
Wheel Operated Stainless Steel Cylinder Valve for
Ammonia & Amines

Detailed Series Catalogue



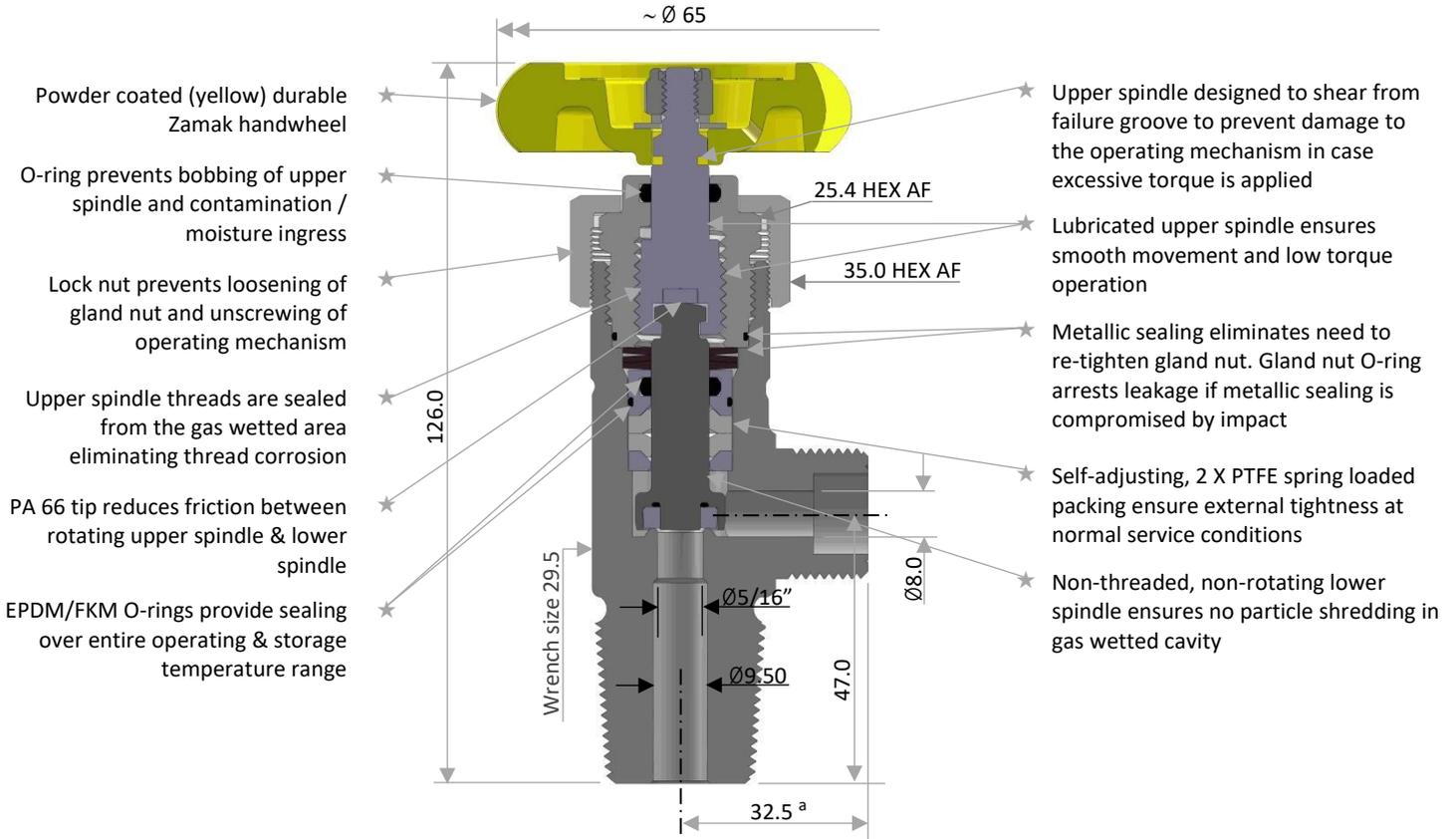
SSWN-22/V-S3



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Series SSWN-22/V-S3



All dimensions are in mm

Dimensions shown are for 25E inlet & BS-6 outlet

a Depends upon outlet connection

Design Specifications		
	Metric	English
Minimum life	2000 cycles	
Pressure rating	250 bar	3600 psig
Operating temperature range	-20 °C to +65 °C	-4 °F to +149 °F
Storage temperature range	-40 °C to +65 °C	-40 °F to +149 °F
Flow coefficient (C _v)	1.1	
Minimum closing torque	6 Nm	4 ft.lb
Gland nut installation torque	95 Nm	70 ft.lb
Lock nut installation torque	35 Nm	26 ft.lb
Lubricant	Klübertemp GR M30	
MAX weight of cylinder package mass for which valve can be used without protection	111 kg	244 lb

Testing & Certification

- Valves meet EN ISO 10297:2017
- Valves are certified by BAM to European Transportable Pressure Equipment Directive (TPED) & available with Π mark
- Production testing as per EN ISO 14246



Identifying Features

The handwheel operated packed valves use non-metallic seat and its sealing mechanism is designed to seal by hand. The design uses 2 x PTFE spring loaded packing. O-rings provide sealing in case of leakage through packing. The design employs two-piece spindle in which the non-threaded non-rotating lower spindle is connected by T-slot to the threaded upper spindle. The lower spindle assembly seals against the seat without rotating which reduces wear and particle generation. This sealing motion and soft seating allows the valve to be operated using hand torque. Leakage through gland nut threads is eliminated by metallic sealing with protection provided by O-ring below gland nut thread. Lock nut prevents loosening of gland nut and unscrewing of operating mechanism.

Recommended Opening Procedure

The T-slot interface of the upper and lower spindle creates a free play of about 1/4 turn. The handwheel rotates approximately two turns in anti-clockwise direction from closed to fully open position. It is advisable to open the valve fully and then rotate the handwheel clockwise about 1/2 turn. This position provides maximum flow and prevents the valve to backseat.

Recommended Closing Procedure

Close the cylinder valve tightly in clockwise direction using a hand glove.

Valve Installation

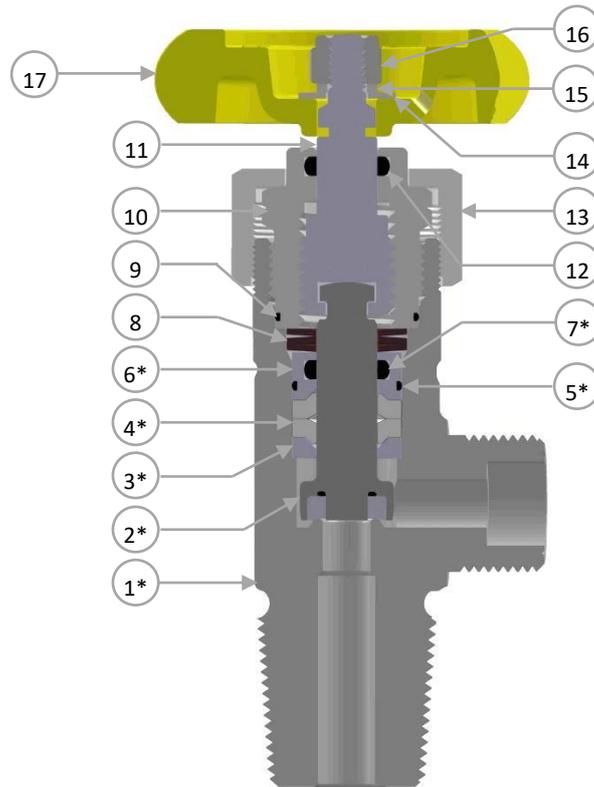
1. For 25E or equivalent thread, valving procedure & torque guidelines should be as per EN ISO 13341.
2. For NGT threads, use hand tight + 3 turns wrench tight to install the valve in the cylinders
(refer http://teknovalves.com/Information_Center)

⚠ CAUTION

1. NEVER use wrenches or other persuaders to operate the valve.
2. Valving tools (e.g. sockets or jaws) used to screw the valve into the cylinder must make contact with the flats in the valve body and not touching any part of the PRD, if provided. The tools should fit the valve properly without causing damage.
3. Over-torquing the valve into the cylinder must be avoided as they cause high stresses in the cylinder neck, leading to overload failures. Over-torquing also leads to irreparable damage to the valve stem.
4. Proper filling connectors should be used for filling and discharge ensuring contact only at the intended sealing surface.



Series SSWN-22/V-S3



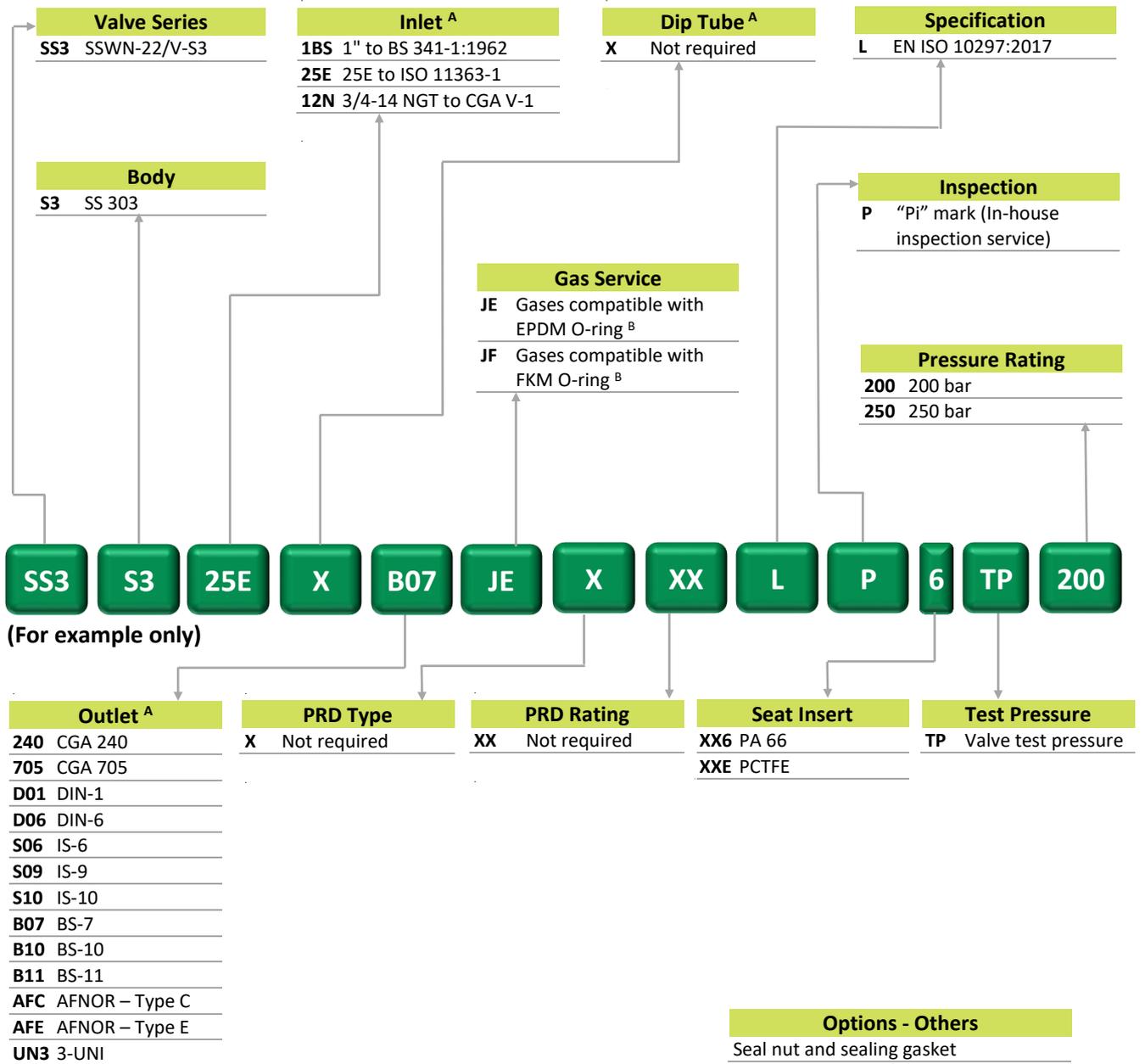
Part list			
Part No.	Description	No. off	MATL
1*	Valve body	1	SS 303
2*	Lower spindle assembly	1	SS 303 spindle with PCTFE / PA 66 seat insert & EPDM / FKM O-ring
3*	Packing collar	1	SS 303
4*	Packing	2	PTFE
5*	Packing gland O-ring	1	EPDM / FKM
6*	Packing gland	1	SS 303
7*	O-ring	1	EPDM / FKM
8	Belleville spring	3	EN 42
9	Gland nut O-ring	1	EPDM / FKM
10	Gland nut	1	SS 303
11	Upper spindle assembly	1	SS 303 spindle with PA 66 tip blank
12	Upper spindle O-ring	1	EPDM / FKM
13	Lock nut	1	SS 303
14	Plain washer	1	SS
15	Spring washer	1	
16	Nylock nut	1	Powder coated (yellow), Zamak
17	Handwheel	1	

*Gas wetted parts



Product Selection Guide – Valve Item Code Matrix

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A - Other inlet, outlet & dip tube connections are available as per customer requirement
B – Refer list of approved gases, next page

List of Approved Gases



Series SSWN-22/V-S3

Gases compatible with EPDM O-ring						
Sl. No.	UN No.	Gas *	Chemical Formula	Condition	Seat MATL	
					PCTFE	PA 66
1	1005	Ammonia	NH ₃	A	✓	✓
2	1026	Cyanogen	C ₂ N ₂	-	✓	X
3	1032	Dimethylamine	(CH ₃) ₂ NH	A	✓	✓
4	1036	Ethylamine	C ₂ H ₅ NH ₂	-	✓	X
5	1048	Hydrogen bromide	HBr	A	✓	X
6	1050	Hydrogen chloride	HCl	A	✓	X
7	1052	Hydrogen fluoride	HF	A	✓	X
8	2197	Hydrogen iodide	HI	A	✓	X
9	1053	Hydrogen sulphide	H ₂ S	A	✓	✓
10	1061	Methylamine	CH ₃ NH ₂	A	✓	✓
11	1076	Phosgene	COCl ₂	-	✓	X
12	1079	Sulphur dioxide	SO ₂	-	✓	X

Gases compatible with FKM O-ring							
Sl. No.	UN No.	Gas *	Chemical Formula	ASHRAE No.	Condition	Seat MATL	
						PCTFE	PA 66
1	1741	Boron trichloride	BCl ₃	-	-	✓	X
2	1008	Boron trifluoride	BF ₃	-	-	✓	X
3	1010	Butadiene-1,2	C ₄ H ₆	-	-	✓	✓
4	1010	Butadiene-1,3	C ₄ H ₆	-	-	✓	✓
5	2204	Carbonyl sulphide	COS	-	-	✓	✓
6	1026	Cyanogen	C ₂ N ₂	-	-	✓	X
7	1027	Cyclopropane	C ₃ H ₆	-	-	✓	✓
8	1048	Hydrogen bromide	HBr	-	A	✓	X
9	1050	Hydrogen chloride	HCl	-	A	✓	X
10	1052	Hydrogen fluoride	HF	-	A	✓	X
11	2197	Hydrogen iodide	HI	-	A	✓	X
12	1076	Phosgene	COCl ₂	-	-	✓	X
13	2035	Trifluoroethane	C ₂ H ₃ F ₃	R 143a	-	✓	X
14	1085	Vinyl bromide	C ₂ H ₃ Br	R140B1	-	✓	X
15	1086	Vinyl chloride	C ₂ H ₃ Cl	R140	-	✓	X

* Valve may also be used for mixtures of the listed gases.

✓ - Material resistant to the gas

X – Material not resistant to the gas

A – Anhydrous (Water content less than 0.01%)

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Natun Rasta, Bilkanda, 24 Parganas (N), Kolkata

INDIA

+91 33 25956767

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International Distributors

USA & CANADA

Tekno Valves North America, Inc.

+1 (225) 330 - 6590

www.tvnainc.com

EUROPE

GBP Gas Business Partner GmbH

+49 (0)6468-917 99 52

www.gas-business-partner.com