



Taylor Valve
Technology

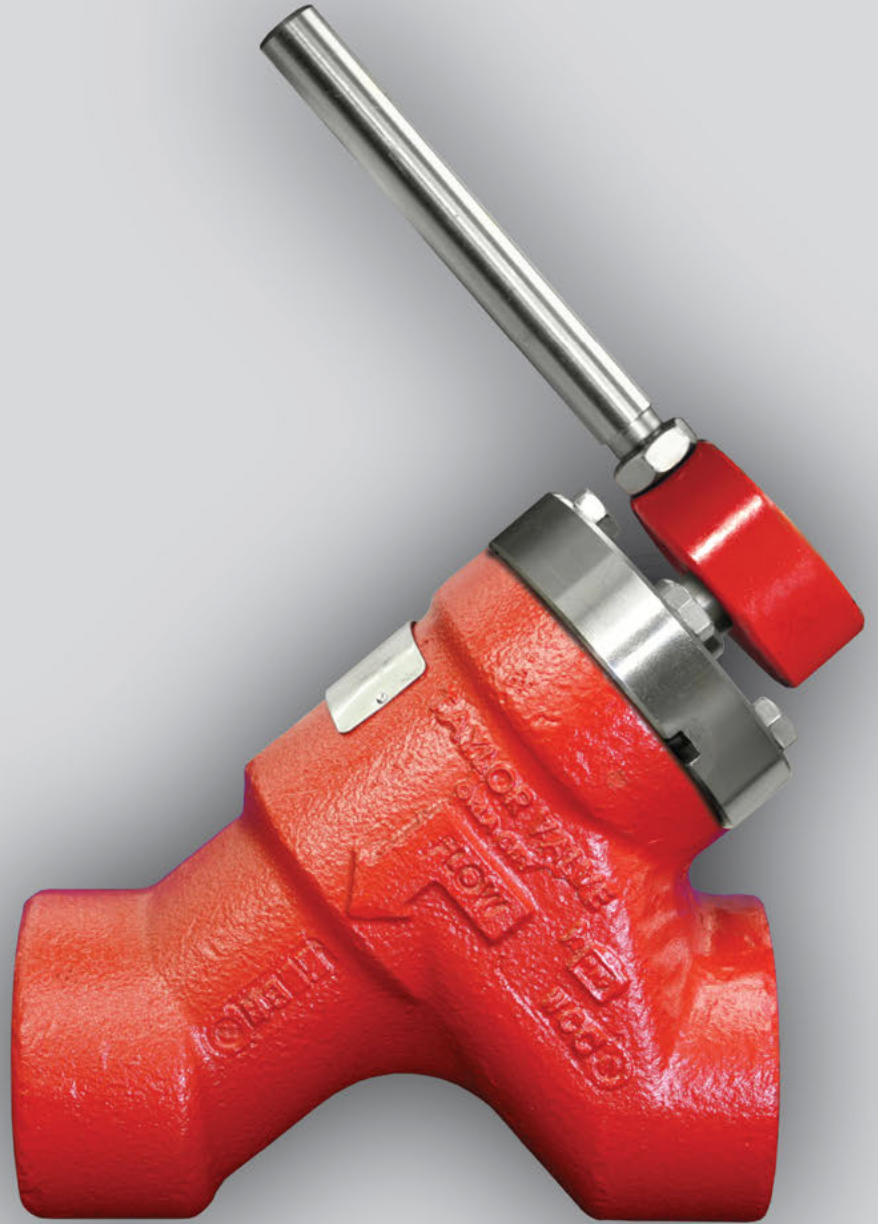
MDI / MDIS Choke Valves

Unique.

Precise.

Quality.

Reliable.

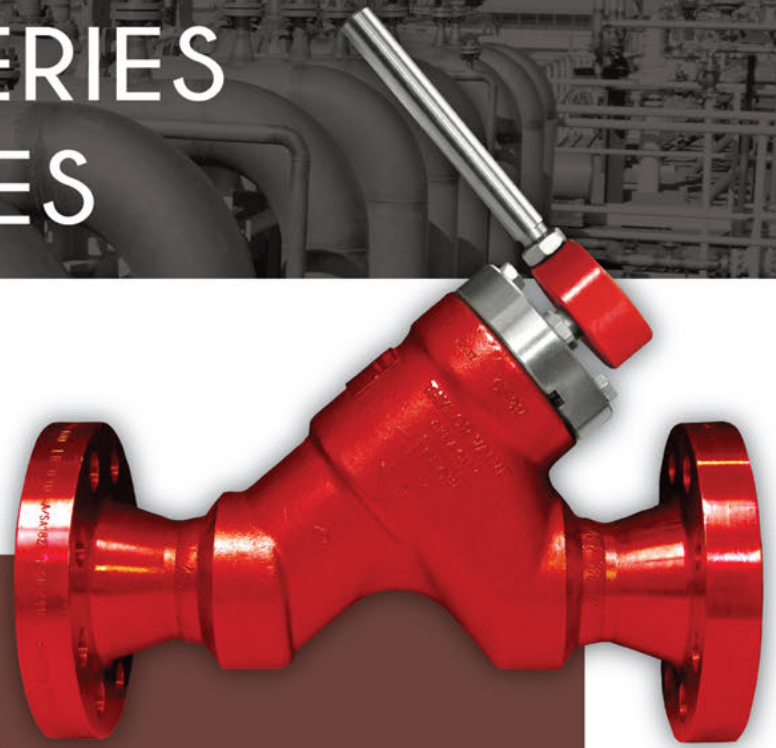


SINCE 1958



MDI / MDIS SERIES CHOKES VALVES

FEATURES & *Benefits*



Taylor Valve MDI / MDIS Series Chokes are made with wear resistant material to extend service life, with redundant O-Rings on the Bonnet Seals and Stem Seals that help prevent leakage. Fully Guided Stems reduce imbalance and vibration. Control Discs provide ANSI Class III/IV Shut off. Available sizes are the 1 Inch, 2 Inch, and the 3 Inch chokes.

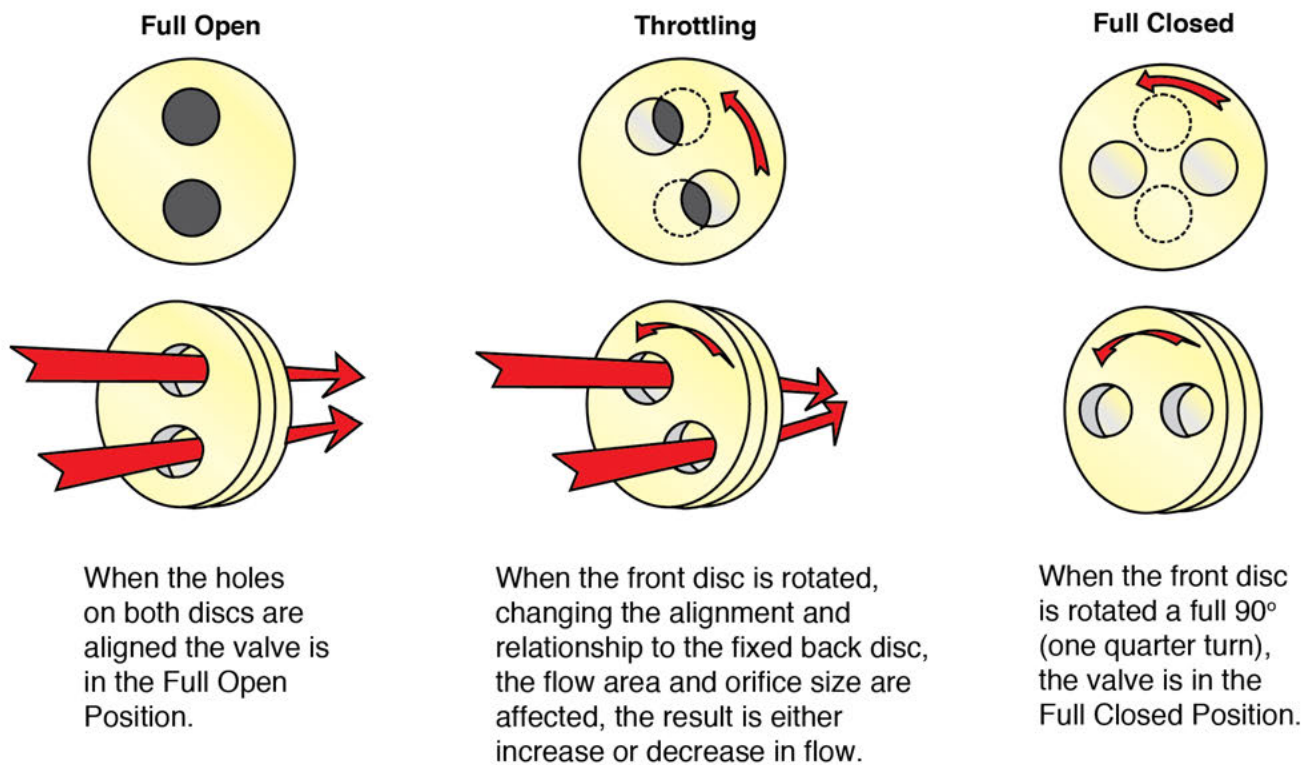
- **Accurate Control** - 90 degree rotation from Full Off to Full On.
- **Bolted Bonnet** - Safety Bonnet is bolted into the body, it avoids the well-known risks of corrosion, cross threading, galling of threaded type connection in production environments.
- **Extended Mean Time Between Service** - Robust design and liberal application of hardened materials, efficient flow-geometry means the valves offer maximum production potential and minimum service requirements.
- **Easy Maintenance** - Repair parts can be installed in the field without removing the valve from the line.
- **Optional Features** - Choke Valves can have trims and actuators custom designed for specific requirements. Such as special noise reduction trims, reduced port and maximum orifice trims, and for very high pressure or minimum pressure loss for a declining field.

Applications:

- Well Site Automation
- Water Injection Control Valve
- CO2 Injection Control Valve
- Pump Bypass
- Pump Startup
- Gas Lift Injection Control
- High Temperature Protection
- Blow Down and Dump Valve
- Steam Injection
- Remote Control for directional drilling
- Steam Injection
- Steam Tracer Control
- Manual and Automated Application

MOV Valve Principle of Operation

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.

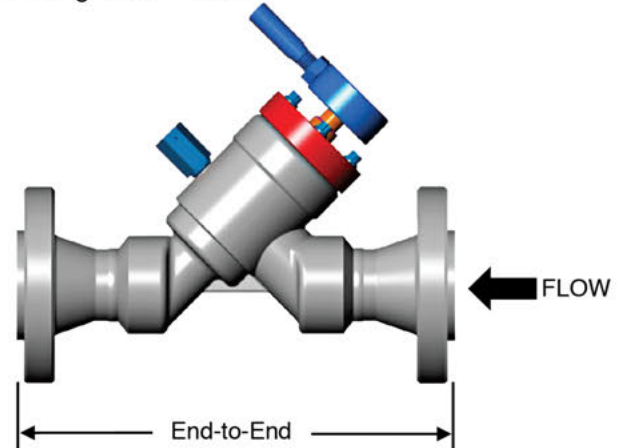
MDI 1" & 2" Specifications / Cutaway View

MDI CHOKE STANDARD DIMENSIONS (IN. +/- .10)

CONNECTION	SIZE		
	1"	2"	3"
FNPT	8.00	8.00	19.64
BUTT-WELD	8.00	8.00	19.15
150 # RFF	12.56	13.18	18.61
150 # RTJ	12.93	13.55	18.63
300 # RFF	13.06	13.68	19.11
300 # RTJ	13.43	14.18	19.61
600 # RFF	13.56	14.43	20.39
600 # RTJ	13.56	14.56	20.52
900 # RFF	14.43	16.68	20.39
900 # RTJ	14.43	16.81	20.52
1500 # RFF	14.43	16.68	21.89
1500 # RTJ	14.43	16.81	22.02
2500 # RFF	15.68	18.68	-
2500 # RTJ	15.68	18.81	-

MDI Inline Choke

1" & 2" Configurations
 316 SS or 1018/1020 CS
 ¼ Turn Actuated
 Body Rating = 5,000 PSI
 CV Range= 0.7 – 23.86

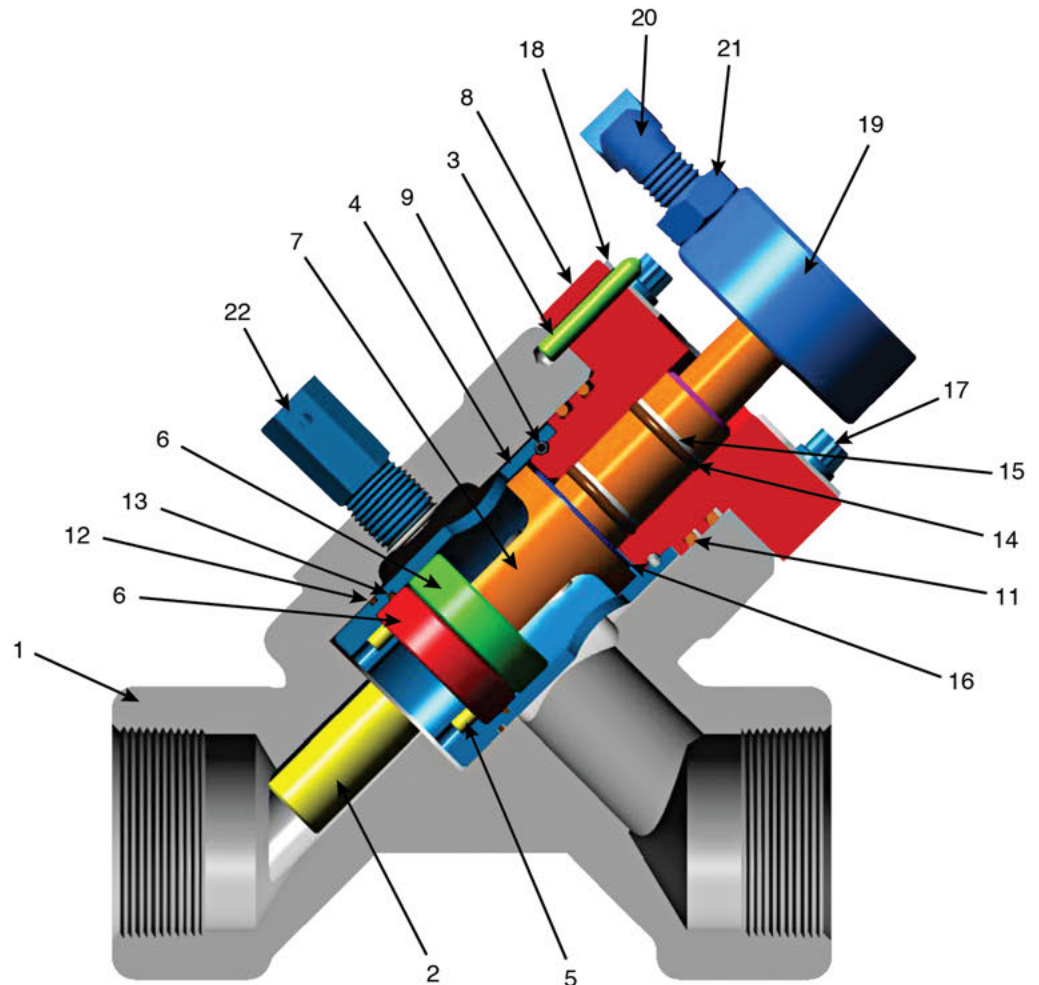


No.	Description	Qty
1	Body	1
2	Wear Sleeve	1
3	Pointer	1
4	Cage	1
5	Dowel Pin	4
6	Disc	2
7	Fork	1
8	Bonnet	1
9	Retainer Wire	1
10**	Dowel Pin	2
11	O-Ring	2
12	O-Ring	1
13	O-Ring	1
14	O-Ring	2
15	Backup Ring	2
16	Thrust Bearing	1
17	Cap Screw	6
18	Index Plate	1
19***	Turning Hub	1
20***	Turning Handle	1
21***	Jam Nut	1
22	Fitting Vent	1
23**	Screw	2
24**	Data Label	1
25**	Thumb Screw	1

*Item Optional

**Items not shown in section view

***Items not included on actuated version

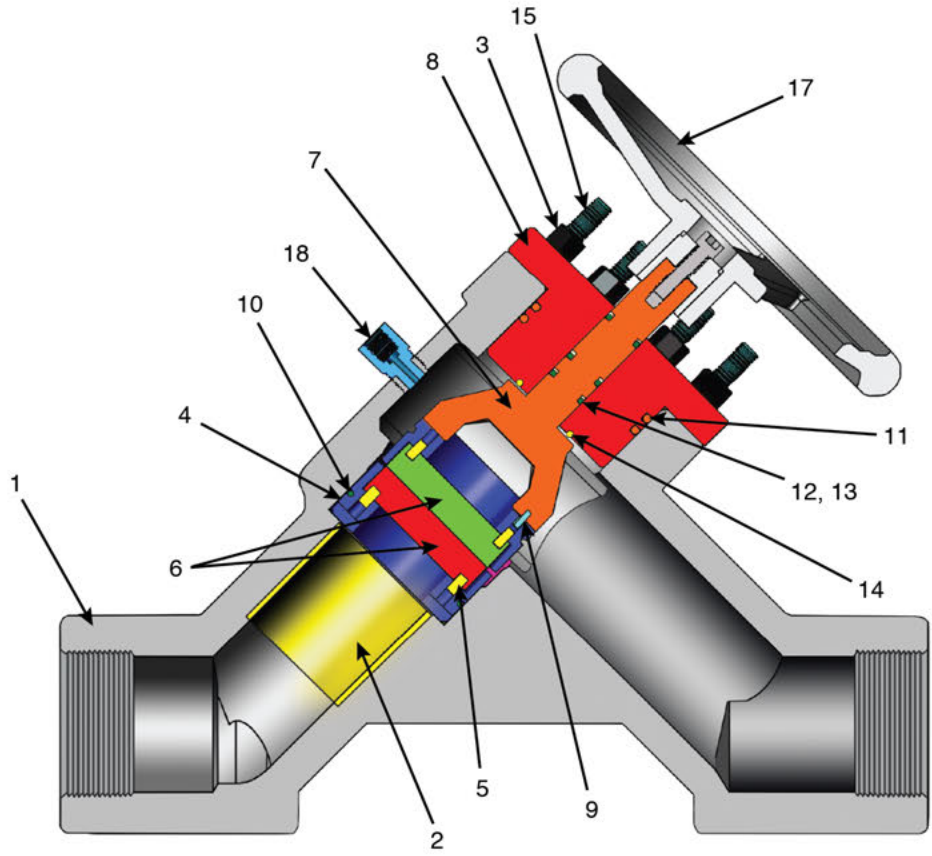
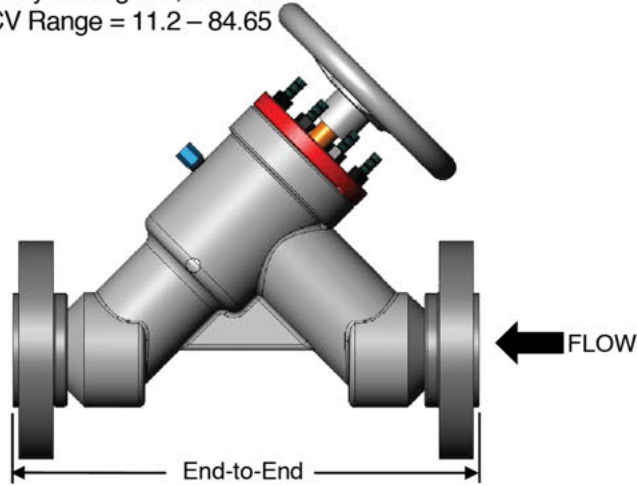


MDI 3" Specifications / Cutaway View

MDI CHOKE STANDARD DIMENSIONS (IN. +/- .10)			
CONNECTION	SIZE		
	1"	2"	3"
FNPT	8.00	8.00	19.64
BUTT-WELD	8.00	8.00	19.15
150 # RFF	12.56	13.18	18.61
150 # RTJ	12.93	13.55	18.63
300 # RFF	13.06	13.68	19.11
300 # RTJ	13.43	14.18	19.61
600 # RFF	13.56	14.43	20.39
600 # RTJ	13.56	14.56	20.52
900 # RFF	14.43	16.68	20.39
900 # RTJ	14.43	16.81	20.52
1500 # RFF	14.43	16.68	21.89
1500 # RTJ	14.43	16.81	22.02
2500 # RFF	15.68	18.68	-
2500 # RTJ	15.68	18.81	-

MDI Inline Choke

3" Configuration
 316 SS
 ¼ Turn Actuated
 Body Rating = 3,000 PSI
 CV Range = 11.2 – 84.65



No.	Description	Qty
1	Body	1
2*	Wear Sleeve	1
3	Nut	8
4	Disc Carrier	2
5	Dowel Pin	4
6	Disc	2
7	Fork	1
8	Bonnet	1
9	Dowel Pin	1
10	O-Ring	1
11	O-Ring	2
12	O-Ring	3
13	Backup Ring	3
14	Thrust Bearing	1
15	Stud	8
16**	Index Plate	1
17***	Hand Wheel	1
18	Fitting Vent	1
19**	Lock Bracket	1
20**	Screw	2
21**	Data Label	1

*Item Optional
 **Items not shown in section view
 ***Items not included on actuated version

MDIS 1" & 2" Specifications / Cutaway View

MDIS CHOKE STANDARD DIMENSIONS (IN. +/- .10)

CONNECTION	SIZE		
	1"	2"	3"
FNPT	8.00	8.00	19.64
BUTT-WELD	8.00	8.00	19.15
150 # RFF	12.56	13.18	18.61
150 # RTJ	12.93	13.55	18.63
300 # RFF	13.06	13.68	19.11
300 # RTJ	13.43	14.18	19.61
600 # RFF	13.56	14.43	20.39
600 # RTJ	13.56	14.56	20.52
900 # RFF	14.43	16.68	20.39
900 # RTJ	14.43	16.81	20.52
1500 # RFF	14.43	16.68	21.89
1500 # RTJ	14.43	16.81	22.02
2500 # RFF	15.68	18.68	-
2500 # RTJ	15.68	18.81	-

MDIS Inline Choke

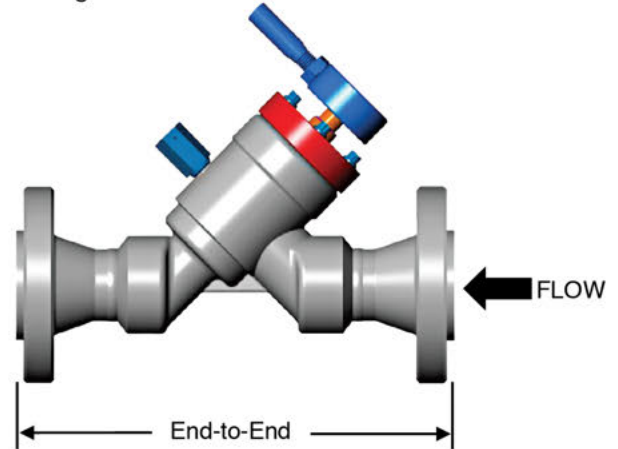
1" & 2" Configurations

316 SS or 1018/1020 CS

¼ Turn Actuated

Body Rating = 5,000 PSI / MAWP 1333 PSI for steam

CV Range= 0.7 – 23.86

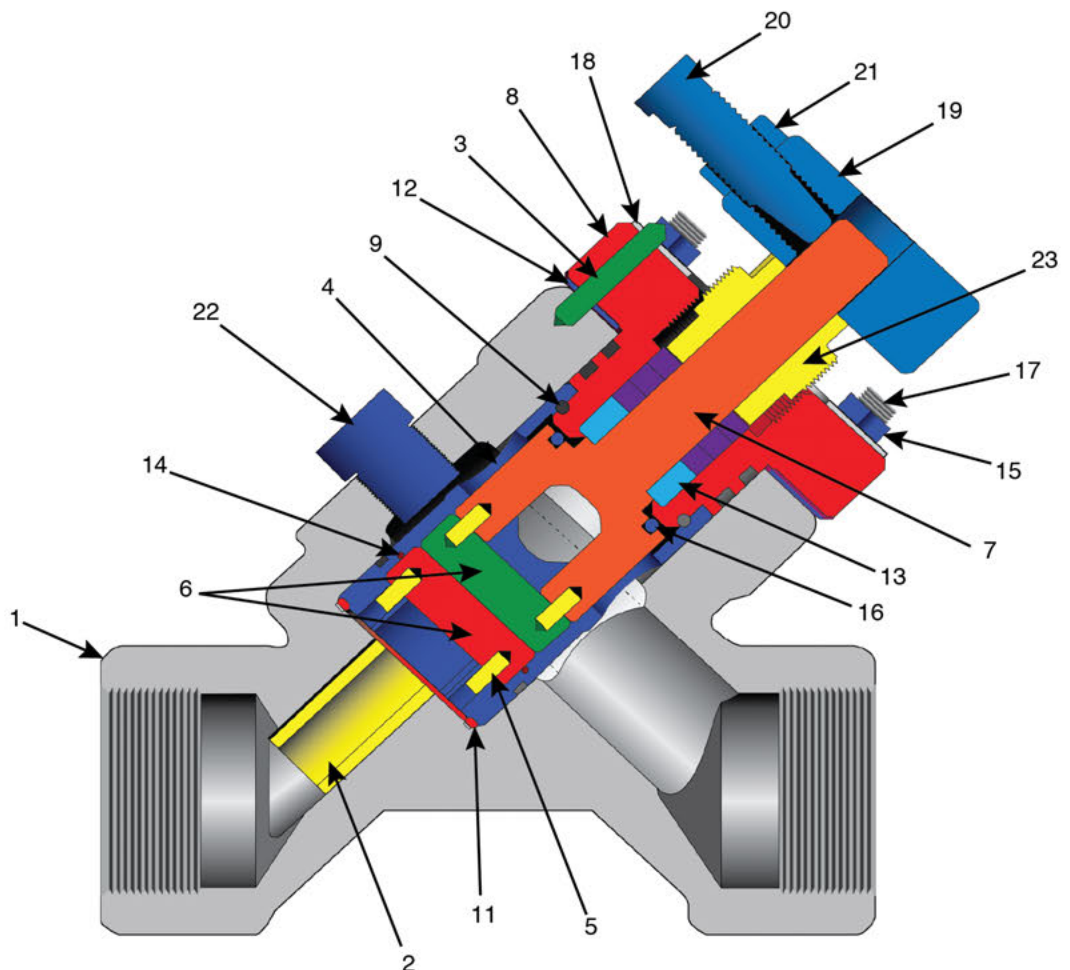


No.	Description	Qty
1	Body	1
2	Wear Sleeve	1
3	Pointer	1
4	Cage	1
5	Dowel Pin	4
6	Disc	2
7	Fork	1
8	Bonnet	1
9	Retainer Wire	1
10**	Dowel Pin	2
11	Crush Seal	1
12	Gasket	1
13	Hi-Temp Packing	1
14	O-Ring	1
15	Nut	6
16	Thrust Bearing	1
17	Stud	6
18	Index Plate	1
19***	Turning Hub	1
20***	Turning Handle	1
21***	Jam Nut	1
22	Pipe Plug	1
23	Hex Gland Nut	1
24**	Screw	2
25**	Data Label	1
26**	Thumb Screw	1

*Item Optional

**Items not shown in section view

***Items not included on actuated version



MDIS 3" Specifications / Cutaway View

MDIS CHOKE STANDARD DIMENSIONS (IN. +/- .10)			
CONNECTION	SIZE		
	1"	2"	3"
FNPT	8.00	8.00	19.64
BUTT-WELD	8.00	8.00	19.15
150 # RFF	12.56	13.18	18.61
150 # RTJ	12.93	13.55	18.63
300 # RFF	13.06	13.68	19.11
300 # RTJ	13.43	14.18	19.61
600 # RFF	13.56	14.43	20.39
600 # RTJ	13.56	14.56	20.52
900 # RFF	14.43	16.68	20.39
900 # RTJ	14.43	16.81	20.52
1500 # RFF	14.43	16.68	21.89
1500 # RTJ	14.43	16.81	22.02
2500 # RFF	15.68	18.68	-
2500 # RTJ	15.68	18.81	-

MDIS Inline Choke

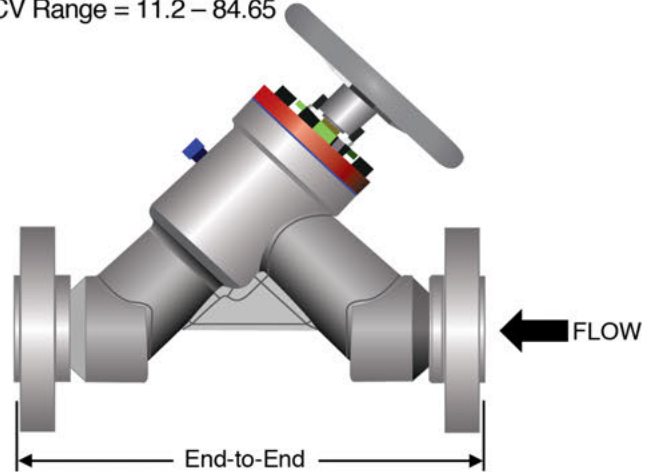
3" Configuration

316 SS

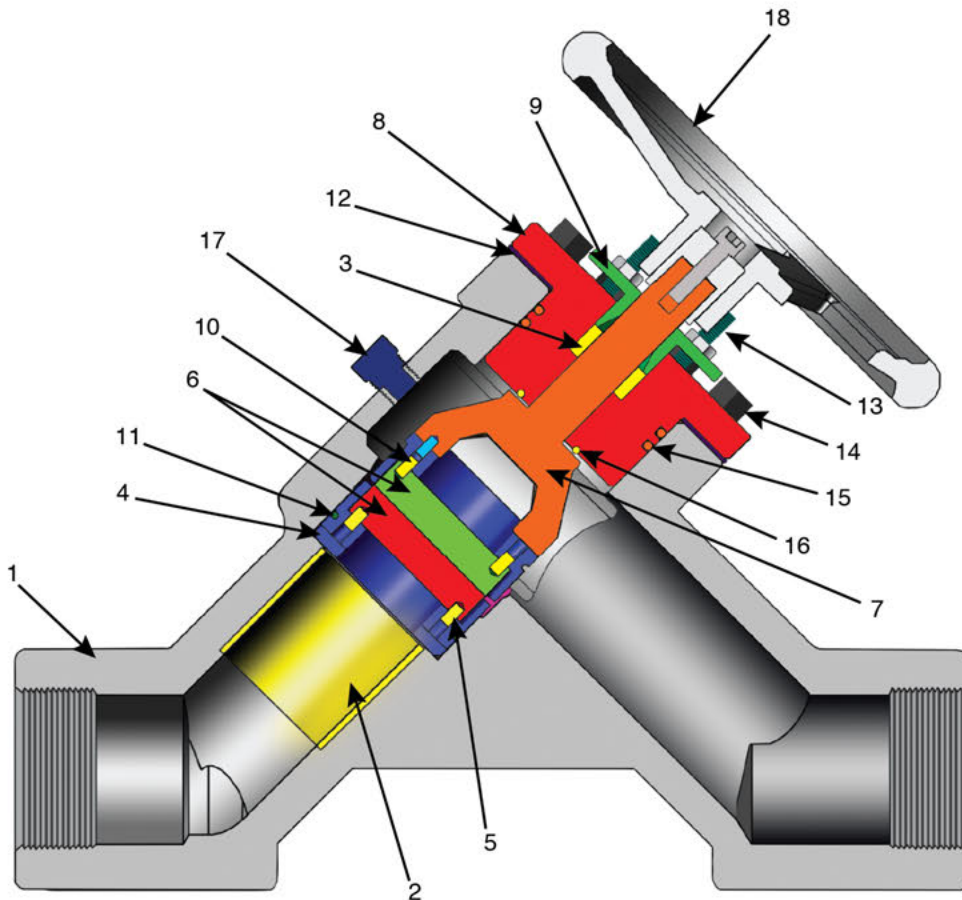
¼ Turn Actuated

Body Rating = 3,000 PSI / MAWP 1333 PSI for steam

CV Range = 11.2 – 84.65



The MDIS Steam valve is designed for high pressure throttling of steam. The multiple orifice system is designed for long life in difficult applications. The standard valve has 1", 2", or 3" female NPT ends, with flanged or special ends readily available. Standard trim is Tungsten Carbide and designed for linear flow characteristics. Manual or electric actuation is standard.



No.	Description	Qty
1	Body	1
2*	Wear Sleeve	1
3	Hi-Temp Packing	1
4	Disc Carrier	2
5	Dowel Pin	4
6	Disc	2
7	Fork	1
8	Bonnet	1
9	Compression Plate	1
10	Dowel Pin	1
11	O-Ring	1
12	Gasket	1
13	Stud	8
14	Nut	8
15	O-Ring	2
16	Thrust Bearing	1
17	Pipe Plug	1
18***	Hand Wheel	1
19**	Screw	2
20**	Data Label	1
21*	Calibration Label	1
22**	Lock Bracket	1

*Item Optional

**Items not shown in section view

***Items not included on actuated version

Choke Nomenclature

Choke Series
CA
CI
MC
MCX
MDA
MDAS
MDI
MDIS
RB
R

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

Service Type
0 Standard
1 Nace
2 Steam/High Temp.
3
4 Low Temp.

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

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

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

Schedule
0 Non-flanged
1 40
2 80
3 160
4 XS
5 XXS
6 SLIP-ON
7 API
8 120

Body Material
00 DUPLEX SS
01 SPECIAL METAL
02 COATED STEEL
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

MDI - 2 0 0 17 17 1 2 04 05 03 04 = MDI-20017171204050304
 MDIS - 2 2 0 17 17 1 2 04 05 03 07 = MDIS-22017171204050307

EXAMPLES

Choke part number has to be 17 digits.

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

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

Seal Material	
00 HNBR/HSN	
01 NBR	
02 POLYURETHANE	
03 EPDM	
04 FKM	
05 NEOPRENE	
06 NBR (PEROXIDE CURED)	
07 STEAM SEALS	
08 PTFE	
09 AFLAS	

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.

REVISED: 8-19-15

