

FEATURES

- Valve with clamp type connection to ISO 2852 for quick disconnection, a system commonly used in the food processing industry or with butt welding connection to ISO 6761 for stainless steel pipe to ISO 1127
- CLAMP valve body pickled in nitric/fluoric acid bath (NET-INOX passivation treatment)
- High flow due to angled seat design
- Anti-waterhammer design (fluid entry under the disc)
- Vacuum operation up to 10^{-2} mbar
- Wide range of piston-type operators (32 - 50- 63 - 90 -125 mm dia.) rotatable through 360°, for maximum performance at different minimum pilot pressures
- High performance, maintenance-free stuffing box
- The valves satisfy Pressure Equipment Directive 97/23/EC, category 1 (DN > 25) or article 3.3 (DN ≤ 25)
- The valves in conformity with IEC 61508 Standard (2010 route 2_H version) certified with integrity levels: SIL 2 for HFT = 0

GENERAL

Differential pressure
Maximum allowable pressure
Ambient temperature range
Maximum viscosity
Pilot fluid
Max. pilot pressure
Min. pilot pressure
Pilot fluid temperature
Response time

See «SPECIFICATIONS» [1 bar =100 kPa]
16 bar
-10°C to +60°C
600 cSt (mm²/s)
Filtered air or water ⁽¹⁾
10 bar
See below and following page
-10°C to +60°C
See page V402-7

fluids (*)	temperature range	disc seal (*)
DN ≤ 50 : air et gaz groupes 1 & 2 DN 65: air and gas group 2 all DN: water, oil, liquids groups 1 & 2 and steam	- 10°C to + 184°C	PTFE

MATERIALS IN CONTACT WITH FLUID

(*) Ensure that the compatibility of the fluids in contact with the materials is verified

Valve body

CLAMP connection
Butt welding connection

AISI 316L (NET-INOX treatment)

AISI 316L

Stuffing box housing

AISI 316L

Stem

Stainless steel

Disc

Stainless steel

Stuffing box packing

PTFE chevrons

Wiper seal

FPM

Disc seal

PTFE

Valve body seal

PTFE

OTHER MATERIALS

Operator

Glass fibre filled PA

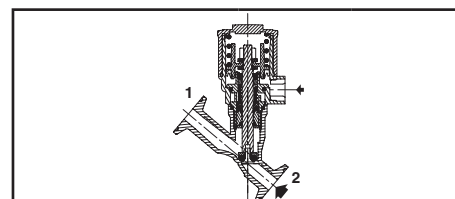
Optical position indicator

PA 12, supplied standard on valves with 63, 90 and 125 mm operators

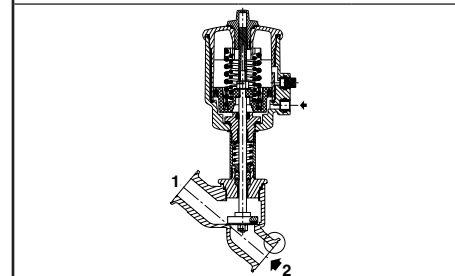
⁽¹⁾ For dia. 32, 50, 63, 90 and 125 mm operators: At service fluid temperatures inside the valve body above 100°C, it is prohibited to pilot the valve with water.

SPECIFICATIONS

DN	O.D. of stub (clamp)	O.D. of stub (butt)	flow coefficient Kv		pilot pressure (bar)		operating pressure differential (bar)				operator diameter	catalogue number				
	(mm)	(mm)					(m³/h)	(l/min)	min.	max.			clamp connection	butt welding connection		
			air, inert gas, aggressive fluids(*)	water, oil, liquids, aggressive liquids(*)	steam (*) (≤184°C)											
						min.				max.	(mm)					
NC - Normally closed, entry under the disc ⁽¹⁾																
10	34	17,2	2,8	47	4	10	0	16	16	10	32	S290A800	S290A802			
15	34	21,3	4,1	68	4	10	0	12	12	10	32	S290A804	S290A806			
			4,9	82	4	10	0	16	16	10	50	S290A408	S290A417			
					2,5	10	0	16	16	10	63	S290B137	S290B205			
20	50,5	26,9	6,5	108	4	10	0	6	6	6	32	S290A808	S290A810			
			9,4	157	4	10	0	10	10	10	50	S290A409	S290A418			
								16	16	10	63	S290B140	S290B208			
								2,5	10	0	12	12	10	63	S290B139	S290B207

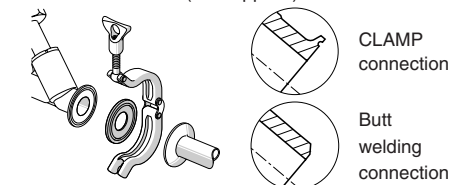


NC function, entry under the disc, 32 and 50 mm operators



NC function, entry under the disc, 63, 90 and 125 mm operators

CLAMP connection (not supplied)



SPECIFICATIONS

DN	O.D. of stub (clamp)	O.D. of stub (butt)	flow coefficient Kv		pilot pressure (bar)		operating pressure differential (bar)					operator diameter	catalogue number			
							min.	max.			clamp connection		butt welding connection			
	(mm)	(mm)	(m³/h)	(l/min)	min.	max.		air, inert gas, aggressive fluids(*)	water, oil, liquids, aggressive liquids(*)	steam (*) (≤184°C)		(mm)				
NC - Normally closed, entry under the disc ⁽¹⁾																
25	50,5	33,7	12,8	213	4	10	0	6	6	6	50	S290A410	S290A419			
			16,5	275	4	10	0	10	10	63	S290B145	S290B211				
					2,5	10	0	16	16	10	90	S290B146	S290B212			
								6	6	6	63	S290B143	S290B210			
								12	12	10	90	S290B144	-			
32	64	42,4	27	450	4	10	0	6	6	6	63	S290A151	S290A215			
					2,5	10	0	12	12	10	90	-	S290A216			
								3	3	3	63	-	S290A214			
								16	16	10	125	-	S290A670			
					40	64	48,3	45	750	4	10	0	4	4	4	63
2,5	10	0	8	8						8	90	S290A156	S290A218			
			4	4						4	90	S290A154	-			
			16	16						10	125	S290A521	S290A573			
50	77,5	60,3	59	983						2,5	10	0	2,5	2,5	2,5	63
					4	10	0	6	6	6	90	S290A688	S290A720			
								2,5	10	0	2,5	2,5	2,5	90	S290A685	-
								4	10	0	10	10	10	125	S290A689	S290A721
					65	91	76,1	94	1567	2,5	10	0	5	5	5	125
4	10	0	2	2						2	90	S290A691	S290A722			
			6	6						6	125	S290A690	-			
			2,5	10						0	1	1	1	125	S290A692	S290A723
NO - Normally open, entry under the disc																
10	34	17,2	2,8	47	IX (*)	10	0	16	16	10	32	S290A812	S290A814			
15	34	21,3	4,1	68	IX (*)	10	0	16	16	10	32	S290A816	S290A818			
			4,9	82	I (*)	10	0	16	16	10	50	S290A411	S290A420			
					II (*)	10	0	16	16	10	63	S290B161	S290B221			
20	50,5	26,9	6,5	108	IX (*)	10	0	16	16	10	32	S290A820	S290A822			
			9,4	157	I (*)	10	0	16	16	10	50	S290A412	S290A421			
					II (*)	10	0	16	16	10	63	S290B162	S290B222			
25	50,5	33,7	12,8	213	I (*)	10	0	16	16	10	50	S290A413	S290A422			
			16,5	275	II (*)	10	0	16	16	10	63	S290B163	S290B223			
32	64	42,4	27	450	II (*)	10	0	16	16	10	63	S290A164	S290A224			
40	64	48,3	45	750	II (*)	10	0	11	11	10	63	S290A165	S290A225			
50	77,5	60,3	59	983	II (*)	10	0	7	7	7	63	S290A693	S290A724			
					III (*)	10	0	13	13	10	90	S290A694	S290A725			
					III (*)	10	0	7	7	7	90	S290A695	S290A726			
65	91	76,1	94	1567	III (*)	10	0	16	16	10	125	S290A696	S290A727			
			111	1850	IV (*)	10	0	16	16	10	125	S290A696	S290A727			
NC - Normally closed, entry above the disc (version recommended for rapid-cycling steam applications)																
10	34	17,2	2,8	47	X (*)	10	0	10	-	10	32	S290A824	S290A826			
15	34	21,3	4,1	68	X (*)	10	0	10	-	10	32	S290A828	S290A830			
			4,9	82	V (*)	10	0	10	-	10	50	S290A414	S290A423			
					VI (*)	10	0	10	-	10	63	S290B167	S290B227			
20	50,5	26,9	6,5	108	X (*)	10	0	10	-	10	32	S290A832	S290A834			
			9,4	157	V (*)	10	0	10	-	10	50	S290A415	S290A424			
					VI (*)	10	0	10	-	10	63	S290B168	S290B228			
25	50,5	33,7	12,8	213	V (*)	10	0	10	-	10	50	S290A416	S290A425			
			16,5	275	VI (*)	10	0	10	-	10	63	S290B169	S290B229			
32	64	42,4	27	450	VI (*)	10	0	10	-	10	63	S290A170	S290A230			
40	64	48,3	45	750	VI (*)	10	0	10	-	10	63	S290A171	S290A231			
					VII (*)	10	0	10	-	10	90	-	S290A259			
50	77,5	60,3	59	983	VI (*)	10	0	9	-	9	63	S290A697	S290A728			
					VII (*)	10	0	10	-	10	90	S290A698	S290A729			
					VII (*)	10	0	10	-	10	90	S290A699	S290A730			
65	91	76,1	94	1567	VII (*)	10	0	10	-	10	90	S290A699	S290A730			
			111	1850	VIII (*)	10	0	10	-	10	125	S290A700	S290A731			

(*) Minimum pilot pressure varies with differential pressure, see page V402-7.

⁽¹⁾ Calculation of the minimum pilot pressure at a ΔP of max. 10 bar with allowable backpressure (backpressure not recommended with liquids as waterhammer may occur).

- 32 and 50 mm operators, 4 bar minimum pilot pressure version: add 2 bar to the minimum pilot pressure of chart V or X, page V402-7..

- 63, 90 and 125 mm operators, 4 bar minimum pilot pressure version: add 1,5 bar to the minimum pilot pressure of chart VI, VII or VIII, page V402-7.

OPTIONS AND ACCESSORIES (see page V435/V436)

- Signaling box or compact signaling unit
- Stroke limiter for opening
- Manual safety device
- Optical position indicator on 32-50 mm operators, NC function
- Adapter plate for NAMUR pad mounting pilot (63-90-125 mm operators only)
- Oxygen service (except DN 65), pressure limited to 15 bar, temperature limited to + 60°C
- Vacuum applications up to 1,33 10⁻³ mbar
- NET-INOX passivation treatment on valve body with butt welding connection
- ATEX 94/9/EC versions for potentially explosive atmospheres

INSTALLATION

- The valves can be mounted in any position without affecting operation
- On clamp connection version: The connection stubs comply with ISO 2852.
The strength of the quick-disconnect connection clamp must be compatible with the maximum pressure applied to the valve
- On butt welding version: Compatible with ASTM 1, 2 and 3 oils
Butt welding connections comply with ISO 6761 and are compatible with pipe to ISO 1127
- Check temperature range of valve body and solenoid pilot valves for suitability. For probability of failure, contact us
- Installation/maintenance instructions are included with each valve

SPARE PARTS KITS

DN	spare parts kit no.	
	Ø 32 mm	Ø 50-63-90-125 mm
10	C140100	-
15	C140101	C131204 ⁽¹⁾
20	C140102	C131205 ⁽¹⁾
25	-	C131206 ⁽¹⁾
32	-	C131207 ⁽¹⁾
40	-	C131208 ⁽¹⁾
50	-	C131209 ⁽¹⁾
65	-	C131622 ⁽¹⁾

⁽¹⁾ Standard suffix VM also applies to kits (see V435).

- Not available

ORDERING EXAMPLES:

S	290	A	804	
S	290	B	137	SM2
S	290	A	155	SU
S	290	A	170	

pipe thread _____
basic number _____ suffix _____

ORDERING EXAMPLES KITS:

C140100	
C140205	
C140205	VM

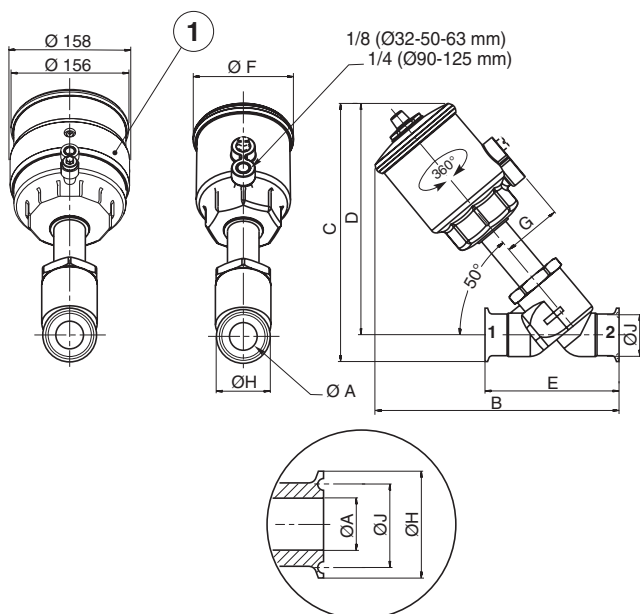
basic number _____ suffix _____

DIMENSIONS (mm), WEIGHT



TYPE 01-02-03-04-05

clamp connection
32, 50, 63, 90 and 125 mm operators
Fluid entry: under the disc at 2
above the disc at 1



type	operator diameter	DN	ØA	B	C	D	E	ØF	G	ØH	ØJ	weight ⁽¹⁾
01	32	10	10	102,5	104,7	87,7	80	43,5	27	34	27,5	0,4
		15	16	110,7	105,8	88,8	101,6	43,5	27	34	27,5	0,43
		20	20	111,6	113,6	88,4	114	43,5	27	50,5	43,5	0,59
02	50	15	15,5	153	158,5	141	102	69	43	34	27,5	0,9
		20	21,5	158	168	143	114	69	43	50,5	43,5	1
		25	26	167	170,5	145	129	69	43	50,5	43,5	1,4
03	63	15	15,5	182	186	169	102	85	50,5	34	27,5	1,2
		20	21,5	184	195	170	114	85	50,5	50,5	43,5	1,3
		25	26	191	197	172	129	85	50,5	50,5	43,5	1,7
		32	35	226	236	204	140	85	50,5	64	56,5	2,1
		40	41	235	247	215	159	85	50,5	64	56,5	2,8
		50	50	257	263	224	180	85	50,5	77,5	70,5	3,7
04	90	25	26	209	214	189	129	118	67	50,5	43,5	2,2
		32	35	245	253	221	140	118	67	64	56,5	2,7
		40	41	254	264	232	159	118	67	64	56,5	3,4
		50	50	275	280	241	180	118	67	77,5	70,5	4,2
		65	65	302	302,5	257	205	118	67	91	83,5	6,2
05	125	32	35	291	307	273	140	156	86	64	56,5	5,2
		40	41	301	316	284	159	156	86	64	56,5	5,9
		50	50	322,5	332	293	180	156	86	77,5	70,5	6,7
		65	65	349,5	353,5	308	205	156	86	91	83,5	8,8

⁽¹⁾ Weight of valve without pilot. Add 0,2 for dia. 125 mm operator NO.

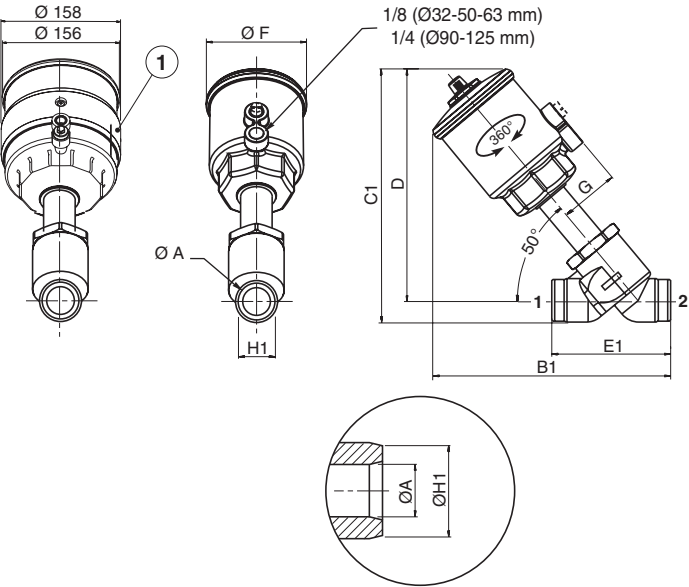
Solenoid pilot valves: see V439 (63 mm operator) / V444 (90 and 125 mm operators).

① Operator dia. 125 mm, NO function

DIMENSIONS (mm), WEIGHT



TYPE 01-02-03-04-05
butt welding connection
32, 50, 63, 90 and 125 mm operators
Fluid entry: under the disc at 2
above the disc at 1



① Operator dia. 125 mm, NO function

type	operator diameter	DN	ØA	B1	C1	D	E1	ØF	G	ØH1	weight ⁽¹⁾
01	32	10	10	102,5	96,9	87,7	80	43,5	27	17,2	0,37
		15	16	101,9	100,5	88,8	84	43,5	27	21,3	0,4
		20	20	103,6	102,4	88,4	98	43,5	27	26,9	0,45
02	50	15	15,5	144	152	141	84	69	43	21,3	0,9
		20	21,5	150	157	143	98	69	43	26,9	1
		25	26	159	162	145	113	69	43	33,7	1,3
03	63	15	15,5	172	181	169	84	85	50,5	21,3	1,2
		20	21,5	175	184	170	98	85	50,5	26,9	1,3
		25	26	183	190	172	113	85	50,5	33,7	1,6
		32	35	218	226	204	124	85	50,5	42,4	2
		40	41	227	240	215	143	85	50,5	48,3	2,7
04	90	50	50	249	254	224	164	85	50,5	60,3	3,6
		25	26	201	207	189	113	118	67	33,7	2,1
		32	35	237	243	221	124	118	67	42,4	2,6
		40	41	246	257	232	143	118	67	48,3	3,3
		50	50	267	271	241	164	118	67	60,3	4,1
05	125	65	65	294	295	257	189	118	67	76,1	6,1
		32	35	283	295	273	124	156	86	42,4	5,1
		40	41	294	308	284	143	156	86	48,3	5,8
		50	50	314,5	323	293	164	156	86	60,3	6,7
		65	65	341,5	346	308	189	156	86	76,1	8,7

⁽¹⁾ Weight of valve without pilot. Add 0,2 for dia. 125 mm operator NO.
Solenoid pilot valves: see V439 (63 mm operator) / V444 (90 and 125 mm operators).

32 mm operator	50 mm operator	63, 90 and 125 mm operators
NO function		
NC function, entry above the disc		