

Simpson Multi-Cooler®

As foundry sand preparation and molding plants become increasingly high-speed and quality-oriented, the control of return sand temperature is essential. The Simpson Multi-Cooler is specifically designed to provide the mixer group with sand that is cooled to temperatures that allow optimal mulling, pre-mixed to eliminate return sand variations and with a moisture content controlled within tight tolerances. The result is optimal mulling and high-quality, profitable castings.

Pre-Conditioning

The mixer group can operate at optimal performance and efficiency when shakeout sand is continuously cooled, pre-mixed and the moisture is increased and stabilized within a narrow tolerance before final mixing.



Description

Continuous sand cooler and pre-conditioning system operating on the principle of evaporative cooling.

Application

Sand systems with return sand temperature above 120° F and/or wide variations in return sand properties.

Features

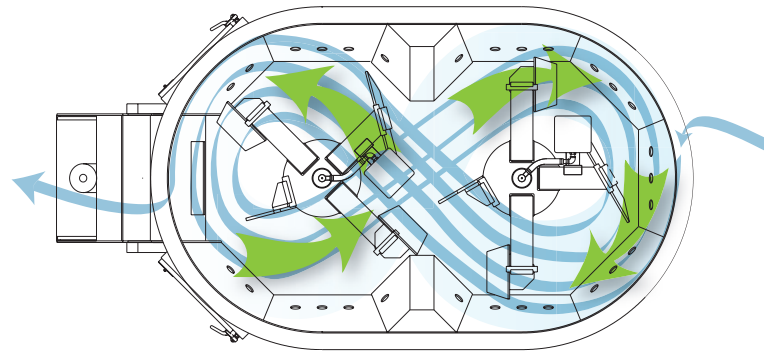
- Pre-mixing with back-blending and controlled retention
- High-efficiency cooling to below 120° F or 20° F over ambient
- Discharge moisture of 2.0% +/-0.2%

Upgrades

- Discharge Door and Controls Upgrade
- Moisture Controls Upgrade

Cooling Pre-Mixing

Continuous back-blending of a large volume of retained sand from multiple molds eliminates any “first-in/first-out” effect and assures complete homogeneity of return sand prior to final mixing.

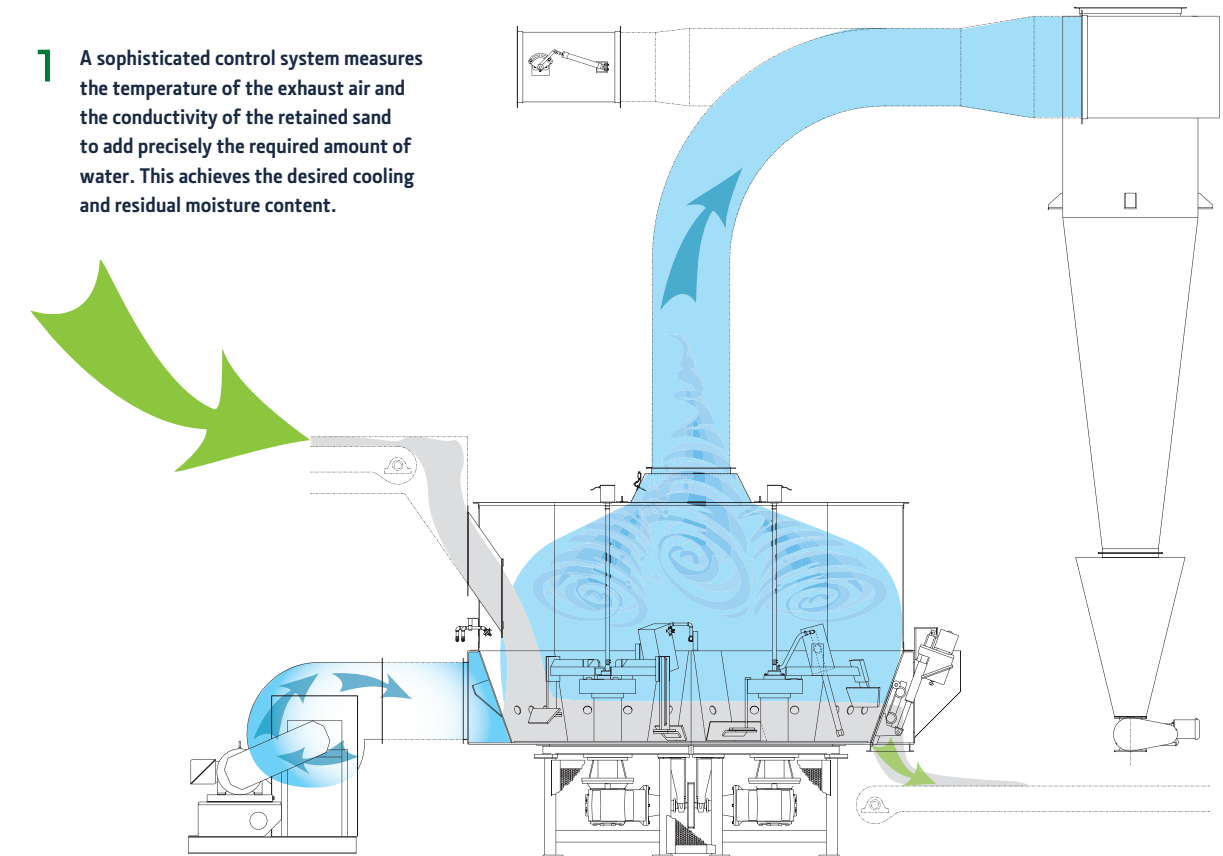


Simpson Multi-Cooler Technical Data

Model		MC-25	MC-50	MC-100	MC-150	MC-200	MC-250	MC-300
Capacity	tph	25	50	100	150	200	250	300
Length	in	95	145	172	209	242	293	293
Width	in	60	82	98	117	137	186	186
Height	in	105	133	135	160	173	239	239
Drive Motor	hp	15	30	50	100	150	200	250
Blower Motor	hp	15	20	40	60	75	100	100
Inlet Blower	ft³/min	2,650	5,300	10,600	15,800	21,100	26,400	31,700
Exhaust	ft³/min	3,530	6,600	13,100	19,700	26,200	32,800	39,400
Shipping Weight	lbs	5,955	10,900	16,350	26,500	43,200	64,400	64,400

All figures are approximate and are subject to change depending upon your application.

1 A sophisticated control system measures the temperature of the exhaust air and the conductivity of the retained sand to add precisely the required amount of water. This achieves the desired cooling and residual moisture content.



2 Counter-rotating mixing tool sets mechanically fluidize the retained sand so that cooling air, provided by the inlet blower, and water can be in intimate contact with the sand; thus providing for efficient and effective cooling.

3 Based on sensors monitoring motor load, the control system adjusts the discharge door opening to maintain a constant volume of sand in the cooler at all times.