



DUPLEX REFINER/ CONCH

*3,000 KG TO 10,000 KG BATCH CAPACITY
DUPLEX UNIVERSAL CHOCOLATE REFINER/CONCHES
(POWER ASSISTED)*



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Features

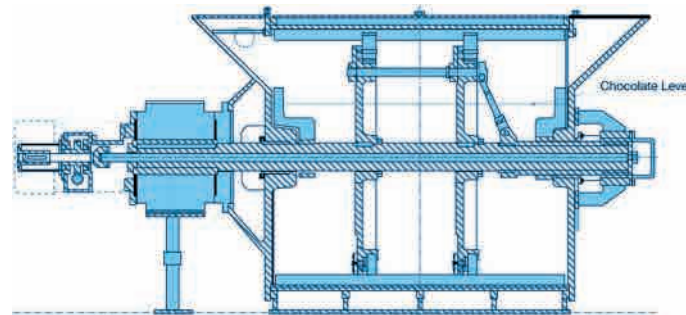
- Double Spider Wheel arrangement
- Electric Immersion Heating
- Electric Main Drive Motor
- Electric Extract Fan
- Energy efficient geared Motor drive assembly
- Automatic Temperature Control
- Control Panel
- Power Assisted Pressure Control for increasing and decreasing pressure
- Louvre through air control
- Sampling & Take Off Valve
- Hard Wearing D Section lining bars
- Shear attachment as standard from 5000 Kg model upwards

Benefits

- Cost effective system for the production of pure chocolate, compound, couverture, praline, truffle, cream fillings, etc
- Suitable for rapid reduction and improved flavour development. Shorter cycle time.
- Requires the minimum of floor space as this universal system performs the function of a sugar mill, cocoa mill, pre-mixer, refiner and conche, all in the one machine
- Low energy consumption
- Minimal labour requirements
- Moisture content achievable as low as 0.3%
- Low metal count (approximately 12 added parts per million)
- Fat contents of 24% to 70% can be handled (as low as 21% can be achieved with the addition of a Shear Attachment)
- Hard wearing grinding section made from specially developed alloy steel

Optional Extras

- Sound Reduction Blanket – is a combination of rigid urethane board and polished aluminium shrouding, it is fitted round the cylinder of the Refiner/Conche to reduce the noise level
- Anti Vibration Strip - reduces vibration and therefore transmitted noise. We recommend using it in conjunction with our Sound Reduction Blanket
- PLC Control Panel - A fully automatic control system can be used to run the machine overnight or to allow operators to concentrate on other tasks. A PLC is used to monitor system parameters and adjusts the machines characteristics to achieve the optimum refining cycle. The system can be configured by the user to run each stage of the process for a given time and at user specified temperatures.
- Shear Attachment (for 3000kg model) - to enable processing of chocolate down to 21.5% fat content - see Datasheet
- Cabling between the Refiner/Conche and Control Panel



Technical Data

Machine Capacity (kg)	Main Drive Motor (kw)	Power Assisted Motor (kw)	Electric Immersion (kw)	Length (mm)	Width (mm)	Height (mm)	Net Weight (kg)
3000	55	0.55 - 4 RPM	2-3	3950	1700	1960	9200
5000	75	0.55 - 4 RPM	4-3	4020	2035	2280	13500
6000	90	0.55 - 4 RPM	4-3	4020	2215	2470	14700
7500	110	0.37 - 2 RPM	4-3	4600	2520	2850	16600
10,000	110	0.37 - 2 RPM	8-3	5400	2830	3150	21000

Installation

- Ideally 1 metre clearance is required around the equipment's perimeter. The area should be adequately ventilated to prevent overheating of the motors and gearboxes
- The machine is best installed on a flat reinforced concrete foundation floor- minimum thickness 230mm (9") of 30 Newton grade concrete. The machine does not have to be bolted to the floor
- It is advisable that the machine be mounted on anti-vibration pads, or strip, mounted under the channel sections that form the machine plinth. These pads also allow the machine to sit stably on slightly uneven floors and slightly reduces noise levels
- Control panel is a standalone unit but should be located so operators can observe and monitor the equipment in operation
- Consideration of service provision to and from the machine should also be made. Electrical supplies should be carried to the equipment using cable trays or trunking
- Water feed and return lines will need to be connected to the machine to provide cooling taking into consideration the following cooling requirements
- Three phase electrical supply is required

Ambient Temperature	25°C
Cooling Water Temperature	12 - 16°C

Machine Capacity (kg)	Machine Style	Cylinder Capacity (Litres)	Consumption (Litres per Hour)	Water Cooling Capacity (kW)
3000	Duplex	515	2800 - 3000	53.1
5000	Duplex	608	4050 - 4250	65.5
6000	Duplex	791	4700 - 4900	71.6
7500	Duplex	1021	5900 - 6100	82.0
10,000	Duplex	1311	7800 - 8000	94.7

Notes

- Values are for guidance only and will vary depending upon the ambient temperature, the cooling water temperature, the product being manufactured and the machine's settings
- If the ambient temperature in the room where the machine operates is between 35 – 40°C then the above water consumption values should be increased by 40%
- When cooling water temperature is 25 – 30°C and ambient temperature is 25°C then the above water consumption values should be increased by 60%
- Maximum pressure permitted in the cylinder water cooling jacket is 1.5 bar (21.5 psi)
- Cooling capacity based upon 6.5 kW/m² transferred to cooling water over effective area of internal cylinder wall giving a 5°C temperature gradient through the wall and 0.2 kW/m² lost to ambient atmosphere through cylinder jacket giving a 1°C temperature gradient through the jacket wall
 - We recommend that product ingredients will need to be conveyed to the machine and processed product piped from the machine for downstream processing (additional equipment available from MacIntyre for this purpose. Pipe runs for these elements should be planned before equipment installation commences)

Cycle Times

- Cycle times are dependant on recipe, quality of raw materials, fineness required and model of Refiner/Conche being used. Please contact the sales office for a cycle time estimation

MacIntyre reserve the right to change specifications without prior warning.



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