# **Mould Space Combo**

MSC - Series



# **Working Principle**

Process Blower gets air from ambient through Air Filter and Heat Exchanger (Evaporator). Inbuilt refrigeration based system removes the initial moisture from air by cooling air at constant temperature. Cooled and constant temperature of air then passes through a continuously rotating desiccant rotor for removing the moisture at dew point level of -3°C to -5°C. After removing the moisture, Process Blower supplies low dew point air to processing machine through post cooler to reduce the temperature of air below 25°C. A continuously rotating desiccant rotor removes the moisture at regeneration temperature of 140 Degree Celsius in open air.

# **Capacity Ranges**

400 m<sup>3</sup>/hr • 600 m<sup>3</sup>/hr • 1200 m<sup>3</sup>/hr • 2400 m<sup>3</sup>/hr

#### **Unique Features**

- Lower dew point at air outlet 3°C to 5°C to prevent condensation on mould which helps in improving productivity of the main processing machine
- Desiccant rotor based system instead of refrigerant based system
- Designed for higher static pressure at rated air flow
- Designed for Indian ambient conditions
- Proven component suppliers
- Compressor from Danfoss
- Ziehla-abegg Germany make centrifugal blowers
- Allen Bradly make PLC
- Touch screen HMI of 4" size with color graphics
- Process and Regeneration blowers are protected against impurities with PP filter with easy access
- Lower pressure drop across the desiccant assembly
- Neat and clean component layout for easy access of major components
- Tabular fast response heater



# **Control Features**

- User friendly design of touch screen HMI
- Display of temperature readings of air at various stages of process e.g.
- Evaporator outlet temperature
- Temperature at desiccant rotor outlet
- Temperature going to process
- Regeneration temperature
- Status of all DI & DO screen
- Trending screen to monitor the performance of Mould Space Combo
- Two different levels of password protection
- Audio visual alarm
- Display of air outlet temperature and humidity
- Solid state relay based heater control for frequent ON / OFF
- Real time clock with capability to record last 50 alarms
- Capable to communicate through Modbus TCP / IP platform
- Option of multiple outlet for multiple machines with central Mould Space Combo
- Optional dew point indication & control

# **Technical Specifications**

Model	MSC 1	MSC 1.5	MSC 2	MSC 4
Performance Characteristics				
Air Flow M <sup>3</sup> /Hr (CFM)**	400 (235)	600 (353)	1200 (705)	2400 (1411)
Process Air Static Pressure Wc" (Pa)	2.4" (600 Pa)	1.5" (373 Pa)	2" (500 Pa)	
Rated Air Outlet Dew Point** at 100 Deg. Cel. of Regeneration	Plus (+) 1.6 Degree Celsius			
Rated Air Outlet Dew Point** at 140 Deg. Cel. of Regeneration	Minus (-) 3.0 Degree Celsius			
Process Air Outlet Temperature Degree Celsius	30			
Standard Process Blower KW	0.51		0.62	5
Standard Regeneration Blower KW	0.19		0.51	
Regeneration Heater KW		7.5 15		30
Compressor Quantity / KW	1 x 4.65	1 x 5.83	1 x 7.8	1 x 13.6
Refrigerant	R22			
Voltage	415V, 50 Hz, 3 Phase			
Connected Load KW	12.15	13.33	22.8	43.6
Control Voltage	24V DC			
Dimension W x D x H (mm)		1		
W - Width	1150	1240 1500		
D - Depth	1300	2050 2700		2700
H - Height	1900	2100 2080		2080
Process Connections				1
Process Delivery Size Ø Inch (mm)	5 (127)		8 (203.2)	12 (304.8)
Regeneration Delivery Size Ø Inch (mm)	2.5 (63)		5 (127)	8 (203.2)
Water Requirements (Customer Scope of Supply)				
Cooling Tower Capacity Require KW (TR)	18 (5.1)	21.19 (6)	26.65 (7.5)	23 (15.66)
Temperature Degree Celsius	30			
Flow Rate M <sup>3</sup> / Hr (LPM)	3 (52)	5 (78)	6 (96)	17.5 (292)
Chilled Water Inlet / Outlet Connection	1 1/2" BSP Female Connection			
Weight Kg		-		-
Installed (NET)	310	400	435	675
Color	Black RAL 9005 / Siemens Grey RAL 7032			

All specifications are subject to change without prior notice.

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\*\*Considering ambient condition: 35 degree celsius & 63% relative humidity.

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