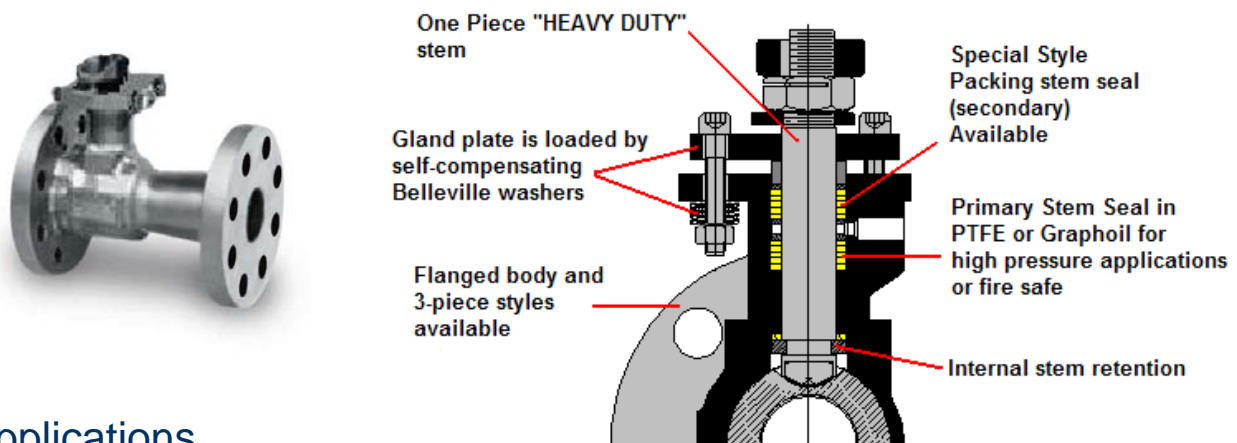


Series 94



High-Performance Valves for Fugitive Emission, Toxic Gas and High Cycle Applications.

VALBOL Series 94 valves are designed for both cycle-life and leak tightness of ball valves. Available in flanged body or 3 piece styles, they offer a unique combination of features as Dual Stem Seals - primary seal and filler ring seal against the stem and body. Special style packing rings, loaded by the gland plate, for the secondary seal. Double "Live-loaded" Stem Seals - . They are further loaded by the gland plate that is under constant force from the stacked Belleville washers. Two Stem Purge Bosses, The Series 94 comes with 2 bosses in the stem area. One is drilled & tapped to 3/8" NPT standard threads. An optional second port can be added to allow through purging between the stem seals or connection of instrumentation and sensing devices. The valve goes from full open to full closed with 90° operation of the stem. Dual stem seals ensure zero leakage. The bonnet and body are cast as a single piece. There are no welds, crevices or static seals to fracture and leak. The Series 94 is available with stainless steel or other anti-corrosion trims to meet NACE MRO 1-75.



Applications

- Leak-off systems with sensing devices & alarms for fugitive emissions
- Applications requiring extremely high cycle life
- Chlorine applications requiring a high performance stem seal design
- Superheated water (400°F & 400 psi)
- High temperature applications and/or high pressure drops requiring metal seated versions
- High temperatures above 500°F requiring a Grafoil stem packing

Features

- Gland plate is loaded by self-compensating Belleville washers
- Extra heavy stem design
- Grafoil® stem packings available for high temperature and fire-safe applications
- Special style packing stem seal (secondary)
- Primary stem seal

Benefits

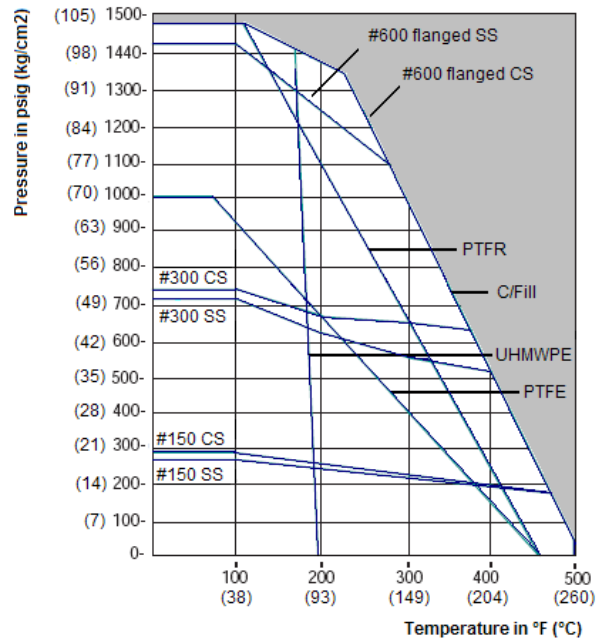
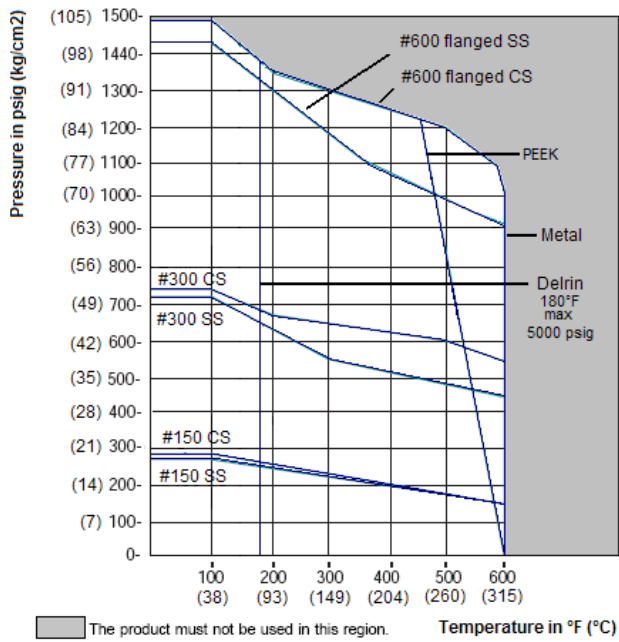
- High vacuum capability (tight shutoff to 1 x 10⁻³ Torr and higher)
- Extremely high cycle life (more than 20 times that of a conventional stem seal design.)
- For automated versions, the actuator can be removed without affecting the integrity of the valve seals.

- Phosgene gas and other highly toxic media requiring zero leakage
- Steam: High cycle steam valves are subject to wide thermal swings.
- Polymer Lines: The Series 94 valve, using FEP or PFA seats and seals, is a technical improvement designed for use in polymer lines.
- Cryogenics: A bonnet extension on the Series 94 valve provides the thermal conductivity to maintain ambient temperatures on the stem seals.

- Flanged body and 3-piece styles available
- Optional second purge port
- Dual purge bosses
- Purge port drilled and tapped to NPT thread specifications
- Internal stem retention

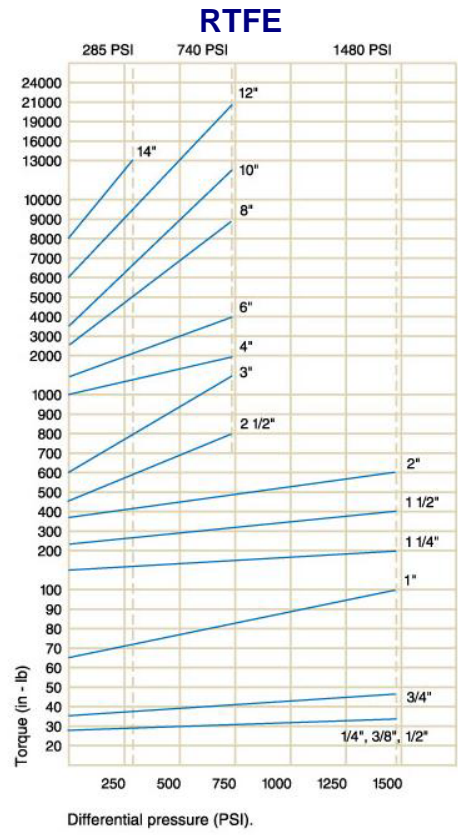
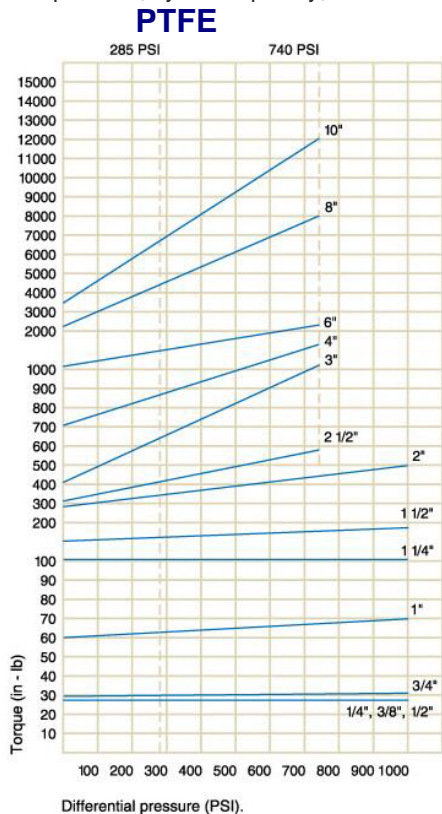
- The extended bonnet allows easy stem access after insulation. It also provides thermal isolation of the actuation mechanism.
- Pneumatic and electric modulating packages with either standard or characterized seats are the only solution in applications where traditional rising stem control valves just cannot be used.

Pressure/Temperature Ratings



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.



Specifications

Series 94 3-Piece

Sizes: 1/4" - 2"

Ends: Screwed Ends, Socket Weld, Butt Weld

Body Materials: Stainless steel, carbon steel.

Stem: 316 S.S, Monel or Hastelloy C.

Stem Seals: Virgin PTFE, Grafoil, Carbon filled PTFE

Seats: Metal, Peek, PTFE, C/Fill, RTFE or UHMWPE

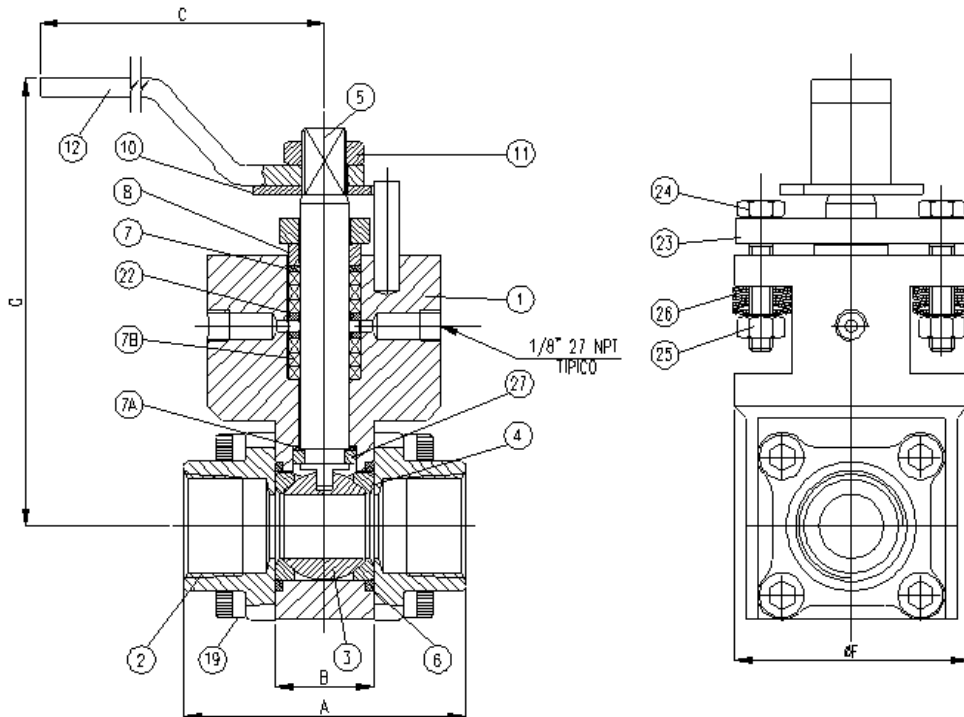
Body Seals: PTFE coated "S" gasket, PTFE, Viton

Ball: 316 S.S, Monel or Hastelloy C.

Options: 1 leak-off port drilled & tapped to 3/8" NPT standard. Optional 2nd port for purging.

Operation: Lever handle, pneumatic or electric automation (on/off or proportional control)

Dimensions for 94 3. Piece (mm.)



#VALV.	A	B	C	F	G
1/4"	94.0	31.7	165.0	75.0	164.0
3/8"	94.0	31.7	165.0	75.0	164.0
1/2"	94.0	31.7	165.0	75.0	164.0
3/4"	94.0	31.7	165.0	75.0	164.0
1"	94.0	31.7	165.0	75.0	164.0
1 1/4"	115.0	48.32	260.0	90.0	174.0
1 1/2"	115.0	48.32	260.0	90.0	174.0
2"	128.0	56.3	260.0	100.0	178.0

Series 94 Flanged

Sizes: 2", 3", 4" & 6"

Flanges: Per ANSI 150# or ANSI 300# raised face

Body Materials: Stainless steel, carbon steel

Stem: 316 S.S, Monel or Hastelloy C

Stem Seals: Virgin PTFE, Grafoil, Carbon filled PTFE

Seats: Metal, Peek, PTFE, C/Fill, PTFR or UHMWPE

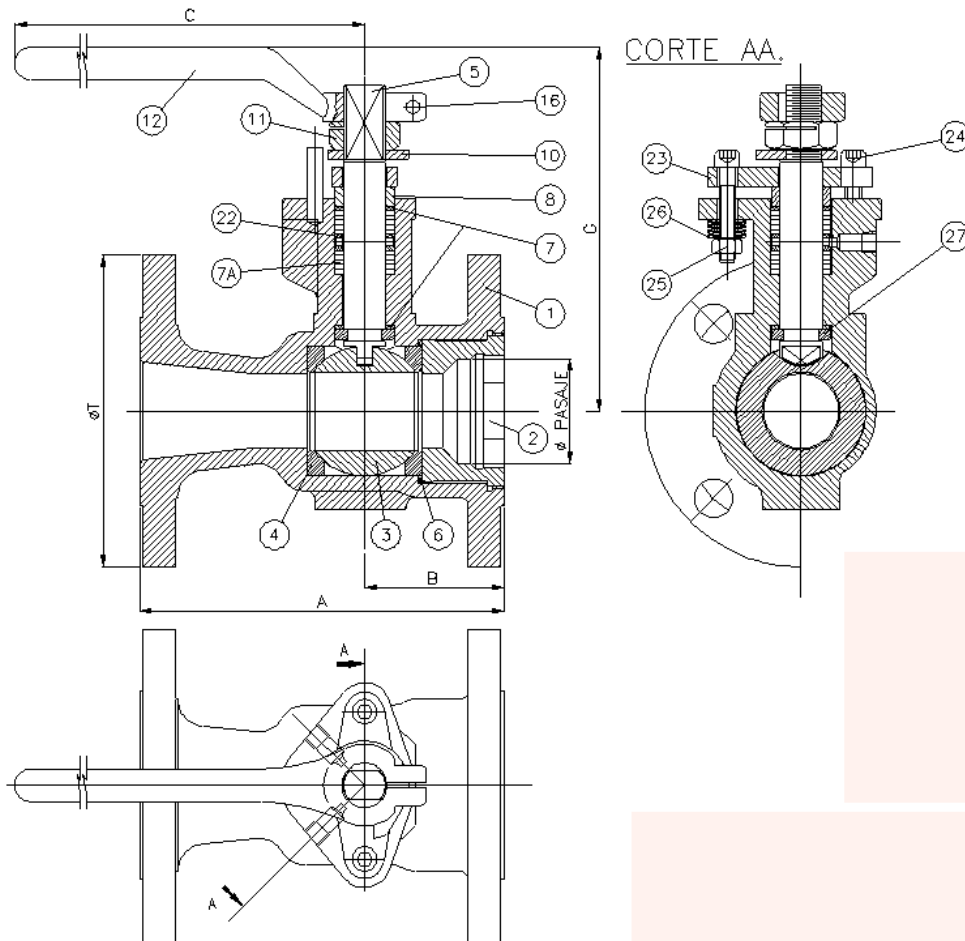
Body Seals: PTFE or graphite coated stainless steel "S" gasket, TFE, Viton® or Grafoil

Ball: 316 S.S, Monel or Hastelloy C

Options: 1 leak-off port drilled & tapped to 3/8" NPT standard. Optional 2nd port for purging.

Operation: Lever handle, pneumatic or electric automation (on/off or proportional control)

Dimensions for 94 Flanged (mm.)



Ø VALV.	PASAJE	A	B	C	G	T
2"	36.5	177.8	68.0	260.0	178.0	152.4
3"	63.5	203.2	92.3	465.0	166.0	190.5
4"	82.5	228.6	101.8	465.0	180.0	228.6
6"	111.0	266.7	108.1	541.0	251.0	266.7

Standards:

ANSI B16.5 (flange dimensions), B16.10 (face-to-face dimensions), B16.34, ANSI B1.20.1 (for SE, NPT threads), B16.11 (for SW socket dimensions only), B16.34, B31.1, B31.3 (including category M materials) and MSS SP-72 API 607 Edition 4, fire test approvals.

Ordering Instructions

1.Model	2.Size	3.Options	4.Body	5.Ball & Stem	6.Seat	7.Body Seals	8.Ends	9.Operator
94	02-DN8 (1/4")	0-Standard	4 - C. Steel	6 - SS316	C - Metal "V"	A - Silicone	1 - Flanged	A - Actuator
	03-DN10 (3/8")	1-More than one	6 - SS316	7 - Monel	G - Metal round	B - Nitrile	150RF	C- Gear Box
	05-DN15 (1/2")	A-Antistatic		8 - SS304	P - C/Fill	Buna	3 - Flanged	M - Wrench
	07-DN20 (3/4")	E-Steam Service		A - Alloy 20	R - PTFE	E - EPR	300RF	N - Bare stem
	10-DN25 (1")	F-Fire Safe		C - Hastelloy	T - PTFE	G - Graphoil	B - BSPT	
	12-DN32 (1.1/4")	G-Locking handle			U - Uhmwpe	N - Neoprene	N - NPT	
	15-DN40 (1.1/2")	J-Extended Stem			Y - Delrin	R - PTFE	P - BSP	
	20-DN50 (2")	P-Relief hole			H - Peek	S - Metal TFE	S - SW pipe	
	25-DN65 (2.1/2")	Q-Vacuum Service				T - PTFE	T - SW tube	
	30-DN80 (3")	R-Spring return handle				V - Viton	V - BW tube	
	40-DN100 (4")	S-SS bolting & accs.					W - BW pipe	
	60-DN150 (6")	X-Oxygen service					X - Ext. BW	
		Z-Cryogenic service						
		V-Blind flanges						

Example

1	2	3	4	5	6	7	8	9
94	20	P	6	6	T	V	3	M



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