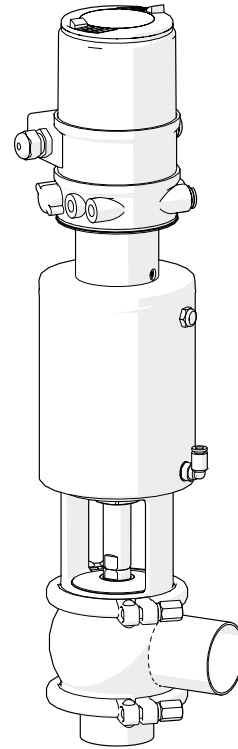# INNOVA G

Control Single Seat Valve

The INNOVA G-type 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 (corresponds to OD pipe)	OD 1" - OD 4"

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

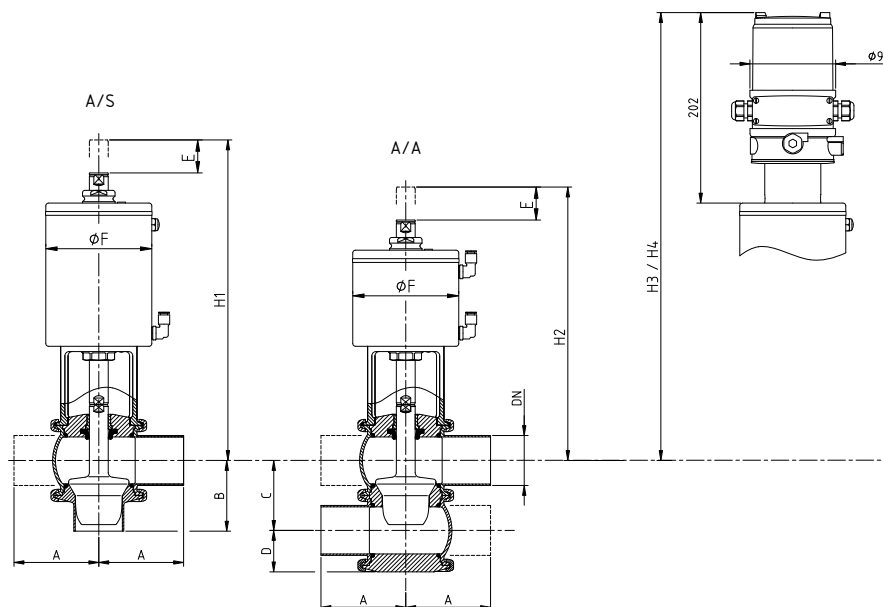Double-acting pneumatic actuator.
Gaskets: FPM, HNBR.
Seat seal.
Other connection types.
Surface finish: Ra < 0,5 µm.
Bodies with heating jacket.
Steam barrier.

DIMENSIONS

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	DN	Pipe Ø	A	B	C	D	E	ØF	H1	H2	A/S H3	A/A H4	A/S kg[1]	A/A kg[1]
DIN	25	29,0 x 1,50	50	50	50	32	15	87	272	242	418	388	4,4	3,7
	40	41,0 x 1,50	85	60	62	38	21	87	281	251	427	397	5,5	4,8
	50	53,0 x 1,50	90	70	74	44	32	113	340	290	476	426	8,8	7,3
	65	70,0 x 2,00	110	90	92	53	31	136	355	305	490	440	14,4	11,6
	80	85,0 x 2,00	125	90	107	60	30	136	362	312	498	448	15,8	13,1
	100	104 x 2,00	150	125	127	70	29	166	384	334	519	469	23,4	19,2
OD	1"	25,4 x 1,65	50	50	46	30	11	87	270	240	416	386	4,4	3,7
	1½"	38,1 x 1,65	85	60	59	36	18	87	280	250	425	395	5,5	4,8
	2"	50,8 x 1,65	90	70	72	43	29	113	339	289	474	424	8,9	7,3
	2½"	63,5 x 1,65	110	90	86	50	25	136	352	302	487	437	14,5	11,7
	3"	76,2 x 1,65	125	90	99	56	22	136	358	308	494	444	15,7	13,0
	4"	101,6 x 2,11	150	125	124	69	26	166	383	333	518	468	24,1	20,0

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

HOUSING COMBINATIONS

L   T

A   B   C   D

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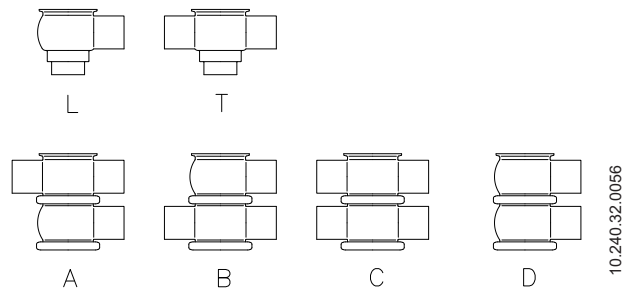
SIZING

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: $Q \equiv$ flow (m³/h)
$\Delta P \equiv$ drop in pressure in the valve

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

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

Example:
$Q = 18$ m³/h ; $\Delta P = 0,5$ bar

$$Kv = \frac{18}{\sqrt{0,5}} = 25,5 \text{ m}^3/\text{h}$$

$$Kv_s = \frac{25,5}{0,7} = 36,4 \text{ m}^3/\text{h}$$

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