tekno valves

50 YEARS OF EXCELLENCE

Beyond Compliance...Towards Excellence

Wheel Operated Stainless Steel Cylinder Valve for Corrosive Gases

Detailed Series Catalogue

SSWN-22/V

BAM
TPED Certification by BAM as notified body: ID-0589

Your safety is valued

ISO 9001 & TPED certified valve manufacturer

Identifying features

The handwheel operated packed valve uses 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

Valving procedure and torque guidelines should be as per EN ISO 13341.

For NGT threads, we recommend hand tight + 3 turns wrench tight to install the valve in the cylinders.

(Refer *https://drive.google.com/file/d/1E0H1B_Z4rBb7ddQJ6R897duZPmFSzHCH/view?usp=sharing*)

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. The tools should fit the valve properly without causing damage.

Valves should not be over-torqued into the cylinder to avoid high stresses in the cylinder neck, leading to overload failures. Over-torquing may also lead to irreparable damage to the valve stem.

⚠CAUTION

1. NEVER use wrenches or other persuaders to operate the valve.
2. Proper filling connectors shall be used for filling and discharge ensuring contact only at the intended sealing surface.

Series SSWN-22/V

Powder coated (yellow) durable Zamak handwheel

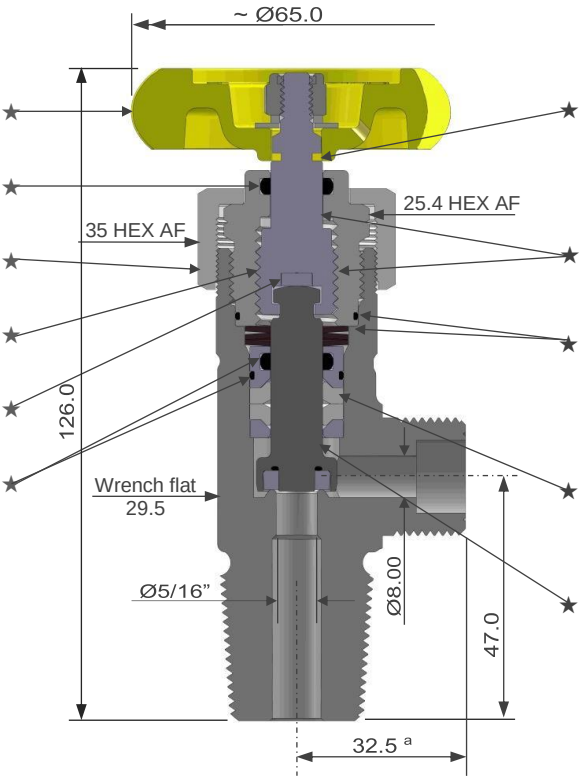
O-ring prevents bobbing of upper spindle and contamination / moisture ingress

Lock nut prevents loosening of gland nut and unscrewing of operating mechanism

Upper spindle thread is not in gas wetted area to prevent corrosion

PVDF tip reduces friction between rotating upper spindle and lower spindle

FKM O-rings provide sealing over entire operating and storage temperature range



Upper spindle designed to shear from failure groove to prevent damage to the operating mechanism in case excessive torque is applied

Lubricated upper spindle ensures smooth movement and low torque operation

Metallic sealing eliminates need to re-tighten gland nut. Gland nut O-ring arrests leakage if metallic sealing is compromised by impact

Self-adjusting, 2 X PTFE spring loaded packing ensure external tightness at normal service conditions

Non-threaded, non-rotating lower spindle ensures no particle shredding in gas wetted cavity

Dimensions are in mm

Dimensions shown are for BS-6 outlet

a Depends upon outlet connection

Design Specifications

	Metric
Minimum life	2000 cycles
Minimum closing torque	6 Nm
Gland nut installation torque	95 ± 3 Nm
Lock nut installation torque	35 ± 2 Nm
Handwheel nut installation torque	9 ± 1 Nm
Maximum test pressure (TP)	250 bar
Lubricant	Klubertemp GR M30
Flow coefficient (C_v)	1.1
Valve inherent strength proven up to *	111 kg

** MAX cylinder package mass for which valve can be used without protection*

Testing & Certification

- Valves meet EN ISO 10297:2017
- Valves are certified by BAM to European Transportable Pressure Equipment Directive (TPED) & available with ⚶ mark
- Valves for Indian market are approved by PESO and supplied under Lloyd inspection
- Production testing as per EN ISO 14246

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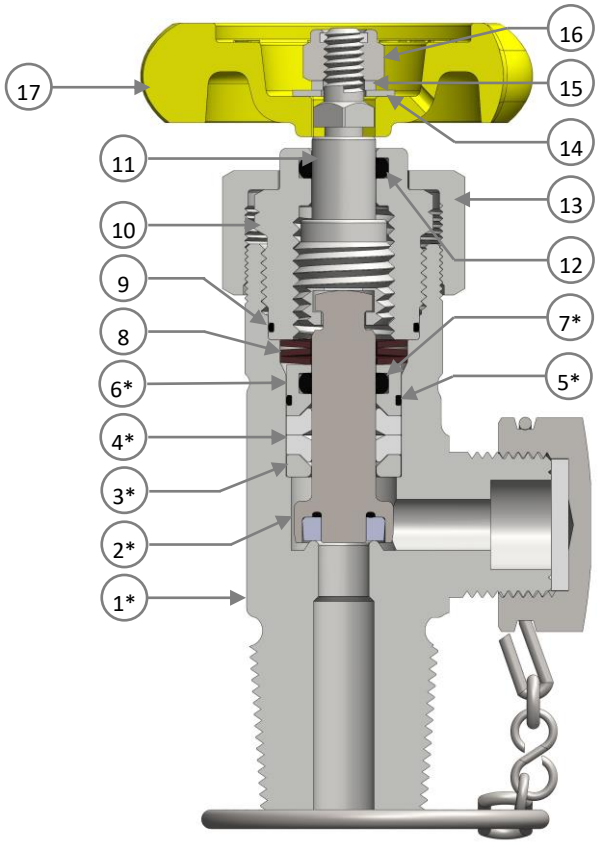

* Gas wetted parts

Part list			
Part No.	**Description**	**No. off**	**MATL**
1*	Valve body	1	SS 316L
2*	Lower spindle assembly	1	Monel spindle with PCTFE or PVDF seat insert and FKM O-ring
3*	Packing collar	1	SS 316L
4*	Packing	2	PTFE
5*	Packing gland O-ring	1	FKM
6*	Packing gland	1	SS 303
7*	O-ring	1	FKM
8	Belleville spring	3	EN 42
9	Gland nut O-ring	1	FKM
10	Gland nut	1	SS 303
11	Upper spindle assembly	1	SS 303 spindle with PVDF tip blank
12	Upper spindle O-ring	1	FKM
13	Lock nut	1	SS 316L
14	Plain washer	1	SS
15	Spring washer	1	SS
16	Nylock nut	1	SS
17	Handwheel	1	Powder coated (yellow), Zamak

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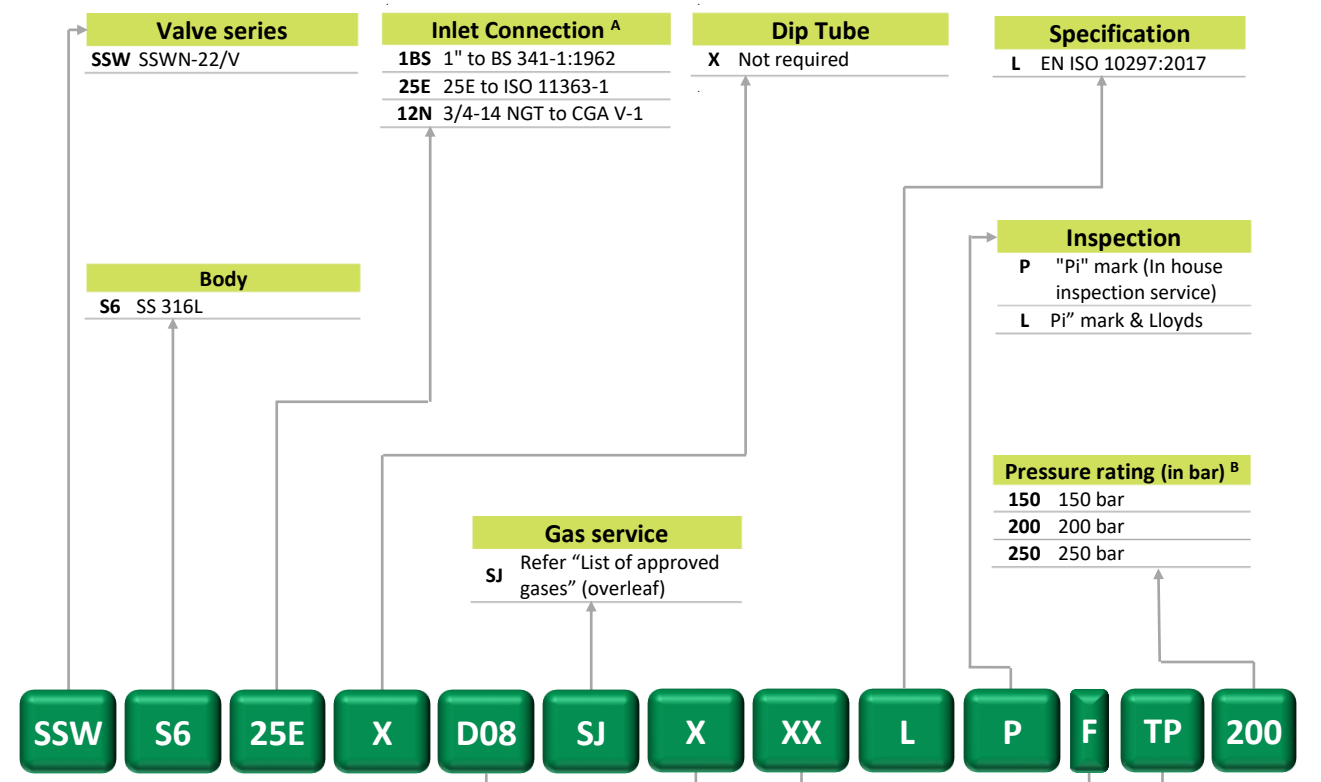

Options
Seal nut with sealing gasket
Chain & keeper ring

A - Other inlet & outlet connections are available as per customer requirement

Sl. No.	UN No.	Name of gas [B]	Chemical formula	LC_{50}	ASHRAE No.	Condition
01	1741	Boron trichloride	BCl_3	2541	-	A
02	1010	Butadiene-1,2	C_4H_6	-	-	-
03	1010	Butadiene-1,3	C_4H_6	-	-	-
04	2204	Carbonyl sulphide	COS	1700	-	A
05	1026	Cyanogen	C_2N_2	350	-	A
06	1027	Cyclopropane	C_3H_6	220000	-	-
07	1048	Hydrogen bromide	HBr	2860	-	A
08	1050	Hydrogen chloride	HCl	2810	-	A
09	1052	Hydrogen fluoride	HF	1307	-	A
10	2197	Hydrogen iodide	HI	2860	-	A
11	2035	Trifluoroethane	$C_2H_3F_3$	-	R 143a	A
12	1085	Vinyl bromide	C_2H_3Br	>40000	R140B1	A
13	1086	Vinyl chloride	C_2H_3Cl	150000	R140	A

A – Anhydrous (Water content less than 0.01%)

B - Valve may also be used for mixture of listed gases

Valve shall be fitted with pressure retaining gas-tight plugs or caps having threads that match those of the valve outlets and made of material not liable to attack by the contents of the pressure receptacle.

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