

Series 82/83/84/85 & 86

Trunnion Mounted Ball Valves

Full Bore ball valves are specifically designed to take full advantage of the positive sealing of pressurized media on both sides of the valve.

*Series 82 - ANSI 150#
Flanged Full Port Ball Valve
Series 83 - ANSI 300#
Flanged Full Port Ball Valve
Series 84 - ANSI 600#
Flanged Full Port Ball Valve
Series 85 - ANSI 900#
Flanged Full Port Ball Valve
Series 86 - ANSI 1500#
Flanged Full Port Ball Valve*



Based on the wide and proven valve experience VALBOL designed a new generation of trunnion-mounted ball valves, series 82, 83, 84, 85 & 86 have been developed with VALBOL's own engineering with over 35 years of design & experience in ball valves. VALBOL designed this ball valve to mount on two large, low-friction trunnion bearings, with the live-loaded seat that is in continuous contact with the ball surface. The trunnion mounted valve can be used for high cycle shut-off and throttling service with high pressure differentials.

Applications

- Chemical and petrochemical plants.
- Oil and gas production.
- Power plants.
- Natural gas.
- Crude oil.
- Hydrocarbons.
- Polymers.
- Catalyst handling.
- Liquids, gas and steam.
- Cryogenic services.
- Control and shut-off.
- Emergency valves ESD/ESV.
- LNG.

Sizes/Pressure Classes

- 1/2"...12" / ASME Class 150.
- 1/2"...12" / ASME Class 300.
- 1/2"...12" / ASME Class 600.
- 1.1/2"...6" / ASME Class 900.
- 1"...6" / ASME Class 1500.

Trunnion mounted

- Smooth control.
- Double block & bleed. • Low operating torque.
- Fully rated seats.
- Quick operations.
- High cycle capability.

Full bore.

Maximum Cv per nominal size.
Cylindrical flow path allows low flow resistance.
Full bore design for API requirements.

Specifications

Sizes: 1/2", 3/4", 1", 1.1/4", 1.1/2", 2", 2.1/2", 3", 4", 6", 8", 10" & 12"

Flanges: Series 82 - ANSI 150# flanges, Series 83 - ANSI 300# Flanges, Series 84 - ANSI 600# flanges, Series 85 - ANSI 900# flanges. Series 86 - ANSI 1500# flanges

Body: One-piece (1/2" - 2") and two-piece (2 1/2", 12")

Construction available in 316 - stainless steel ASTM A351 GR. CF8M or carbon steel ASTM A216, GR. WCB.

Body Studs: ASTM A193 GRB7 (2 1/2", 12 only)

Nut: ASTM A194 GR2H (2 1/2", 12 only)

Ball and Stem: 316 stainless steel.

Seats: TFE seats, Reinforced TFE seats, C/fill, Metal with delrin insert.

Body Seal: TFE, Graphite.

Operation: 1/2" - 6" Valves are supplied with a handle operator. 8" - 12" requires a gear operator.

Gear operators are sold separately. Pneumatic and electric actuators are available.

Valve Size	Cv (USGPM)
1/2"	32
3/4"	54
1"	105
1.1/2"	275
2"	460
2.1/2"	780
3"	1330
4"	2420
6"	5400
8"	10000
10"	18500
12"	26800

Standards

ANSI B16.10 Face to face dimensions.

ANSI B16.5 150#, 300#, 600# & 900# flange dimensions.

ANSI B16.34, ANSI B31.1, ANSI B31.3. MSS SP-72.

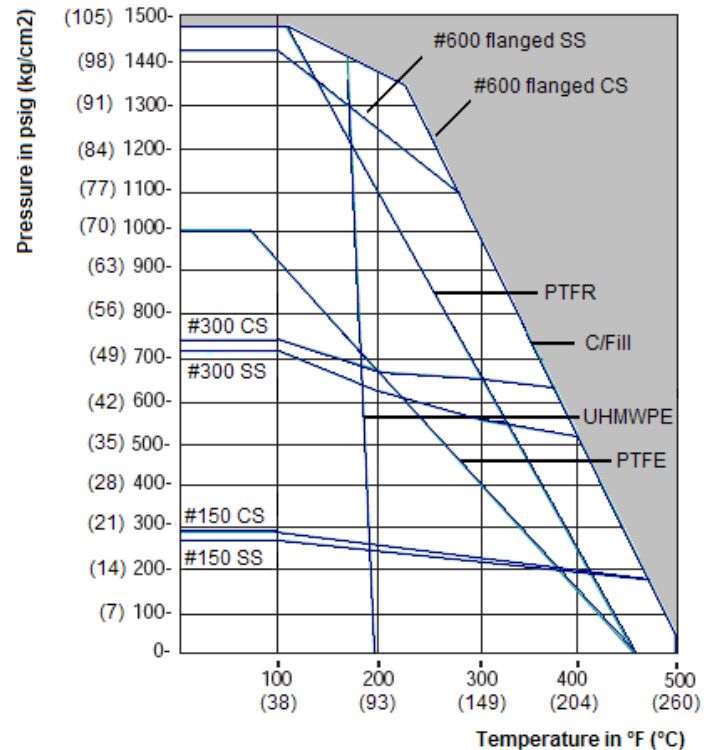
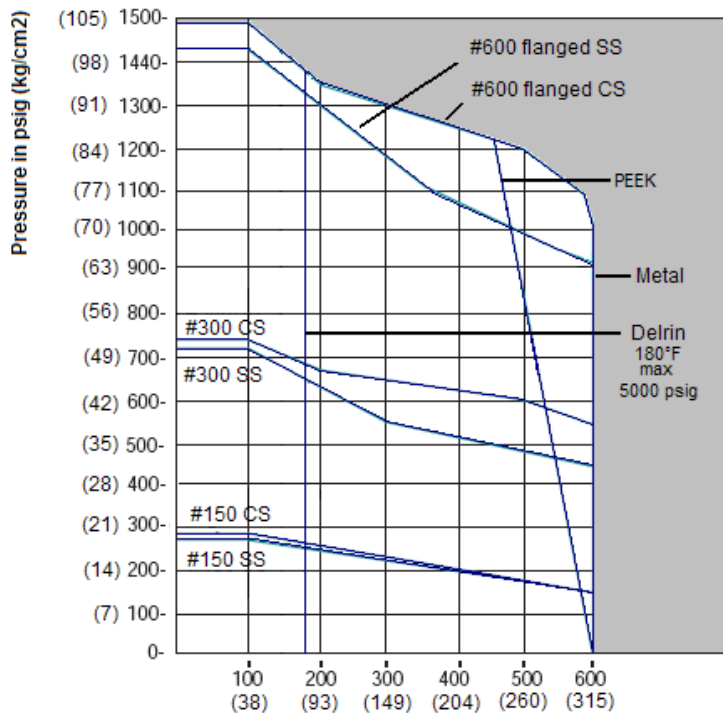
BS 5251, Anti-static, fire rating, available as option.

API 607 tested

NACE MR-01-75

API 6D, Pipeline valves

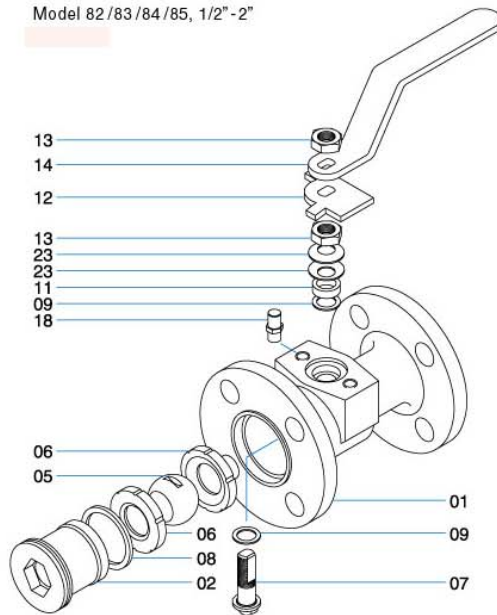
Pressure / Temperature Rating



Maximum working pressure temperature is limited by both flange rating seat and body seal capacity.

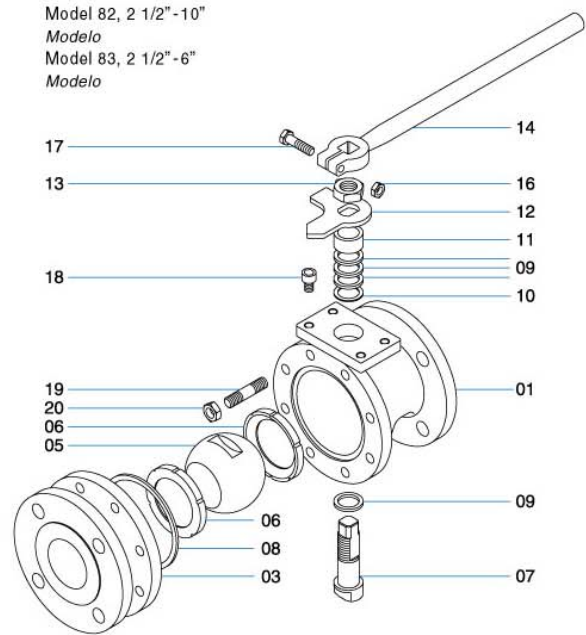
Parts Identification

Model 82/83/84/85, 1/2"-2"

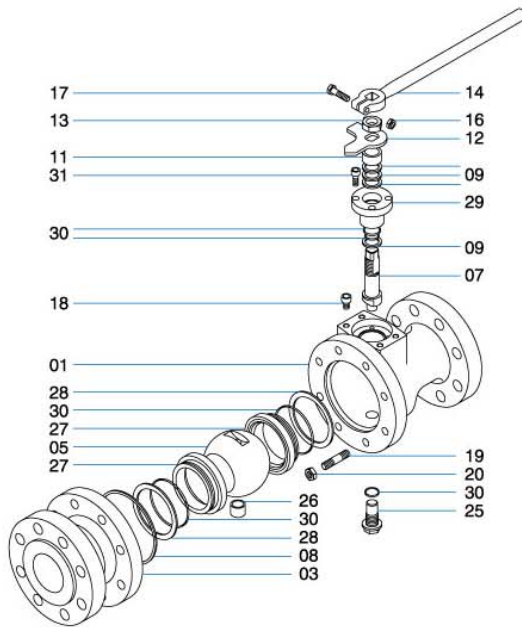


Model 82, 2 1/2"-10"

Modelo
Model 83, 2 1/2"-6"
Modelo



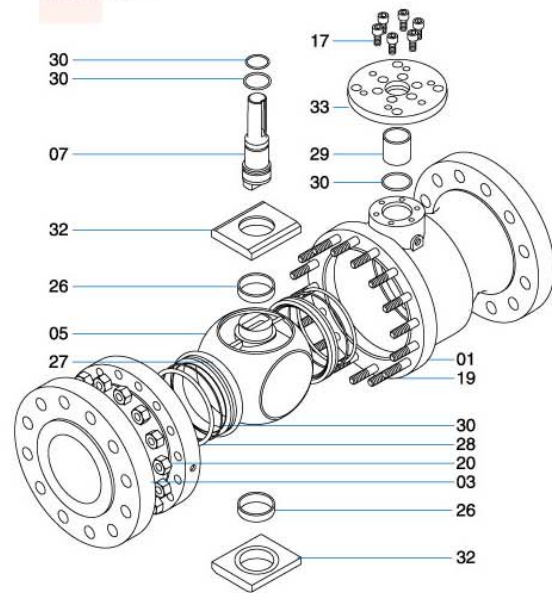
Model 84/85-3", Model 85-2"



Model 83, 8"-12"

Model 84, 4"-12"

Model 85, 4"-6"

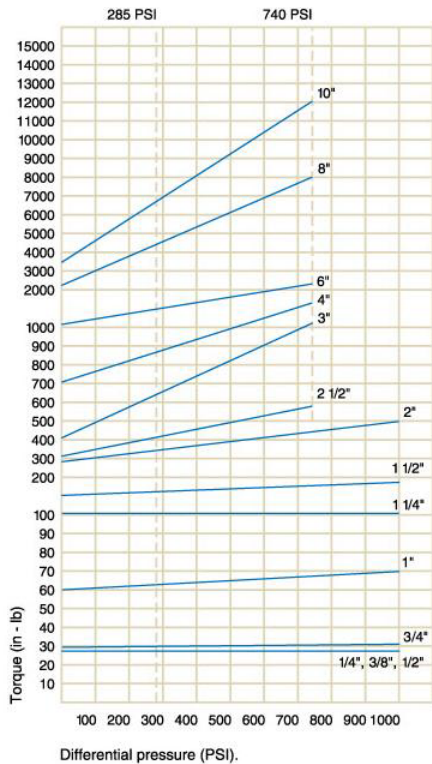


- | | | |
|---------------------|----------------------|----------------------------|
| 01 Body | 11 Follower | 25 Inferior trunnion guide |
| 02 End plug | 12 Stop plate | 26 Stem seal follower |
| 03 Body tail piece | 13 Retaining nuts | 27 Seat insert |
| 05 Ball | 14 Wrench/Handle | 28 Spring plate |
| 06 Seat | 16 Hex nut | 29 Stem seal follower |
| 07 Stem | 17 Hex bolt | 30 O' ring |
| 08 Body seal | 18 Stop screw | 31 Bolt |
| 09 Thrust bearing | 23 Bellville washers | 32 Trunnion guide |
| 10 Centering washer | | 33 Upper flange |

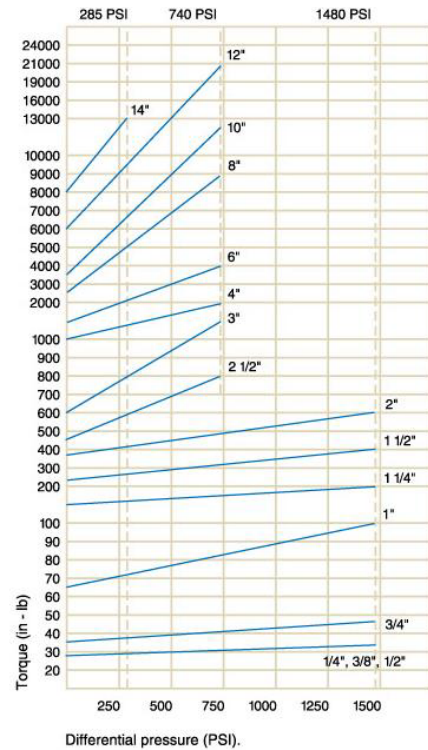
Automation

VALBOL offers a complete line of pneumatic and electric automation packages for Series 82 & 83 valves. Both pneumatic and electric packages are offered for on/off or proportional control. Available options include Top mounted limit switches - Proximity switches - Single and double acting pneumatic actuators - TYPE 4, 4x, 7 and 9 enclosures - Remote position indication - Positioners. Before an actuator can be sized for any given valve application the operating torque required for the valve must be determined. The operating torque of a ball valve is influenced by a number of factors, some are design and materials related, others are application and service conditions. Design related factors include the type and material of the valve seats, while application factors include system differential pressure, media and frequency of operation. For complete valve operating torque data refer to the torque curves given for each seat material, and provide the correction factor for media and the type of service such as on-off operation, cycle frequency, etc. **Torques shown are for Standard port valves, for sizing full port valves use the immediate larger diameter of the standard valve.**

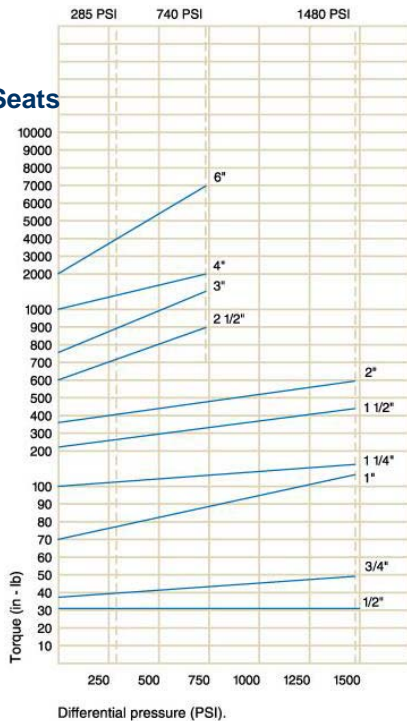
PTFE Seats



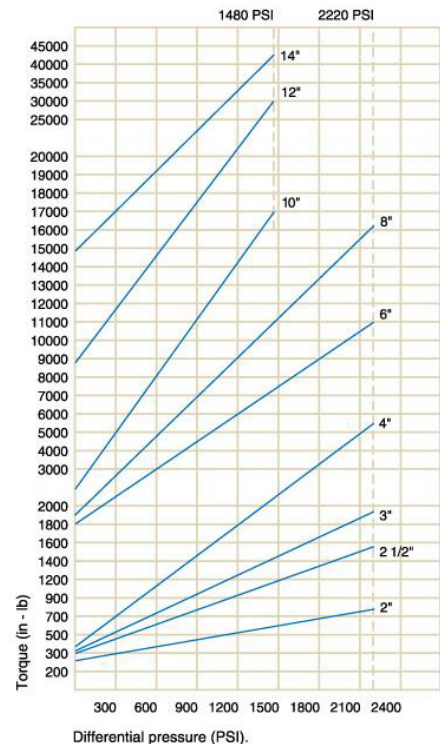
Reinforced PTFE Seats



C/FILL Seats

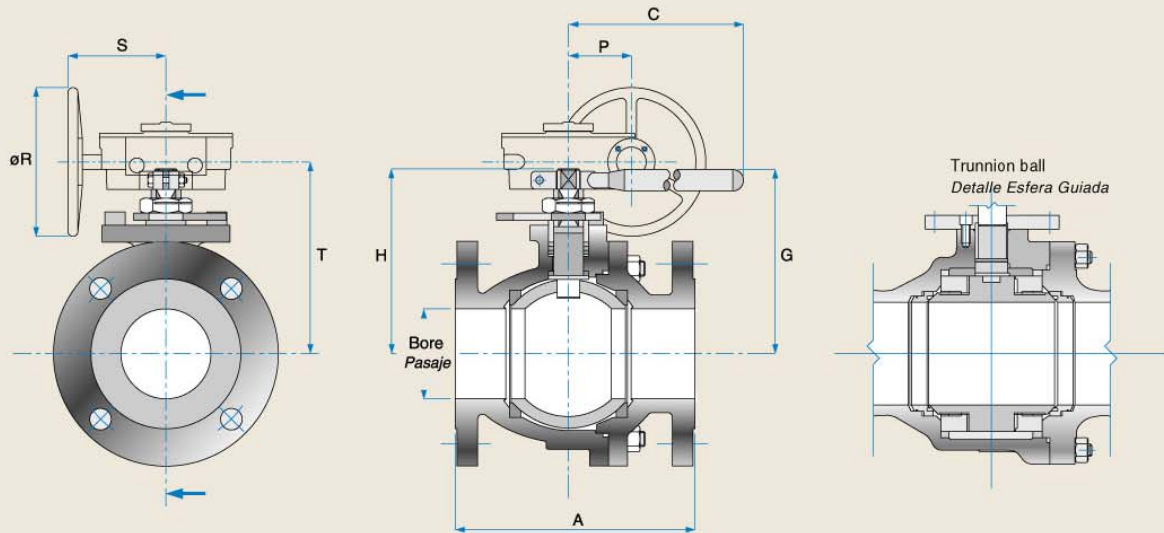


Metal w/Nylon Insert



Dimensions

Ball valve, full bore, two piece design, blowout-proof stem. *Válvula Esférica Bridada de Pasaje Total.*



Note:

Model 82 Flanged ANSI 150
Model 83 Flanged ANSI 300
Model 84 Flanged ANSI 600
Model 85 Flanged ANSI 900

Nota:

Modelo 82 Bridado ANSI 150
Modelo 83 Bridado ANSI 300
Modelo 84 Bridado ANSI 600
Modelo 85 Bridado ANSI 900

Dimensions. Dimensiones.

Size Tamaño	Bore Pasaje	Mod.82 A	Mod. 83 A	Mod. 84 A	Mod. 85 A	C	G	H	P	ϕR	S	T	Mod. 82 kg	Mod. 83 kg	Mod. 84 kg	Mod. 85 kg
1/2"	0.56	4.25	5.50	6.50	-	5.12	3.35	1.60	-	-	-	-	1.80	2.50	2.70	-
DN 15	14.3	107.9	139.7	165.1	-	130.0	85.0	40.5	-	-	-	-	-	-	-	-
3/4"	0.81	4.62	6.00	-	-	5.79	4.37	2.19	-	-	-	-	2.50	4.00	5.00	-
DN 20	20.6	117.4	152.4	-	-	147.0	111.1	55.6	-	-	-	-	-	-	-	-
1"	1.00	5.00	6.50	8.50	-	5.00	3.69	2.38	-	-	-	-	3.50	5.00	6.00	-
DN 25	25.4	127.0	165.1	215.9	-	127.8	93.7	60.5	-	-	-	-	-	-	-	-
1 1/4"	1.25	5.50	7.00	-	-	5.75	4.90	3.34	-	-	-	-	6.50	8.00	-	-
DN 32	31.7	139.7	177.8	-	-	146.0	124.2	84.8	-	-	-	-	-	-	-	-
1 1/2"	1.50	6.50	7.50	9.50	12.00	5.75	4.59	3.06	-	-	-	-	6.50	9.00	11.00	45.00
DN 40	38.1	165.1	190.5	241.3	304.8	146.0	116.6	77.2	-	-	-	-	-	-	-	-
2"	2.00	7.00	8.50	11.50	14.50	10.24	5.05	4.57	-	-	-	-	12.50	17.00	19.70	55.00
DN 50	50.8	177.8	215.9	292.1	368.3	260.0	128.2	116.1	-	-	-	-	-	-	-	-
2 1/2"	2.50	7.50	9.50	13.00	16.50	18.31	5.91	5.71	-	-	-	-	18.50	25.00	40.00	60.00
DN 65	63.5	190.5	241.3	330.2	419.1	465.0	150.1	145.1	-	-	-	-	-	-	-	-
3"	3.00	8.00	11.12	14.00	15.00	18.31	7.13	6.93	-	-	-	-	24.00	33.00	45.00	75.00
DN 80	76.2	203.2	282.6	355.6	381.0	465.0	181.1	176.1	-	-	-	-	-	-	-	-
4"	4.00	9.00	12.00	17.00	18.00	18.31	7.13	6.93	3.35	17.71	9.45	8.46	34.50	55.00	105.00	130.00
DN 100	101.2	228.6	304.8	431.8	457.2	465.0	181.1	176.1	85.1	450.0	240.0	215.0	-	-	-	-
6"	6.00	15.50	15.87	22.00	24.00	21.30	10.3	9.99	3.35	17.71	9.45	10.65	80.00	101.00	211.00	290.00
DN 150	152.4	393.7	403.2	558.8	609.6	541.0	261.8	253.8	85.1	450.0	240.0	270.6	-	-	-	-
8"	8.00	18.00	16.50	26.00	-	-	13.15	-	3.76	17.71	9.45	14.01	134.00	184.00	482.00	-
DN 200	203.2	457.2	419.1	660.4	-	-	334.0	-	95.5	450.0	240.0	356.0	-	-	-	-
10"	10.00	21.00	22.37	31.00	-	-	15.43	-	8.15	30.00	18.00	19.09	226.00	295.00	673.00	-
DN 250	254.0	533.4	568.3	787.4	-	-	392.0	-	207	762	457	485	-	-	-	-
12"	12.00	24.00	25.50	33.00	-	-	17.60	-	8.15	30.00	18.00	26.00	360.00	560.00	850.00	-
DN 300	304.8	609.6	647.7	838.2	-	-	447.0	-	207	762	457	661	-	-	-	-

Notes:

- Series 600 2" and above trunnion ball.
Series 300 10" and above trunnion ball.
- Above 6" series 150 and 300 - 4" series 600 and 900. Gear box recommended.
- Series 150-300 2" to 8" trunnion ball optional.
- Model 84/85 BW ends optional.
- 1/2"-2" models 82/83/84/85 one piece design.

Notas:

- Serie 600 2" y mayores Esfera Guiada.
Serie 300 10" y mayores Esfera Guiada.
- Mayores a 6" series 150/300 y 4" series 600/900, recomendamos usar caja de engranajes.
- Serie 150-300 2" a 8" Guiada Opcional.
- Modelos 84/85 extremos biselados opcional.
- 1/2"-2" modelos 82/83/84/85 cuerpo enterizo.

Instructions to order

1. Model	2. Size	3. Options	4. Body	5. Ball & Stem	6. Seat	7. Body Seals	8. Ends	9. Operator
82	05- DN15 (1/2")	0-Standard	4 - C. Steel	4 - C. Steel	G-Metal round	A - Silicone	J-Ring Joint	A - Actuator
83	07- DN20 (3/4")	1-More than one	6 - SS316	6 - SS316	P-C/Fill	B - Nitrile Buna	R-RFFlanges	C - Gear Box
84	10- DN25 (1")	A-Antistatic		7 - Monel	R-PTFR	E - EPR		M - Wrench
85	12- DN32 (1.1/4")	E-Steam Service		8 - SS304	T-PTFE	G - Graphoil		N - Bare stem
86	15- DN40 (1.1/2")	F-Fire Safe		A - Alloy 20	U-Uhmwpe	N - Neoprene		
	20- DN50 (2")	G-Locking handle		C - Hastelloy	H-Peek	R - PTFR		
	25- DN65 (2.1/2")	J-Extended Stem			M-Metal w/insert	S - Metal TFE		
	30- DN80 (3")	P-Relief hole				T - PTFE		
	40- DN100 (4")	Q-Vacuum Service				V - Viton		
	60- DN150 (6")	R-Spring return handle						
	80- DN200 (8")	S-SS bolting & accs.						
	AO- DN250 (10")	V-Blind Flanges						
	A2- DN300 (12")	X-Oxygen service						
		Z-Cryogenic service						

Ordering Example

1	2	3	4	5	6	7	8	9
84	A2	A	4	6	M	B	R	C



API 6D 0395



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