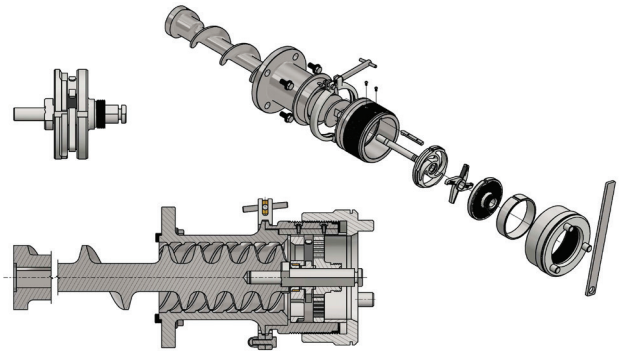
THOMPSON CLAMP ON SYSTEM

Clamp On System allows interchangeability by changing the Plate Housing clamped onto the Mincing Barrel for an alternative creating change from single cut to double cut or to Triple cut or beyond triple cut to Multi-cut.

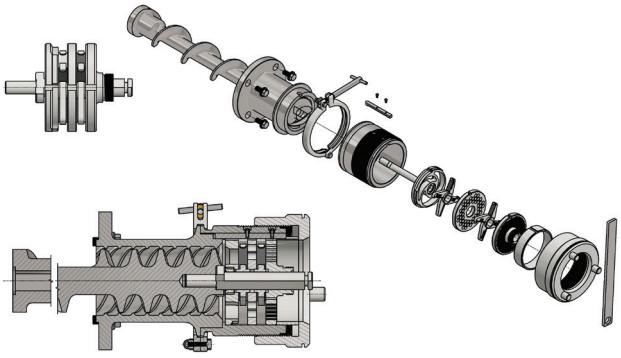
Thompson Clamp On Enterprise & Unger Cutting System Interchangeable Options.



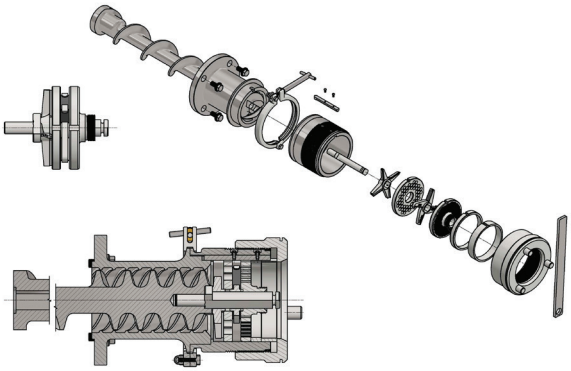
3a. 4000AS-133 (SC) Clamp-On Single Cut Enterprise



3b. 4000AS-135 (DC) Clamp-On Double Cut Unger

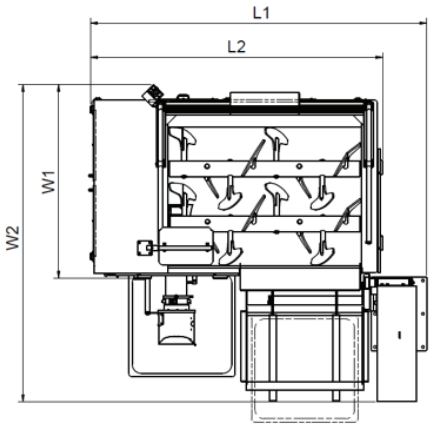


3c. 4000AS-134 (TC) Clamp On Triple Cut Unger

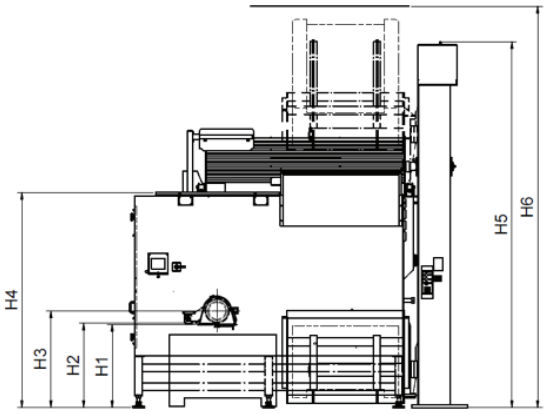


3e. 4000AS-140 (Multi Cut Frozen, Knife First)

Thompson 9000 Series Mixer Mincer Specifications (415V, 50Hz)



TOP VIEW



FRONT VIEW

(US metrics in brackets)

Machine Model	H1	H2	H3	H4	H5	H6	L1	L2	W1	W2
91000	803 (31.6")	818 (32.2")	950 (37.4")	2005 (78.9")	3415 (134.5")	3500 (137.8")	3187 (125.5")	2660 (104.7")	1480 (58.3")	2240 (88.2")
92500	900 (35.4")	915 (36")	1050 (41.3")	2332 (91.8")	3965 (156.1")	4350 (171.3")	3645 (143.5")	3170 (124.8")	2095 (82.5")	3435 (135.2")

Dimensions in mm (inches)
Dimensions and weight may vary in the course of development.

Machine Model	Bowl Capacity (Top of Paddle) L (gal)	Bowl Capacity (Top of Bowl) L (gal)	Mix Capacity L (gal)	Mix Motor	Mince Motor	460V, 60Hz	230V, 60Hz	208V, 60Hz
						Full Load Current	Full Load Current	Full Load Current
91000	1110 L (293)	1570 L (414.7)	5 x 200 L bins (5 x 50 gal bins)	11 kW (15 hp)	22kW (30 hp)	61 A	122 A	135 A
92500	2530 L (668)	3410 L (900)	5 x 750 L bins (5 x 200 gal bins)	15kW (20 hp)	22kW (30 hp)	69 A	137 A	151 A

(Volume units US gallons)
***Machine Power supply to be fitted with a "D" Curve Motor Start Circuit Breaker appropriate size. Technical data is to be used as a guide only and is subject to change without notice.*
30 kW & 37 kW (40 hp & 50 hp) VFD motor option available on selected models. Overload Protection to Motors.

Discharge Size	Muscle & Trim kg/hr (lbs/hr) (up to)			Sausage Emulsion kg/hr (lbs/hr) (up to)	
	½" (12.7mm) hole plate	¼" (6.35mm) hole plate	9/64" (3.57mm) hole plate	¼" (6.35mm) hole plate	9/64" (3.57mm) hole plate
66 (HECS + VFD)	9300 1st Cut (20,500)	8700 2nd cut (19,200)	8700 2nd cut (19,200)	8700 2nd cut (19,200)	6900 2nd cut (15,200)
GU160	5800 1st Cut (12,800)	4600 2nd cut (10,100)	4100 2nd cut (9,000)	4100 2nd cut (9,000)	4100 2nd cut (9,000)
U200	9300 1st Cut (20,500)	8700 2nd cut (8700)	8700 2nd cut (8700)	8700 2nd cut (8700)	6900 2nd cut (15,200)

Production rates are indicative and dependent upon machine model, the product and the temperature of the product.
Technical data is to be used as a guide only and are subject to change without notice.

Thompson Twin Shaft Mixing Paddle Design

Thompson Twin Shaft Mixer Mincers currently extend to hopper volumes of 3,500 L (920 gallons) which can be increased at customer Request. The Twin Shaft Mixing Paddle Mixer Mincers have larger Hopper Capacity & Batch Mixing Capacity. The 9000 Series Twin Shaft Mixing Paddle Mixer Mincers incorporate the same high-performance mince technology as Single Shaft.

Increased batch mix capability provides production efficiency from batch mixing time reduction over production day. The Larger Total hopper capacity allows Greater Number of bins to be loaded or a larger single bin to be loaded. Both practices are Improved Production Efficiencies.

Thompson 9000 Mixer Mincers have a mince output rate of up to 21,000 kg (46,300 lbs) per hour.

Larger Bin i.e. 500 kg bin loading in one loading operation saves significant loader time i.e. one load rather than 3 bins 22 seconds time travel up and 22 seconds time travel down. Very Efficient Production Processing Practice.

Thompson Twin Shaft Mixer mincers have capability to upgrade to 30 kW & 37 kW (40 hp & 50 hp) mincer gear motor drive. Increased motor size can provide additional advantages when processing frozen meats. Thompson Mixer Mincers can easily process frozen Tempered, pre-broken or flaked meat at temperatures of -12°C.

Mincing Output Rates Become More Important with Larger Batch Processing Volumes. The larger the batch the more critical is to empty the batch from the mixer mincer at fastest rate possible. On

completion of the mixing cycle achieving the correct mix and texture. There is additional mix action during the mince discharge cycle as paddles continue to rotate feeding mincer feedscrew. If product is not minced out quickly, additional mix agitation can become destructive with further extraction of protein, and damage to meat particle causing product spoilage if discharge time is excessive. Larger Hopper Capacity Production with Thompson Twin Shaft Mix Design Provides Improved Production Efficiency.

Thompson 9000 Mixer Mincers Production Rate Improvements with Thompsons Patented H.E.C.S. Mincing System.

1st Cut Mincing Production Rates Achievable processing Fresh Meat through 13mm Hole Plate

- 15,000 kg/hr (33,000 lbs/hr) 1st cut through 13mm (1/2") hole plate
- 12,000 kg/hr or 200 kg/min (26,500 lbs/hr or 440 lbs/min). with upgraded H.E.C.S. High

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