

FEATURES

- Valve in conformity with Regulation (EC) 1935-2004, the material of the wetted parts are listed in the chart of the Annex I of Regulation (EC) 1935/2004)
- All the material of the wetted parts are conform with FDA CFR21
- 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 2014/68/EU, category 1 (DN > 25) or article 4.3 (DN ≤ 25)
- The valves in conformity with IEC 61508 Standard (2010 route 2_H version) certified with integrity levels: SIL 2 for HFT = 0
- Valve in conformity with the provisions of the directive RoHS 2 (EU 2001/65)

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 7 (www.asco.com)

fluids (*)	temperature range	disc seal (*)
DN ≤ 50: air and gas groups 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

	Stainless steel body	All AISI 316L
Valve body	AISI 316L	AISI 316L ⁽²⁾
Stuffing box housing	AISI 316L	AISI 316L ⁽²⁾
Stem	Stainless steel	AISI 316L
Disc	Stainless steel	AISI 316L
Stuffing box packing	PTFE chevrons	PTFE chevrons
Wiper seal	PTFE	PTFE
Disc seal	PTFE	PTFE
Valve body seal	PTFE	PTFE

OTHER MATERIALS

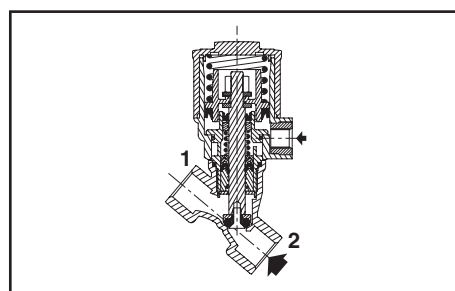
Operator Glass fibre filled PA
Optical position indicator PA 12, supplied standard on valves with 63, 90 and 125 mm operators

⁽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.

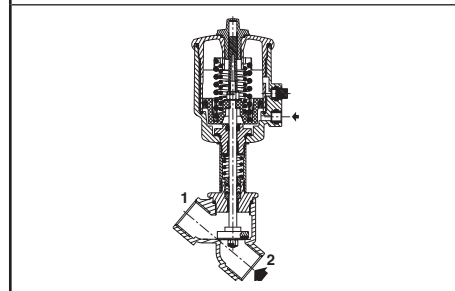
⁽²⁾ NET-INOX passivation treatment included.

SPECIFICATIONS

piping (ISO 6708)		flow coefficient Kv		pilot pressure (bar)		operating pressure differential (bar)					operator diameter	catalogue number	
pipe size	DN					min.	max.						
							air, inert gas, aggressive fluids (*)	water, oil, liquids, aggressive liquids (*)	steam (*) (≤184°C)	stainless steel		all AISI 316L	
(G*)		(m³/h)(l/min)	min.	max.						(mm)			
NC - Normally closed, entry under the disc ⁽¹⁾													
3/8	10	2,8 47	4 10	0	16	16	10	32	E290A791FB	E290A845FB			
1/2	15	4,1 68	4 10	0	12	12	10	32	E290A792FB	E290A846FB			
		4 10	0	16	16	10	50	E290A393FB	E290A402FB				
		4,9 82	2,5 10	0	16	16	10	63	E290B045FB	E290B088FB			
3/4	20	6,5 108	4 10	0	6	6	6	32	E290A793FB	E290A847FB			
		9,4 157	4 10	0	10	10	10	50	E290A394FB	E290A403FB			
					16	16	10	63	E290B048FB	E290B091FB			
1	25	12,8 213	4 10	0	6	6	6	50	E290A395FB	E290A404FB			
		16,5 275	4 10	0	10	10	10	63	E290B053FB	E290B096FB			
					16	16	10	90	E290B054FB	E290B097FB			
1 1/4	32	27 450	4 10	0	6	6	6	63	E290A059FB	E290A102FB			
					12	12	10	90	E290A060FB	E290A103FB			
			4 10	0	16	16	10	125	E290A646FB	E290A650FB			
		29 483	2,5 10	0	16	16	10	125	E290A645FB	E290A649FB			



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



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

SPECIFICATIONS

piping (ISO 6708)		flow coefficient Kv		pilot pressure (bar)		operating pressure differential (bar)				operator diameter	catalogue number	
pipe size	DN					min.	max.				stainless steel	all AISI 316L
		(G*)	(m³/h) (l/min)	min.	max.		air, inert gas, aggressive fluids (*)	water, oil, liquids, aggressive liquids (*)	steam (*) (≤184°C)			
NC - Normally closed, entry under the disc ⁽¹⁾												
1 1/2	40	45	750	4	10	0	4	4	4	63	E290A063FB	E290A106FB
							8	8	8	90	E290A064FB	E290A107FB
		48	800	4	10	0	16	16	10	125	E290A495FB	E290A508FB
2	50			2,5	10	0	10	10	10	125	E290A494FB	E290A507FB
		59	983	4	10	0	2,5	2,5	2,5	63	E290A067FB	E290A110FB
							6	6	6	90	E290A068FB	E290A111FB
2 1/2	65	66	1100	4	10	0	10	10	10	125	E290A498FB	E290A511FB
		94	1567	4	10	0	2	2	2	90	E290A500FB	E290A513FB
		111	1850	4	10	0	6	6	6	125	E290A501FB	E290A514FB
NO - Normally open, entry under the disc												
3/8	10	2,8	47	IX (*)	10	0	16	16	10	32	E290A794FB	E290A848FB
1/2	15	4,1	68	IX (*)	10	0	16	16	10	32	E290A795FB	E290A849FB
		4,9	82	I (*)	10	0	16	16	10	50	E290A396FB	E290A405FB
3/4	20	6,5	108	IX (*)	10	0	16	16	10	32	E290A796FB	E290A850FB
				I (*)	10	0	16	16	10	50	E290A397FB	E290A406FB
		9,4	157	II (*)	10	0	16	16	10	63	E290B070FB	E290B113FB
1	25			II (*)	10	0	16	16	10	63	E290B071FB	E290B114FB
		16,5	275	III (*)	10	0	16	16	10	90	E290B072FB	E290B115FB
				II (*)	10	0	16	16	10	63	E290A073FB	E290A116FB
1 1/4	32	27	450	III (*)	10	0	16	16	10	90	E290A074FB	E290A117FB
				IV (*)	10	0	16	16	10	125	E290A647FB	E290A651FB
		29	483	IV (*)	10	0	16	16	10	125	E290A647FB	E290A651FB
1 1/2	40	45	750	II (*)	10	0	11	11	10	63	E290A075FB	E290A118FB
				III (*)	10	0	16	16	10	90	E290A076FB	E290A119FB
		48	800	IV (*)	10	0	16	16	10	125	E290A502FB	E290A515FB
2	50	59	983	II (*)	10	0	7	7	7	63	E290A077FB	E290A120FB
				III (*)	10	0	13	13	10	90	E290A078FB	E290A121FB
		66	1100	IV (*)	10	0	16	16	10	125	E290A503FB	E290A516FB
2 1/2	65	94	1567	III (*)	10	0	7	7	7	90	E290A504FB	E290A517FB
		111	1850	IV (*)	10	0	16	16	10	125	E290A505FB	E290A518FB
NC - Normally closed, entry above the disc (version recommended for rapid-cycling steam applications)												
3/8	10	2,8	47	X (*)	10	0	10	-	10	32	E290A797FB	-
1/2	15	4,1	68	X (*)	10	0	10	-	10	32	E290A798FB	-
				V (*)	10	0	10	-	10	50	E290A399FB	-
		4,9	82	VI (*)	10	0	10	-	10	63	E290B079FB	-
3/4	20	6,5	108	X (*)	10	0	10	-	10	32	E290A799FB	-
				V (*)	10	0	10	-	10	50	E290A400FB	-
		9,4	157	VI (*)	10	0	10	-	10	63	E290B080FB	-
1	25	12,8	213	V (*)	10	0	10	-	10	50	E290A401FB	-
		16,5	275	VI (*)	10	0	10	-	10	63	E290B081FB	-
1 1/4	32	27	450	VI (*)	10	0	10	-	10	63	E290A082FB	-
1 1/2	40			VII (*)	10	0	10	-	10	90	E290A137FB	-
		45	750	VI (*)	10	0	10	-	10	63	E290A083FB	-
				VII (*)	10	0	10	-	10	90	E290A084FB	-
2	50	59	983	VI (*)	10	0	9	-	9	63	E290A085FB	-
				VII (*)	10	0	10	-	10	90	E290A086FB	-
2 1/2	65	94	1567	VII (*)	10	0	10	-	10	90	E290A625FB	-

(*) Minimum pilot pressure varies with differential pressure, see page: 7 (www.asco.com)

⁽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 [see page: 7 (www.asco.com)]

- 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 [see page: 7 (www.asco.com)]

OPTIONS AND ACCESSORIES [see pages: 37 (www.asco.com) / 43 (www.asco.com)]

- 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)
- NET-INOX passivation treatment on stainless steel body valve
- ATEX 2014/34/EU versions for potentially explosive atmospheres (www.asco.com)
- Other pipe connections are available on request

INSTALLATION

- The valves can be mounted in any position without affecting operation
- Compatible with ASTM 1, 2 and 3 oils
- Check temperature range of valve body and solenoid pilot valves for suitability. For probability of failure, contact us
- Pipe connections (G*) have standard combination thread according to ISO 228/1 and ISO 7/1
- 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	C140100FB	-
15	C140101FB	C131204FB
20	C140102FB	C131205FB
25	-	C131206FB
32	-	C131207FB
40	-	C131208FB
50	-	C131209FB
65	-	C131622FB

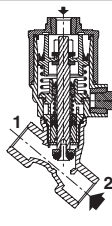
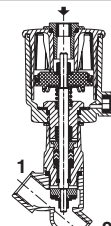
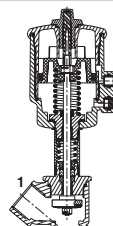
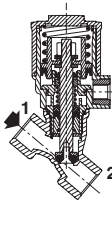
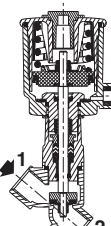
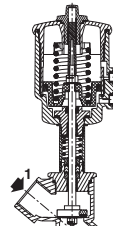
- Not available

ORDERING EXAMPLES:

E	290	A	792	FB
pipe thread		suffix		
basic number				

ORDERING EXAMPLES KITS:

C140100	FB
C140205	FB
basic number	suffix

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

DIMENSIONS (mm), WEIGHT (kg)



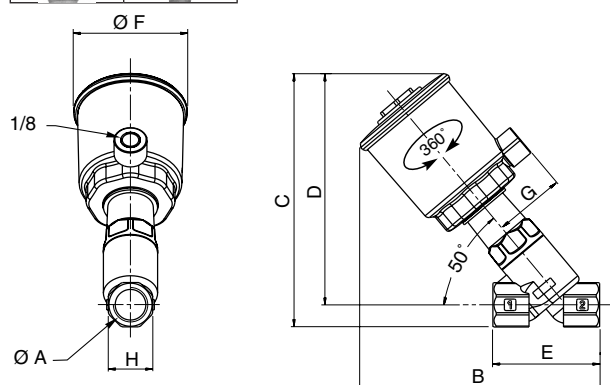
TYPE 01-02

32 and 50 mm operators

Fluid entry:

under the disc at 2

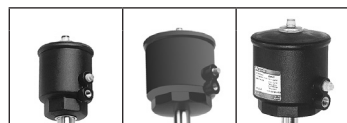
above the disc at 1



type	operator diameter	ØA	B	C	D	E	ØF	G	ØH	weight ⁽¹⁾
01	32 mm	3/8	92	93	81,5	55	43,5	27	23,5	0,35
		1/2	99	97	83,5	65	43,5	27	28	0,4
		3/4	107	104,5	88	75	43,5	27	30	0,45
02	50 mm	1/2	142	154,5	141	65	69	43	27	0,9
		3/4	150,5	159	143	75	69	43	32	1
		1	155	165	145	90	69	43	41	1,4

⁽¹⁾ Weight of valve without pilot.

Solenoid pilot valves, see page: [49](#) (www.asco.com) [32 and 50 mm operators].



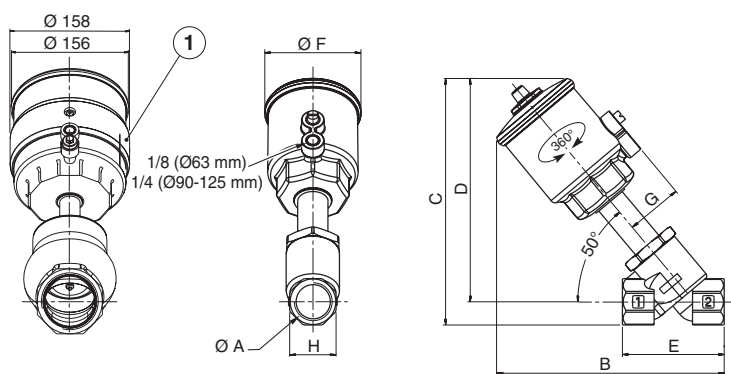
TYPE 03-04-05

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	ØA	B	C	D	E	ØF	G	ØH	weight ⁽¹⁾
03	63 mm	1/2	170	182	169	65	85	50,5	27	1,2
		3/4	175	185	170	75	85	50,5	32	1,3
		1	179	192	172	90	85	50,5	41	1,7
		1 1/4	217	229	204	110	85	50,5	50	2,1
		1 1/2	224	245	215	120	85	50,5	60	2,9
		2	249	259	224	150	85	50,5	70	3,7
04	90 mm	1	197	209	189	90	118	67	41	2,3
		1 1/4	236	246	221	110	118	67	50	2,7
		1 1/2	243	262	232	120	118	67	60	3,5
		2	267	276	241	150	118	67	70	4,3
		2 1/2	299	300	257	190	118	67	86	6,3
		1 1/4	284	298	273	110	156	86	50	5,2
05	125 mm	1 1/2	291	313,5	283,5	120	156	86	60	6
		2	315	328	293	150	156	86	70	6,8
		2 1/2	347	352	308	190	156	86	86	8,9

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

Solenoid pilot valves, see pages: [49](#) (www.asco.com) [63 mm operator] / [51](#) (www.asco.com) [90 and 125 mm operators]

All leaflets are available on: www.asco.com