

# Three-Way Thermostatic Valves

- ▶ Bypass Cold Oil Around Heat Exchanger During Start Up
- ▶ Expanding Wax Element Is Self-Contained, And Does Not Require Any External Controls
- ▶ Rugged Cast Iron Construction, With Leak Free O-Ring Connections
- ▶ Maintains A Much More Precise Control Of Temperatures Than Pressure Bypass Valves



# Description

These modulating thermal bypass valves are designed to bypass cold oil around coolers during start-up, then to provide accurate temperature control for cooling systems at operational conditions. They operate on the expanding wax principal, so they do not require any outside control to

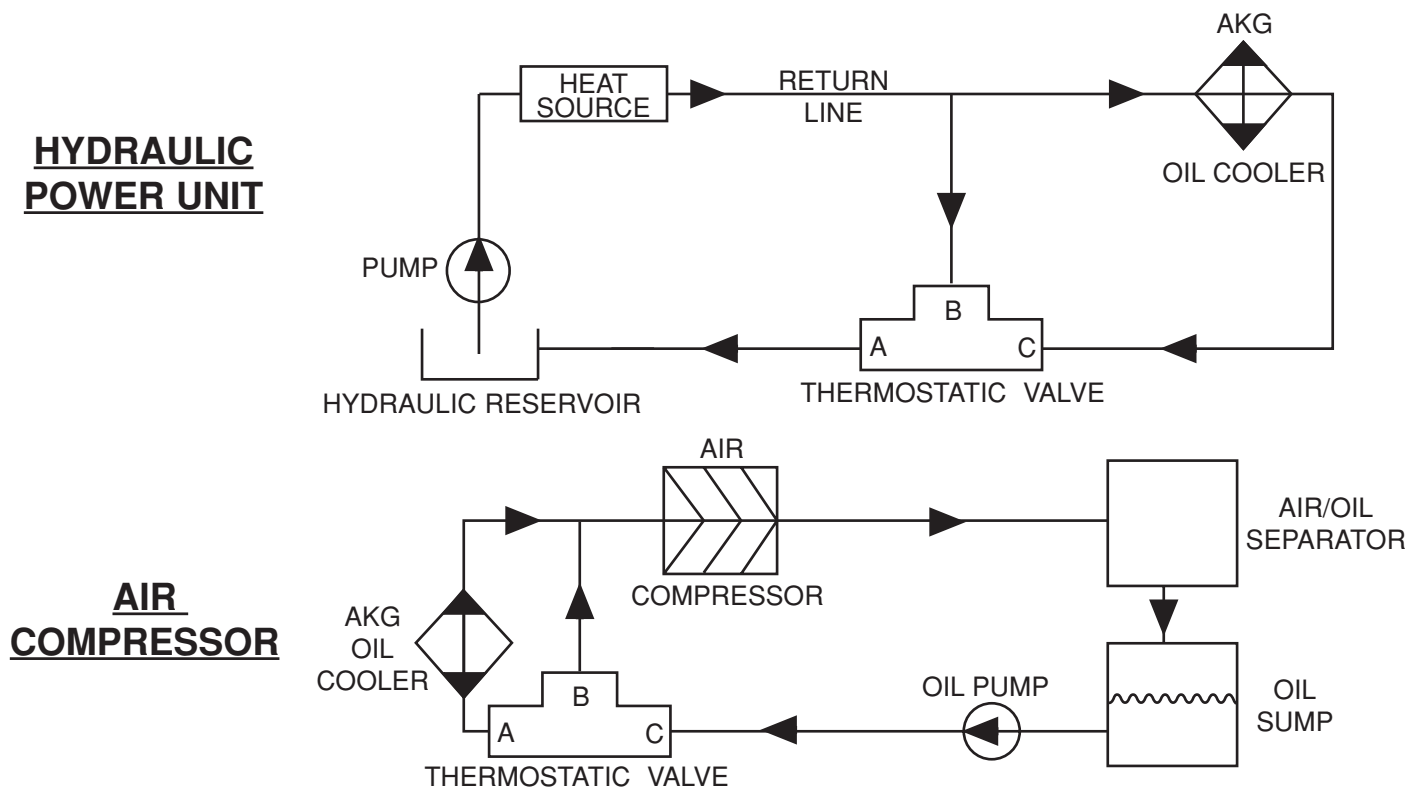
operate. The valve will begin to shift (open) 10°F below the selected temperature setting, and will be fully shifted 10°F above. Pressure drops across the valve of more than 7 PSI at Operating conditions may cause erratic operation.

# Installation

Valves may be installed to operate as either mixing or diverting valves. We have found that if installed as a mixing valve, (shown below) more consistent performance is

obtained. Please consult factory for information regarding the diverting mode of operation. The valve may be installed in any plane.

## Recommended Installation



# Ordering Information

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**SAE PORT SIZE**

- 12
- 16
- 20
- 24
- 32

**NOMINAL TEMPERATURE SETTING**

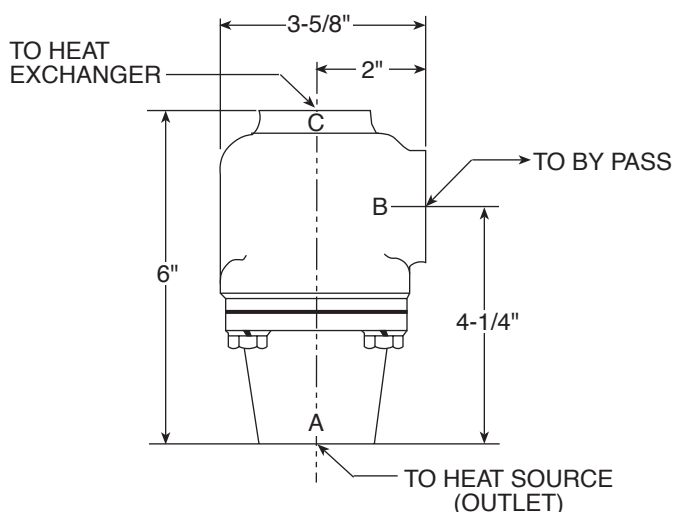
- 110
- 140
- Other settings available. Consult factory.

# Flow Capacity/Pressure Drop

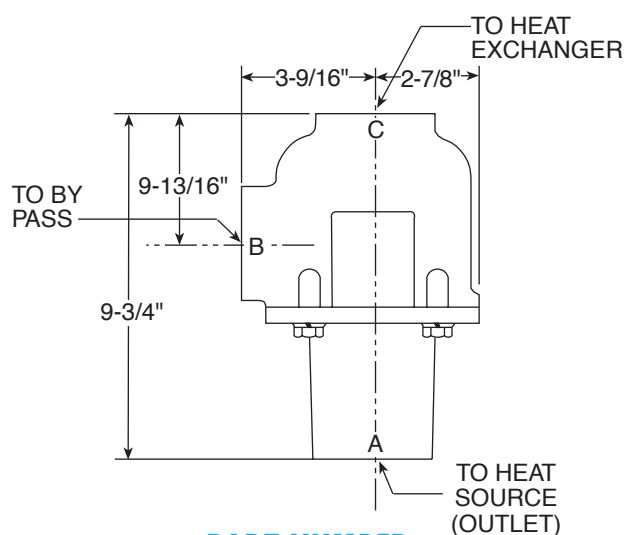
(LIMIT PRESSURE DROP TO 7PSI MAX ACROSS VALVE)

SIZE	VISCOSITY	OIL FLOW - GPM							
		5	10	20	40	60	80	100	120
#12 #16	WATER	0.2	0.5	1.2	3.8	—	—	—	—
	100 SUS	2.2	2.5	3.2	5.8	—	—	—	—
	300 SUS	2.8	3.2	4.0	6.6	—	—	—	—
#20 #24	WATER	—	—	—	2.0	4.3	—	—	—
	100 SUS	—	—	—	3.0	6.0	—	—	—
	300 SUS	—	—	—	3.5	7.0	—	—	—
#32	WATER	—	—	—	—	1.6	2.2	4.5	6.6
	100 SUS	—	—	—	—	1.8	3.2	5.7	8.3
	300 SUS	—	—	—	—	2.2	4.2	7.0	10.8

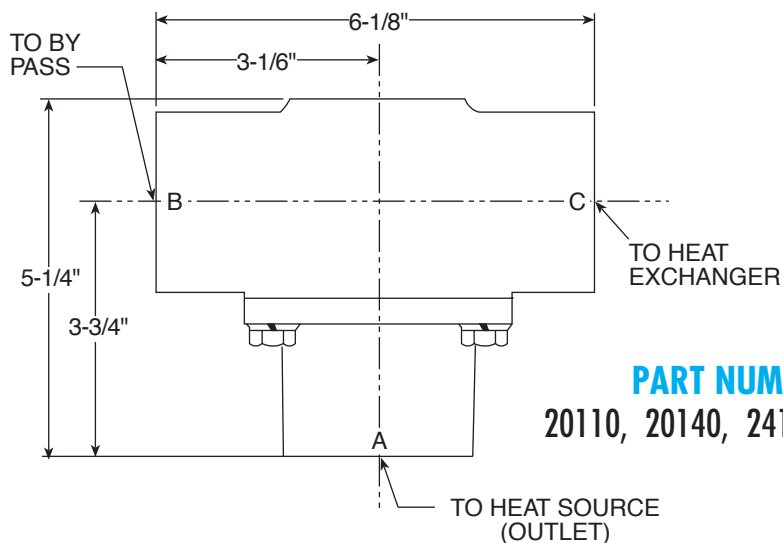
## Dimensions



**PART NUMBER**  
12110, 12140, 16110, 16140

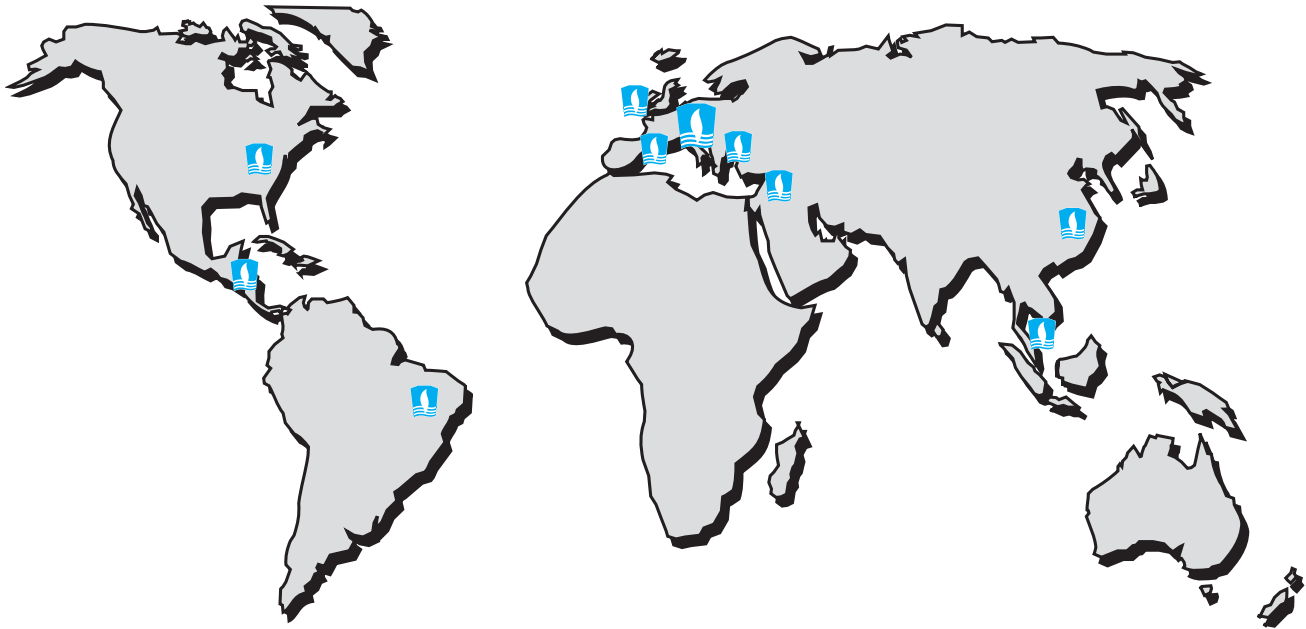


**PART NUMBER**  
32110, 32140



**PART NUMBER**  
20110, 20140, 24110, 24140

# **AKG Worldwide**



**AKG** has been manufacturing high quality coolers and cooling systems since 1919. We have grown to include 10 facilities with over 1400 employees to serve you.

## **Your Business Partner**



### **AKG Worldwide**

**AKG** is a complete single source supply for all of your cooling requirements. Choose from both standard and custom engineered products depending on your specific needs.



### **Partnership**

**AKG** believes in solid long-term business relationships built on partnerships with its customers.



### **Customer**

**AKG** places heavy emphasis on development of leading edge technologies, products and finding creative solutions to our customers individual requirements.

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