MacDonald Steel Limited

Environmental Systems Division

Exhaust Systems - Dust Collector/Filtration Units – Balers – Fans – Shredders – Hogs

ROTARY AIR LOCK

MacDonald Steel's Rotary Air Locks are designed to efficiently transfer non-stringy materials from one air system component to another, ensuring maintenance of a required vacuum or to prevent pressurization.

The air lock maintains a tight, positive air seal by keeping a maximum of the six flexible neoprene steel backed wipers in full contact with the interior housing at all times.

The neoprene wipers are bolted to the vanes of the rotor tips for ease of maintenance. The rotors are open-ended. The rotor housing is heavy-duty steel construction with a removable side plate to provide easy access and maintenance of the rotor.

The MacDonald Steel Rotary Air Lock is available in a range of sizes with inlet/outlet openings ranging from 9" dia./9" x 11" to 72" dia./70" x 96". All packages are supplied complete with drive motor package to suit your displacement requirements. Optional zero-speed sensor package is also available.

Specifications

			Displacement ft^3/min				
Model	Weight	HP	10 RPM	15 RPM	20 RPM	25 RPM	30 RPM
RAL-9	250	1	3.4	5	6.7	8.4	10.1
RAL-12	325	1	6.2	9.2	12.3	15.4	18.5
RAL-18	585	1 ½	15.7	23.6	31.4	39.3	47.1
RAL-24	971	2	31.8	47.8	63.7	79.6	95.6
RAL-30	1217	2	56.5	84.8	113.0	141.3	169.5
RAL-36	1634	3	91.4	137	182.7	228.4	274.0
RAL-48	3440	7 ½	222.5	333.7	445	556.3	
RAL-60	10 100	15	508.9	763.4	967		
RAL-72	12 131	25	923.6	1477.8			

Displacement Rates are shown based on a 30% fill rate.

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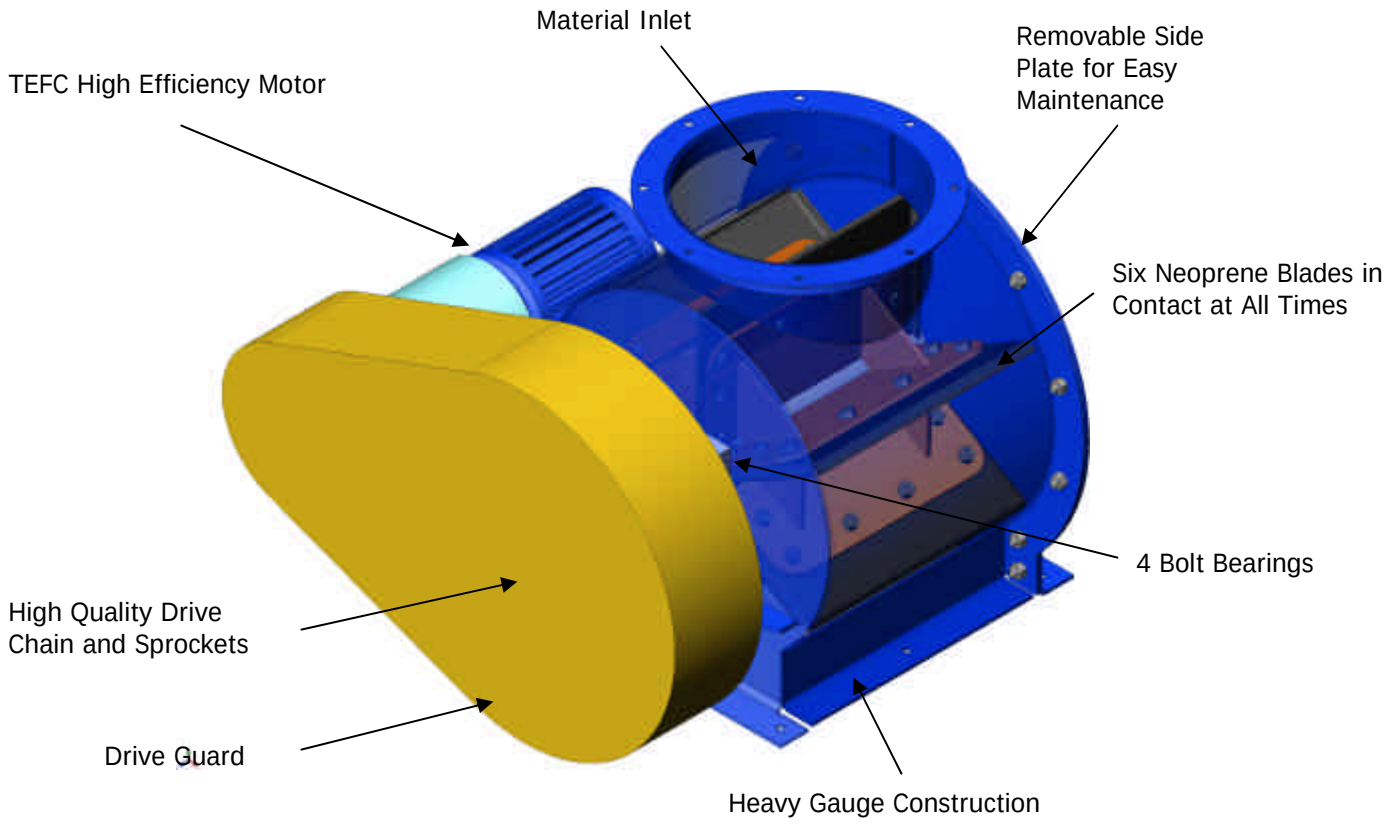
Option

MacDonald Steel's Rotary Air locks are available with Zero-Speed Sensors to sense if the air lock is operating or not. When ordered, MacDonald Steel's Environmental Division will install and test the package before the air lock is shipped. Below are the models available and standard features. Other styles of sensors are available upon customer's request.

SENSOR FEATURES

- All proximity sensors complete with red LED to facilitate operation monitoring and adjustment
- Wide operating voltage ranges - DC or AC
- Ambient operating temperature range of -25 to 70° C assure stable operation
- DC switching types are equipped with short-circuit protection circuit, surge absorber circuit and polarity protection circuit