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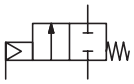
VALVES

pressure operated
bronze or stainless steel body
threaded ports, 3/8 to 2 1/2

NC



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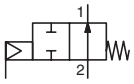


2/2
Series
E290

FEATURES

- *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*

GENERAL

Differential pressure	See «SPECIFICATIONS» [1 bar =100 kPa]
Maximum allowable pressure	16 bar
Ambient temperature range	-10°C to +60°C
Maximum viscosity	600 cSt (mm²/s)
Pilot fluid	Filtered air or water (1)
Max. pilot pressure	10 bar
Min. pilot pressure	See below and following page
Pilot fluid temperature	-10°C to +60°C
Response time	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

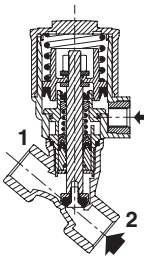
(✳) Ensure that the compatibility of the fluids in contact with the materials is verified

	Bronze body	Stainless steel body
Valve body	Bronze	AISI 316L
Stuffing box housing	Brass	AISI 316L
Stem	Stainless steel	Stainless steel
Disc	Brass	Stainless steel
Stuffing box packing	PTFE chevrons	PTFE chevrons
Wiper seal	FPM	FPM
Disc seal	PTFE	PTFE
Valve body seal	PTFE	PTFE

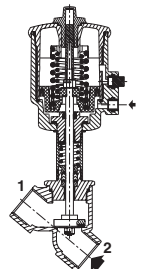
OTHER MATERIALS

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.



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.					
(G*)		(m³/h)	(l/min)	min.	max.		air, inert gas, aggressive fluids (✳)	water, oil, liquids, aggressive liquids (✳)	steam (✳) (≤184°C)	(mm)	bronze	stainless steel
NC - Normally closed, entry under the disc (1)												
3/8	10	2,8	47	4	10	0	16	16	10	32	-	**E290A791**
1/2	15	4,1	68	4	10	0	12	12	10	32	-	**E290A792**
		4,9	82	4	10	0	16	16	10	50	**E290A384**	**E290A393**
				2,5	10	0	16	16	10	63	**E290B002**	**E290B045**
3/4	20	6,5	108	4	10	0	6	6	6	32	-	**E290A793**
		9,4	157	4	10	0	10	10	10	50	**E290A385**	**E290A394**
							16	16	10	63	**E290B005**	**E290B048**
				2,5	10	0	12	12	10	63	**E290B004**	**E290B047**
1	25	12,8	213	4	10	0	6	6	6	50	**E290A386**	**E290A395**
		16,5	275	4	10	0	10	10	10	63	**E290B010**	**E290B053**
							16	16	10	90	**E290B011**	**E290B054**
				2,5	10	0	6	6	6	63	**E290B008**	**E290B051**
							12	12	10	90	**E290B009**	**E290B052**
1 1/4	32	27	450	4	10	0	6	6	6	63	**E290A016**	**E290A059**
							12	12	10	90	**E290A017**	**E290A060**
				2,5	10	0	3	3	3	63	**E290A014**	**E290A057**
							7	7	7	90	**E290A015**	**E290A058**
		29	483	4	10	0	16	16	10	125	**E290A642**	**E290A646**
				2,5	10	0	16	16	10	125	**E290A641**	**E290A645**

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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)		bronze	stainless steel
(G*)		(m³/h)	(l/min)	min.	max.					(mm)		
NC - Normally closed, entry under the disc (1)												
1 1/2	40	45	750	4	10	0	4	4	4	63	**E290A020**	**E290A063**
							8	8	8	90	**E290A021**	**E290A064**
				2,5	10	0	4	4	4	90	**E290A019**	**E290A062**
		48	800	4	10	0	16	16	10	125	**E290A482**	**E290A495**
				2,5	10	0	10	10	10	125	**E290A481**	**E290A494**
2	50	59	983	4	10	0	2,5	2,5	2,5	63	**E290A024**	**E290A067**
							6	6	6	90	**E290A025**	**E290A068**
				2,5	10	0	2,5	2,5	2,5	90	**E290A023**	**E290A066**
		66	1100	4	10	0	10	10	10	125	**E290A485**	**E290A498**
				2,5	10	0	5	5	5	125	**E290A484**	-
2 1/2	65	94	1567	4	10	0	2	2	2	90	**E290A487**	**E290A500**
		111	1850	4	10	0	6	6	6	125	**E290A488**	**E290A501**
NO - Normally open, entry under the disc												
3/8	10	2,8	47	IX (⁎)	10	0	16	16	10	32	-	**E290A794**
1/2	15	4,1	68	IX (⁎)	10	0	16	16	10	32	-	**E290A795**
		4,9	82	I (⁎)	10	0	16	16	10	50	**E290A387**	**E290A396**
				II (⁎)	10	0	16	16	10	63	**E290B026**	**E290B069**
3/4	20	6,5	108	IX (⁎)	10	0	16	16	10	32	-	**E290A796**
		9,4	157	I (⁎)	10	0	16	16	10	50	**E290A388**	**E290A397**
				II (⁎)	10	0	16	16	10	63	**E290B027**	**E290B070**
1	25	12,8	213	I (⁎)	10	0	16	16	10	50	**E290A389**	-
		16,5	275	II (⁎)	10	0	16	16	10	63	**E290B028**	**E290B071**
				III (⁎)	10	0	16	16	10	90	**E290B029**	**E290B072**
1 1/4	32	27	450	II (⁎)	10	0	16	16	10	63	**E290A030**	**E290A073**
				III (⁎)	10	0	16	16	10	90	**E290A031**	**E290A074**
		29	483	IV (⁎)	10	0	16	16	10	125	**E290A643**	**E290A647**
1 1/2	40	45	750	II (⁎)	10	0	11	11	10	63	**E290A032**	**E290A075**
				III (⁎)	10	0	16	16	10	90	**E290A033**	**E290A076**
		48	800	IV (⁎)	10	0	16	16	10	125	**E290A489**	**E290A502**
2	50	59	983	II (⁎)	10	0	7	7	7	63	**E290A034**	**E290A077**
				III (⁎)	10	0	13	13	10	90	**E290A035**	**E290A078**
		66	1100	IV (⁎)	10	0	16	16	10	125	**E290A490**	**E290A503**
2 1/2	65	94	1567	III (⁎)	10	0	7	7	7	90	**E290A491**	**E290A504**
		111	1850	IV (⁎)	10	0	16	16	10	125	**E290A492**	**E290A505**
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	-	**E290A797**
1/2	15	4,1	68	X (⁎)	10	0	10	-	10	32	-	**E290A798**
		4,9	82	V (⁎)	10	0	10	-	10	50	**E290A390**	**E290A399**
				VI (⁎)	10	0	10	-	10	63	**E290B036**	**E290B079**
3/4	20	6,5	108	X (⁎)	10	0	10	-	10	32	-	**E290A799**
		9,4	157	V (⁎)	10	0	10	-	10	50	**E290A391**	**E290A400**
				VI (⁎)	10	0	10	-	10	63	**E290B037**	**E290B080**
1	25	12,8	213	V (⁎)	10	0	10	-	10	50	**E290A392**	**E290A401**
		16,5	275	VI (⁎)	10	0	10	-	10	63	**E290B038**	**E290B081**
1 1/4	32	27	450	VI (⁎)	10	0	10	-	10	63	**E290A039**	**E290A082**
				VII (⁎)	10	0	10	-	10	90	**E290A136**	**E290A137**
1 1/2	40	45	750	VI (⁎)	10	0	10	-	10	63	**E290A040**	**E290A083**
				VII (⁎)	10	0	10	-	10	90	**E290A041**	**E290A084**
2	50	59	983	VI (⁎)	10	0	9	-	9	63	**E290A042**	**E290A085**
				VII (⁎)	10	0	10	-	10	90	**E290A043**	**E290A086**
2 1/2	65	94	1567	VII (⁎)	10	0	10	-	10	90	**E290A623**	**E290A625**
		111	1850	VIII (⁎)	10	0	10	-	10	125	**E290A624**	-

(⁎) 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 t he minimum pilot pressure of chart VI, VII or VIII [see page: **7** (www.asco.com)]

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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)
- 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 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	**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 page: 37 (www.asco.com)].
- Not available

ORDERING EXAMPLES:

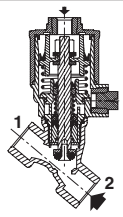
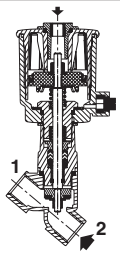
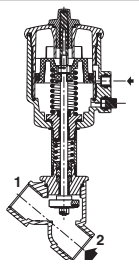
E 290 **A** 792
E 290 **B** 002 **SM2**
E 290 **A** 791 **SU**
E 290 **A** 082

pipe thread
basic number
suffix

ORDERING EXAMPLES KITS:

C140100
C140205
C140205 **VM**

basic number
suffix

32 mm operator	50 mm operator	63, 90 and 125 mm operators
		
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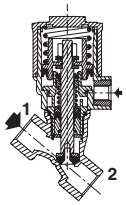	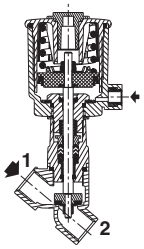	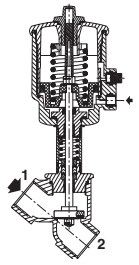
NC function, fluid entry above disc		

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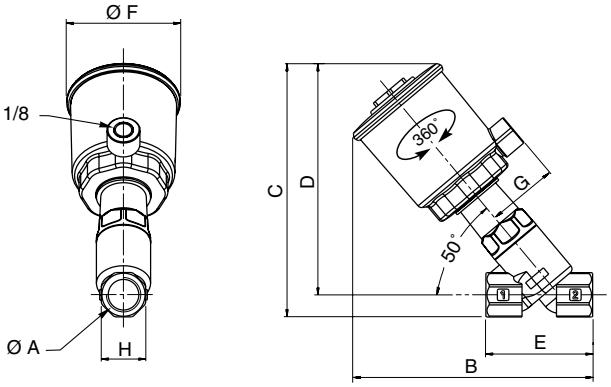
DIMENSIONS (mm), WEIGHT (kg)

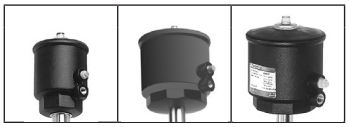
TYPE 01-02

32 and 50 mm operators
Fluid entry:
under the disc at 2
above the disc at 1



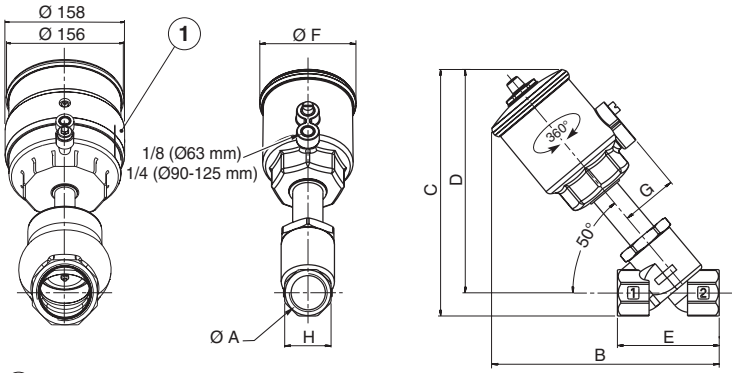
type	operator diameter	ØA	B	C	D	E	ØF	G	ØH	weight (1)
01	32 mm	3/8	92	93	81,5	55	43,5	27	23,5	0,35
		1/2	99	97	83,5	65	43,5	27	28	0,4
		3/4	107	104,5	88	75	43,5	27	30	0,45
02	50 mm	1/2	142	154,5	141	65	69	43	27	0,9
		3/4	150,5	159	143	75	69	43	32	1
		1	155	165	145	90	69	43	41	1,4

(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
05	125 mm	1 1/4	284	298	273	110	156	86	50	5,2
		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]

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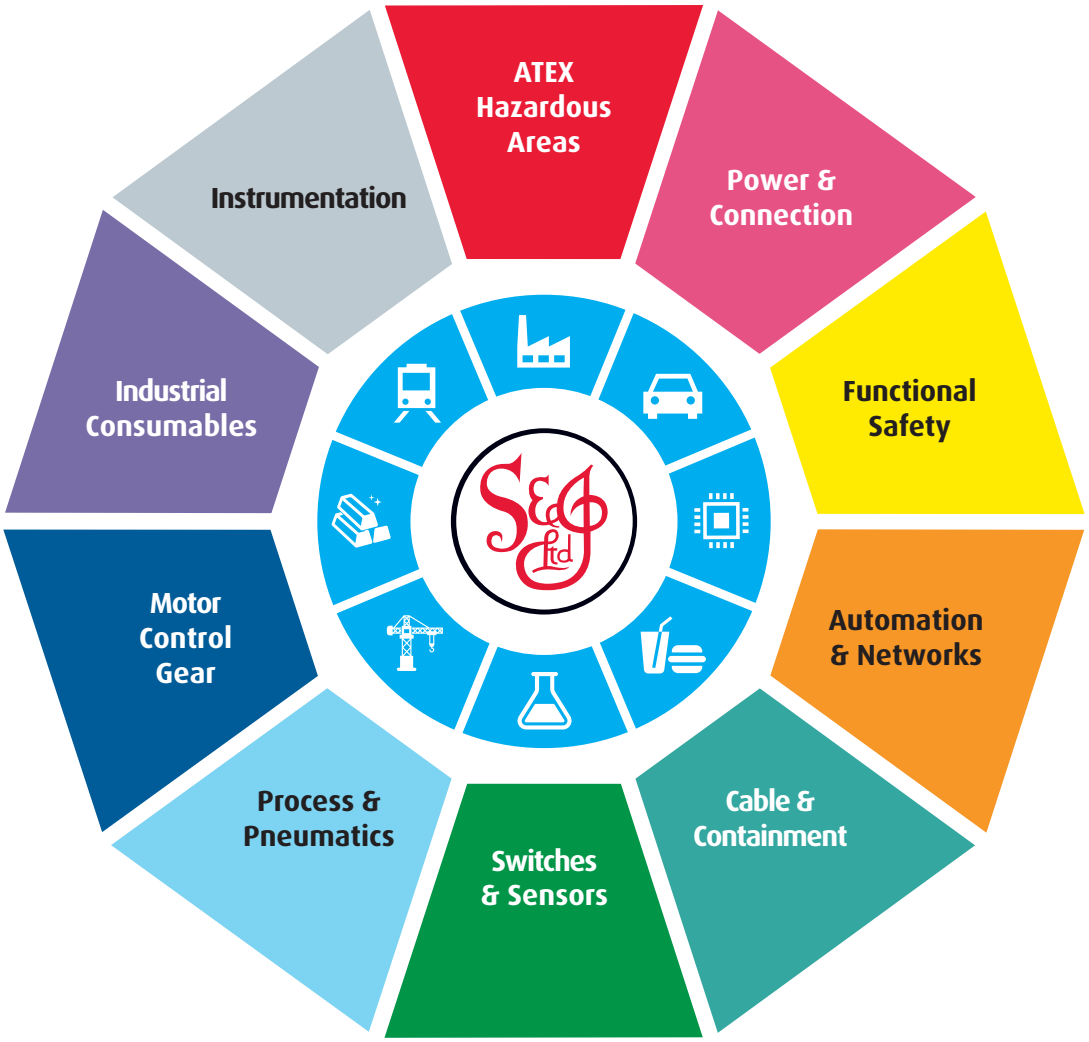

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