

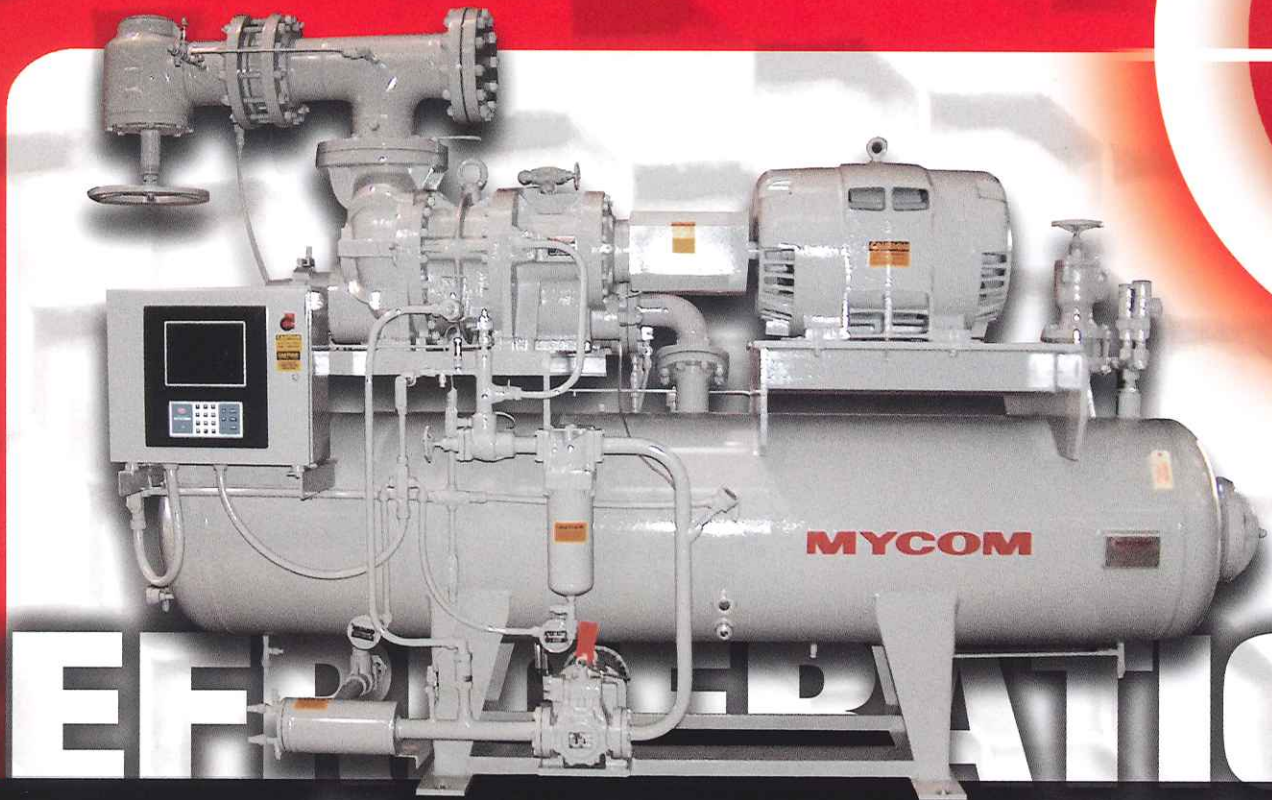


MYCRO COLD  
**V-SERIES**  
SCREW COMPRESSOR PACKAGES



**MYCOM**

THE EXPERTS IN INDUSTRIAL REFRIGERATION



## **MYCOM** IS THE NUMBER ONE SCREW COMPRESSOR MANUFACTURER IN THE WORLD.

We have developed the ultimate screw compressor for the MICRO COLD screw packages. Designed and manufactured by MYCOM, the "V" series has many superb features. These work together to obtain maximum performance, ease of operation and high reliability.

Models from 160mm (295cfm) to 400mm (5,760cfm) rotor diameter to meet all of your requirements (based on 3550 RPM compressor speed).

### **COMPRESSOR HOUSING**

MYCOM screw compressor housings are low porosity cast iron (cast steel is also an option) designed in compliance with ANSI/ASHRAE 15-1994. The compressor assembly is hydraulically tested at 470 psig after assembly.

### **BEARINGS**

Main and side bearings are steel backed babbbitted type. The bearings are arranged for forced feed lubrication. Proper oil management design assures longer bearing life without periodic replacement. Thrust bearings are angular contact ball bearings and absorb axial loads on the male and female rotors. An enlarged balance piston is employed on the male rotor to balance any uneven loads on the rotors.

### **ROTOR PROFILE**

A newly developed MYCOM "O" profile is used in the "V" series screw compressors. Higher efficiency is achieved by reducing the inter-lobe blow-by gas. This profile also facilitates a build up of oil film on the rotor lobe surface by the circular arc profile rather than the conventional raised sealing edge.

### **VARIABLE VI**

"V" series compressors have the capability of being able to change the  $V_i$  (internal volume ratio) whenever required. Manually adjustable  $V_i$  is standard. The applicable range is from 2.6 to 5.8 (2.2 to 5.0 as an option). Optimum  $V_i$  can be set at the factory prior to shipment if required.

### **CAPACITY CONTROL**

The hydraulically operated slide valve regulates the capacity of the compressor from 10% to 100%. Part load efficiency is improved on the "V" series compressors.



# V-SERIES MICRO COLD SCREW COMPRESSOR

## OIL COOLING

MYCOM offers various options for oil cooling. Thermosyphon, Water and Liquid Injection.

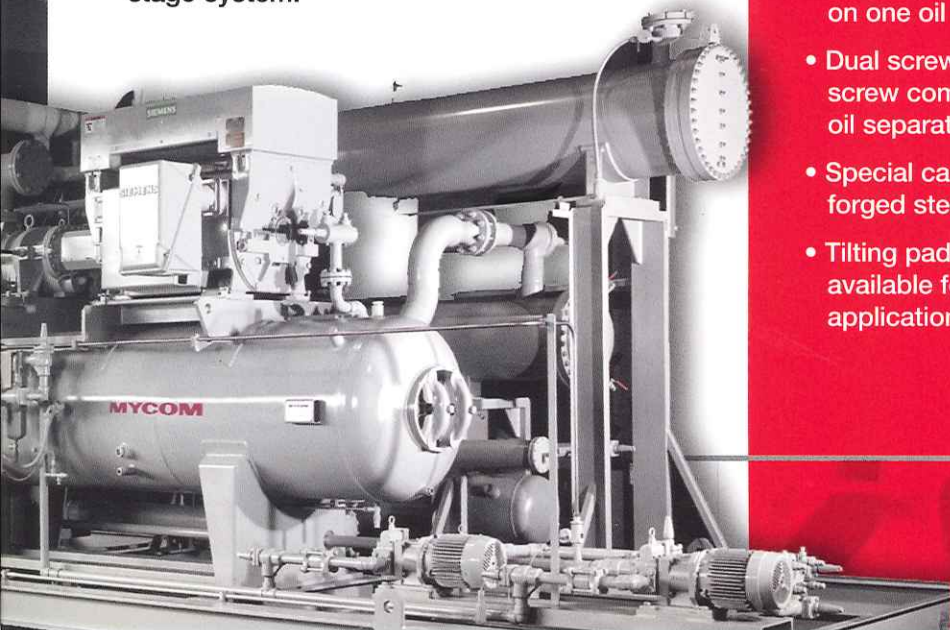
**THERMOSYPHON:** External shell and tube refrigerant cooled oil coolers are mounted and piped for this option. The heat exchanger is constructed to ASME SECT. VIII at a design pressure of 400 psig. A 3-way oil temperature bypass valve can be installed to control a constant oil temperature as an option.

**WATER:** External shell and tube (plate and frame optional) water cooled oil coolers are mounted and piped. The tubes are either copper or steel and the shell is made of carbon steel designed for 400 psig. Oil temperature can be controlled either by a water regulating valve or a 3-way oil temperature control valve as an option.

**"YOSAKU" LIQUID INJECTION:** MYCOM has developed an electronic pulse type liquid injection valve (YOSAKU). Discharge gas/oil temperature is continuously monitored by the micro processor control panel. This controls the discharge temperature by pulsing the "YOSAKU" valve as required.

## ECONOMIZER SYSTEM (OPTIONAL)

The factory mounted economizer is effective for single stage systems at medium and low temperature applications. The liquid sub-cooler provides sub-cooling of the liquid refrigerant from the condenser to the expansion device, providing a cost-effective alternative to a two stage system.



## OIL MANAGEMENT

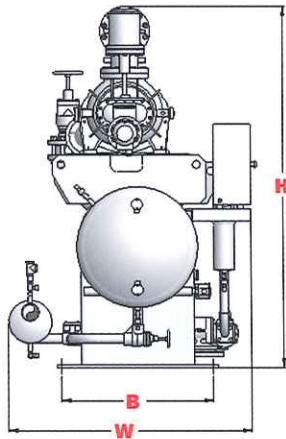
A high efficiency horizontal (vertical as an option) oil separator incorporates three-stage oil separation which includes a fine coalescing type element. The separator is designed and constructed to ASME Sect. VIII for a design operating pressure of 300 psig. Oil is drawn from the oil separator through the oil cooler and is filtered by a stainless steel cleanable 300 mesh strainer. The oil enters the oil pump and is maintained at a set discharge pressure which supplies oil to the bearings, balance piston and the capacity control piston via a 20 micron replaceable oil filter. The oil pump is a MYCOM double helical screw direct driven self regulating oil pump. This oil pump is well recognized in the industry as a reliable, quiet oil pump.

## SPECIAL FEATURES AND OPTIONAL ACCESSORIES

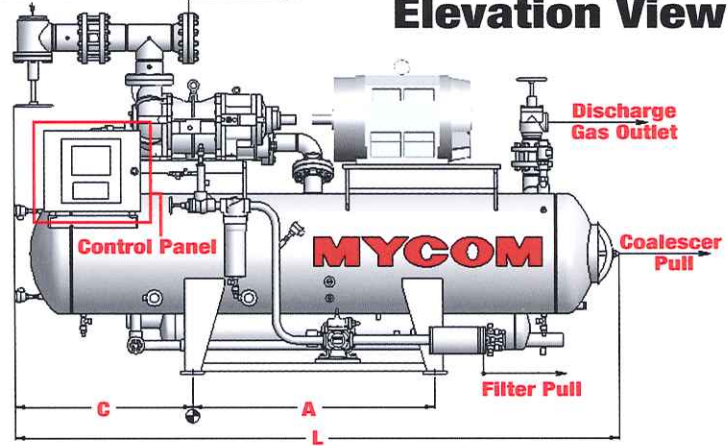
- Dual oil filters and oil pumps are available.
- Electro mechanical control panel is available.
- Control panel options: NEMA 4 outdoor panel, NEMA 4 stainless panel, Class 1, Group C & D Div.II type electrical equipment are all options.
- Modem communication.
- Two stage systems with two compressors on one oil separator are available.
- Dual screw compressor package (two screw compressors mounted on a single oil separator) is available.
- Special cast steel casing material and forged steel rotors are available.
- Tilting pad type bearings are available for high pressure applications.

# PACKAGES

## Front View



## Elevation View



### STANDARD RATINGS

MODEL#	R-717			R-22	
	CAPACITY		POWER	CAPACITY	POWER
	CPM	TR	BHP	TR	BHP
160 VSD	294	105.6	118.2	69.4	124.1
160 VMD	367	131.9	144.9	87.0	152.1
160 VLD	441	158.1	172.2	104.6	180.7
200 VSD	574	208.7	228.7	136.9	240.1
200 VMD	718	262.6	280.0	172.3	293.9
200 VLD	859	317.3	335.6	208.0	352.2
250 VSDES	1120	366.9	383.4	242.1	402.4
250 VSD	1120	412.3	430.8	272.0	452.2
250 VMDS	1400	463.1	483.3	306.5	507.3
250 VMD	1400	520.3	543.1	344.4	570.0
250 VLD	1670	622.0	648.5	413.1	680.7
320 VSD	2250	833.0	868.5	553.2	911.6
320 VMD	2800	1039.6	1083.9	690.4	1137.7
320 VLD	3350	1244.1	1297.0	826.2	1361.3
400 VSD	4590	1703.4	1864.7	1131.2	1957.2
400 VMD	5770	2140.8	2343.5	1421.7	2459.8

### PHYSICAL DATA

MODEL#	DIMENSIONS (INCHES)					CONNECTIONS (IN.)			APPROX. WEIGHT (LBS)
	A	B	C	L	H	W	SUCTION	DISCH.	
160 VSD	47	28	34	105	70	39	4	2.5	3400
160 VMD	50	34	35	123	75	50	4	2.5	4750
160 VLD	50	34	36	125	75	50	4	3	4800
200 VSD	50	34	44	130	81	52	5	3	5450
200 VMD	60	38	42	147	89	57	6	4	6850
200 VLD	60	38	43	149	89	57	6	4	6950
250 VSDES	60	38	45	151	94	58	6	4	8600
250 VSD	60	38	45	151	94	58	6	4	8600
250 VMDS	60	42	47	183	107	70	8	4	11750
250 VMD	90	42	47	183	107	70	8	4	11750
250 VLD	90	42	50	185	107	70	8	5	11950
320 VSD									
320 VMD									
320 VLD									
400 VSD									
400 VMD									

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- A. Performance for R-717 is based on 20°F (-6.7°C) evaporating temperature, 95°F (35°C) condensing, 10°F (5.5°C) sub-cooling and 10°F (5.5°C) suction superheat.
- B. Performance for R-22 is based on 5°F (-15°C) evaporating temperature, 105°F (40.6°C) condensing, 10°F (5.5°C) sub-cooling and 10°F (5.5°C) suction superheat.
- Physical data based on R-717 refrigerant, 3550 RPM, no economizer, thermosyphon oil cooler mounted.
- Weight does not include motor.
- All dimensions are in inches.
- Dimensions shown are for reference only. Subject to change without notice. Use actual fabrication drawings for final dimensions.

Data Source: MYCOM Screw Compressor Performance Program 10.0.

# MYCRO V-SERIES STATS

THE EXPERTS IN INDUSTRIAL REFRIGERATION

# OTHER MYCOM PRODUCTS



## MYCOM MYPRO "M" CONTROL PANEL

Safety, Reliability and Quality are achievements met by MYCOM's extensive line of micro processor based control panels. The MYPRO control panels are designed in compliance with UL and CSA requirements.

The MYPRO panel is provided on all current MYCOM compressor packages. It automatically controls and monitors the compressor system, giving it the best efficiency and productivity possible. The MYPRO panel can operate alone, or can form an integrated network when connected to other MYPRO series controllers. The panel can also be installed onto existing systems enabling the system to increase efficiency, safety and reliability.

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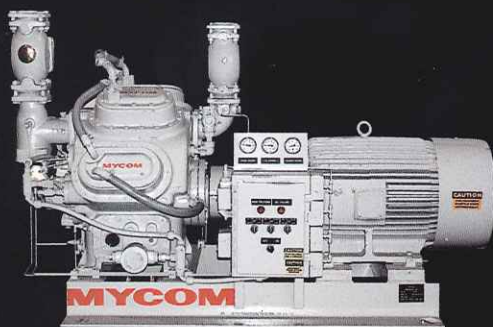
## i-SERIES

The i Series compressor package will be designed for an optional variable frequency drive system (VFD), allowing the compressor to operate at peak efficiency. When operated with VFD, the compressor maximizes cooling capacity while minimizing power consumption. Operational speeds of 1,450 rpm to 4,500 rpm can be achieved.



## PARTS WAREHOUSE

MYCOM's genuine parts for refrigeration and natural gas compressors are designed and created by MYCOM using state of the art global production facilities. These facilities meet ISO-9001 International Quality Assurance Standards, assuring that MYCOM genuine parts meet the highest standards.



## W-SERIES

The MYCOM W Series Compressors are divided into 2 basic models, the WA & WB. The WA Series has a 3.75" (95mm) bore and a 3" (76mm) stroke, while the WB Series has a 5.125" (130mm) bore and a 3.945" (100mm) stroke. Each series is then divided into two types: single stage for high and mid temperature applications, and internal two stage, or compound, for low temperature applications.



# MYCOM



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