



# CV8 SERIES

0 - 300 PSIG



## CRYOGENIC VACUUM JACKETED SHUTOFF VALVES

### Features

- Vacuum Jacketed or Non-Jacketed
- Bubble Tight Shut Off
- Redundant Packing Seals
- Axially Bolted Bonnet for High Seat Loading
- Low Heat Leak Extension
- Self-Centering Plug Seal
- Quality Investment Cast Body for High Flow Values
- Easy Inline Maintenance

### Applications

- Cryogenic Storage Tanks
- Cryogenic Transportation Trailers
- Cryogenic Vacuum Jacketed Piping Systems

### Options

- Cold Box Cuff
- Ported Bonnet (Overseat Purge)
- Pneumatic and Electric Actuators
- Positioners & Position Indicators
- Limit Switches
- Linear & Equal % Flow Plugs
- Special extended length for Helium Service
- Higher rated working pressures

### Technical Data

#### Operating Ranges

Temperature .....-456°F to +300°F  
 .....-283°C to +149°C

Max. Operating Pressure 300 PSIG

#### Materials of Construction

All Major Structural Components are 300 Series Stainless Steel.

Body Seat .....Kel-F  
 Bonnet Gasket .....Glass Filled Teflon®  
 Redundant Seal .....Viton®  
 Packing .....Teflon® or Graphite

#### Tests

External Leakage .....Mass spec. to  
 .....1x10<sup>-9</sup>scc GHe/sec  
 Seat Leakage .....Bubble Tight to 150 PSIG  
 Proof Pressure .....330 PSIG (ambient)

#### Valve Size

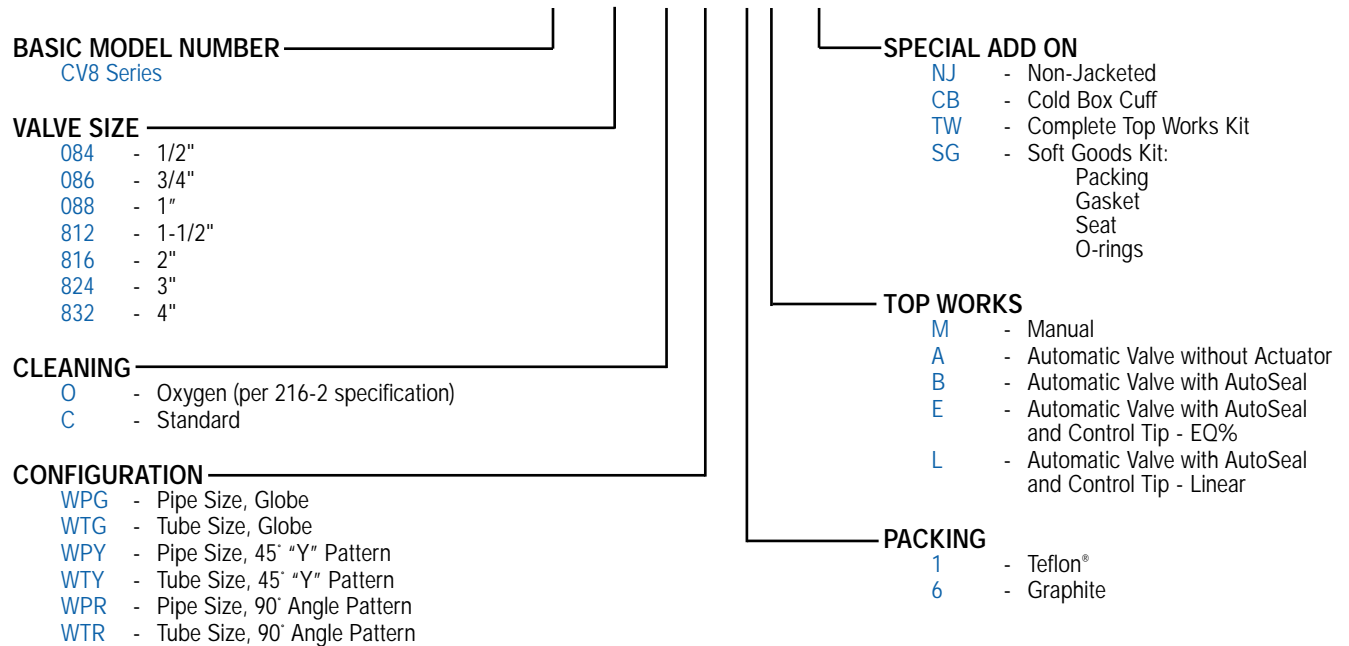
1/2" to 4"

# CV8 SERIES

0 to 300 PSIG

## How To Order

### CV8 - 088 - C WPG 1 M - NJ



All vacuum jacketed valves are insulated with four layers of radiation shielding.

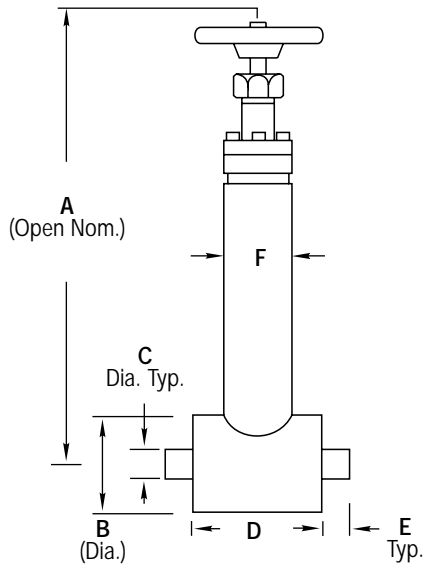
## Performance Characteristics

Valve Size	Conductive Heat Leak (BTU/HR to 20°K)	Cooldown Weight (#)	Flow Coefficient (C <sub>v</sub> )		
			Globe	Y	Angle
1/2"	5.9	2.7	6.6	9	8
3/4"	6.6	3.3	8	12	10
1"	10.4	3.8	14	22	17
1 1/2"	21.8	7.0	34	47	41
2"	27.3	10.2	50	96	60
3"	68.1	30.8	139	162	145
4"	79.9	51.2	182	288	248

# CV8 SERIES

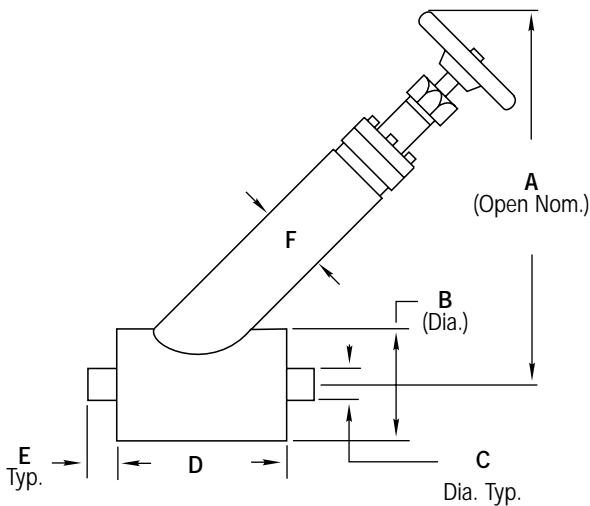
0 to 300 PSIG

## Dimensions



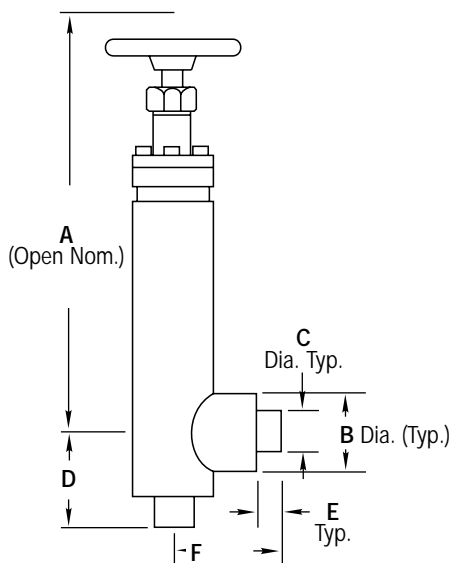
### Globe Pattern

Size	Assembly Part No	A	B	C	D	E	F
1/2" Tube	CV8-084-CWTG	16.5	2.88	.50	3.88	1.0	2.38
1/2" Pipe	CV8-084-CWPG	16.5	2.88	.84	3.88	1.0	2.38
3/4" Tube	CV8-086-CWTG	16.5	2.88	.75	3.88	1.0	2.38
3/4" Pipe	CV8-086-CWPG	16.5	2.88	1.05	3.88	1.0	2.38
1" Tube	CV8-088-CWTG	16.5	3.50	1.00	5.00	1.0	2.38
1" Pipe	CV8-088-CWPG	16.5	3.50	1.32	5.00	1.0	2.38
1 1/2" Tube	CV8-812-CWTG	19.5	4.00	1.50	6.00	1.0	3.5
1 1/2" Pipe	CV8-812-CWPG	19.5	4.00	1.90	6.00	1.0	3.5
2" Tube	CV8-816-CWTG	22.5	4.50	2.00	6.00	1.0	4.0
2" Pipe	CV8-816-CWPG	22.5	4.50	2.38	6.00	1.0	4.0
3" Pipe	CV8-824-CWPG	28.0	8.62	3.50	12.00	1.0	5.5
4" Pipe	CV8-832-CWPG	36.0	10.75	4.50	14.00	1.0	8.62



### "Y" Pattern

Size	Assembly Part No	A	B	C	D	E	F
1/2" Tube	CV8-084-CWTY	12.6	2.88	.50	5.00	1.0	2.38
1/2" Pipe	CV8-084-CWPY	12.6	2.88	.84	5.88	1.0	2.38
3/4" Tube	CV8-086-CWTY	12.6	2.88	.75	5.88	1.0	2.38
3/4" Pipe	CV8-086-CWPY	12.6	2.88	1.05	5.88	1.0	2.38
1" Tube	CV8-088-CWTY	12.6	2.88	1.00	6.00	1.0	2.38
1" Pipe	CV8-088-CWPY	12.6	2.88	1.32	6.00	1.0	2.62
1 1/2" Tube	CV8-812-CWTY	14.7	4.50	1.50	10.00	1.0	3.5
1 1/2" Pipe	CV8-812-CWPY	14.7	4.50	1.90	10.00	1.0	3.5
2" Tube	CV8-816-CWTY	14.7	4.50	2.00	10.00	1.0	4.0
2" Pipe	CV8-816-CWPY	14.7	4.50	2.38	10.00	1.0	4.0
3" Pipe	CV8-824-CWPY	22.0	8.62	3.50	16.00	1.0	5.5
4" Pipe	CV8-832-CWPY	34.0	10.75	4.50	18.00	1.0	8.62

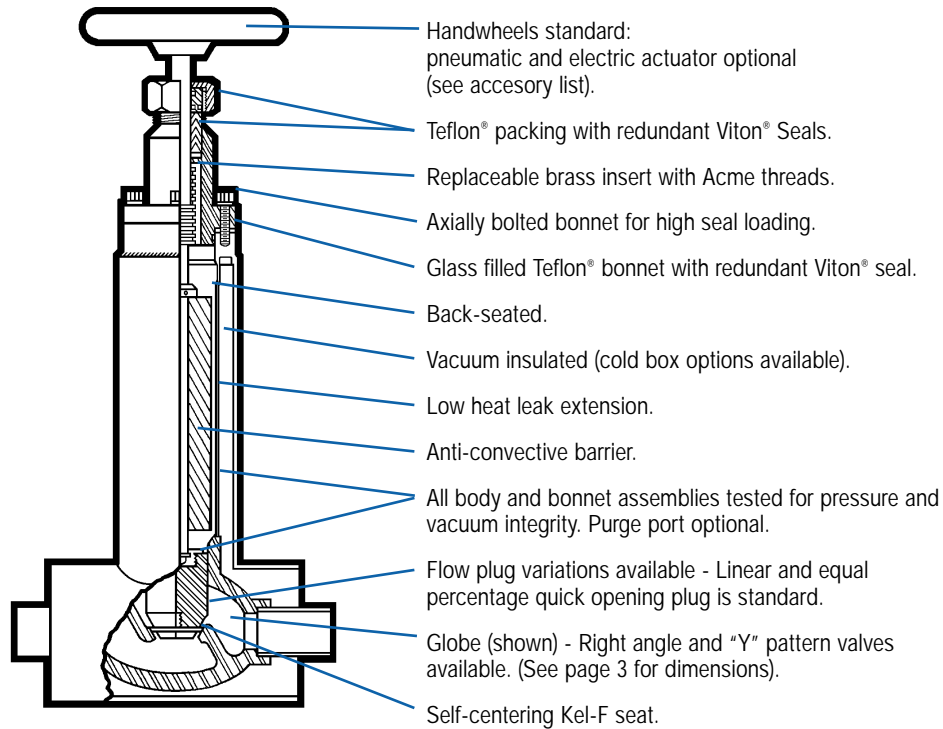


### Angle Pattern

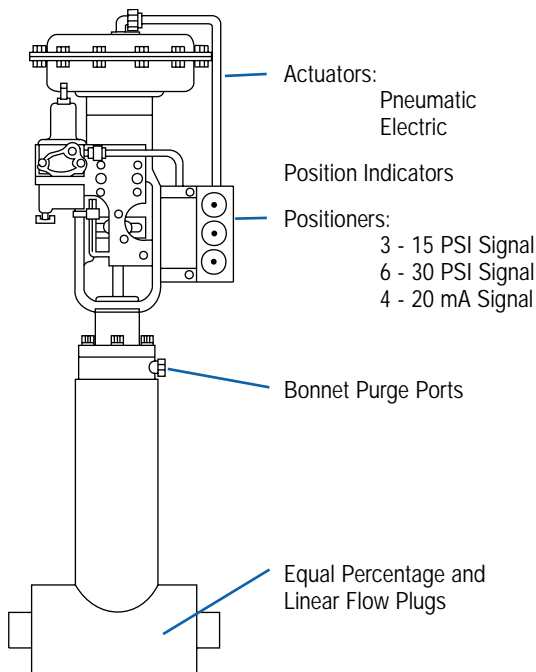
Size	Assembly Part No	A	B	C	D	E	F
1/2" Tube	CV8-084-CWTR	16.5	2.38	.50	3.50	1.0	3.50
1/2" Pipe	CV8-084-CWPR	16.5	2.38	.84	3.50	1.0	3.50
3/4" Tube	CV8-086-CWTR	16.5	2.88	.75	3.50	1.0	3.50
3/4" Pipe	CV8-086-CWPR	16.5	2.88	1.05	3.50	1.0	3.50
1" Tube	CV8-088-CWTR	16.5	2.88	1.00	3.50	1.0	3.50
1" Pipe	CV8-088-CWPR	16.5	2.88	1.32	3.50	1.0	3.50
1 1/2" Tube	CV8-812-CWTR	19.5	3.50	1.50	3.75	1.0	3.75
1 1/2" Pipe	CV8-812-CWPR	19.5	3.50	1.90	3.75	1.0	3.75
2" Tube	CV8-816-CWTR	19.5	4.00	2.00	4.00	1.0	4.00
2" Pipe	CV8-816-CWPR	19.5	4.00	2.38	4.00	1.0	4.00
3" Pipe	CV8-824-CWPR	28.0	5.56	3.50	5.00	1.0	5.00
4" Pipe	CV8-832-CWPR	36.0	8.62	4.50	8.00	1.0	8.00

Please consult factory for larger sizes.

## Features



## Optional Accessories and Trim



Actuators, Accessories, and Trim Hardware must be specified when an automatic valve is ordered.

General Information needed:

- Maximum Working Pressure
- Available Air Supply Pressure
- Signal Input to Valve
  - 3 - 15 PSI
  - 6 - 30 PSI
  - 20 - 60 PSI
  - 4 - 20 mA.
- Flow Rate in SCFM or GPM
- Fluid Media
- Working Temperature
- Air to Open or Air to Close