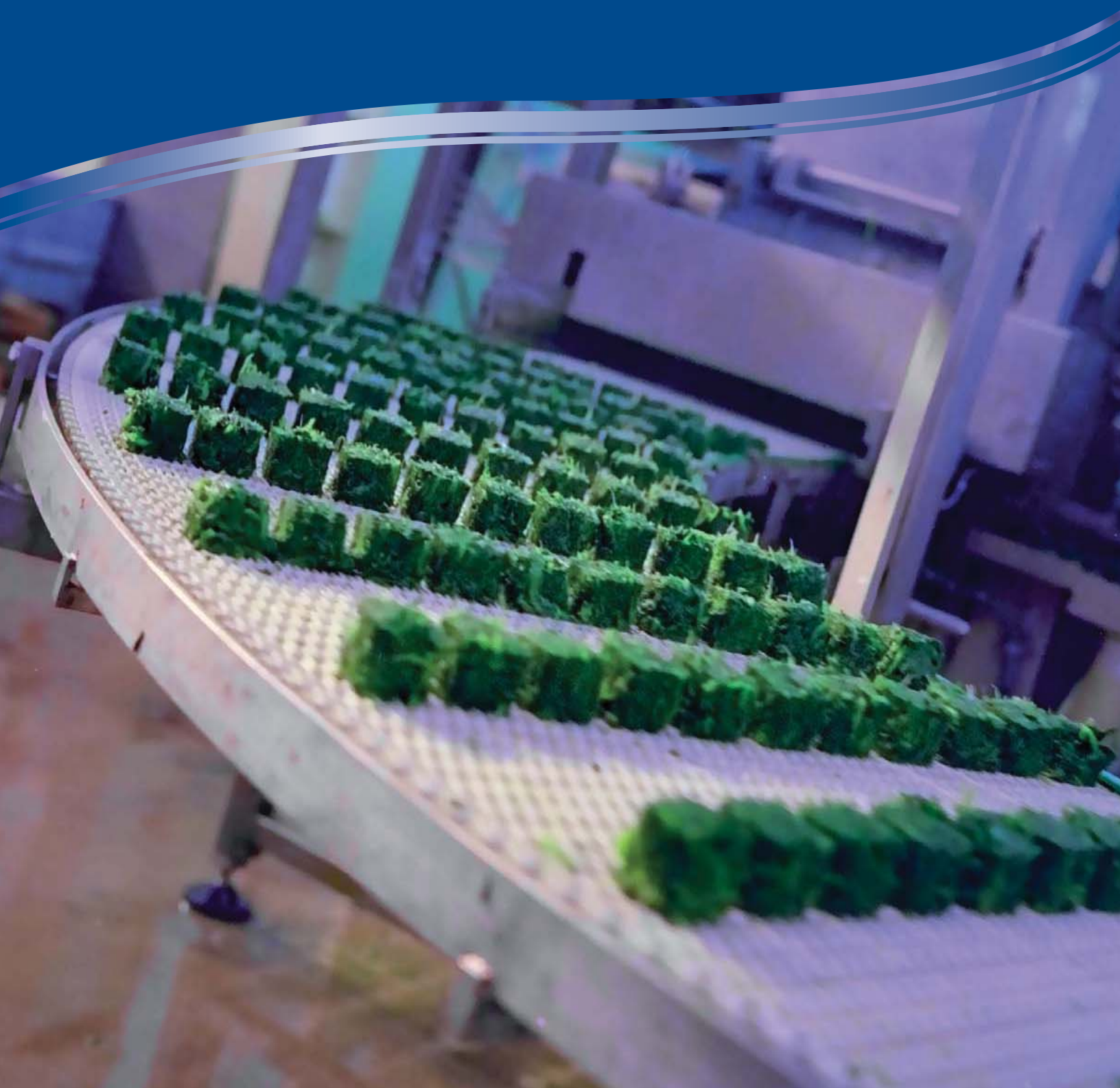


# Vilter Single Screw Compressors



**VILTER**<sup>®</sup>  
Since 1867

  
**EMERSON**<sup>™</sup>  
Climate Technologies

# Vilter Single Screw Refrigeration Compressors

Vilter's VSM & VSS 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 advantages allow Vilter to offer the exclusive 5/15 Warranty, including 5 years on the compressor and 15 years on the bearings. The key to the single screw compressor's high efficiency is Vilter's exclusive Parallellex™ slide system allowing the compressor to run at optimum efficiency through its full range of capacity. Providing the highest reliability and unsurpassed energy efficiency...

The World's Best Compressors™ are available only from Vilter!

## Vilter Single Screw Compressor Features:

### Parallellex™ 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.

### Vision 20/20™ Microprocessor Control

- Reliable Operation
- Enhanced Communications
- Easy to Use
- Flexible and Expandable



### Block and Bleed Valves are Standard

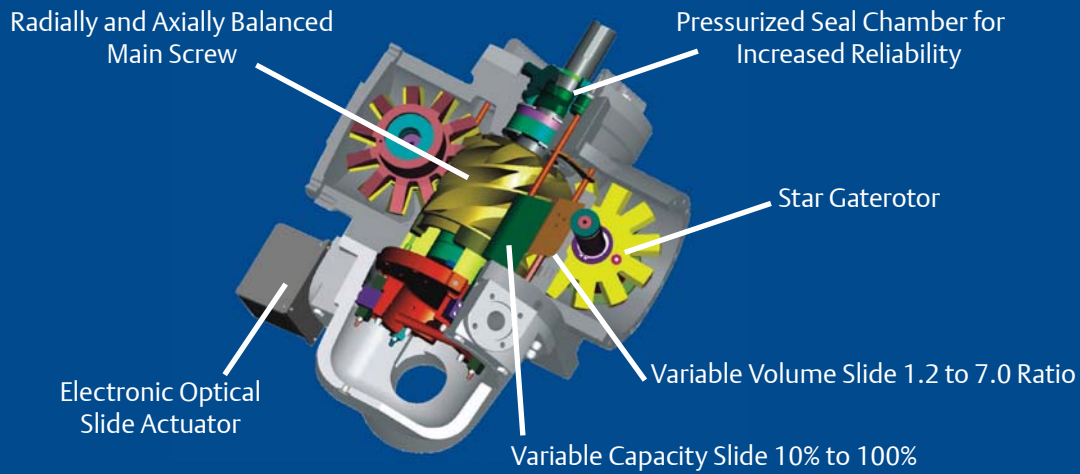
For ease of service and calibration of pressure transducers.

### Oil Cooling Options

- Thermosyphon
- Water Cooled
- Liquid Injection
- V-Plus

### Approvals

- CE
- PED
- UL
- ASME



## Vilter Single Screw Compressor Design & Operation



### Energy Savings

#### Variable Capacity & Volume Control

- Paralex™ slide valves - Only available on Vilter single screw compressors
- Capacity slide - 10% to 100% of gas flow
- Volume slide - 1.2 to 7.0 volume ratio
- Independent capacity & volume control - optimized efficiency at part load conditions



### Low Maintenance

#### Balanced Loading

- No Radial Loads - Compression occurs simultaneously on opposite sides of the screw
- No Axial Loads - Main screw is vented such that both ends are at suction pressure
- All bearings are only exposed to suction pressure
- Results in reliable bearing performance, backed by exclusive 5/15 Warranty

Scan here to see how the Single Screw compressor works:



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# Vilter Single Screw Compressor Specifications

VSM Series													
Model Number	Displacement		Ammonia				Standard Connection Sizes		Unit Dimensions and Weights (b)				Shipping Weight (Lbs.) lbs (kg)
	CFM	m3/hr	Base Ratings (a) Tons BHP		Base Ratings (b) Capacity Absorbed Power kW kW		Standard	Discharge	Length ft-in (mm)	Width Single Oil Filter ft-in (mm)	Width Dual Oil Filter ft-in (mm)	Height ft-in (mm)	
VSM-152*	152	258	52	76	183	57	3"	3"	8'-2"	3'-7"	3'-11"	5'-9"	3800
VSM-152E*			57	79	200	59			(2490)	(1092)	(1194)	(1753)	(1724)
VSM-182*	177	301	61	84	214	63	3"	3"	8'-2"	3'-7"	3'-11"	5'-9"	3800
VSM-182E*			68	88	239	66			(2490)	(1092)	(1194)	(1753)	(1724)
VSM-202*	202	3343	72	93	253	69	3"	3"	8'-2"	3'-7"	3'-11"	5'-9"	3950
VSM-202E*			79	98	278	73			(2490)	(1092)	(1194)	(1753)	(1724)
VSM-301	305	518	107	133	376	99	3"	3"	8'-2"	3'-7"	3'-11"	5'-9"	4100
VSM-301E			111	139	390	104			(2490)	(1092)	(1194)	(1753)	(1860)
VSM-361	353	600	136	151	478	113	3"	3"	8'-2"	3'-7"	3'-11"	5'-9"	4100
VSM-361E			139	158	489	118			(2490)	(1092)	(1194)	(1753)	(1860)
VSM-401	405	688	146	169	513	126	4"	3"	8'-2"	3'-9"	3'-11"	5'-9"	5000
VSM-401E			161	178	566	133			(2490)	(1143)	(1194)	(1753)	(2268)
VSM-501	502	853	185	202	651	151	4"	3"	8'-2"	3'-9"	4'-0"	6'-11"	6150
VSM-501E			203	213	714	159			(2490)	(1143)	(1194)	(2108)	(2790)
VSM-601	609	1035	229	241	805	180	4"	4"	9'-9"	3'-11"	4'-5"	7'-3"	6700
VSM-601E			252	254	886	189			(2970)	(1194)	(1346)	(2210)	(3039)
VSM-701	691	1174	260	272	914	203	5"	4"	9'-9"	3'-11"	4'-5"	7'-9"	6900
VSM-701E			285	287	1002	214			(2970)	(1194)	(1346)	(2362)	(3130)

VSS Series													
Model Number	Displacement		Ammonia				Standard Connection Sizes		Unit Dimensions and Weights (b)				Shipping Weight lbs (kg)
	CFM	m3/hr	Base Ratings (a) Tons BHP		Base Ratings (b) Capacity Absorbed Power kW kW		Suction	Discharge	Length ft-in (mm)	Width Single Oil Filter ft-in (mm)	Width Dual Oil Filter ft-in (mm)	Height ft-in (mm)	
VSS-751	778	1322	302	327	1062	204	5"	4"	12'-7"	3'-7"	4'-4"	8'-0"	5300
VSS-751E			333	344	1171	215			(3840)	(1090)	(1220)	(2440)	(2410)
VSS-901	880	1495	344	358	1210	223	5"	4"	12'-7"	3'-7"	4'-4"	8'-0"	5350
VSS-901E			381	381	1340	238			(3840)	(1090)	(1220)	(2440)	(2410)
VSS-1051	1070	1818	415	461	1459	288	5"	5"	14'-0"	4'-1"	4'-10"	8'-8"	6600
VSS-1051E			458	486	1611	304			(4280)	(1240)	(1470)	(2640)	(3000)
VSS-1201	1193	2027	468	500	1646	312	6"	5"	14'-0"	4'-1"	4'-10"	8'-10"	6800
VSS-1201E			518	531	1822	331			(4280)	(1240)	(1470)	(2690)	(4180)
VSS-1301	1310	2225	511	534	1797	398	6"	5"	14'-0"	4'-1"	4'-10"	8'-10"	6800
VSS-1301E			Testing in Progress						(4280)	(1240)	(1470)	(2690)	(4180)
VSS-1551	1526	2593	598	645	2103	402	6"	5"	14'-2"	5'-8"	5'-8"	9'-10"	9200
VSS-1551E			660	682	2321	426			(4320)	(1730)	(1730)	(3000)	(4230)
VSS-1851	1790	3041	711	738	2500	460	8"	5"	14'-2"	5'-8"	5'-8"	9'-10"	9300
VSS-1851E			764	781	2687	488			(4320)	(1730)	(1730)	(3000)	(4230)
VSS-2101	2020	3432	784	811	2757	506	8"	5"	14'-2"	5'-8"	5'-8"	9'-10"	9300
VSS-2101E			885	858	3112	535			(4320)	(1730)	(1730)	(3000)	(4230)
VSS-2401	Testing in Progress						10"	8"	16'-10"	6'-10"	6'-10"	11'	19500
VSS-2401E									(5130)	(2083)	(2083)	(3353)	(8845)
VSS-2601	Testing in Progress						10"	8"	16'-10"	6'-10"	6'-10"	11'	19500
VSS-2601E									(5130)	(2083)	(2083)	(3353)	(8845)
VSS-2801	Testing in Progress						10"	8"	16'-10"	6'-10"	6'-10"	11'	19500
VSS-2801E									(5130)	(2083)	(2083)	(3353)	(8845)
VSS-3001	Testing in Progress						10"	8"	16'-10"	6'-10"	6'-10"	11'	19500
VSS-3001E									(5130)	(2083)	(2083)	(3353)	(8845)

(a) 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.

(b) Dimensions and weights are approximate, and are based on use with thermosiphon plate oil cooling, standard size oil separator and standard motor.

\* Models operate at 1775 RPM; all others operate at 3550 RPM (60 Hz)