

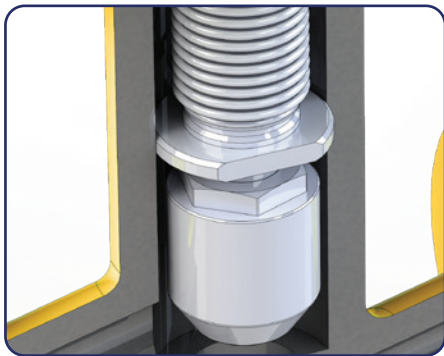


Phönix 350/EC

Lethal Service Bellows Sealed Globe Valve and Angle Valves

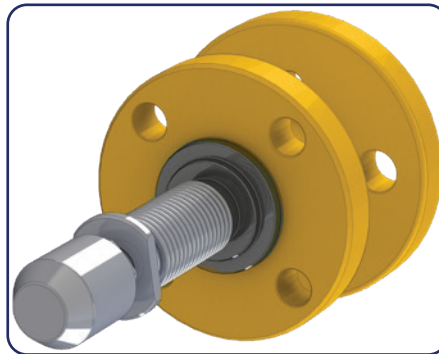
350EC	Standard	Options
Size	1/2" - 14"	
Class	ANSI 150# and ANSI 300#	ANSI 600#
Body	LCC/LF2	M400, C276, 316L, etc.
Trim	Hastelloy C276	
Process Seal	Metal-to-Metal Stellite 6/Stellite 21	
Shutoff	Zero Leakage Bubble Tight	
Primary Stem Seal	2-Ply Hydroformed Bellows	
Bellows Connection	100% Automated Micro Plasma Welding	
Bellows Cycle Rating	50,000 for On/Off Applications	100,000 for Control Applications
Secondary Stem Seal	PTFE Packing	
Temperature Range	-50°F to 400°F	-325°F to 750°F
Standard Packaging	Chlorine Cleaned	
Standards	ASME B16.5, B16.10, B16.34, API 598, GEST 17/492, CI Pamphlet 6, ISO 5208	

Advantages



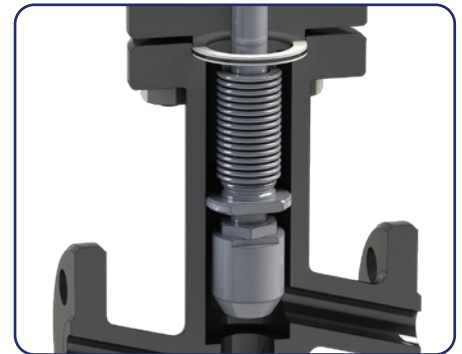
BELLOWS GUIDE

Eliminates wear, flow induced vibrations, and lateral loading by providing additional support.



INSPECTABLE BELLOWS

Ability to visually inspect and perform NDT/Penetrant Testing on critical welds and components.



EXTENDED 1 PIECE BODY

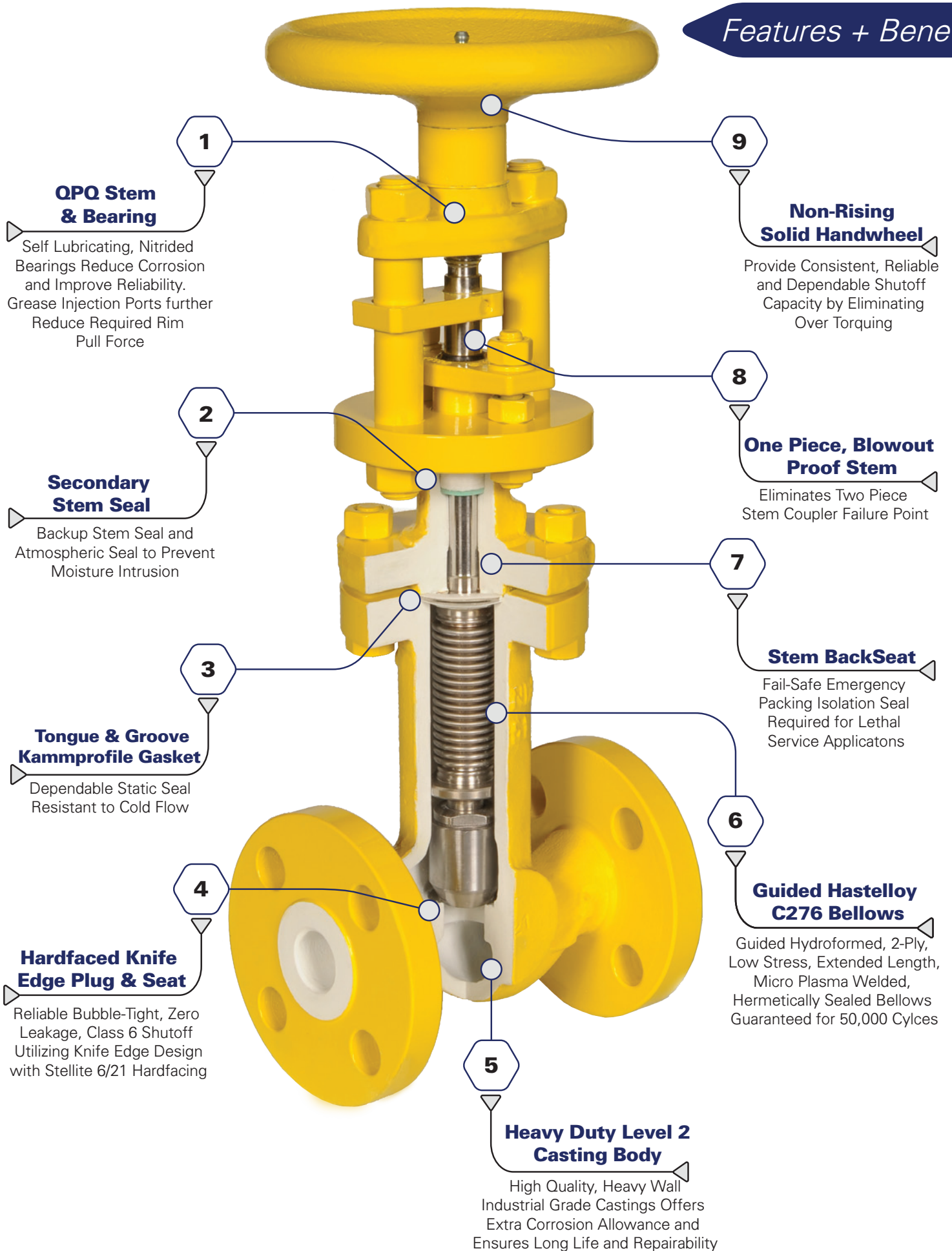
Reduces leakpoints and extends gasketed bonnet connection above insulation line decreasing the negative effects of thermo-cycles.

Applications

- Dry Chlorine Gas
- Liquid Chlorine
- Phosgene
- Chlorinated Solvents

- Ethylene Dichloride (EDC)
- Vinyl Chloride Monomer (VCM)
- Isocyanates (MDI, TDI, HDI)
- Chlorinated Organics

- Anhydrous HF
- Anhydrous HCl
- Anhydrous HBr
- Chlorine TriFluoride



1 QPQ Stem & Bearing

Self Lubricating, Nitrided Bearings Reduce Corrosion and Improve Reliability. Grease Injection Ports further Reduce Required Rim Pull Force

9 Non-Rising Solid Handwheel

Provide Consistent, Reliable and Dependable Shutoff Capacity by Eliminating Over Torquing

2 Secondary Stem Seal

Backup Stem Seal and Atmospheric Seal to Prevent Moisture Intrusion

8 One Piece, Blowout Proof Stem

Eliminates Two Piece Stem Coupler Failure Point

3 Tongue & Groove Kamprofile Gasket

Dependable Static Seal Resistant to Cold Flow

7 Stem BackSeat

Fail-Safe Emergency Packing Isolation Seal Required for Lethal Service Applications

4 Hardfaced Knife Edge Plug & Seat

Reliable Bubble-Tight, Zero Leakage, Class 6 Shutoff Utilizing Knife Edge Design with Stellite 6/21 Hardfacing

6 Guided Hastelloy C276 Bellows

Guided Hydroformed, 2-Ply, Low Stress, Extended Length, Micro Plasma Welded, Hermetically Sealed Bellows Guaranteed for 50,000 Cycles

5 Heavy Duty Level 2 Casting Body

High Quality, Heavy Wall Industrial Grade Castings Offers Extra Corrosion Allowance and Ensures Long Life and Repairability



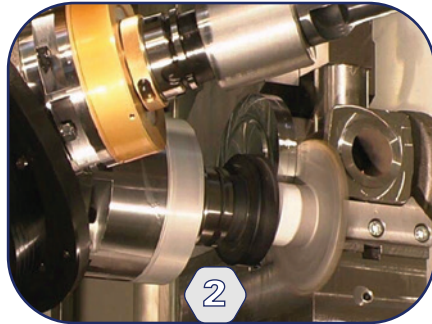
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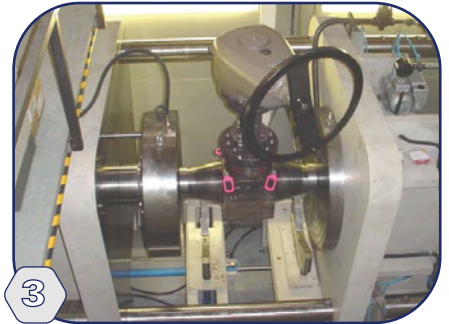
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2



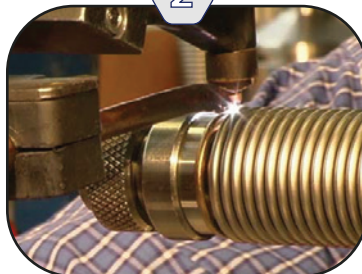
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4



2



5

1

History

Phönix Valves was founded and has been manufacturing valve since 1910. Established World Leader in the Valve Industry based in Germany.

2

Manufacturing // Modern CNC machining, welding, and manufacturing equipment ensure repeatability. Critical components like the bellows are micro plasma welded with an automated process ensuring quality and consistency.

3

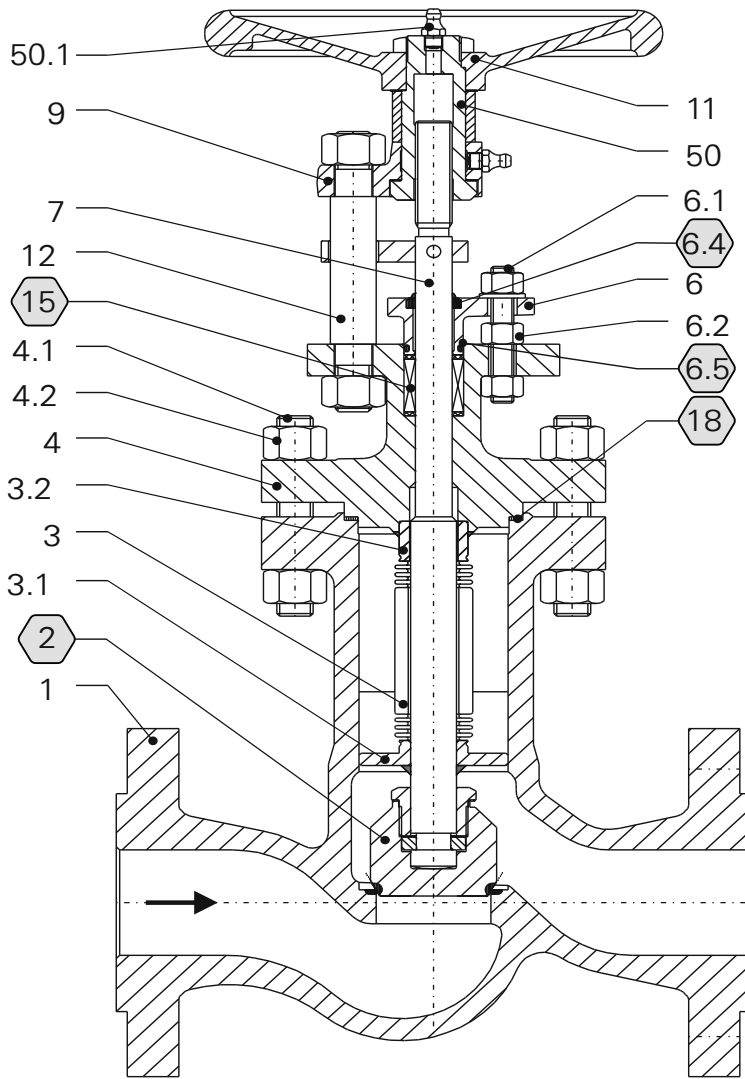
100% Testing // All valves are hydro, seat, bellows, and function tested before leaving the factory. This ensures that all Phönix valves will be bubble tight, zero leakage, and will not cause unexpected outages or downtime.

4

ISO 9001 Certification // Phönix has had continuous certification in the ISO 9001 Quality Management System since 1989. This has helped guarantee consistency for all aspects and processes of the business.

5

Chlorine Industry // Phönix has a long history servicing the Chlorine Industry. Being a founding member, Phönix helped author many of EUROCHLOR's publications. Phönix 350/EC product line is also 100% compliant with CI Pamphlet 6.



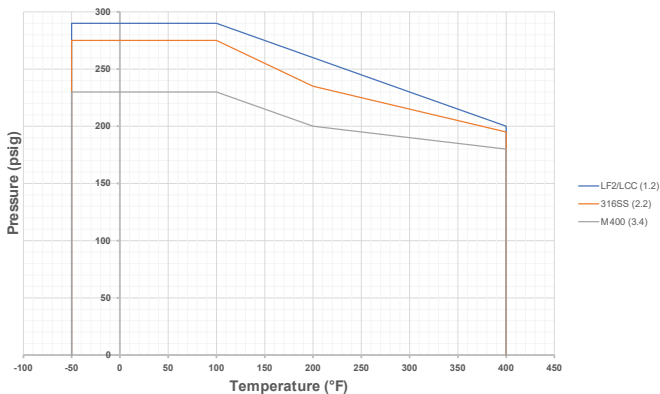
Item	Description	Material	Cert
1	Body	LCC/LF2*	✓
2	Disc	LF2**	✓
3	Bellows	Hastelloy® C276	✓
3.1	Bellow Ring	Hastelloy® C276	✓
3.2	Bellows Ring	Hastelloy® C276	✓
4	Bonnet	LCC	✓
4.1	Stud	A320-L7	✓
4.2	Hex Nut	A194-7L	✓
6	Gland Follower	AISI 321	-
6.1	Stud	A320-L7	✓
6.2	Hex Nut	A194-7L	✓
6.4	Atmospheric Wiper	EPDM	-
6.5	Atmospheric O-Ring	EPDM	-
7	Stem	Hastelloy® C276	✓
9	Bridge	Zinc Coated A105	-
11	Handwheel	Ductile Iron	-
12	Pillar	AISI 431	-
15	Packing	PTFE	-
18	Bonnet Gasket	PTFE	-
50	Stem Nut	QPO A105 Nitrided	-
50.1	Grease Nipple	Steel	-

// Notes //

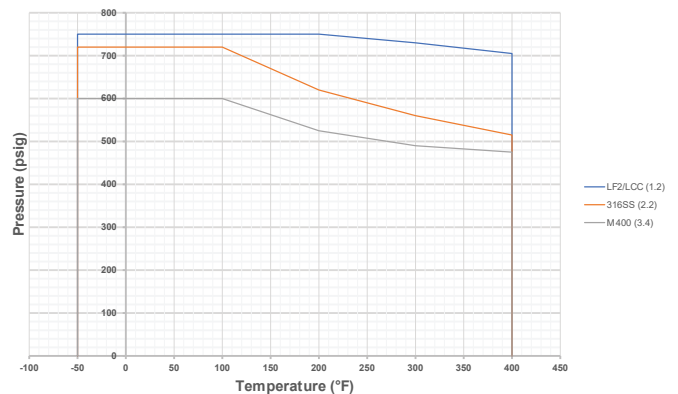
- (*) - ≥ 2"ASTM A352 LCC; < 2"ASTM A350 LF2
- (*) - Stellite 21 Hardface Overlay
- (**) - Stellite 6 Hardface Overlay; C276 as option
- ⬡ - Denotes Replaceable Part

Pressure/Temperature

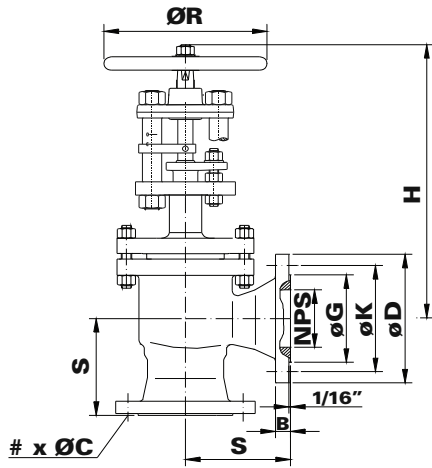
ANSI 150# Class



ANSI 300# Class

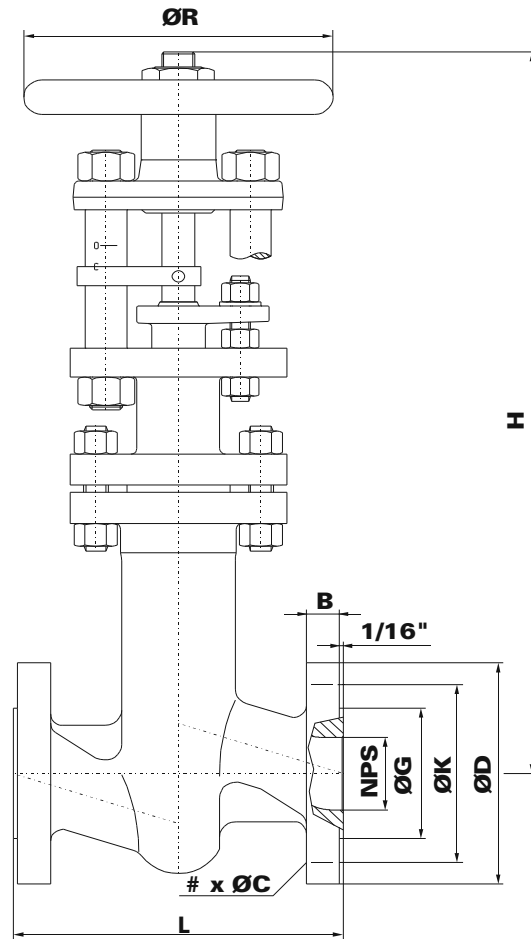


Notes // Values based on ASME B16.34
Low Temperature Option Available



Size	S	S	H	ØR	Wt. (lb)	Cv
1"	3.94	4.00	12.2	5.9	20	10.6
1-1/2"	4.50	4.50	15.0	7.9	37	26.8
2"	4.92	5.25	15.2	7.9	44	40
3"	6.10	6.25	21.5	9.8	123	144
4"	6.88	7.00	24.0	12.4	202	229
6"	8.85	8.75	33.1	15.7	422	516
Class	150#	300#	150# & 300#			

// Angle Valve 355EC11-12 Available Upon Request //



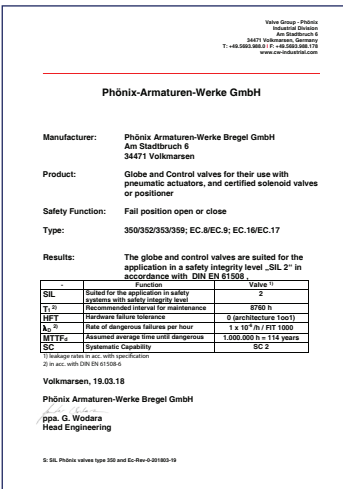
Size	150#							300#							150# & 300#			
	L Globe	L Ball	ØK	# x ØC	ØD	B	Wt. (lb)	L Globe	L Ball	ØK	# x ØC	ØD	B	Wt. (lb)	H	ØR	ØG	Cv
1/2"	4.25	4.25	2.38	4 x 5/8"	3.50	0.31	18	6.00	5.50	2.6	4 x 5/8"	3.75	0.50	20	15.2	5.9	1.38	4.7
3/4"	4.62	4.62	2.75	4 x 5/8"	3.90	0.35	18	7.00	6.00	3.3	4 x 3/4"	4.60	0.56	20	15.2	5.9	1.69	8.1
1"	5.00	5.00	3.11	4 x 5/8"	4.25	0.38	22	8.00	6.50	3.5	4 x 3/4"	4.88	0.62	22	15.2	5.9	2.00	18.3
1-1/2"	6.50	6.50	3.90	4 x 5/8"	5.00	0.50	35	9.00	7.50	4.5	4 x 7/8"	6.10	0.75	42	18.0	7.9	2.88	32.6
2"	8.00	7.00	4.76	4 x 3/4"	6.00	0.56	44	10.50	8.50	5.0	8 x 3/4"	6.50	0.81	53	19.0	7.9	3.62	54.7
3"	9.50	8.00	6.00	4 x 3/4"	7.50	0.69	121	12.50	11.12	6.6	8 x 7/8"	8.27	1.06	139	24.0	9.8	5.00	136
4"	11.50	9.00	7.50	8 x 3/4"	9.00	0.88	198	14.00	12.00	7.9	8 x 7/8"	10.00	1.19	220	29.0	12.4	6.18	208
6"	16.00	15.50	9.50	8 x 7/8"	11.00	0.94	405	17.50	15.88	10.6	12 x 7/8"	12.50	1.38	451	38.0	15.7	8.50	517
8"	19.50	18.00	11.77	8 x 7/8"	13.50	1.06	774	22.00	19.75	13.0	12 x 1"	15.00	1.56	880	45.0	19.7	10.60	872
10"	24.50	21.00	14.25	12 x 1"	16.00	1.12	1364	24.50	22.38	15.2	16 x 1-1/8"	17.50	1.81	1540	53.0	19.7	12.80	1,279
12"	27.50	24.00	17.00	12 x 1"	19.00	1.25	1570	28.00	25.50	17.8	16 x 1-1/4"	20.50	1.94	2090	59.0	24.8	15.00	1,694
14"	31.00	27.00	21.00	12x1-1/8"	21.00	1.37	1940	38.70	30.00	20.2	20 x 1-1/4"	23.00	2.06	2860	71.0	28.3	16.30	2,065
Class	150#							300#							150# & 300#			

// ANSI 600# Valves Available Upon Request //

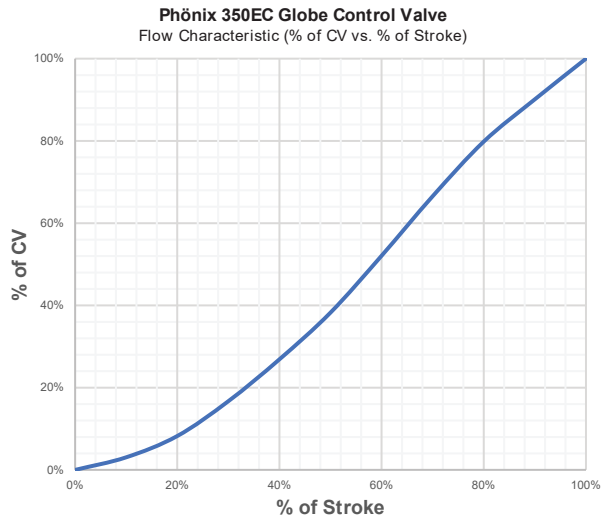
1 Reliability // Extended length bellows guaranteed for over 100,000 cycles are used for control applications in order to reduce the bellows stress and increase the life of the asset ensuring Plant Uptime and Production.

2 SIL 2 Certified - SIL 3 Capable // Tested according to standards IEC 61508 and IEC 61511, the valves, actuators, and automated packages are certified to a SIL 2 rating by TÜV Rheinland.

3 Control or Shutoff // Automated valve is able to perform as a control or on/off valve. PTFE seats option is available for problematic services

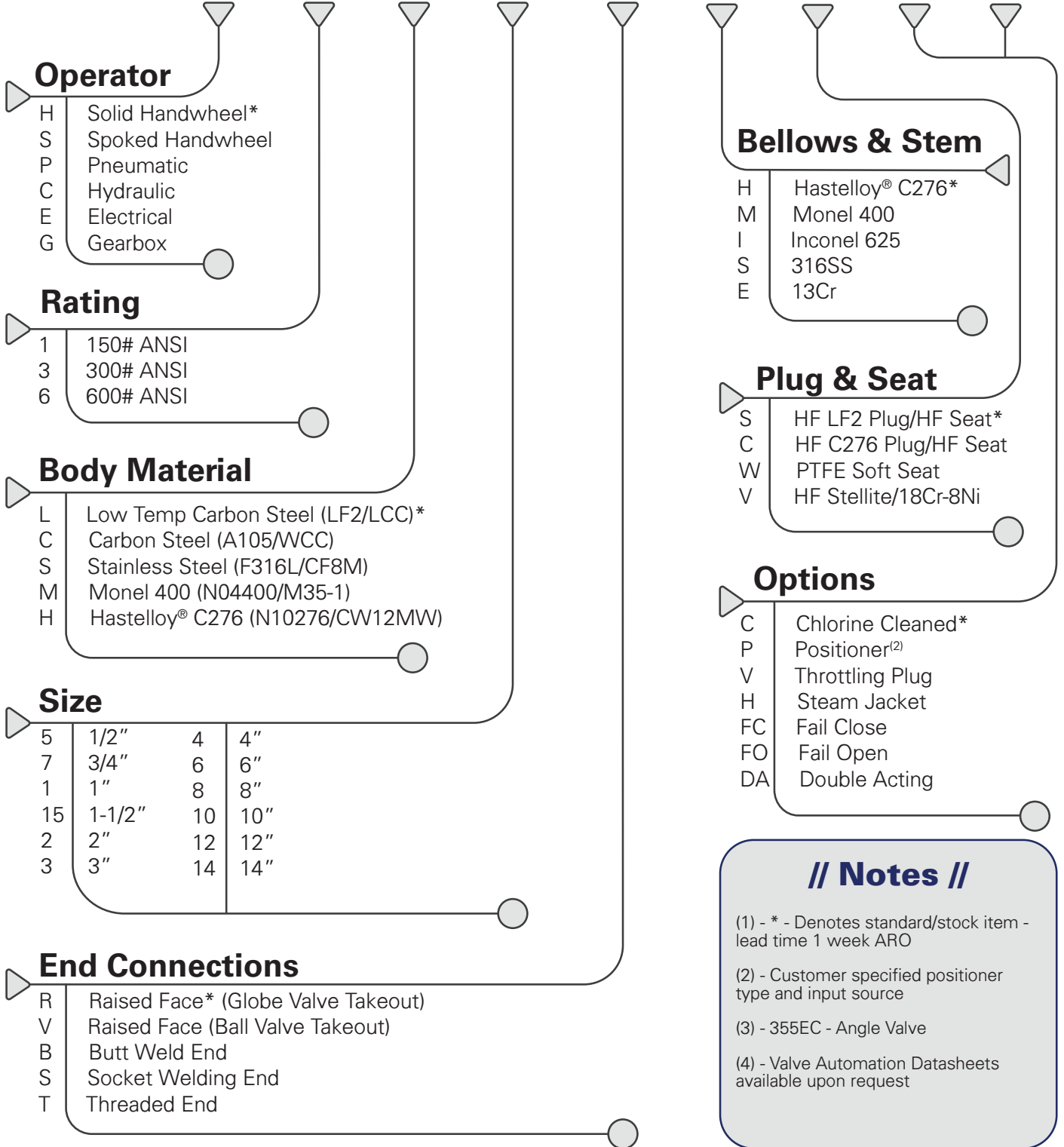


Valve Size	% of Stroke									Full CV
	10%	20%	30%	40%	50%	60%	70%	80%	90%	
1"	0.25	0.55	1.00	1.60	2.60	3.70	5.25	6.75	7.85	8.70
1-1/2"	0.50	2.50	4.30	7.45	10.5	14.0	17.0	19.0	21.0	22.5
2"	2.50	5.50	7.40	10.2	12.6	15.0	20.1	25.5	30.0	34.0
3"	4.00	12.0	23.0	36.0	52.0	70.0	92.0	105	115	125
4"	5.00	15.0	30.0	55.0	77.0	105	128	150	170	190
6"	10.0	25.0	65.0	123	175	245	295	347	380	420
8"	12.0	50.0	135	210	300	400	515	600	675	750
10"	15.0	45.0	150	220	315	465	605	780	875	975
12"	20.0	75.0	185	300	450	635	805	980	1130	1290



350EC

355EC⁽³⁾



Operator

- H Solid Handwheel*
- S Spoked Handwheel
- P Pneumatic
- C Hydraulic
- E Electrical
- G Gearbox

Rating

- 1 150# ANSI
- 3 300# ANSI
- 6 600# ANSI

Body Material

- L Low Temp Carbon Steel (LF2/LCC)*
- C Carbon Steel (A105/WCC)
- S Stainless Steel (F316L/CF8M)
- M Monel 400 (N04400/M35-1)
- H Hastelloy® C276 (N10276/CW12MW)

Size

5	1/2"	4	4"
7	3/4"	6	6"
1	1"	8	8"
15	1-1/2"	10	10"
2	2"	12	12"
3	3"	14	14"

End Connections

- R Raised Face* (Globe Valve Takeout)
- V Raised Face (Ball Valve Takeout)
- B Butt Weld End
- S Socket Welding End
- T Threaded End

Bellows & Stem

- H Hastelloy® C276*
- M Monel 400
- I Inconel 625
- S 316SS
- E 13Cr

Plug & Seat

- S HF LF2 Plug/HF Seat*
- C HF C276 Plug/HF Seat
- W PTFE Soft Seat
- V HF Stellite/18Cr-8Ni

Options

- C Chlorine Cleaned*
- P Positioner⁽²⁾
- V Throttling Plug
- H Steam Jacket
- FC Fail Close
- FO Fail Open
- DA Double Acting

// Notes //

- (1) - * - Denotes standard/stock item - lead time 1 week ARO
- (2) - Customer specified positioner type and input source
- (3) - 355EC - Angle Valve
- (4) - Valve Automation Datasheets available upon request

// Control Valve Sizing //

The following process information is needed in order to properly size the Phönix Globe Control Valve

- Inlet Pressure
- Outlet Pressure
- Specific Gravity
- Viscosity
- Process Fluid
- Temperature
- Vapor Pressure
- Connection Size

ADREM™

Severe Service Specialists Inc.

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225-335-0343 - www.sssvalve.com