



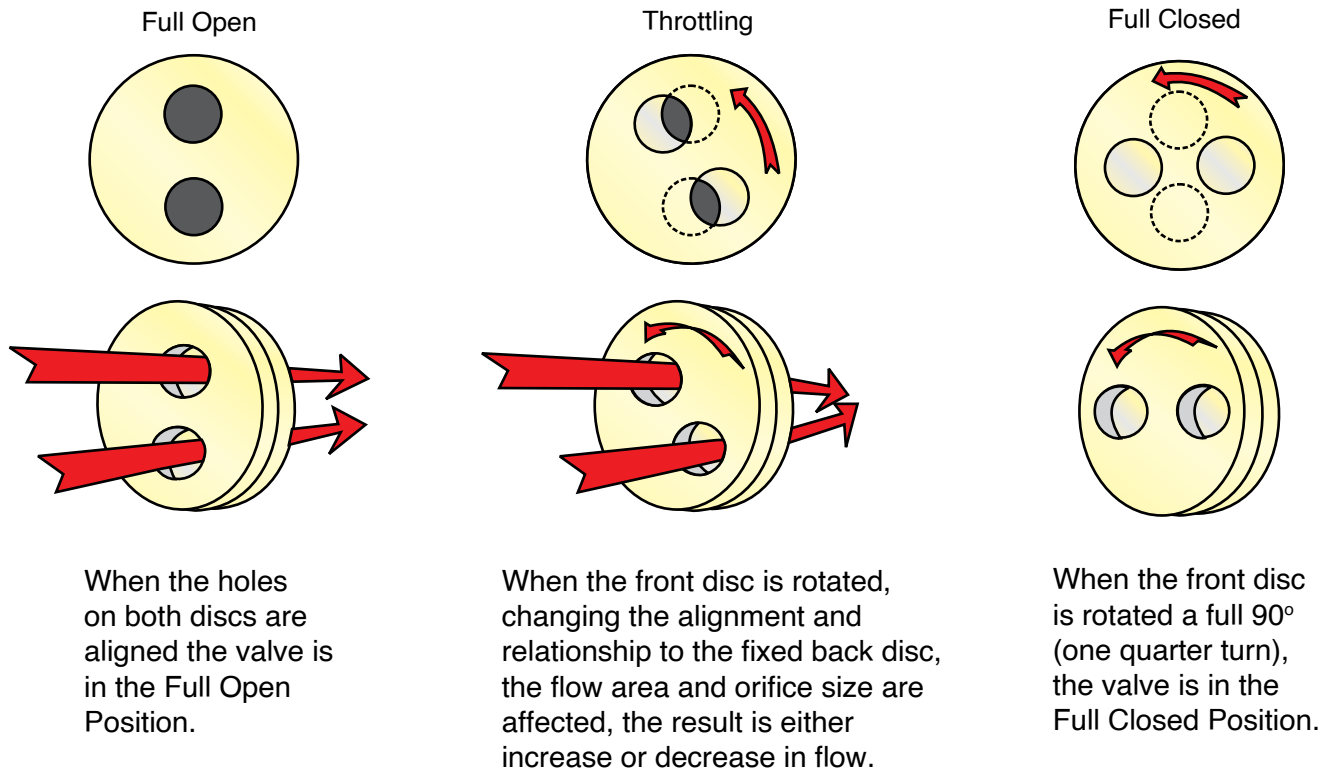
Precise.

Quality.

Reliable.



Taylor Valve Technology Multi-Orifice Valve Design Principle Provides Precision Control.
The two adjacent internal discs each contain two precision orifices.



The discs are lapped to within two light bands of flatness (+/- .00002") to achieve positive shut off and maintain precise control. The fixed back disc is held perpendicular to the flow. The front disc floats against the back disc and seeks a mating surface promoting a positive seal. The differential pressure across the upstream disc and the downstream disc stabilizes the control surfaces. Vibration, noise or fatigues normally associated with loose or unsupported parts are eliminated. No control surfaces are introduced into the orifice, providing a clear center line for the flow. The valves are rated for shut-off at ANSI Class III or IV depending on the style of valve and trim used. The orifices of the standard disc expose a small control surface profile to the fluid steam reducing wear. The multi-orifice design produces near linear flow characteristics. The low torque and quarter-turn design of Taylor Valve Technology's Multi-orifice valves allows for a variety of actuation options: manual, pneumatic, hydraulic, or electric.

1" BODY STANDARD DIMENSIONS AND WEIGHTS				
CONNECTIONS		DIM. END-to-END IN. (MM.) +/- .10	WEIGHT	
INLET	OUTLET		LB.	KG.
1" FNPT	1" FNPT	8.92	22	9.99
1" BUTT WELD	1" BUTT WELD	8.92	22	9.99
1" 150 RFF	1" 150 RFF	13.48	28	12.71
1" 150 RTJ	1" 150 RTJ	13.85	28	12.71
1" 300 RFF	1" 300 RFF	13.98	30	13.62
1" 300 RTJ	1" 300 RTJ	14.35	30	13.62
1" 600 RFF	1" 600 RFF	14.48	30	13.62
1" 600 RTJ	1" 600 RTJ	14.48	30	13.62
1" 900 RFF	1" 900 RFF	15.35	40	18.16
1" 900 RTJ	1" 900 RTJ	15.35	40	18.16
1" 1500 RFF	1" 1500 RFF	15.35	40	18.16
1" 1500 RTJ	1" 1500 RTJ	15.35	40	18.16

MC Inline Choke

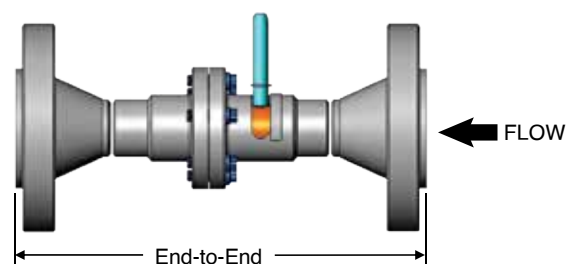
1" & 2" Configuration

316 SS

¼ Turn Actuated

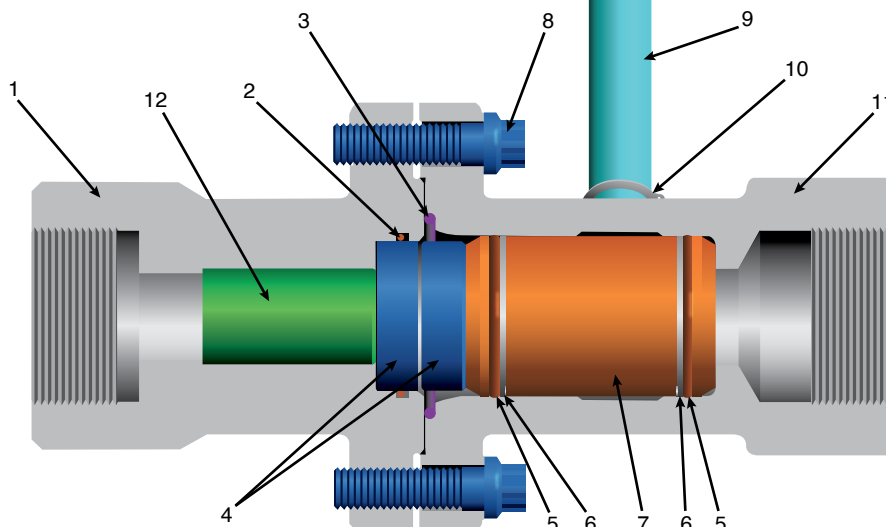
Body Rating = 3,600 PSI

CV Range = 0.70 - 16.57



2" BODY STANDARD DIMENSIONS AND WEIGHTS				
CONNECTIONS		DIM. END-to-END IN. (MM.) +/- .10	WEIGHT	
INLET	OUTLET		LB.	KG.
2" FNPT	2" FNPT	10.04	23	10.40
2" BUTT WELD	2" BUTT WELD	9.80	22	9.99
2" 150 RFF	2" 150 RFF	14.98	34	15.44
2" 150 RTJ	2" 150 RTJ	15.35	34	15.44
2" 300 RFF	2" 300 RFF	15.48	40	18.16
2" 300 RTJ	2" 300 RTJ	15.98	40	18.16
2" 600 RFF	2" 600 RFF	16.23	46	20.88
2" 600 RTJ	2" 600 RTJ	16.36	46	20.88
2" 900 RFF	2" 900 RFF	18.48	72	32.69
2" 900 RTJ	2" 900 RTJ	18.61	72	32.69
2" 1500 RFF	2" 1500 RFF	18.48	72	32.69
2" 1500 RTJ	2" 1500 RTJ	18.61	72	32.69

No.	Description	Qty
1	Hub	1
2	O Ring	1
3	O Ring	1
4	Disc	2
5	O Ring	2
6	Backup Ring	2
7	Rotator	1
8	Cap Screw	6
9	Handle	1
10	Retaining Ring	1
11	Body	1
12*	Flow Tube	1
13**	Dowel Pins	5
14**	Drive Screw	2
15**	Index Label	1
16**	Data Plate	1
17**	Screw	2



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NOTE: Taylor Valve reserves the right to change product designs and specifications without notice.

*Item optional

** Items not shown in section view

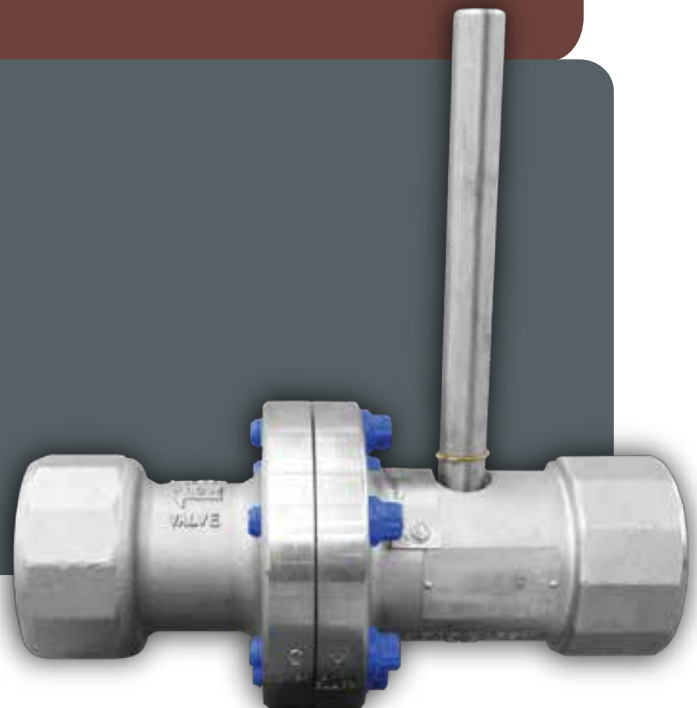
MC SERIES CHOKE VALVES

FEATURES & *Benefits*

- **Accurate Control** - 90 degree rotation from Full Off to Full On
- **Bolted Body** - Body is constructed with two bolted segments, avoiding the risk of corrosion, cross threading, galling of threaded type valve assemblies.
- **Extended Mean Time Between Service** - Robust design and liberal application of hardened materials, efficient flow-geometry means the valves offer maximum production potential and minimum service requirements.
- **Easy Maintenance** - Choke valves are designed to provide simple straightforward disassembly with no special tooling or fixtures.
- **Optional Features** - Choke valves can have trims and actuators custom designed for specific requirements, such as, special trims for noise reduction and sand control, several trims are available to accommodate high pressure flows or minimum pressure loss applications.

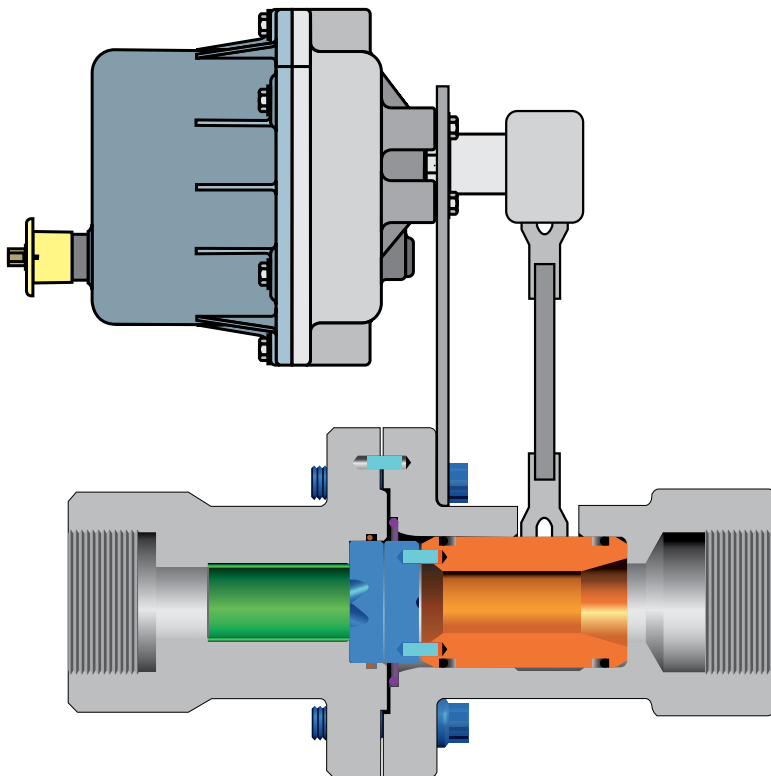
Applications:

- Well Site Automation
- Water Injection Control Valve
- CO2 Injection Control Valve
- Pump Bypass
- Pump Startup
- Gas Lift Injection Control
- Blow Down and Dump Valve
- Steam Injection
- Throttling Valve
- High DP Valve
- Motor Operated Valve



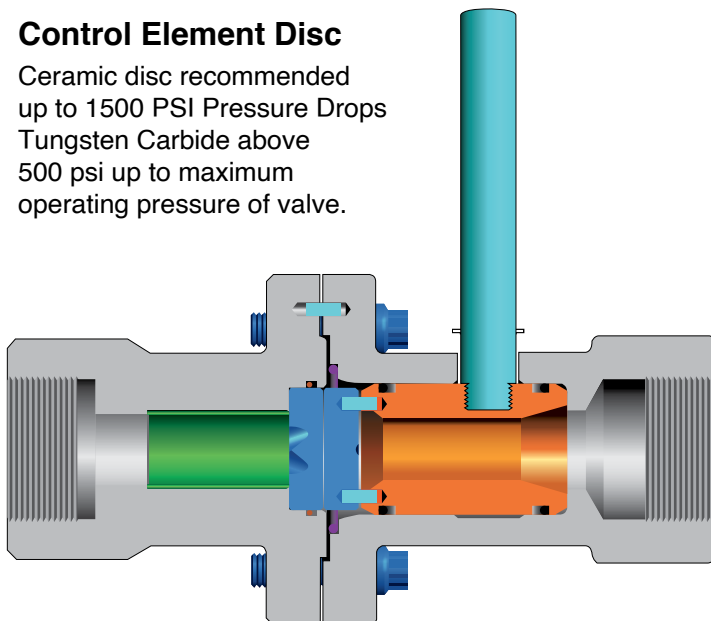
The MC Series of Inline MOV Chokes Offer:

- ~ ANSI Class III Shut Off
- ~ Linear flow characteristics
- ~ Downstream Wear Resistant Flow Tube
- ~ Simple Design for easy field maintenance
- ~ Choice of materials for body standard is 316 SS
- ~ Threaded, Flanged, Butt Weld, and Victaulic End
- ~ Sizes from 1" and 2" Threaded & Flanged to 3" Flanged



Control Element Disc

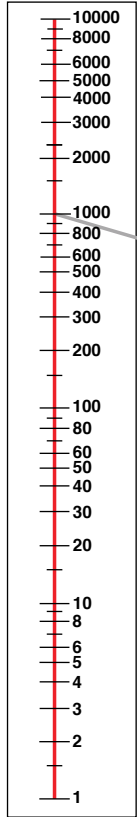
Ceramic disc recommended
up to 1500 PSI Pressure Drops
Tungsten Carbide above
500 psi up to maximum
operating pressure of valve.



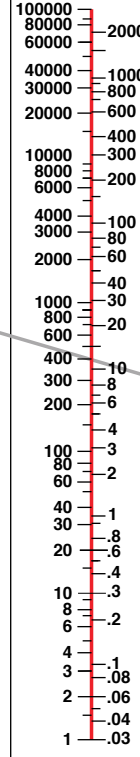
NOMOGRAPHS

For
WATER

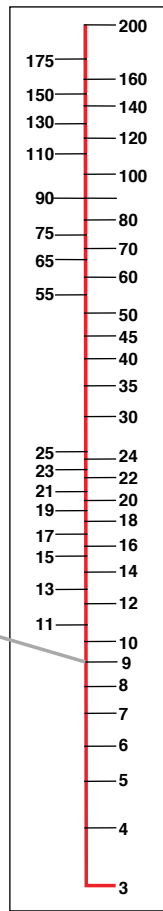
**PRESSURE DROP (DP)
ACROSS CHOKE (PSI)**



**FLOW RATE
BBL/DAY GAL/MIN**



**ORIFICE SIZE
Bean Size = 1/64th Dia**

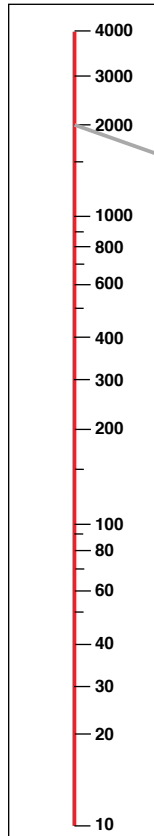


EXAMPLE:
PRESSURE DROP DP 1000 PSI,
WATER FLOW RATE 400 BARRELS
PER DAY OR 2310 B/D DOUBLE
ORIFICE CHOKE READ BEAN SIZE 9

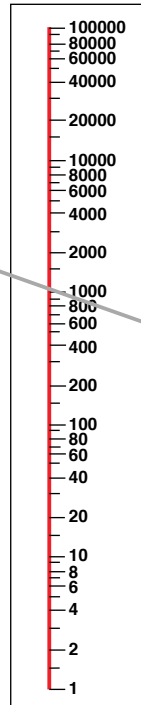
NOTE: $P1 - P2 = DP$
WHEN $P1 =$ UPSTREAM PRESSURE
 $P2 =$ DOWNSTREAM PRESSURE
 $DP =$ PRESSURE DROP ACROSS THE CHOKE

For
GAS

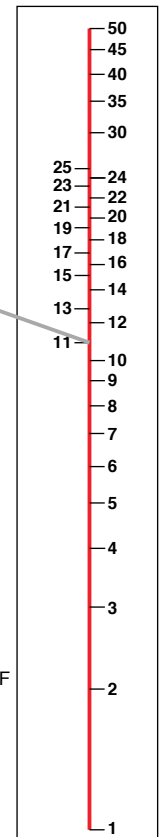
**PRESSURE DROP (DP)
ACROSS CHOKE (PSI)**



**FLOW RATE
BBL/DAY GAL/MIN**



**ORIFICE SIZE
Bean Size = 1/64th Dia**



* GAS FLOW AT .825 SPECIFIC GRAVITY AND TEMPERATURE AT 60 F
** STEAM QUALITY = 80%
NOTE: LBS/HR of STEAM = LB/D * 14.5

EXAMPLE:
UPSTREAM PRESSURE IS 2000 PSI AND THE SETTING IS 11,
GAS FLOW RATE WILL BE 1000 SCFD

Sizing Information Flow Equations

Liquid

Solve for C_v

$$C_v = Q/34.3 \sqrt{\frac{\Delta P}{S_G}}$$

Solve for Flow (Q)

$$Q = 34.3 \times C_v \sqrt{\frac{\Delta P}{S_G}}$$

Where:

- P_1 = Inlet Pressure (psia)
 P_2 = Outlet Pressure (psia)
 $\Delta P = P_1 - P_2$
 Q = Flow Rate (BPD)
 S_G = Specific Gravity - Water = 1.00
 C_v = Valve coefficient of Flow

Sizing Data for Liquids

- P_1 - Inlet Pressure (psia, psig, Bara, kPaa)
 P_2 - Outlet Pressure (psia, psig, Bara, kPaa)
 Q_L - Flow (bbl/d, gal/min, lbs/hr, kg/hr, m/d)
 S_G - Specific Gravity of Liquid
 T - Temperature (F° , C° , R° , K°)

2 Phase Flow

- P_1 - Inlet Pressure (psia, psig, Bara, kPaa)
 P_2 - Outlet Pressure (psia, psig, Bara, kPaa)
 Q_G - Flow (scf/d, m³/hr, kg/hr)
 Q_L - Flow (bbl/d, gal/min, lbs/hr, kg/hr, m/d)
 G_G - Specific Gravity of Gas
 S_G - Specific Gravity of Liquid
 T - Temperature (F° , C° , R° , K°)

Gas

Solve for C_v

$$C_v = Q / .0234 \sqrt{\frac{\Delta P (P_1 + P_2)}{G_G}}$$

Solve for Flow (Q)

$$Q = C_v \times .0234 \sqrt{\frac{\Delta P (P_1 + P_2)}{G_G}}$$

Where:

- P_1 = Inlet Pressure (psia)
 P_2 = Outlet Pressure (psia)
 $\Delta P = P_1 - P_2$
 Q = Flow Rate (MMSCFD)
 G_G = Specific Gravity - Air = 1.00
 C_v = Valve coefficient of Flow

Sizing Data for Gas Service

- P_1 - Inlet Pressure (psia, psig, Bara, kPaa)
 P_2 - Outlet Pressure (psia, psig, Bara, kPaa)
 Q_G - Flow (scf/d, m³/hr, kg/hr)
 G_G - Specific Gravity
 T - Temperature (F° , C° , R° , K°)

Co2 (Gaseous)

- P_1 - Inlet Pressure (psia, psig, Bara, kPaa)
 P_2 - Outlet Pressure (psia, psig, Bara, kPaa)
 Q_G - Flow (scf/d, m³/hr, kg/hr)
 P_v - Vapor Pressure (Function of Temperature)
 V - Specific Volume (Function of Temperature and P_1 Pressure)
 SG_G - Specific Gravity of Gas
 T - Temperature (F° , C° , R° , K°)

Choke Nomenclature

Choke Series
CA
CI
MC
MCX
MDA
MDAS
MDI
MDIS
RB
RBHU (Hammer Union)

Size
1 1"
2 2"
3 3"
4 4"
6 6"

Service Type
0 Standard
1 NACE
2 Steam/High Temp.

Actuation Type
0 Manual Handle
1 Manual Gear
2 Electric
3 Pneumatic
4 Hydraulic
7 Positive Bean

Style
0 Non-flanged
1 RFF
2 RTJ
3 RFF X RTJ
4 RTJ X RFF
5 NPT X API

Schedule
0 Non-flanged
1 40
2 80
3 160
4 XS
5 XXS
6 SLIP-ON
7 API
8 120
9 XXH X S80
A S80 X S40
B NPT X API
C S120 X S80

Trim Material
03 CARBIDE DISC - STELLITE WR SLV
04 CERAMIC DISC - STELLITE WR SLV
05 CARBIDE DISC - CARBIDE WR SLV
15 CERAMIC DISC - NO WR SLV
16 CARBIDE DISC - NO WR SLV
32 CERAMIC DISC/CARBIDE FLOW TUBE
44 R/RB-SERIES
47 BEAN 17-4 SS
17 CARBIDE DISCS & DIFFUSER
18 CERAMIC DISCS & DIFFUSER

Body Material
00 DUPLEX SS
03 CARBON STEEL
04 LOW ALLOY (4130 LACS)
05 316 SS (CF8M)
06 316 SS "L" (CF3M)
07 ALUMINUM BRONZE
08 A350 LF2
09 LCC
10 INCONEL
11 SUPER DUPLEX SS
12 440 SS
13 410 SS

EXAMPLE ONLY* MC - 2 0 0 17 17 1 2 04 05 03 04 = MC-20017171204050304
Choke part number has to be 17 digits.

Inlet Connection	Outlet Connection
01 1" FNPT	41 6" 600
02 1" BUTT WELD	42 6" 900
03 1" SOCKET WELD	43 6" 1500
04 1" VICTAULIC	44 6" 2500
05 1" 150	45 8" 150
06 1" 300	46 8" 300
07 1" 600	47 8" 600
08 1" 900/1500	48 8" 900
09 1" 2500	49 8" 1500
10 2" FNPT	50 8" 2500
12 2" BUTT WELD	51 2-1/16" 3000
13 2" SOCKET WELD	52 2-1/16" 5000
14 2" VICTAULIC	53 2-1/16" 10000
15 2" 150	54 2-9/16" 3000
16 2" 300	55 2-9/16" 5000
17 2" 600	56 2-9/16" 10000
18 2" 900/1500	57 3-1/8" 3000
19 2" 2500	58 3-1/8" 5000
20 3" FNPT	59 3-1/8" 10000
21 3" BUTT WELD	60 4-1/16" 3000
22 3" SOCKET WELD	61 4-1/16" 5000
23 3" 150	62 1-13/16" 10000
24 3" 300	63 3-1/16" 5000
25 3" 600	64 3/4" 600#
26 3" 900	65 1.5" 900/1500
27 3" 1500	66 3-1/16" 10000
28 3" 2500	67 7-1/16" 5000
29 4" FNPT	68 1-13/16" 15000
30 4" BUTT WELD	69 2-1/16" 15000
31 4" SOCKET WELD	75 1" UNION
32 4" VICTAULIC	76 3" 602M x 3" 602F Union
33 4" 150	78 3-1/16" 15000
34 4" 300	80 10" 600
35 4" 600	81 10" 900
36 4" 900	82 10" 1500
37 4" 1500	83 10" 2500
38 4" 2500	84 2-9/16" 15000
39 6" 150	85 6" Butt Weld
40 6" 300	87 1.5" 1500

Orifice Size
01 (2) 1/8" RND PORTS
02 (2) 3/16" RND PORTS
03 (2) 1/4" RND PORTS
04 (2) 3/8" RND PORTS
05 (2) 1/2" RND PORTS
06 (2) 5/8" PIE PORTS
07 (2) 3/4" RND PORTS
08 (2) 7/8" RND PORTS
10 (2) 1-3/16" RND PORTS
11 (2) 1-1/4" RND PORTS
14 (2) 1-1/2" RND PORTS
30 (2) 3/4" PIE PORTS
32 (2) 1-3/4" RND PORTS
35 (2) 1" ROUND PORTS
38 (2) 2" PIE PORTS
40 (2) 1-1/4" PIE PORTS
41 (2) 1-3/8" PIE PORTS
42 (2) 1-1/8" RND PORTS
47 (2) 1-1/2" PIE PORTS
49 (2) 5/8" RND PORTS
54 (2) 2.92 PIE HOLES
55 3 CV
56 12 CV
57 164 CV
58 420 CV
59 64 CV
60 35 CV
22 17/64 BEAN
23 18/64 BEAN
24 8/64 BEAN
25 13/64 BEAN
26 4/64 BEAN
27 38/64 BEAN
28 36/64 BEAN
29 48/64 BEAN
34 32/64 BEAN
43 40/64 BEAN
44 34/64 BEAN
45 28/64 BEAN
46 30/64 BEAN
53 10/64 BEAN
63 11/64 BEAN
64 14/64 BEAN
65 15/64 BEAN
66 16/64 BEAN
67 19/64 BEAN
68 20/64 BEAN
69 24/64 BEAN
70 21/64 BEAN
71 22/64 BEAN
72 23/64 BEAN
73 27/64 BEAN
74 29/64 BEAN
75 25/64 BEAN
76 1/7" RND PORTS
77 7/64 BEAN
78 54/64 BEAN
79 44/64 BEAN
80 45/64 BEAN
81 47/64 BEAN
82 51/64 BEAN
83 35/64 BEAN
84 37/64 BEAN
85 6 CV
86 85 CV
87 12/64 BEAN
88 78 CV
89 42/64 BEAN
90 43/64 BEAN
91 41/64 BEAN

Seal Material
00 HNBR/HSN
01 NBR
03 EPDM
04 FKM (VITON)
05 NEOPRENE
06 NBR (PEROXIDE CURED)
07 STEAM SEALS
09 AFLAS
11 V8588
12 KALREZ 7075

PINS
I INCONEL (Optional)

Butt weld connections MUST specify a schedule.

All API connections are "RTJ" style by default.

API flange bore (SCHEDULE) is specified by API.

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REVISED: 06-10-21

*See back page of actual choke product brochure for a more detailed order number example.

*For more options, contact Taylor Valve.

02/02/2026

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