

Vilter™ Single Screw Compressor Units



VILTER™


EMERSON™

Keep it Cold With Vilter™ Single Screw Compressor Units

Vilter's single screw compressors deliver longer life, higher reliability, and better energy efficiency than twin screw compressors and have fewer moving parts than reciprocating compressors. The key to the single screw compressor's reliability is in its balanced design. The balanced design results in ultra-low bearing loads with significantly decreased vibration and sound levels. The inherent balanced design of the single screw allows Vilter to offer the longest warranty in the industry. The extended 5/15 warranty, includes 5 years on the compressor internal rotating parts and 15 years on the bearings. The key to the single screw compressor's high efficiency is Vilter's exclusive Paralex™ slide system allowing the compressor to run at optimum efficiency through its full range of capacity.

The VSMC and VSSC units have pre-engineered configured to order (CTO) standard designs, and are built in an assembly line fashion, resulting in faster lead times and consistency in appearance. Non-CTO VSMC and VSSC units are custom engineered and made to order. These units involve special components and unique configurations which require additional review and processing. These attributes increase the manufacturing period and lead time, but customers get a unit tailored to their specific needs.

Paralex™ Slide System

It's the key to part load efficiencies which are far superior to twin screw compressors. Capacity and volume slides (with an expanded volume ratio of 1.2 to 7.0) move independently of each other based on load, eliminating over or under compression and saving energy costs.

High-Efficiency Oil Separator

Same coalescing element used on all units make it easier to store spare parts and replace.

Oil Cooling Options

Oil cools the internal components during the entire compression process. Cooling is essential in removing heat whereby extending the life of the internal components.

Options include:

- Liquid injection
- Thermosyphon plate heat exchanger (shown)

Vission 20/20™ Microprocessor Control

- Reliable operation
- Enhanced communications
- Easy to use
- Flexible and expandable

Approvals

- CE
- PED
- UL
- ASME

VSSC 280mm high stage with plate oil cooler, 30" separator, economizer, single filter, and pump option

Pressure Transducers

Provide instant feedback for precise unit control. They are centrally mounted with block and bleed valves; optional gauges can be added.

Ultra Fine Oil Filter

Maximum filtration without flow restriction for extended bearing life and longer maintenance interval.

Oil Pump (Optional)

For units needing constant oil pressure, such as booster, swing and low pressure differential applications. The oil pump on the VSSC is positioned conveniently for the service technicians and field operators.

Intelligent Oil Level Switch

Protects the compressor in the event of low oil level conditions assuring minimal operational interruption.



Common Panel Height for Vision 20/20

Uniform height for Vision 20/20 panel across full product range for superior visibility and operator comfort.



Liquid Injection Cooling with Optional 3-Way Valve System

Dual port liquid injection optimizes cooling to match operating conditions for the most energy efficient performance.



Standard Suction and Discharge Port Connections

Simplified suction and discharge connections for ease of installation.



VSMC 240mm, high stage with dual port liquid injection cooling, 24" separator, single filter, and no pump option

Oil Cooling Options

- Liquid Injection (shown)
- Thermosyphon plate heat exchanger

Single Screw Compressor Specifications

Model Number	Displacement		Ammonia Base Ratings ¹				Standard Connection Sizes		Unit Dimensions and Weights ²									
	CFM	m³/hr	Tons	BHP	Capacity kW	Absorbed Power kW	Suction	Discharge	Length ft-in (mm)	Width Single Oil Filter ft-in (mm)	Height ft-in (mm)	Shipping Weight lbs (kg)						
VSMC Series																		
VSMC-152* VSMC-152E*	152	258	52 57	76 79	183 200	57 59	3", 4", 6"	3"	8'-9" (2667)	3'-8" (1118)	5'-10" (1778)	3800 (1724)						
VSMC-182* VSMC-182E*	177	301	61 68	84 88	214 239	63 66												
VSMC-202* VSMC-202E*	202	343	72 79	93 98	253 278	69 73												
VSMC-301 VSMC-301E	305	518	107 111	133 139	376 390	99 104												
VSMC-361 VSMC-361E	353	600	136 139	151 158	478 489	113 118						6000 (2722)						
VSMC-401 VSMC-401E	405	688	146 161	169 178	513 566	126 133												
VSMC-501 VSMC-501E	502	853	185 203	202 213	651 714	151 159												
VSMC-601 VSMC-601E	609	1035	229 252	241 254	805 886	180 189												
VSMC-701 VSMC-701E	691	1174	260 285	272 287	914 1002	203 214						4", 6", 8"	4"	9'-5" (2870)	3'-2" (965)	6'-8" (2032)	7135 (3236)	
VSSC Series																		
VSSC-751 VSSC-751E	778	1322	302 334	327 346	1062 1175	244 258	4", 6", 8"	3", 4", 5"	12'-1" (3680)	4'-4" (1317)	7'-2" (2187)	7100 (3200)						
VSSC-901 VSSC-901E	880	1495	344 382	358 383	1210 1343	267 286												
VSSC-1051 VSSC-1051E	1070	1818	415 457	466 491	1460 1607	347 366	6", 8", 10"	4", 5", 6"	13'-1" (3996)	4'-8" (1412)	7'-7" (2418)	9720 (4410)						
VSSC-1201 VSSC-1201E	1193	2027	462 513	505 536	1625 1804	377 400		5"										
VSSC-1301 VSSC-1301E	1323	2248	510 565	533 566	1794 1987	397 422		5", 6"	13'-10" (4216)	5'-2" (1575)	9'-1" (2769)	14700 (6670)						
VSSC-1551 VSSC-1551E	1526	2593	597 660	645 682	2100 2321	481 509												
VSSC-1851 VSSC-1851E	1790	3041	710 783	738 781	2497 2754	550 582												
VSSC-2101 VSSC-2101E	2020	3432	809 891	853 901	2845 3134	636 672												
VSS-2401 VSS-2401E	2536	4309	969 1064	1063 1116	3408 3742	793 832							8", 10"	6", 8"	17'-5" (5309)	7'-0" (2134)	12'-9" (3658)	18500 (8391)
VSS-2601 VSS-2601E	2759	4688	1048 1153	1132 1192	3686 4055	844 889												
VSS-2801 VSS-2801E	2959	5027	1104 1217	1188 1253	3883 4280	886 934												
VSS-3001 VSS-3001E	3072	5219	1146 1264	1221 1289	4030 4445	910 961												

¹ Tons and BHP based on +20°F and 95°F; 10°F liquid subcooling, saturated suction, 0°F superheat. Ratings for other refrigerants are available, consult Vilter for more information.

² Dimensions and weights are approximate, and are based on use with thermosyphon oil cooling, motor, and standard size oil separator. Contact Vilter for specific unit information.

* Models operate at 1772 RPM; all others operate at 3550 RPM (60 Hz)

About Emerson

Emerson (NYSE: EMR), headquartered in St. Louis, Missouri (USA), is a global technology and engineering company providing innovative solutions for customers in industrial, commercial, and residential markets.

Our Emerson Automation Solutions business helps process, hybrid, and discrete manufacturers maximize production, protect personnel and the environment while optimizing their energy and operating costs.

Our Emerson Commercial and Residential Solutions business helps ensure human comfort and health, protect food quality and safety, advance energy efficiency, and create sustainable infrastructure.

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