

TRUSTED
SINCE 1958
WORLDWIDE



Precise.

Quality.

Reliable.



MDA / MDAS SERIES CHOKE VALVES

FEATURES & *Benefits*

Taylor Valve MDA / MDAS 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.

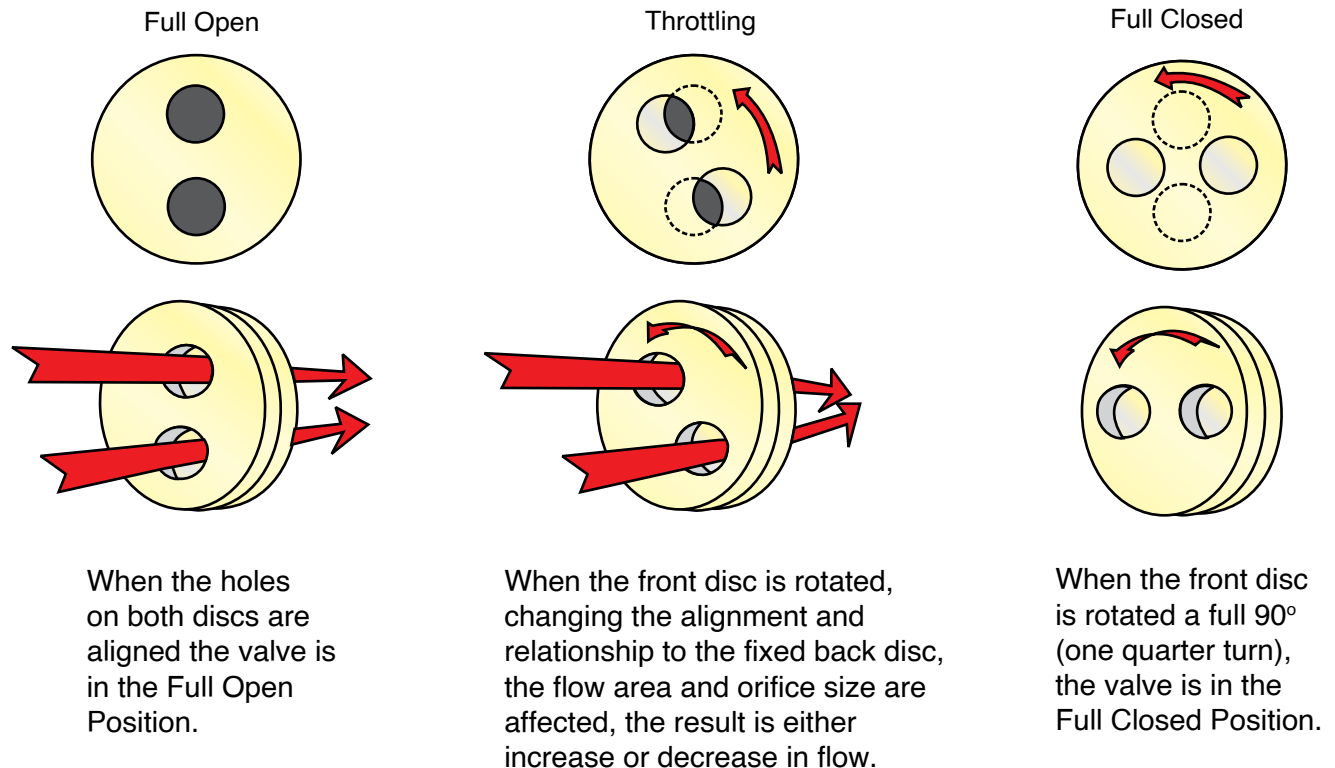
- Accurate Control - 90 degree rotation from Full Off to Full On.
- Bolted Bonnet - Safety Bonnet is bolted into the body, it avoids the well-known risks of corrosion, cross threading, galling of threaded type connection in production environments.
- Extended Mean Time Between Service - Robust design 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
- Remote Control for directional drilling
- Steam Injection
- Steam Tracer Control
- Manual and Automated Application



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 stream 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.

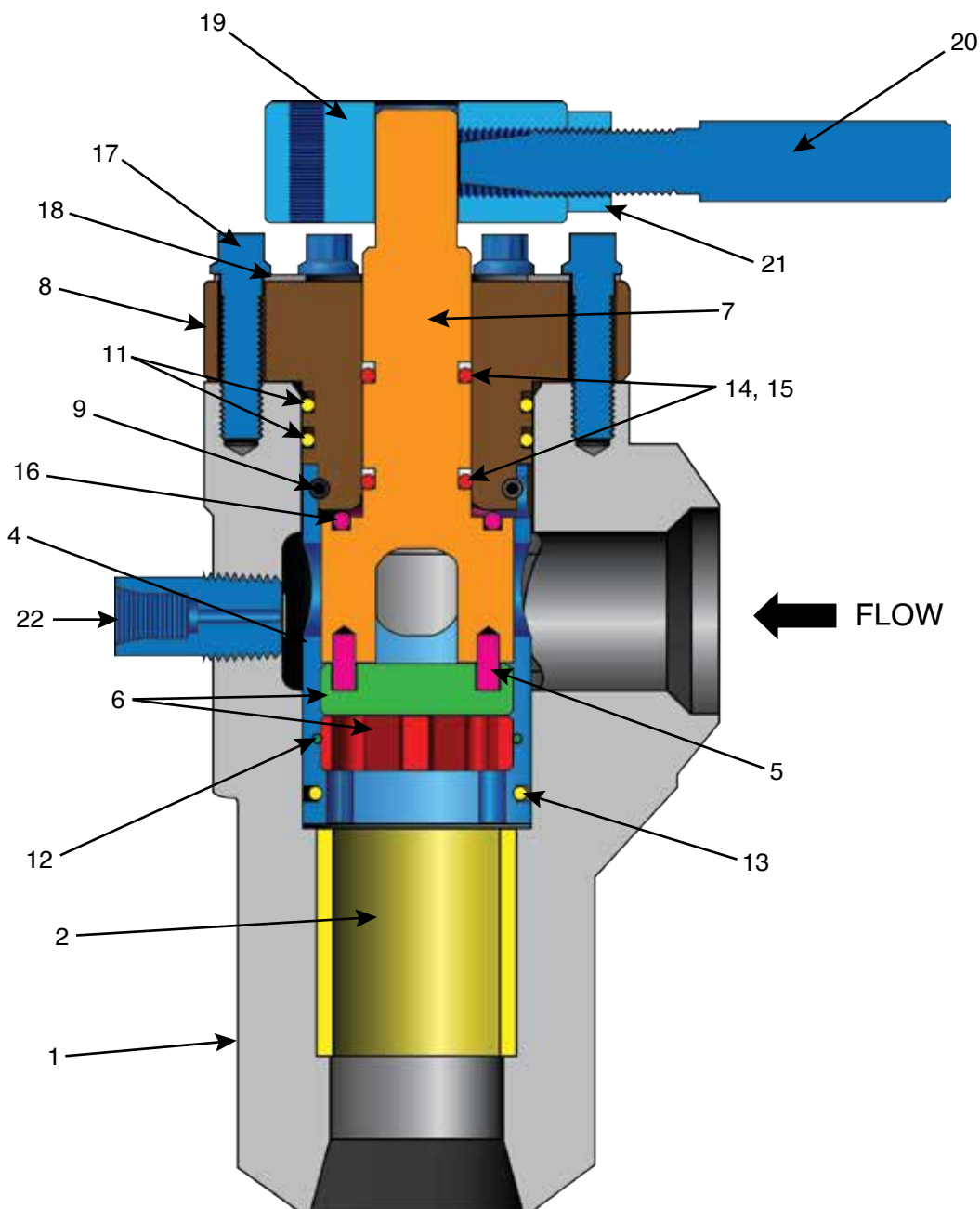
MDA Cutaway View

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



MDA Angle Choke

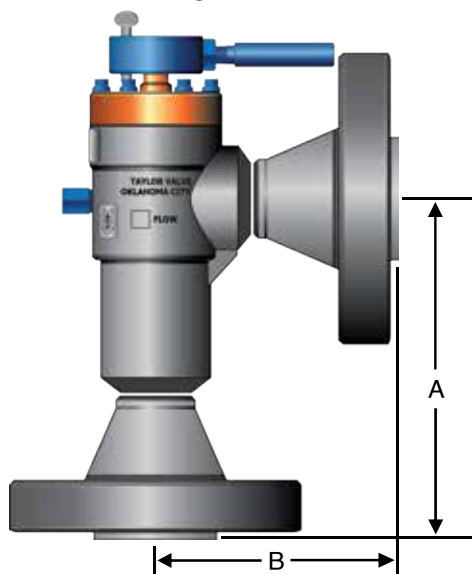
1" & 2" Configurations

1018/1020 CS, 316 SS

¼ Turn Actuated

Body Rating = 5,000 PSI

CV Range = 0.7 – 23.86



1" BODY STANDARD DIMENSIONS AND WEIGHTS

CONNECTIONS		DIM. END-to-END IN. (MM.) +/- .10		WEIGHT	
INLET	OUTLET	A	B	LB.	KG.
1" FNPT	1" FNPT	5.53 (140)	2.80 (71)	23	10.44
1" FNPT	1" FNPT	5.58 (142)	2.74 (70)	23	10.44
1" BUTT WELD	1" BUTT WELD	5.58 (142)	2.74 (70)	22	9.99
1" 150 RFJ	1" 150 RFJ	7.86 (200)	5.02 (128)	28	12.71
1" 150 RTJ	1" 150 RTJ	8.05 (204)	5.21 (132)	28	12.71
1" 300 RFF	1" 300 RFF	8.11 (206)	5.27 (134)	30	13.62
1" 300 RTJ	1" 300 RTJ	8.30 (211)	5.46 (139)	30	13.62
1" 600 RFF	1" 600 RFF	8.36 (212)	5.52 (140)	30	13.62
1" 600 RTJ	1" 600 RTJ	8.36 (212)	5.52 (140)	30	13.62
1" 900/1500 RFF	1" 900/1500 RFF	8.80 (224)	5.96 (151)	40	18.16
1" 900/1500 RTJ	1" 900/1500 RTJ	8.80 (224)	5.96 (151)	40	18.16
1" 2500 RFF	1" 2500 RFF	9.42 (239)	6.58 (167)	46	20.88
1" 2500 RTJ	1" 2500 RTJ	9.42 (239)	6.58 (167)	46	20.88

2" BODY STANDARD DIMENSIONS AND WEIGHTS

CONNECTIONS		DIM. END-to-END IN. (MM.) +/- .10		WEIGHT	
INLET	OUTLET	A	B	LB.	KG.
2" FNPT	2" FNPT	5.58 (142)	2.74 (70)	22	9.99
2" BUTT WELD	2" BUTT WELD	5.58 (142)	2.74 (70)	22	9.99
2" 150 RFJ	2" 150 RFJ	8.17 (208)	5.33 (135)	33	14.98
2" 150 RTJ	2" 150 RTJ	8.36 (212)	5.52 (140)	33	14.98
2" 300 RFF	2" 300 RFF	8.42 (214)	5.58 (142)	39	17.71
2" 300 RTJ	2" 300 RTJ	8.67 (220)	5.83 (148)	39	17.71
2" 600 RFF	2" 600 RFF	8.80 (224)	5.96 (151)	45	20.43
2" 600 RTJ	2" 600 RTJ	8.86 (225)	6.02 (153)	45	20.43
2" 900/1500 RFF	2" 900/1500 RFF	9.92 (252)	7.08 (180)	72	32.69
2" 900/1500 RTJ	2" 900/1500 RTJ	9.98 (253)	7.14 (181)	72	32.69
2" 2500 RFF	2" 2500 RFF	10.92 (277)	8.08 (205)	106	48.12
2" 2500 RTJ	2" 2500 RTJ	10.98 (279)	8.14 (207)	106	48.12
2-1/16" 3000 API	2-1/16" 3000 API	9.98 (253)	7.14 (181)	74	33.60
2-1/16" 5000 API	2-1/16" 5000 API	9.98 (253)	7.14 (181)	76	34.50
2-9/16" 3000 API	2-9/16" 3000 API	10.11 (257)	7.27 (185)	94	42.68
2-9/16" 5000 API	2-9/16" 5000 API	10.11 (257)	7.27 (185)	96	43.58

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

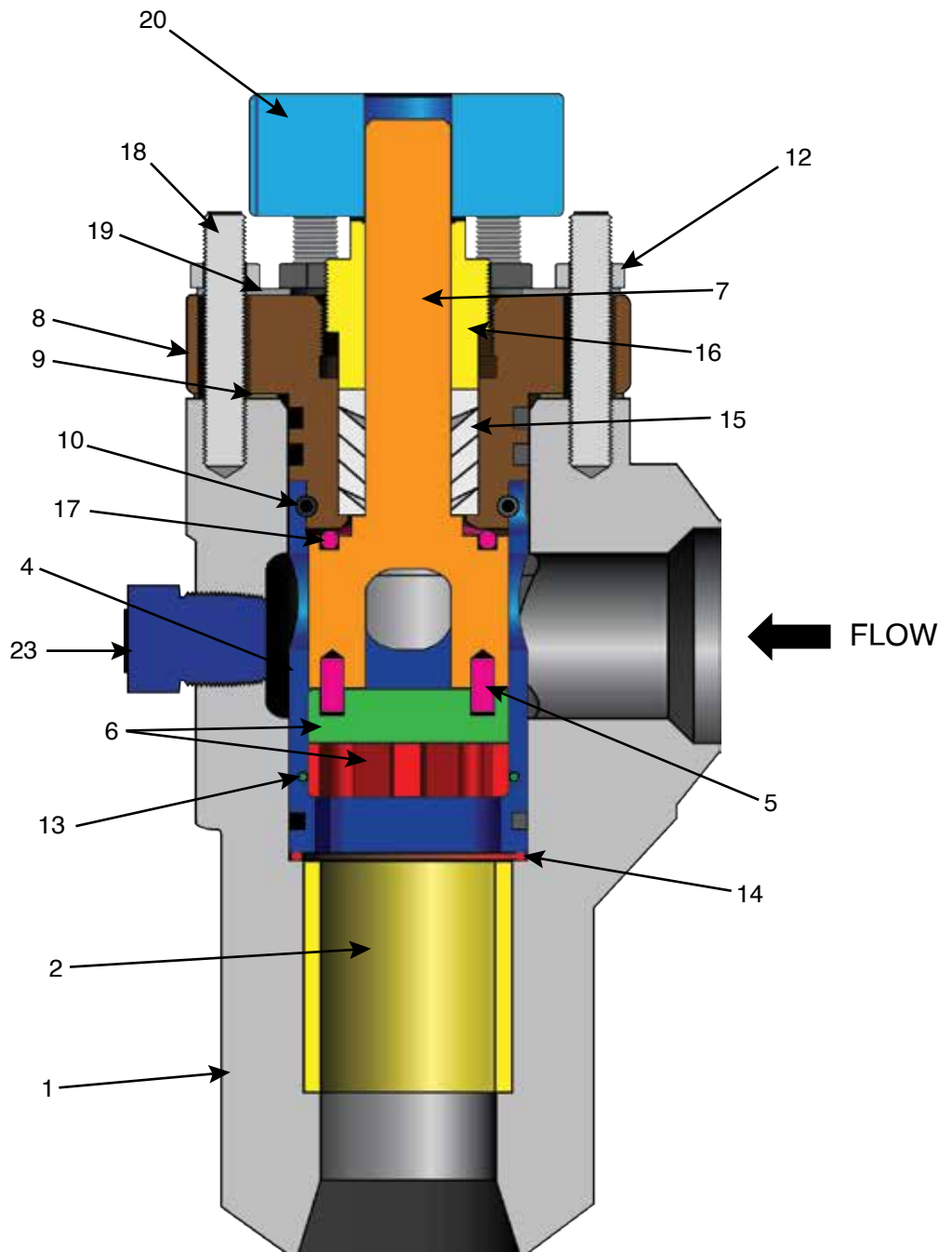
MDAS Cutaway View

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	Crush Seal	1
10	Retainer Wire	1
11**	Dowel Pin	2
12	Hex Nut	6
13	O-Ring	1
14	Crush Seal	1
15	Hi-Temp Packing	2
16	Hex Gland Nut	2
17	Thrust Bearing	1
18	Stud	6
19	Index Plate	1
20***	Turning Hub	1
21*	Turning Handle	1
22*	Jam Nut	1
23	Fitting Vent	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



MDAS Angle Choke

1" & 2" Configurations

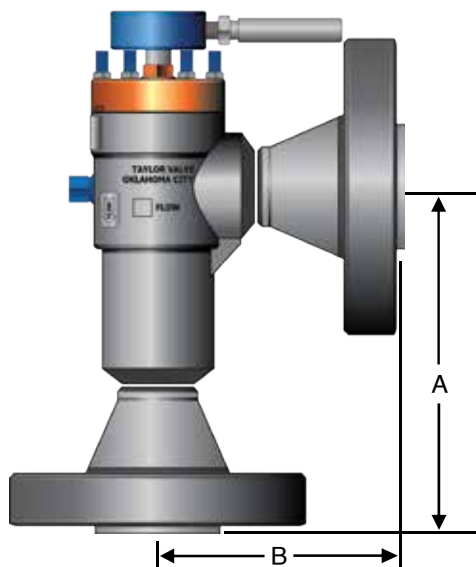
1018/1020 CS, 316 SS

¼ Turn Actuated

Body Rating = 5,000 PSI/

MAWP 1333 PSI for steam

CV Range = 0.7 – 23.86



1" BODY STANDARD DIMENSIONS AND WEIGHTS

CONNECTIONS		DIM. END-to-END IN. (MM.) +/- .10		WEIGHT	
INLET	OUTLET	A	B	LB.	KG.
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1" 900/1500 RFF	1" 900/1500 RFF	8.80 (224)	5.96 (151)	40	18.16
1" 900/1500 RTJ	1" 900/1500 RTJ	8.80 (224)	5.96 (151)	40	18.16
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2" BODY STANDARD DIMENSIONS AND WEIGHTS

CONNECTIONS		DIM. END-to-END IN. (MM.) +/- .10		WEIGHT	
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2" FNPT	2" FNPT	5.58 (142)	2.74 (70)	22	9.99
2" BUTT WELD	2" BUTT WELD	5.58 (142)	2.74 (70)	22	9.99
2" 150 RFJ	2" 150 RFJ	8.17 (208)	5.33 (135)	33	14.98
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2" 900/1500 RTJ	2" 900/1500 RTJ	9.98 (253)	7.14 (181)	72	32.69
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2" 2500 RTJ	2" 2500 RTJ	10.98 (279)	8.14 (207)	106	48.12
2-1/16" 3000 API	2-1/16" 3000 API	9.98 (253)	7.14 (181)	74	33.60
2-1/16" 5000 API	2-1/16" 5000 API	9.98 (253)	7.14 (181)	76	34.50
2-9/16" 3000 API	2-9/16" 3000 API	10.11 (257)	7.27 (185)	94	42.68
2-9/16" 5000 API	2-9/16" 5000 API	10.11 (257)	7.27 (185)	96	43.58

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

$$\begin{array}{r} \text{MDA} - \frac{2}{2} \frac{0}{2} \frac{0}{0} \frac{17}{17} \frac{17}{17} \frac{1}{1} \frac{2}{2} \frac{04}{04} \frac{05}{05} \frac{03}{03} \frac{04}{04} = \text{MDA-20017171204050304} \\ \text{MDAS} - \frac{2}{2} \frac{2}{2} \frac{0}{0} \frac{17}{17} \frac{17}{17} \frac{1}{1} \frac{2}{2} \frac{04}{04} \frac{05}{05} \frac{03}{03} \frac{07}{07} = \text{MDAS-22017171204050307} \end{array}$$

EXAMPLE ONLY* ▲ ▲ ▲ ▲ ▲

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

*For more options, contact Taylor Valve.

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