

# Needle Valves

## Diverter

# 20DV Series

*Pressures to 20,000 psi (1379 bar)*

Autoclave Engineers diverter valves provide the ability to direct incoming flow to one of two outlets. Flow is changed by rotating the handle in or out causing a double-ended stem to block the flow path to the outlet not needed. Diverter valves eliminate the need for multiple valves and the possibility of error in flow direction changes.

### *AE Diverter Valve Features:*

- Diverts incoming flow to one of two outlet lines.
- Tubing sizes from 9/16 to 1”.
- Rising stem/barstock body design.
- Non-rotating stem prevents stem/seat galling.
- Metal-to-metal seating achieves bubble-tight shut-off, longer stem/seat life in abrasive flow, greater durability for repeated on/off cycles and excellent corrosion resistance.
- PTFE (Teflon) encapsulated packing provides dependable stem and body sealing.
- Stem sleeve and packing gland materials have been selected to achieve extended thread cycle life and reduced handle torque.

Autoclave valves are complemented by a complete line of fittings, tubing, and accessories. The 20DV series uses Autoclave’s medium pressure connection. This coned and threaded connection provides a reliable bubble-tight seal for dependable performance to 20,000 psi (1379).



**Autoclave  
Engineers** 

Fluid Components  
Division of Snap-tite, Inc.

[www.autoclaveengineers.com](http://www.autoclaveengineers.com)

**Needle Valves - 20DV Series**  
Diverter

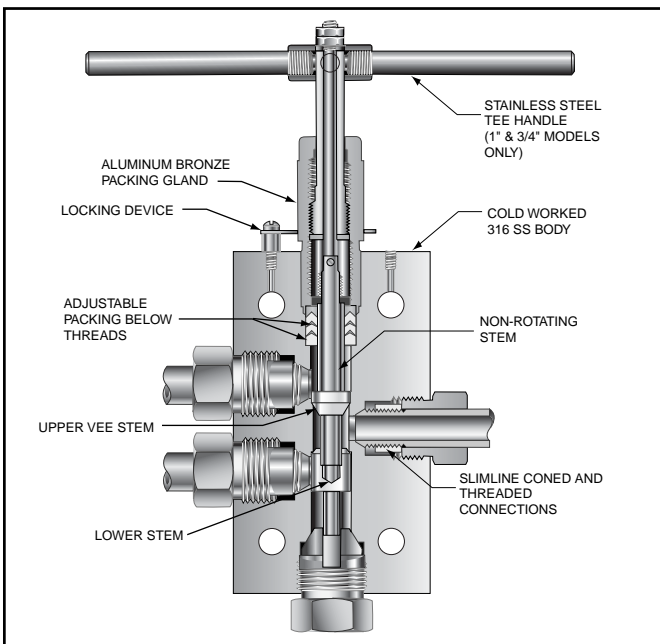
# Valve Series - 20DV Series

Pressures to 20,000 psi (1379 bar)

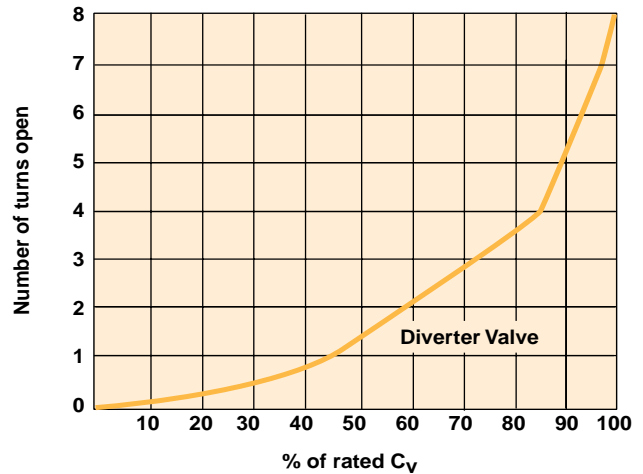
Tube Outside Diameter Size Inches	Connection Type	Orifice Size Inches (mm)	Rated $C_v$	Pres./Temp. Rating psi (bar) @ Room Temperature**
9/16	SF562CX	0.359 (9.12)	1.5	20,000 (1379)
3/4	SF750CX	0.516 (13.10)	2.9	20,000 (1379)
1	SF1000CX	0.688 (17.47)	4.5	20,000 (1379)

**Notes:**

\*\* For complete temperature ratings see pressure/temperature rating guide in Technical Information section.



### Generalized Flow Coefficient Curves ( $C_v$ )

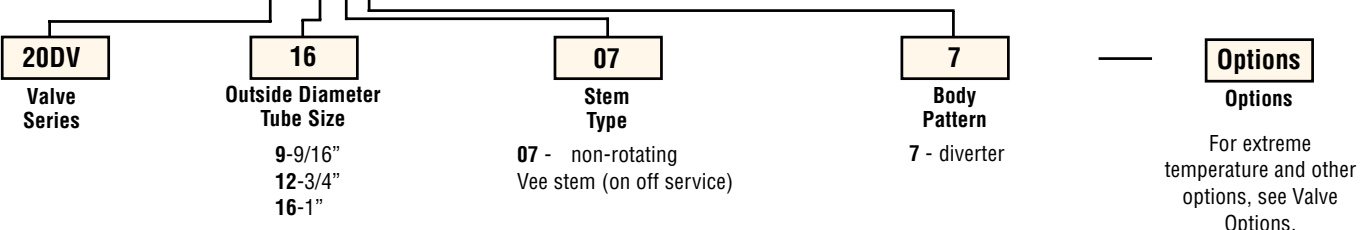


To ensure proper fit use Autoclave tubing

## Ordering Procedure

For complete information on available stem types, optional connections and additional valve options, see Needle Valve Options section or contact your Sales Representative. The 20DV Series valves are furnished complete with connection components, unless otherwise specified.

Typical catalog number: **20DV16077**



## Valve Options

### Extreme Temperatures

Standard Autoclave valves with Teflon packing may be operated to 450°F (232°C). High temperature packing and/or extended stuffing box is available for service from -423°F (-252°C) to 1200°F (648°C) by adding the following suffixes to catalog order number.

**HT** extended stuffing box valve with graphite braided yarn packing to 1200°F (648°C).

**B** standard valve with cryogenic trim materials and Teflon packing to -100°F (-73°C).

**LT** extended stuffing box valve with Teflon packing and cryogenic trim materials to -423°F (-252°C).

## Valve Maintenance

**Repair Kits:** add "R" to the front of valve catalog number for proper repair kit. (Example: **R20DV16077**)

**Valve Bodies:** Valve bodies are available. Order using the eight (8) digit part number found on the valve drawing or contact your Sales Representative for information.

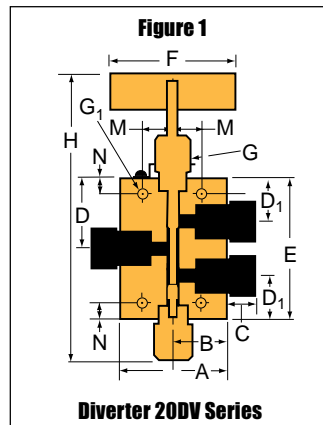
Consult your Autoclave representative for pricing on repair kits and valve bodies. Refer to the Tools, Installation, Operation and Maintenance section for proper maintenance procedures.

Catalog Number	Stem Type	Outside Diameter Tube	Orifice Diameter	Dimensions - inches (mm)												Block Thickness	Valve Pattern
				A	B	C	D	D <sub>1</sub>	E	F	G	G <sub>1</sub>	H*	M	N		
20DV9077	VEE	9/16	0.359	2.50	1.25	0.53	2.41	1.75/1.63	4.69	4.00	1.00	0.34	8.88	0.69	0.50	1.00	<b>See Figure 1</b>
		(14.29)	(9.12)	(63.50)	(31.75)	(13.46)	(61.21)	44.45/41.40	(119.13)	(101.60)	(25.40)	(8.64)	(225.55)	(17.53)	(12.70)	(25.40)	
20DV12077	VEE	3/4	0.516	3.00	1.50	0.62	3.00	2.13/1.81	5.69	10.25	1.12	0.44	10.12	0.88	0.62	1.38	
		(19.05)	(13.11)	(76.20)	(38.10)	(15.75)	(76.20)	54.10/45.97	(144.53)	(260.35)	(28.45)	(11.18)	(257.05)	(22.35)	(15.75)	(35.05)	
20DV16077	VEE	1	0.750	4.12	2.06	0.72	3.75	2.81/2.62	7.25	10.25	1.62	0.56	12.79	1.25	1.12	1.75	
		(25.40)	(19.05)	(104.65)	(52.33)	(18.29)	(95.25)	71.37/66.55	(184.15)	(260.35)	(41.15)	(14.22)	(324.87)	(31.75)	(28.45)	(44.45)	

*G* - Packing gland mounting hole drill size  
*G<sub>1</sub>* - Bracket mounting hole size  
 Panel mounting drill size: 0.22" all valves.

\* *H* Dimension is with stem in closed position.  
 All dimensions for reference only and subject to change.

**For prompt service, Autoclave stocks select products. Consult factory.**



All general terms and conditions of sale, including limitations of our liability, apply to all products and services sold.

**! WARNING !**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND/OR PROPERTY DAMAGE.

*This document and other information from Snap-tite, Inc., its subsidiaries and authorized distributors, provides product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operation conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Snap-tite, Inc. and its subsidiaries at any time without notice.*

**ISO-9001  
Certified**

02-0118SE-1002



Industrial Estate  
Whitemill-Wexford  
Republic of Ireland  
PH: 353-53-41566 FAX: 353-53-41582  
e-mail: [snaptite@snap-tite.iol.ie](mailto:snaptite@snap-tite.iol.ie)  
[www.snap-tite.com](http://www.snap-tite.com)



Fluid Components  
Division of Snap-tite, Inc.

8325 Hessinger Drive  
Erie, Pennsylvania 16509-4679 USA  
PH: 814-838-5700 FAX: 814-838-5811  
e-mail: [ae\\_sales@snap-tite.com](mailto:ae_sales@snap-tite.com)  
[www.autoclaveengineers.com](http://www.autoclaveengineers.com)