



# CASCADE

Cascade Compressors. The mobile integrated solution.

## KEY FEATURES AND BENEFITS

- ▶ Flexible
- ▶ Thrifty
- ▶ DC Voltage
- ▶ Variable speed

▶ **Compact size:**

Integrated electronic controller mounting and robust reciprocating design.

▶ **Reduce energy consumption and costs:**

Variable speed compressor, and no external fan cooling is required.

▶ **Voltage range options:**

12/24V dual voltage, 24V and 48V models are available.



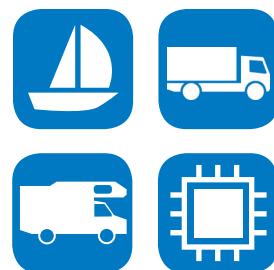
MASTERFLUX

## APPLICATIONS

Low temperature compressor ideally suited for mobile applications, and high temperature models available for telecommunications environment.

Some typical applications:

- ▶ Marine refrigeration
- ▶ Truck Cab Refrigerators
- ▶ RV's
- ▶ Battery Cooling





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## COMPRESSOR INFORMATION

### Capacity range\*:

- ▶ LBP: from 31 to 130 Watts
- ▶ HBP: from 337 to 522 Watts

### Refrigerant:

- ▶ R134a

### Application(s):

- ▶ LBP temperature:  
Tev: -34.4°C to -12.2°C  
Tcond: 37.8°C to 60°C
- ▶ LBP/MBP/HBP:  
Tev: -40°C to 15°C  
Tcond: 26.7°C to 65.6°C

	Voltages Available (DC)*			
	12/24	24/48	24	48
Cascade	■	■	■	■

\*Custom voltage ranges are available

Application Code Table		
Application Code	Evaporator Temperature	Rating Point
1	Low	-23.3° C
2	Medium / Commercial	-6.7° C
3	High / Air Conditioning	7.2° C



Refrigerant		
Code Table		Cascade
Y	R134a	■
Z	R404A	□
H	R1234yf	
U	R290	□
M	R600a	□

□ Models in development

Voltage Code Table	
VOLTAGE CODE	NOMINAL VOLTAGE RANGE DC
01	12
02	12/24
03	24/48
04	48/100
05	100/150
06	150/300
07	150
08	300
09	420
10	600
17	48
18	24

### Compressor Model Naming Convention

The Masterflux model naming convention is very simple. A sample model and the breakdown of each of the parts is shown below. Please remember that a model may have several different part numbers depending on the particular configuration.

**CASCADE17-0342Y3**



\*LOW / FREEZER: performance rated at -23.3°C evap., 49°C cond., 27.4°C superheat, 0°C subcooling, 35°C ambient.  
HIGH / AIR CONDITIONING: performance rated at 7.2°C evap., 54.4°C cond., 11.1°C superheat, 8.3°C subcooling, 35°C ambient.

## CONTROLLER INFORMATION

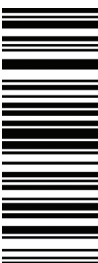
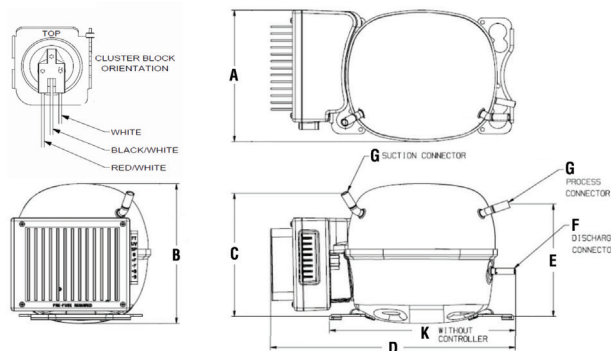
Voltage range: 12-48 VDC, 50/60 Hz.

### Key features:

- ▶ Start and run the compressor
- ▶ Provide locked-rotor protection
- ▶ Provide thermal protection and shutdown of the compressor and controller
- ▶ Vary the speed of the compressor
- ▶ Limit the power and current draw
- ▶ Low voltage and high voltage shutdown

## DIMENSIONS

COMPRESSOR DISPLACEMENT	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
0146 (2.4cc)	151	161	142	265	129	4.9 - 5.0	6.5 - 6.6
0192 (3.1cc)	152	171	128	267	139		
0231 (3.8cc)	151	174	155	265	142		
0244 (4.0cc)	152	171	128	267	139		
0306 (5.0cc)	152	161	142	265	129		
0342 (5.6cc)	152	171	128	267	139		



NWD0171

For more information on products by Tecumseh, please visit our website [www.tecumseh.com](http://www.tecumseh.com)