

V46 Series

# Pressure Actuated Water Regulating Valve



V46AA-1



V46AB-1



V46AT-1

## Description

The V46 is a pressure actuated, modulating valve that is suitable for use either on closed or open systems. Direct acting valves open on pressure increase. This type of valve is primarily used to regulate the flow of water or glycol to a water cooled condenser on a refrigeration system.

## Features

- no close fitting or sliding parts in water passages
- minimizes chatter or water hammer
- free movement of all parts provides smooth pressure modulation
- refrigerant adjustment is not affected by water pressure
- withstands high hydraulic shock without damage
- range spring does not come in contact with cooling water

- easy manual flushing, if required
- 3/8, 1/2, and 3/4 in. valves may be disassembled and reassembled without detaching from the refrigeration system or without pumping down

## Applications

- Modulate flow of water or glycol to a water cooled condenser on a refrigeration system. Examples include:
  - ice machines
  - computer room air conditioning units
  - ice cream machines
  - refrigeration cases

## Specifications

V46 Series Pressure Actuated Water Regulating Valves	
Maximum Water Temperature	170°F (77°C)
Valve	Commercial: 3/8 to 3/4 in. cast brass, 1 in. and larger cast iron with a special finish
Body	Navy and Maritime: Cast naval bronze with monel interior parts

## To Order

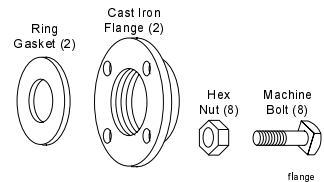
Refer to *V46 Series Valve Sizing Information*. Then specify the code number in the *V46 Selection Chart* on the following pages. Refer to the *Accessories* chart below for companion flange kit code numbers.

## Pressure Range Specification

Refrigerant	Opening Point Range <sup>(a)</sup> psig (kPa) V46A B, C, D	Maximum Permissible Pressure psig (kPa)		Refrigerant
		Static	ΔP Across Valve	
<b>Non-Corrosive Refrigerants (R12, R22, R134a, R502, R404a, R507)</b>				
All Range Valve	70 to 260 (483 to 1793)	150 (1034)	60 PST	320 (2206)
All Range with High Overpressure				370 (2551)
3/8 in. Extended All Range				440 (3034)
<b>Valves 2 in. or Larger</b>				
R12, R134a 2 and 2-1/2 in. Low Range	70 to 170 (483 to 1172)	150 (1034)	60 PST	230 (1586)
R22, R502, R404a, R507 2 and 2-1/2 in. High Range	160 to 260 (1103 to 1793)			320 (2206)
<b>Other Refrigerants</b>				
Ammonia R717	100 to 200 (690 to 1379)	150 (1034)	60 PST	320 (2206)

(a) Direct acting valve ranges indicate the valve opening point.

## Accessories (Companion Flanges and Gaskets)



Kit Number	Water Valve Size (in.)
KIT14A-612 <sup>(a)</sup>	1-1/2
KIT14A-613 <sup>(a)</sup>	2
KIT14A-614 <sup>(a)</sup>	2-1/2

(a) For commercial valves only

## V46 Series Pressure Actuated Water Regulating Valve (Continued)

### Selection Chart

Code Number	Pipe Size (In.)	Inlet and Outlet	Opening Point Range – psig (kPa)	Pressure Element Style	Seat Repair Kit	Replacement Power Elements	
<b>COMMERCIAL TYPE, STANDARD FLOW – NON CORROSIVE REFRIGERANTS (R)</b>							
V46AA-1C	3/8 NPT	Threaded	70 to 260 (483 to 1793)	30 in Capillary 1/4 in. Flare Nut (Style 45)	STT14A-600R	SEP91A-600R and SEC99AA-36C <sup>(a)</sup>	
V46AB-1C	1/2 NPT				STT15A-602R	SEP91A-602R and SEC99AA-36C <sup>(a)</sup>	
V46AC-1C	3/4 NPT				STT16A-601R	SEP91A-601R and SEC99AA-36C <sup>(a)</sup>	
V46AD-1C	1 NPT				STT17A-609R	SEP91A-603R and SEC99AA-36C <sup>(a)</sup>	
V46AE-1C	1 1/4 NPT				STT17A-610R		
V46AJ-2C	1/2	Union		30 in Capillary 1/4 in. Flare Nut (Style 46)	STT15A-602R	SEP77A-605R	
V46EK-2C	3/4				STT16A-601R	SEP127A-600R	
V46AL-2C	1				STT17A-609R	SEP107A-602R	
V46AM-2C	1-1/4			STT17A-610R			
V46AR-1C	1 1/2	4 Hole ASME Flange		70 to 170 (483 to 1172)	30 in Capillary 1/4 in. Flare Nut (Style 45)	STT17A-610R	SEP91A-603R and SEC99AA-36C <sup>(a)</sup>
V46AS-1C	2		1/4 in. Male Flare Fitting ( Style 5)			STT18A-600R	SEP81A-602R
V46AS-2C	2			160 to 260 (1103 to 1793)	STT18A-601R	SEP81A-601R	
V46AT-1C	2 1/2			70 to 170 (483 to 1172)	(Note 1)	STT18A-601R	SEP81A-602R
V46AT-2C	2 1/2			160 to 260 (1103 to 1793)		STT18A-601R	SEP81A-601R
<b>COMMERCIAL TYPE, LOW FLOW – NON CORROSIVE REFRIGERANTS (R) <sup>(b)</sup></b>							
V46DA-2C	3/8 NPT	Threaded	70 to 260 (483 to 1793)	30 in Capillary 1/4 in. Flare Nut (Style 45)	STT14A-630R	SEP91A-600R and SEC99AA-36C <sup>(a)(c)</sup>	
<b>COMMERCIAL TYPE – AMMONIA (R)</b>							
V46AC-8C	3/4 NPT	Threaded	100 to 200 (690 to 1379)	1/4 in. Female NPT (Style 15)	STT16A-601R	SEP70A-601R	
V46AD-4C	1 NPT				STT17A-609R	SEP70A-604R	
V46AE-4C	1 1/4 NPT	4 Hole ASME Flange			STT17A-610R		STT18A-600R
V46AR-2C	1 1/2				STT18A-601R		
V46AS-3C	2				2 1/2	STT18A-601R	
V46AT-3C	2 1/2						
<b>MARITIME TYPE – NON-CORROSIVE REFRIGERANTS (R)</b>							
V46BA-2C	3/8 NPT	Threaded	70 to 260 (483 to 1793)	30 in. Capillary with Sweat Connection (Style 34)	STT14A-601R	SEP13A-602R	
V46BB-2C	1/2 NPT				STT15A-603R	SEP13A-600R	
V46BC-2C	3/4 NPT				STT17A-613R	SEP13A-603R	
V46BD-2C	1 NPT				STT17A-611R	SEP50A-600R	
V46BE-2C	1 1/4 NPT				STT17A-612R		
V46BS-4C	2	4 Hole ASME Flange	160 to 260 (1103 to 1793)	STT18A-602R	SEP50A-601R		
V46BT-4C	2 1/2						
<b>NAVSEA Certified – NON-CORROSIVE REFRIGERANTS (R)</b>							
V46CJ-2C	1/2	Sweat Connector	70 to 260 (483 to 1793)	30 in. Capillary with Sweat Connection (Style 34)	STT15A-603R	SEP13A-600R	
V46CN-2C	3/4	4 Hole Navy Flange			STT17A-613R	SEP13A-603R	
V46CP-2C	1				STT17A-611R	SEP50A-600R	
V46CQ-2C	1 1/4						
V46BR-2C	1 1/2				4 Hole ASME Flange		STT17A-612R
V46CR-2C	1 1/2	6 Hole Navy Flange			70 to 170 (483 to 1172)		STT18A-602R
V46BS-3C	2	4 Hole ASME Flange					
V46CS-3C	2	6 Hole Navy Flange			160 to 260 (1103 to 1793)		
V46CS-4C	2						
V46BT-3C	2 1/2	4 Hole ASME Flange			70 to 170 (483 to 1172)		
V46CT-3C	2 1/2	6 Hole Navy Flange	160 to 260 (1103 to 1793)				
V46CT-4C	2 1/2						

(a) Replacement element supplied with 1/4 in. male SAE connector. Order SEC99AA capillary kit with 2 flare nuts separately, if needed.

(b) Low water flow valve - 2.5 GPM max.

(c) Replacement element supplied with 1/4 in. male SAE connector. Order SEC99AA capillary kit with 2 flare nuts separately, if needed.

**Note 1: Use only on valves specified.**

**Note 2: Standard capillary length on Style 45 and Style 34 elements is 30 inches.**

#### s Universal Replacement (R) For Refrigerants Not Listed, Contact Application Engineering

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