



2200 Series

Bar Stock, Screwed Bonnet Needle Valves

Dyna-Pak® packing below the stem threads, a hardened thread gland and a Hastelloy® C-276 stem tip keep valves leak-tight while providing long cycle life. A choice of two flow capabilities enables use in a variety of severe service applications.



Typical Applications

- Corrosive handling
- Sampling systems
- Metering service

Technical Data

BODY*	316 stainless steel
MAXIMUM OPERATING PRESSURE	5000 psig @ 70° F (345 Bar @ 21° C)
OPERATING TEMPERATURE RANGE	-65° to +450° F (-54° to +232° C)
ORIFICE SIZES	0.086" to 0.313" (2.2 mm to 8.0 mm)
Cv FACTORS	0.12 to 1.40

* Consult factory for other materials

Features & Benefits

Safety

- Lock pin prevents accidental bonnet disengagement

Durability

- Hastelloy® C-276 stem tip provides long service life

Extended temperature range

- Dyna-Pak® packing

Reliability

- All valves are tested for bubble-tight leakage at both seat and packing

Extended cycle life

- Dyna-Pak® packing below stem threads prevents washing away of thread lubricant and contamination of process fluid

Installation variety

- Choose from a broad selection of male NPT, female NPT and HOKE Gyrolok® tube fitting connections in globe or angle patterns

Panel mounting

- Panel mounting is standard on all models
- Special High Tolerance NPT Thread

needle valves

HOKE Incorporated

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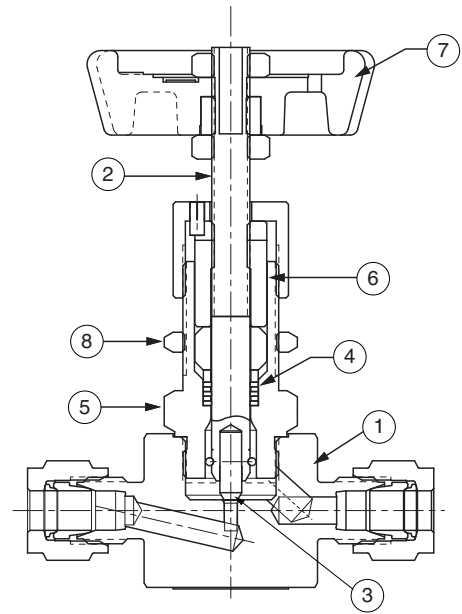
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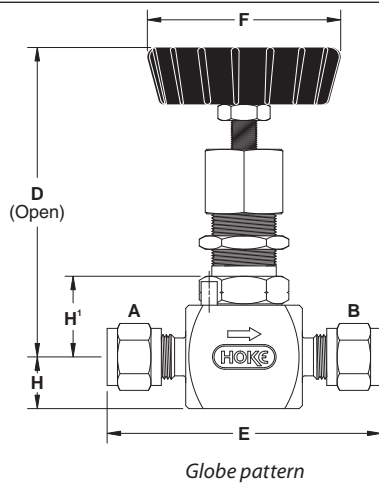
2200 Series

Materials of Construction

DESCRIPTION	MATERIAL
1 Body	316 stainless steel
2 Stem	316 stainless steel
3 Stem tip	Hastelloy® C-276
4 Stem packing	TFE/316 stainless steel wafers
5 Bonnet	316 stainless steel
6 Thread gland	416 stainless steel
<i>Handle</i>	
7 2210, 2220 Series 2230 Series	Aluminum cross, red ABS
8 Panel mounting nut	Nickel-plated brass



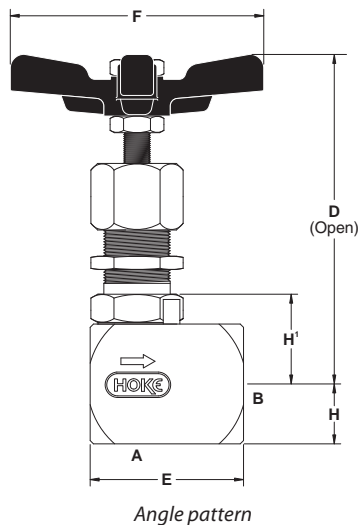
Dimensions



2200 Series: Globe Pattern

INLET A	OUTLET B	D	E	F	H	H'
1/4" Gyrolok®	1/4" Gyrolok®	inch 3 5/16	2 23/32	2 3/8	1/2	2 5/32
		mm 84	67	60	13	20
1/4" female NPT	1/4" female NPT	inch 3 5/16	2	2 3/8	1/2	1 3/16
		mm 84	51	60	13	21
3/8" Gyrolok®	3/8" Gyrolok®	inch 3 1/4	2 1 1/16	2 3/8	1/2	3/4
		mm 83	68	60	13	19
3/8" female NPT	3/8" female NPT	inch 3 5/16	2	2 3/8	1/2	1 3/16
		mm 84	51	60	13	21
1/2" Gyrolok®	1/2" Gyrolok®	inch 3 1/4	2 1 5/16	2 3/8	1/2	2 5/32
		mm 83	75	60	13	20
1/2" male NPT	1/4" female NPT	inch 3 5/16	2 1/8	2 3/8	1/2	1 3/16
		mm 84	54	60	13	21
1/2" female NPT	1/2" female NPT	inch 3 1 1/16	2 1/2	2 3/8	5/8	7/8
		mm 94	64	60	16	22
10mm Gyrolok®	10mm Gyrolok®	inch 3 5/16	2 1 1/16	2 3/8	1/2	2 5/32
		mm 84	68	60	13	20
12mm Gyrolok®	12mm Gyrolok®	inch 3 5/16	2 1 5/16	2 3/8	1/2	3/4
		mm 84	75	60	13	19

Dimensions for reference only, subject to change.



2200 Series: Angle Pattern

INLET A	OUTLET B	D	E	F	H	H'
1/4" female NPT	1/4" female NPT	inch 3 5/16	1 7/16	2 3/8	3/8	7/8
		mm 90	37	60	14	22

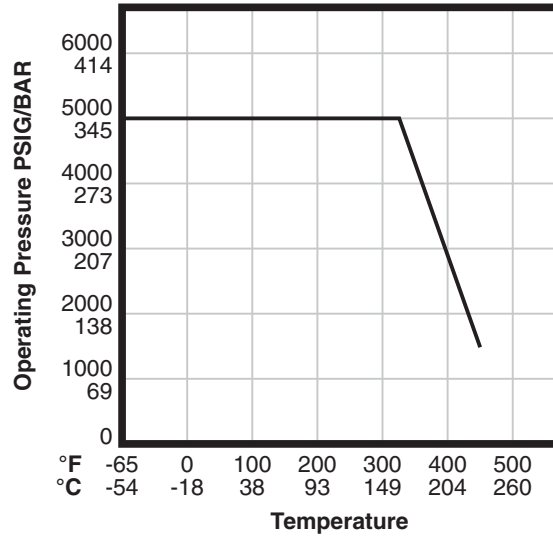
Dimensions for reference only, subject to change.

Panel mounting dimensions

Panel hole: for 1/2" models = 4 5/4" (19.4 mm) diameter
 for all other models = 4 1/4" (16.2 mm) diameter
 Panel thickness = 3/16" (4.7 mm) maximum

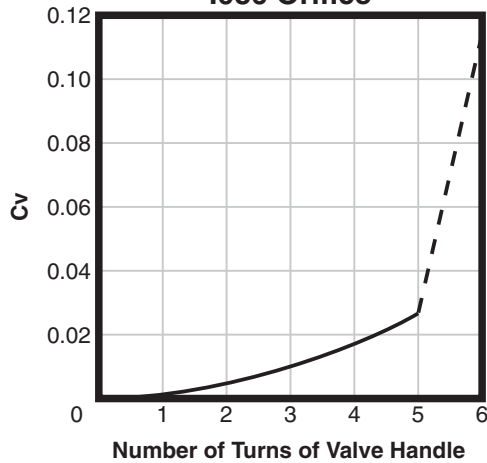
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Pressure vs. Temperature Curve



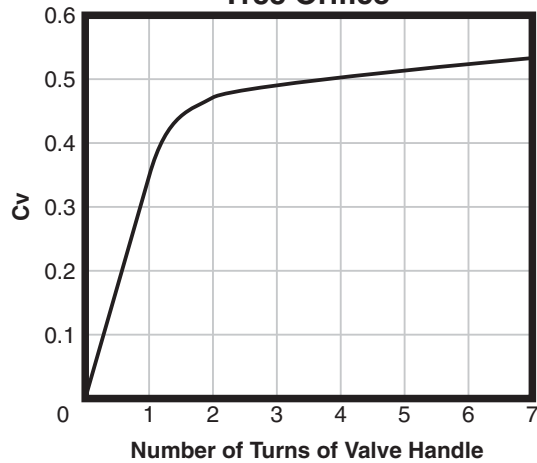
Flow Curves

**Handle Turns vs Cv
.086 Orifice**

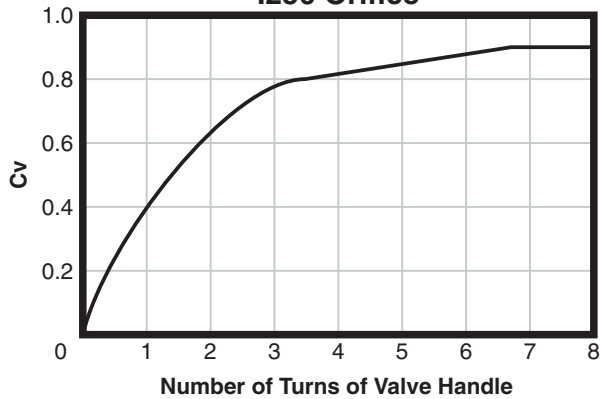


Note: Metering range of valve is within the first 5 handle turns.

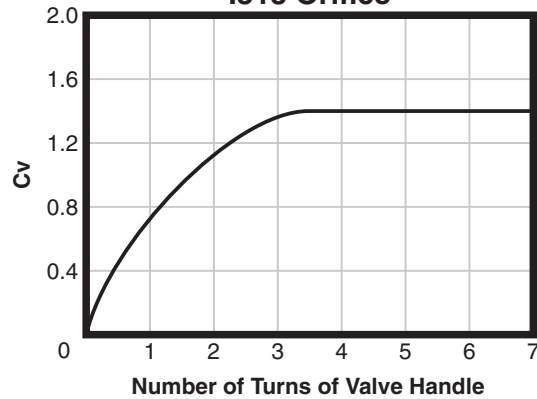
**Handle Turns vs Cv
.188 Orifice**



**Handle Turns vs Cv
.250 Orifice**

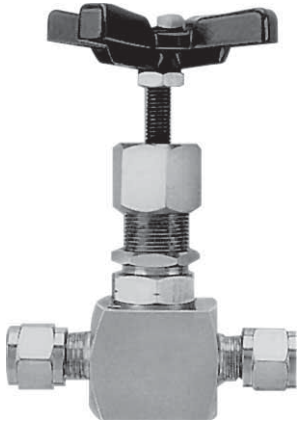


**Handle Turns vs Cv
.313 Orifice**



2200 Series

How to Order: Standard Valves



2215G6Y: Globe pattern



Regulating stem tip
(for greater control
of flow)



2225F4Y: Angle pattern



Blunt vee-point tip
(full flow with only
a few handle turns)

2200 Series: Globe Pattern

Blunt vee-point stem tip

END CONNECTIONS		ORDER BY PART NUMBER 316 STAINLESS STEEL	ORIFICE (INCHES)	Cv
INLET	OUTLET			
¼" Gyrolok®	¼" Gyrolok®	2215G4Y	0.188	0.40
¼" female NPT	¼" female NPT	2215F4Y	0.188	0.50
⅜" Gyrolok®	⅜" Gyrolok®	2215G6Y	0.250	0.76
⅜" female NPT	⅜" female NPT	2215F6Y	0.250	0.90
½" Gyrolok®	½" Gyrolok®	2215G8Y	0.250	0.90
½" male NPT	¼" female NPT	2215L84Y	0.188	0.50
½" female NPT	½" female NPT	2215F8Y	0.313	1.40
10mm Gyrolok®	10mm Gyrolok®	2215G10YMM	0.250	0.90
12mm Gyrolok®	12mm Gyrolok®	2215G12YMM	0.250	0.90

2200 Series: Globe Pattern

Regulating stem tip

END CONNECTIONS		ORDER BY PART NUMBER 316 STAINLESS STEEL	ORIFICE (INCHES)	Cv
INLET	OUTLET			
¼" female NPT	¼" female NPT	2232F4Y	0.086	0.12

2200 Series: Angle Pattern

Blunt vee-point stem tip

END CONNECTIONS		ORDER BY PART NUMBER 316 STAINLESS STEEL	ORIFICE (INCHES)	Cv
INLET	OUTLET			
¼" female NPT	¼" female NPT	2225F4Y	0.188	0.55

Ordering Options

Spare Parts

Spare parts and repair kits are available for all needle valves. Please contact your distributor for specific information.

Cleaning and Testing

When ordering, please specify if oxygen cleaning or helium leak testing is required.

Additional Sizes

Additional sizes and options are available on special request. Please consult your local HOKE distributor.