

V43 Series

# Pressure Actuated Water Valve



V43AS-2

## Description

The V43 is a pilot pressure actuated modulating valve for use on water cooled condensers that require a large flow capacity. Valves open on pilot pressure increase.

## Features

- field proven to give long lasting, trouble-free service on the job
- easy to adjust and service
- simple and efficient manual flushing

## Applications

- water cooled refrigeration condensers that require a large flow capacity

## To Order

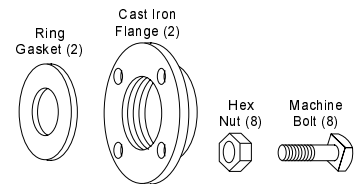
Specify the code number from the following selection chart. Refer to the V43 Valve Capacity and Selection below. Refer to the Accessories chart above for companion flange kit code numbers.

## Accessories

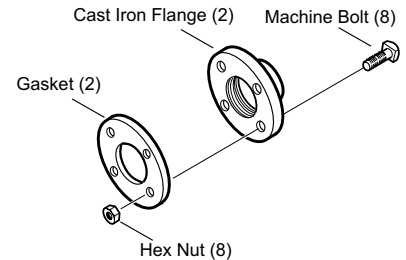
### (Companion Flanges and Gaskets)

Kit Code Number	Water Valve Size (in.)	Ship Wt. lb (kg)
KIT14A-613 (a)	2	11.8 (5.4)
KIT14A-614 (a)	2 1/2	16.5 (7.5)
FLG15A-600 (a)	3	20 (9.1)
FLG15A-601 (a)	4	34 (15.4)

(a) Commercial valves only



KIT14A



FLG15A

## Specifications

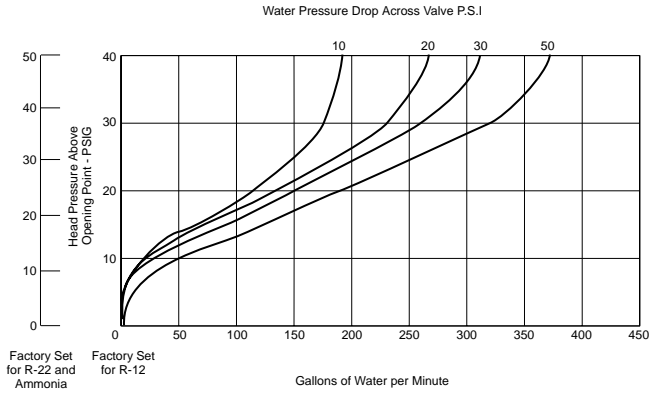
V43 Series Pressure Actuated Water Valves	
Maximum Static Water Pressure	150 psig (1034 kPa)
Maximum Water Pressure Drop Across Valve	60 psig
Maximum Bellows Pressure	300 psig (2068 kPa)
Maximum Water Supply Temperature	160°F (71°C).
Valve Body Material	commercial—cast iron; maritime—red brass
Pressure Connector	non-corrosive—1/4 in. SAE male flare; ammonia—1/4 in. FNPT

## V43 Series Pressure Actuated Water Valve (Continued)

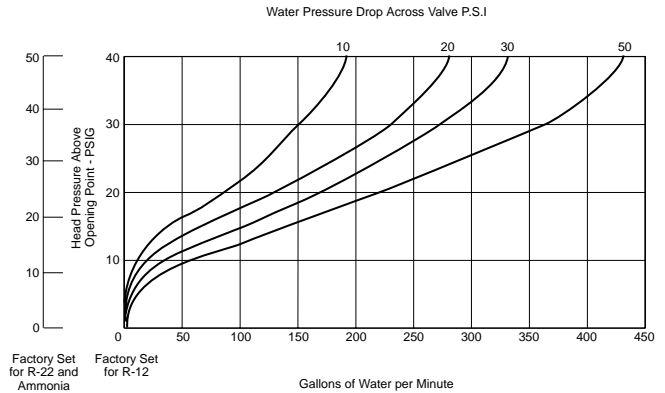
### Valve Capacity and Selection

(See the V43 Product Bulletin for more information on selecting the proper valve size.)

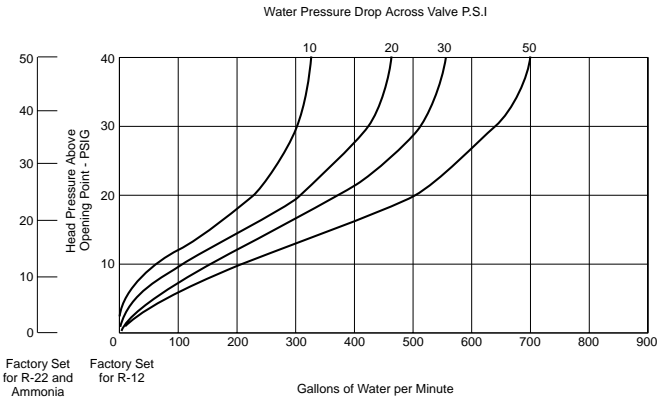
**Capacity Chart for 2 inch Valve**



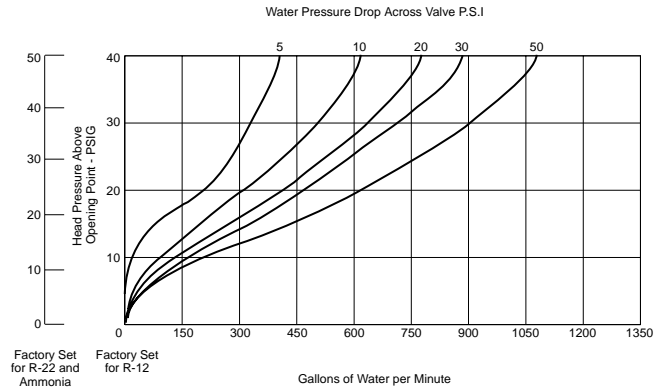
**Capacity Chart for 2-1/2 inch Valve**



**Capacity Chart for 3 inch Valve**



**Capacity Chart for 4 inch Valve**



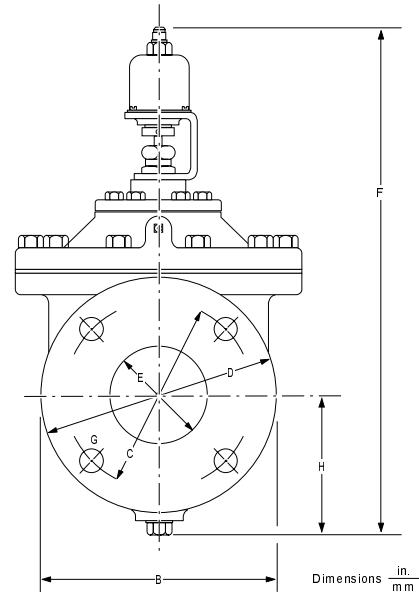
vcapgr1

## V43 Series Pressure Actuated Water Valve (Continued)

### Dimensions

Symbol	2 Inch	2 1/2 Inch	3 Inch	4 Inch
A <sup>(a)</sup>	9.5 in. (241 mm)	10.75 in. (273 mm)	11.75 in. (298 mm)	14.0 in. (356 mm)
B	7.5 in. (191 mm)	8.0 in. (203 mm)	9.0 in. (229 mm)	10.75 in. (273 mm)
C	4.75 in. (121 mm)	5.50 in. (140 mm)	6.0 in. (152 mm)	7.5 in. (191 mm)
D	6.0 in. (152 mm)	7.0 in. (178 mm)	7.5 in. (191 mm)	9.0 in. (229 mm)
E	2.13 in. (54 mm)	2.63 in. (67 mm)	3.13 in. (80 mm)	4.13 in. (105 mm)
F	15.25 in. (387 mm)	15.56 in. (395 mm)	16.56 in. (421 mm)	18.19 in. (462 mm)
G	0.750 in. (19.05 mm) Dia. (4)	0.750 in. (19.05 mm) Dia. (4)	0.750 in. (19.05 mm) Dia. (4)	0.750 in. (19.05 mm) Dia. (8)
H	3.63 in. (92 mm)	3.94 in. (100 mm)	4.25 in. (108 mm)	5.03 in. (128 mm)

(a) Flange face to flange face.



**V43 Dimensions**

### Selection Charts

Code Number	Pipe Size (in.)	Inlet and Outlet	Opening Point Adjustment Range – psig (kPa)	Ship Wt. Lb.
<b>COMMERCIAL TYPE – NON-CORROSIVE REFRIGERANTS (R)</b>				
V43AS-1C	2	4 Hole ASME Flanged	70 to 150 (483 to 1034)	59
V43AS-2C			160 to 260 (1103 to 1793)	
V43AT-1C	2 1/2		70 to 150 (483 to 1034)	65
V43AT-2C			160 to 260 (1103 to 1793)	
V43AV-1C	3		70 to 150 (483 to 1034)	90
V43AV-2C			160 to 260 (1103 to 1793)	90
V43AW-2C	4	8 Hole ASME Flanged	160 to 260 (1103 to 1793)	142
<b>COMMERCIAL TYPE - AMMONIA (R)</b>				
V43AV-5C	3		160 to 260 (1103 to 1793)	90
<b>MARITIME TYPE – NON-CORROSIVE REFRIGERANTS (R)</b>				
V43BS-6C	2	4 Hole ASME Flanged	70 to 150 (483 to 1034)	59
V43BS-7C			160 to 260 (1103 to 1793)	
V43BT-6C	2 1/2		70 to 150 (483 to 1034)	65
V43BT-7C			160 to 260 (1103 to 1793)	
V43BV-10C	3		70 to 150 (483 to 1034)	90
V43BV-7C			140 to 260 (1103 to 1793)	

Code Number	Pipe Size (in.)	Inlet and Outlet	Pressure Connector	Opening Point Adjustment Range – psig (kPa)	Ship Wt. Lb.
<b>NAVY NAVSEA Certified – NON-CORROSIVE REFRIGERANTS (R)</b>					
V43BS-3C	2	4 Hole ASME Flange	1/4 in. Male Flared Conn.	70 to 150 (483 to 1034)	59
V43CS-1C		6 Hole Navy Flange	1/4 in. Male Flared Conn.	70 to 150 (483 to 1034)	59
V43CS-2C			Female Sweat Conn.	70 to 150 (483 to 1034)	59
V43BT-3C	2 1/2	4 Hole ASME Flange	1/4 in. Male Flared Conn.	70 to 150 (483 to 1034)	65
V43CT-2C		6 Hole Navy Flange	1/4 in. Male Flared Conn.	70 to 150 (483 to 1034)	65
V43BV-4C	3	4 Hole ASME Flange	Female Sweat Conn.	70 to 150 (483 to 1034)	90
V43CV-1C		8 Hole Navy Flange	1/4 in. Male Flared Conn.	70 to 150 (483 to 1034)	90
V43CV-2C			Female Sweat Conn.	70 to 150 (483 to 1034)	90
V43BW-7C	4	8 Hole ASME Flange	1/4 in. Male Flared Conn.	70 to 150 (483 to 1034)	142
V43BW-2C				160 to 260 (1103 to 1793)	142

**▲ Universal Replacement (R) For Refrigerants Not Listed, Contact Application Engineering**

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products. © 08/02 Johnson Controls, Inc

## V43 Series Pressure Actuated Water Valve (Continued)

### Repair Parts

Note: Repair parts are supplied in kits only and include all parts required to recondition that portion of the valve.  
To order, specify code number only.

Model	Diaphragm Kit	Seat Disc and Diaphragm Kit	Seat Repair Kit	Screen Repair Kit	Push Rod Kit (a)	Sensing Element Kit	Disc Body Kit							
V43AS-1C	DPM18A-600R	DSC16A-600R	STT19A-602R	SCN10A-600R	ROD18A-600R	SEP88A-600R	DBK11A-600R							
V43AS-2C						SEP88A-601R								
V43AT-1C	DPM18A-601R	DSC16A-601R	STT19A-603R		ROD18A-601R	SEP88A-600R	DBK11A-601R							
V43AT-2C						SEP88A-601R								
V43AV-1C	DPM18A-602R	DSC16A-602R	STT19A-606R		ROD18A-602R	SEP88A-600R	DBK11A-602R							
V43AV-2C						SEP88A-601R								
V43AW-1C	DPM18A-603R	DSC16A-603R	STT19A-608R		ROD18A-602R	SEP88A-600R	DBK11A-603R							
V43AW-2C						SEP88A-601R								
V43AS-5C	DPM18A-600R	DSC16A-600R	STT19A-602R		ROD18A-600R	SEP87A-600R	DBK11A-600R							
V43AT-5C	DPM18A-601R	DSC16A-601R	STT19A-603R		ROD18A-601R		DBK11A-601R							
V43AV-5C	DPM18A-602R	DSC16A-602R	STT19A-606R	ROD18A-602R	DBK11A-602R									
V43AW-5C	DPM18A-603R	DSC16A-603R	STT19A-608R		DBK11A-603R									
V43BS-1C (1)	DPM18A-600R	DSC16A-600R	STT19A-602R	SCN10A-601R	ROD18A-602R	SEP88A-600R	DBK11A-602R							
V43BS-2C (1)			SEP88A-601R											
V43BS-3C			STT19A-600R			SEP88A-600R	DBK10A-600R							
V43BS-6C								SEP88A-601R						
V43BS-7C								SEP88A-600R						
V43BT-1C (1)	DPM18A-601R	DSC16A-601R	STT19A-603R		SCN10A-601R	ROD18A-603R	SEP88A-600R	DBK11A-601R						
V43BT-2C (1)			SEP88A-601R											
V43BT-3C			STT19A-605R				SEP88A-600R	DBK10A-602R						
V43BT-6C									SEP88A-601R					
V43BT-7C									SEP88A-600R					
V43BV-1C (1)	DPM18A-602R	DSC16A-602R	STT19A-606R	SCN10A-601R		ROD18A-603R	SEP88A-600R	DBK11A-602R						
V43BV-2C (1)			STT19A-607R				SEP88A-601R							
V43BV-4C			STT19A-606R				SEP88A-600R	DBK10A-601R						
V43BV-5C (1)									STT19A-606R	SEP88A-600R				
V43BV-6C (1)									STT19A-606R	SEP88A-601R				
V43BV-7C			STT19A-607R		SEP88A-601R		DBK10A-601R							
V43BV-8C								SEP88A-600R						
V43BV-9C								SEP88A-600R						
V43BV-10C			DPM18A-603R		DSC16A-603R		STT19A-609R	SCN10A-601R	ROD18A-602R	SEP88A-601R	DBK10A-603R			
V43BW-2C										SEP88A-601R	DBK10A-603R			
V43BW-6C	ROD18A-602R	SEP88A-600R		DBK10A-600R										
V43BW-7C						ROD18A-604R								
V43CS-1C	DPM18A-600R	DSC16A-600R	STT19A-600R	SCN10A-601R	ROD18A-602R	SEP88A-600R	DBK10A-600R							
V43CS-2C									DPM18A-601R	DSC16A-601R	STT19A-605R	ROD18A-603R	SEP86A-600R	DBK10A-602R
V43CS-3C														
V43CT-1C	DPM18A-601R	DSC16A-601R	STT19A-605R		ROD18A-603R	SEP88A-600R	DBK10A-601R							
V43CT-2C									DPM18A-602R	DSC16A-602R	STT19A-607R	SEP88A-600R	DBK10A-601R	
V43CV-1C	DPM18A-602R	DSC16A-602R	STT19A-607R		SEP88A-600R	DBK10A-601R								
V43CV-2C							DPM18A-602R	DSC16A-602R	STT19A-607R	SEP88A-600R	DBK10A-601R			

(a) Replacement push rod kit requires a seat repair kit and/or a diaphragm kit when replaced.

Note 1: The following valves, manufactured after date code 8702, contain monel interior trim.  
Order replacement parts kits as listed below:

Valve Model	Order Parts Kits for:
V43BS-1C	V43BS-6
V43BS-2C	V43BS-7
V43BT-1C	V43BT-6

Valve Model	Order Parts Kits for:
V43BT-2C	V43BT-7
V43BV-1C	V43BV-10
V43BV-2C	V43BV-7

Valve Model	Order Parts Kits for:
V43BV-5C	V43BV-10
V43BV-6C	V43BV-9