

# Vilter™ Single Screw Compressor Units



# 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 Parallel™ 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.

## Parallel™ 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 Vission 20/20

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

<sup>1</sup> 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.

<sup>2</sup> 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

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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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