

ZS-C30

Control Single Seat Valve

APPLICATION

The ZS-C30 valve is a pneumatic flow control single seat valve for hygienic applications. Its main function involves regulating flow, controlling pressure and level. The plug's design enables equal percentage flow control to obtain the required Kv factor. This type of control is recommended for systems with significant flow or differential pressure variations. Positioning is controllable either manually or using a process parameter via the positioning sensor.

DESIGN AND FEATURES

Normally closed (NC) valve without seal in the plug.
Equal percentage control plug.
Dual function positioner: position controller (PD) or process controller (PID).
Easy assembly/disassembly of internal parts by loosening a clamp fastener.
Open lantern allows visual inspection of shaft sealing. 360º adjustable body.

TECHNICAL SPECIFICATIONS

Materials	
Parts in contact with the product	1.4404 (AISI 316L)
Other stainless steel parts	1.4301 (AISI 304)
Gaskets in contact with the product	EPDM
Surface finish	
Internal	Bright polish Ra ≤ 0,8 µm
External	Matt
Available sizes	
DIN EN 10357 series A (previously DIN 11850 series 2)	DN 25 - DN 100
ASTM A269/270 (correspondsto OD pipe)	OD 1'' - OD 4''

The information provided is for guidance purposes only. We reserve the right to modify any materials or features without prior notice.
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Connections

Weld

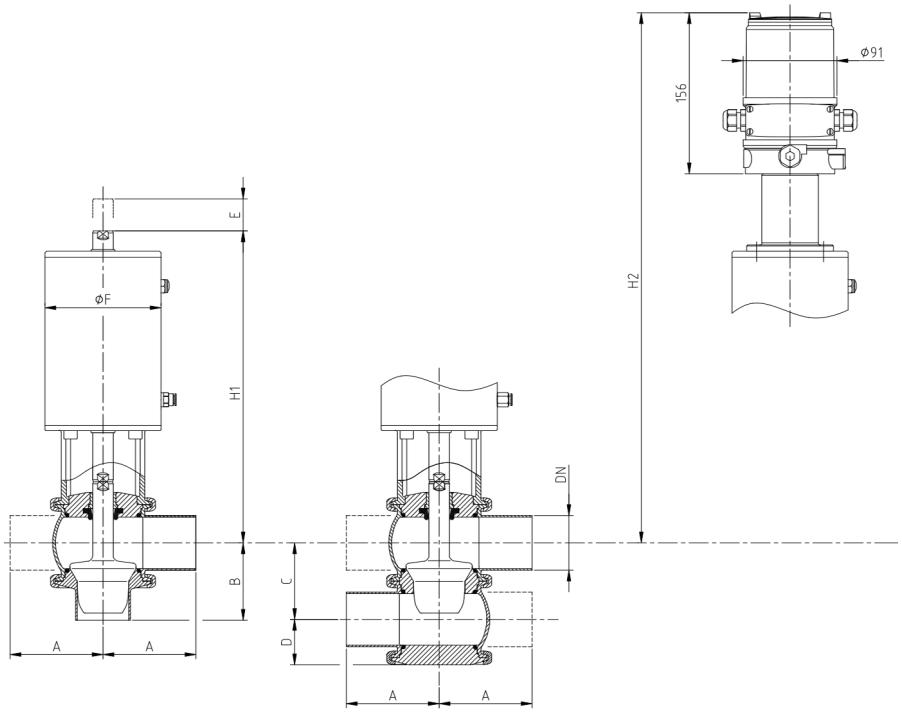
Operating limits

Temperature range	-10ºC to 121ºC	14ºF to 250ºF
Temperature SIP	140ºC (max. 30 min.)	284ºF
Maximum working pressure	1000 kPa (10 bar)	145PSI
Minimum working pressure	Vacuum	Vacuum
Compressed air pressure	6 - 8 bar	87 - 116 PSI

OPTIONS

Double-acting pneumatic actuator.
Gaskets: FPM, HNBR.
Seat seal.
Other connection types.
Surface finish: Ra < 0,5 µm.
Bodies with heating jacket.
Steam barrier.

DIMENSIONS

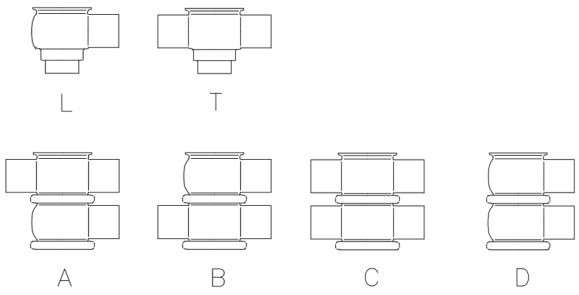


	DN	Pipe Ø	A	B	C	D	E	ØF	H1	H2	kg1
DN	25	29,0 x 1,50	50	50	50	32	15	87	239	436	4,7
	40	41,0 x 1,50	85	60	62	38	23	87	242	446	5,8
	50	53,0 x 1,50	90	70	74	44	31	112	303	517	8,9
	65	70,0 x 2,00	110	90	92	53	36	143	350	569	17
	80	85,0 x 2,00	125	90	107	60	35	143	358	576	18
	100	104 x 2,00	150	125	127	70	30	216	387	603	34
OD	1''	25,4 x 1,65	50	50	46	30	11	87	241	438	4,7
	1½''	38,1 x 1,65	85	60	59	36	20	87	243	448	5,7
	2''	50,8 x 1,65	90	70	72	43	29	112	304	518	8,9
	2½''	63,5 x 1,65	110	90	86	50	30	143	353	572	17
	3''	76,2 x 1,65	125	90	99	56	27	143	362	580	18
	4''	101,6 x 2,11	150	125	124	69	28	216	388	601	34

1) The weights correspond to the "L" housing combination

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HOUSING COMBINATIONS



SIZING

Use the Kv factor to size the control valves, which relates the drop in pressure with the flow. The Kv factor indicates the flow in m3/h for a 1 bar drop in pressure. The Kv values are calculated for water at temperature of 5º to 30ºC. The following formula can calculate the required Kv for products with a similar density and viscosity to water:

$$Kv = \frac{Q}{\sqrt{\Delta P}}$$

where: Q ≡ flow (m3/h)
ΔP ≡ drop in pressure in the valve

The selected Kvs factor should be higher than the required Kv factor to ensure enough margin for the control function. This involves applying a safety coefficient:

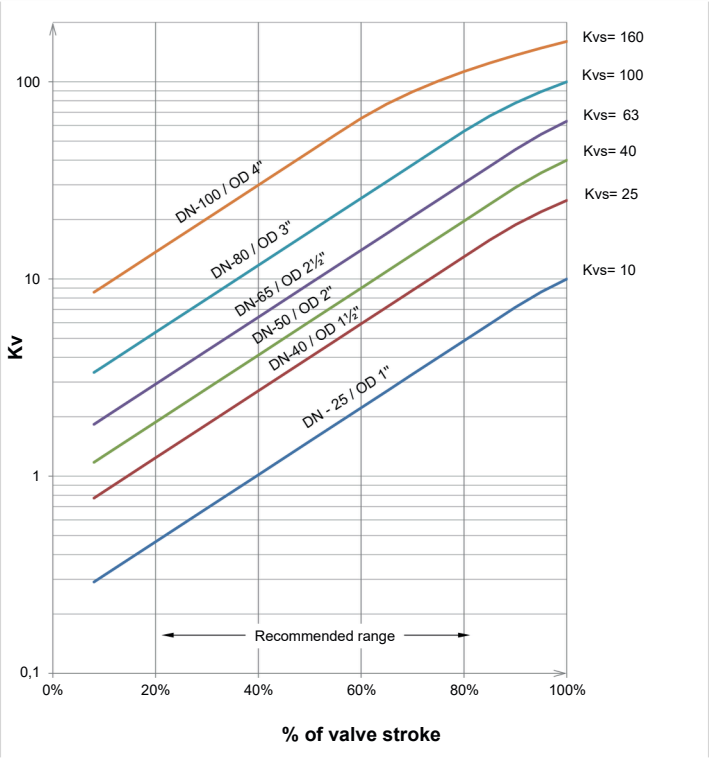
$$Kvs > Kvr = \frac{Kv}{0,7}$$

Example:
Q = 18 m3/h ; ΔP = 0,5 bar

$$Kv = \frac{18}{\sqrt{0,5}} = 25,5 \text{ m3/h}$$

$$Kv^s = \frac{25,5}{0,7} = 36,4 \text{ m3/h}$$

This value indicates that the DN-50 (Kvs = 40) would be the most suitable valve.
Ask the technical department regarding cases involving viscous products.



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