

STAINLESS STEEL ARES PNEUMATIC ANGLE-SEAT VALVE

FEATURES

The stainless steel ARES valve is intended for the automatic shut-off of networks of fluids. The full-bore, inclined-seat body and the excellent flow-rate coefficients allow for very low pressure drops. The body and the internal parts of stainless steel allow the ARES valve to be used on many fluids for pressures up to 25 bars and temperatures up to 180°C. The pneumatic actuator is of PA, orientable with a single- or double-effect, NAMUR interface. The admissible pressure differentials depend upon the size and the type of actuator, and on the compressed air supply pressure. Refer to diagrams for each application.

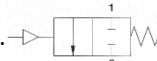


AVAILABLE MODELS

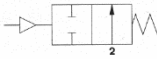
DN 15 to DN 50.

Air connection : G 1/8"

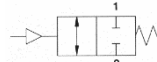
1450: NC single-effect threaded version G inlet on top of the disc.



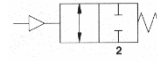
1452: NO single-effect threaded version G inlet under the disc.



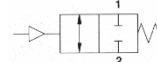
1454: NC single-effect threaded version G inlet under the disc



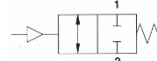
1460: NC single-effect welded version BW inlet under the disc.



1470: NC single-effect flange version inlet under the disc.



1480: NC single-effect clamp version inlet under the disc.



Option

LIMITS OF USE

Fluid WP:	25 bar (except for 1470 flanges PN 16)					
Fluid WT°:	-10° / +180°C					
Maximum viscosity of fluid	600 cst					
Ambient WT°:	-10° / +60°C					
Air supply pressure:	1450	1452	1454	1460	1470	1480
	See Table page 5					
	8 bar max					
Operation on saturated steam	9 bar / 180° C					

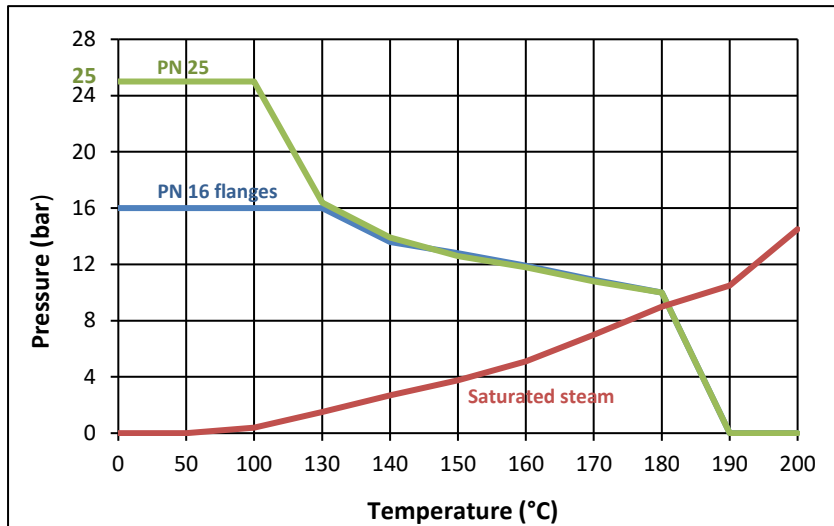
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DIRECTIVES AND MANUFACTURING STANDARDS

OBJECT	Standard	ON	OBJECT	Standard
Pressure Equipment Directive 2014/68/EC	DN 10 to DN 25: A4 § 3 non-submitted	1115	F to F dimensions - threaded	DIN 3202-4 M4
	DN 15 to DN 50: Category II		F to F dimensions - flanges	DIN 3202-F1
Stainless steel grade	EN 1503-1		BW connection	ISO 4200:
ATEX Directive	II2Gdc TXX		Flange connections:	EN 1092-1
Threads	ISO 228		Clamp connection	3A clamp

DIMENSIONS (mm) AND CONNECTIONS (1450 - 1452 - 1454)

DN	∅ Head (1450)	∅ Head (1452)	∅ Head (1454)	A	B	C	D	∅E	F	H	Ch. L
G 1/2"	50	50	50	190	156.5	169	44	70	85	15	25
G 3/4"	50	50	50	195	160.5	176	44	70	95	16.3	31
	-	-	63	213	178.5	194.4	50.5	84.4	95	16.3	31
G 1"	63	63	63	219	183	202	50.5	84.4	105	19.5	38
	-	-	90	259	223	242	66.2	116.4	105	19	38
G 1"1/4	-	63	-	226	185.5	209	50.5	84.4	120	19	47
	90	-	90	266	225.5	249	66.2	116.4	120	18	47
G 1"1/2	90	90	90	271	231	258	66.2	116.4	130	20	54
	110	-	110	307	266	294	77.4	140.6	130	20	54
G 2"	90	-	-	285	241	274	66.2	116.4	150	-	66
	110	110	110	321	276	310	77.4	140.6	150	-	66

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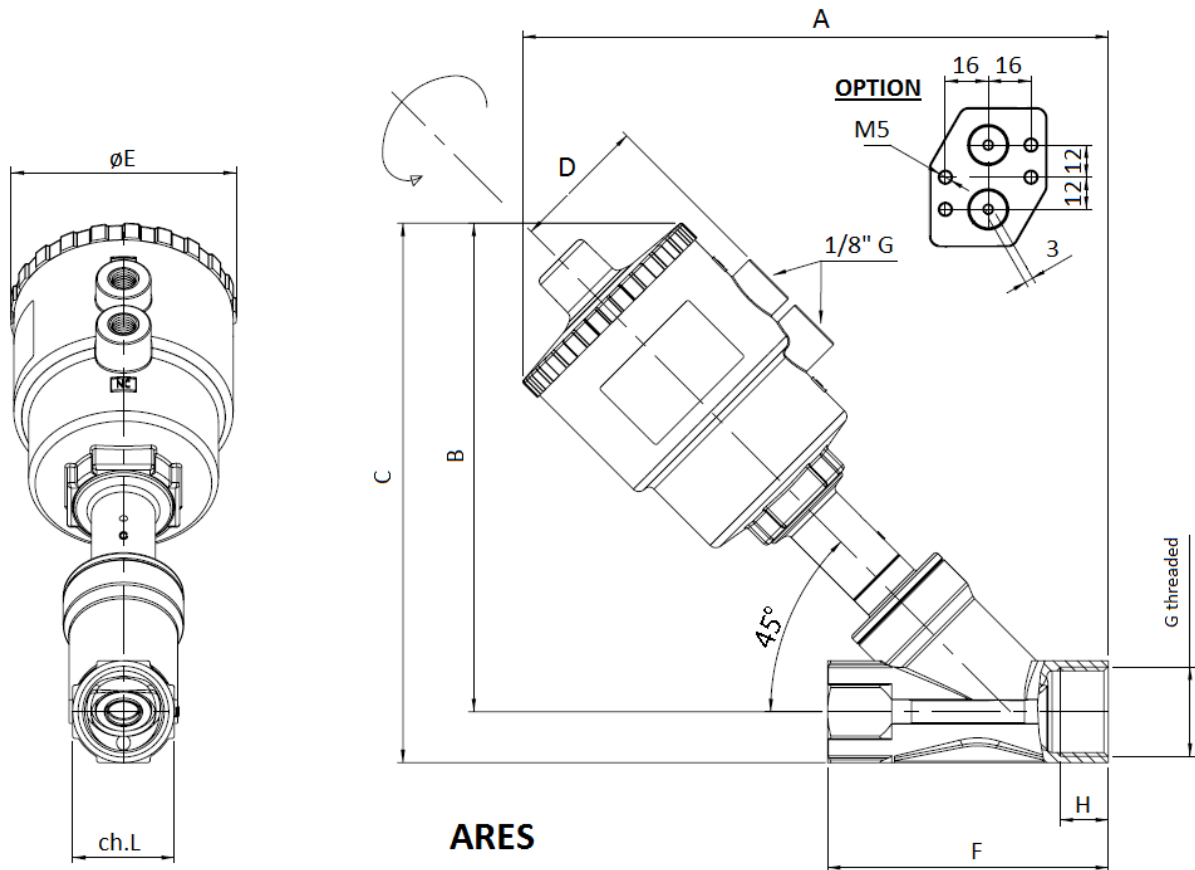
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WEIGHT (Kg) (1450 - 1452 - 1454)

DN	ø Head	Weight (kg)	ø Head	Weight (kg)	ø Head	Weight (kg)
	(1450)		(1452)		(1454)	
G 1/2"	50	0.98	50	0.98	50	0.98
G 3/4"	50	1.2	50	1.2	50	1.2
	-	-	-	-	63	1.8
G 1"	63	1.87	63	1.6	63	2.06
	-	-	-	-	90	3.58
G 1"1/4	-	-	63	2.18	-	-
	90	3.55	-	-	90	3.93
G 1"1/2	90	3.95	90	3.95	90	4.35
	110	4.95	-	-	110	4.4
G 2"	90	4.79	-	-	-	-
	110	5.85	110	5.85	110	6.65



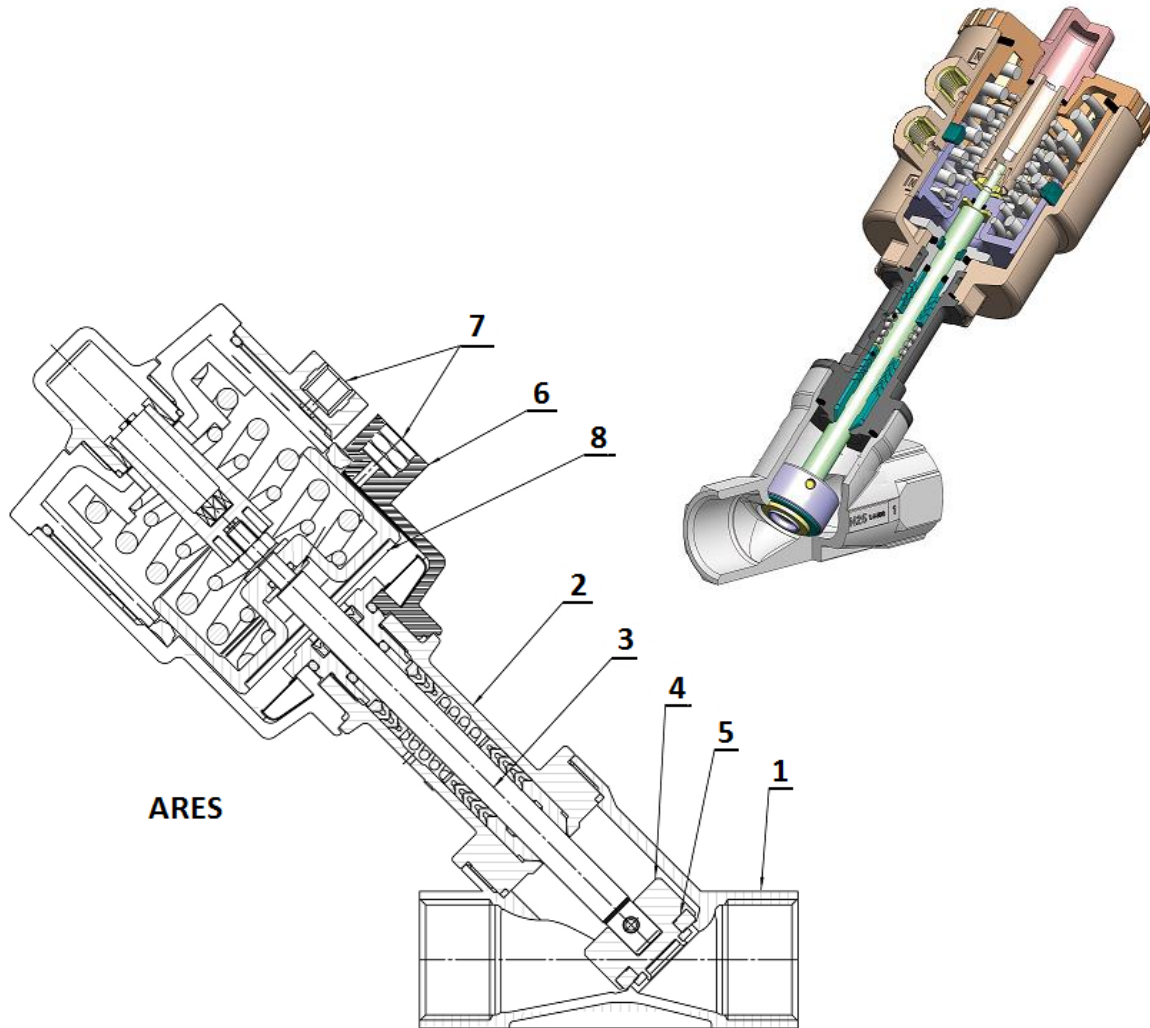
CONSTRUCTION

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STAINLESS STEEL ARES PNEUMATIC ANGLE-SEAT VALVE

No.	Name	Material
1	Body	AISI 316 stainless steel (CF8M)
2	Bonnet	AISI 316 stainless steel (CF8M)
3	Stem	AISI 316L
4	Disc	AISI 316L
5	Gasket	PTFE
6	Actuator	Polymide PA 66 + GF 30%
7	Threaded connection	AISI 303
8	Piston	PBT nickel-plated brass + GF 30%



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HYDRAULIC FEATURES

DN	∅ Head (1450)	∅ Head (1452)	∅ Head (1454)	Kv (m ³ /h)	Max pressure diff. (bar)	Min pressure diff. (bar)	ΔP max	Diagram (∅ Head)
G 1/2"	50	50	-	5.7	10	1.8	16	No. 1 / No. 5
	-	-	50			4		No. 9
G 3/4"	50	50	-	10.5	10	1.8	16	No. 1 / No. 5
	-	-	50	4		10	No. 9	
	-	-	63	10.8	10	4	16	No. 10
G 1"	63	63	-	20	10	1.8	16	No. 2 / No. 6
	-	-	63			4	11	No. 10
	-	-	90		8	4	16	No. 11
G 1"1/4	-	63	-	28.5	10	1.8	16	No. 6
	90	-	-	29	8	1.8	16	No. 3
	-	-	90			4	14	No. 11
G 1"1/2	90	90	-	46	8	1.8	16	No; 3 / No. 7
	-	-	90			4	11	No. 11
	110	-	-	46.5	8	1.8	16	No. 4
	-	-	110			4	16	No. 12
G 2"	90	-	-	59	8	1.8	16	No. 3
	110	110	-	67		1.8	16	No. 4 / No. 8
	-	-	110			4	10	No. 12

Diagram 1 :
Head Ø50 - (1450)

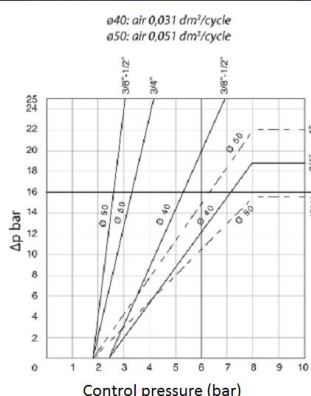


Diagram 2 :
Head Ø63 - (1450)

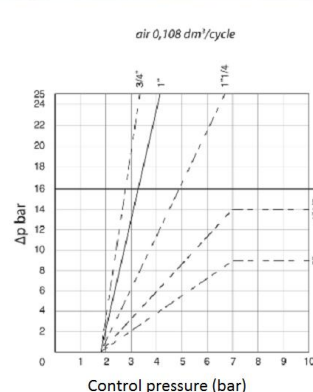


Diagram 3 :
Head Ø90 - (1450)

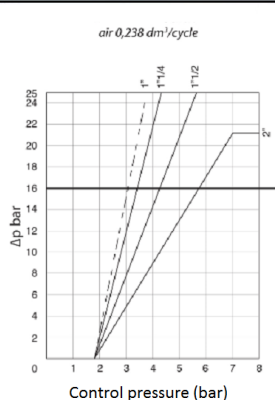
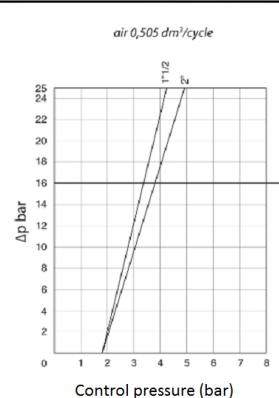


Diagram 4 :
Head Ø110 - (1450)



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Diagram 5 :
Head Ø50 - (1452)

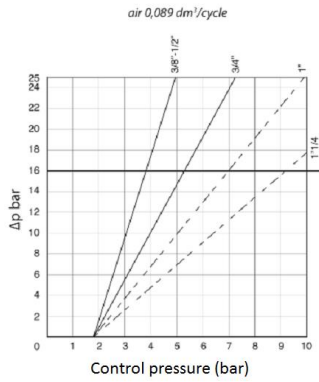


Diagram 6 :
Head Ø63 - (1452)

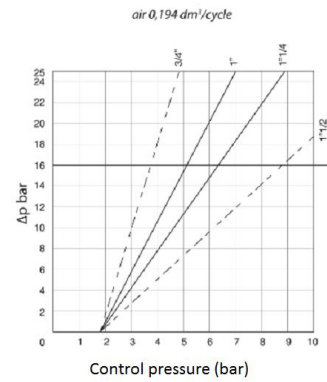


Diagram 7 :
Head Ø90 - (1452)

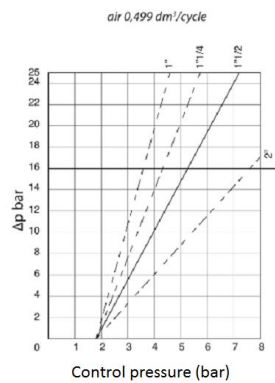


Diagram 8 :
Head Ø110 - (1452)

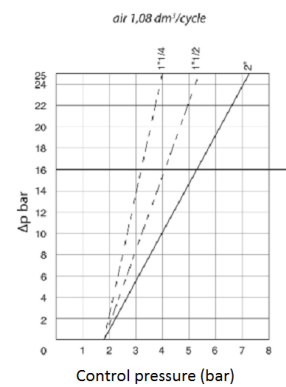


Diagram 9 :
Head Ø50 - (1454)

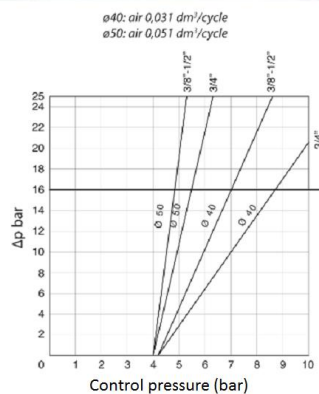


Diagram 10 :
Head Ø63 - (1454)

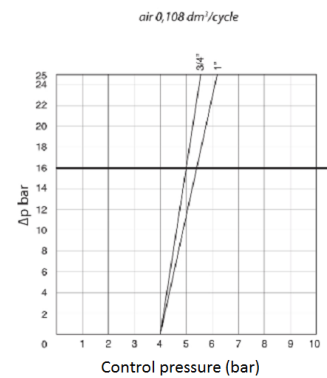


Diagram 11 :
Head Ø90 - (1454)

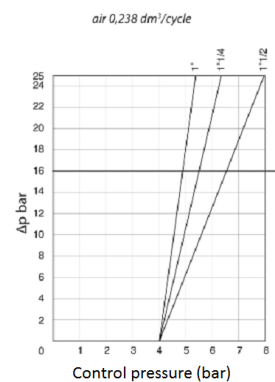
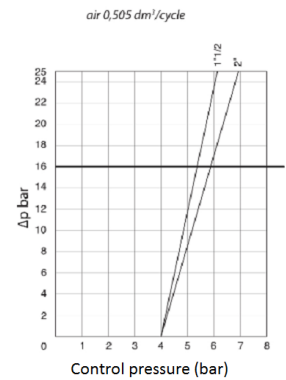


Diagram 12 :
Head Ø110 - (1454)



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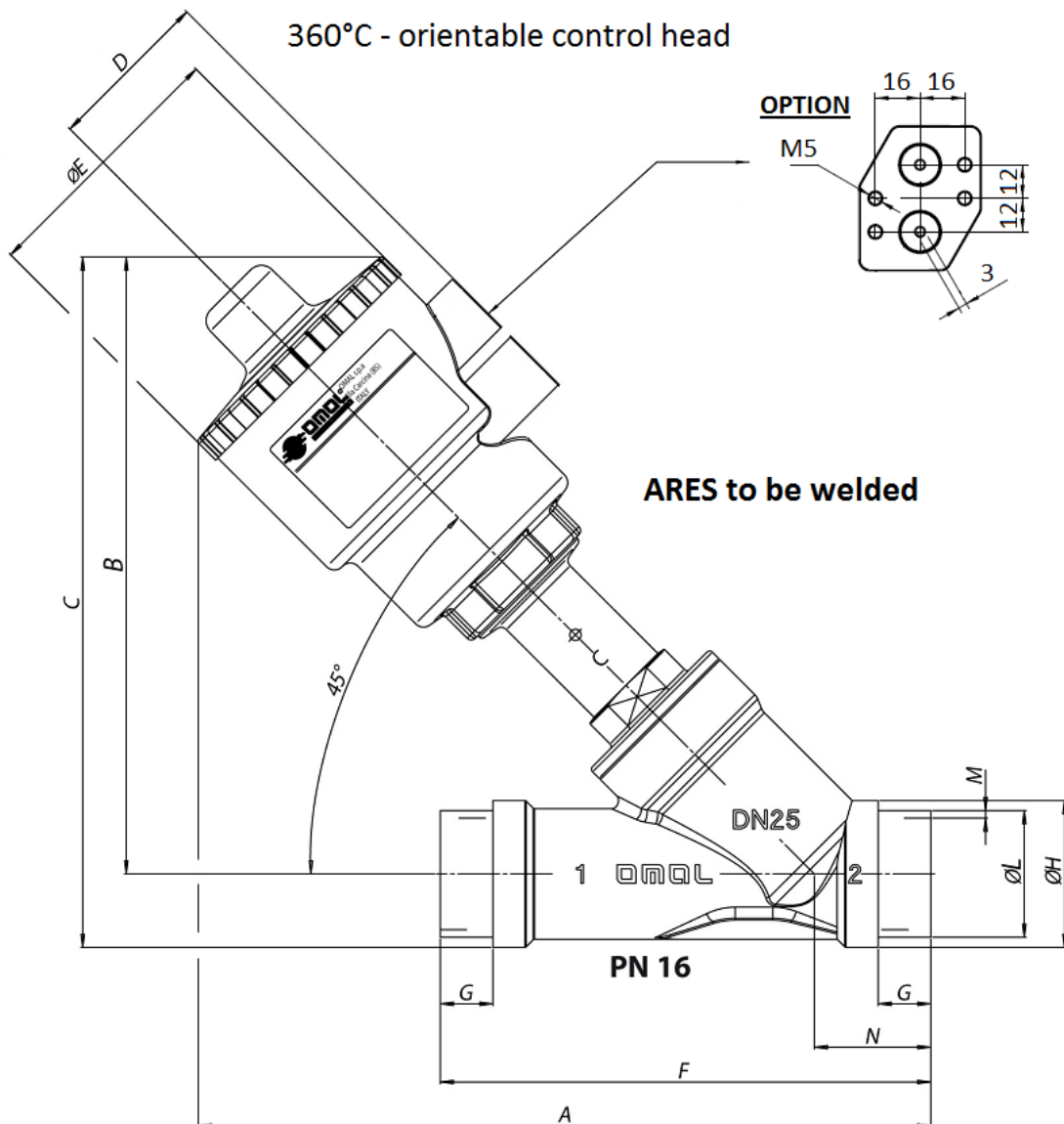
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DIMENSIONS (mm) - WEIGHT (kg) And Connections (1460 BW)

DN	∅ Head (1460)	A	B	C	D	∅E	F	G	∅H	∅L	M	N	Weight (kg)
15	50	180	156	170	44	70	100	12	26.3	21.3	1.6	26	1
20	50	190	160	177	44	70	115	14	33	26.9	1.6	31	1.2
25	63	214	182	202	50.5	84.4	130	14	39	33.7	2	32.96	1.6
32	90	258	226	251	66.2	116.4	145	14	49	42.4	2	34	3.1
40	90	260	230	258	66.2	116.4	160	14	55	48.3	2	37.6	3.7
50	110	317	276	310	77.4	140.6	175	16	67.4	60.3	2.3	41.37	5



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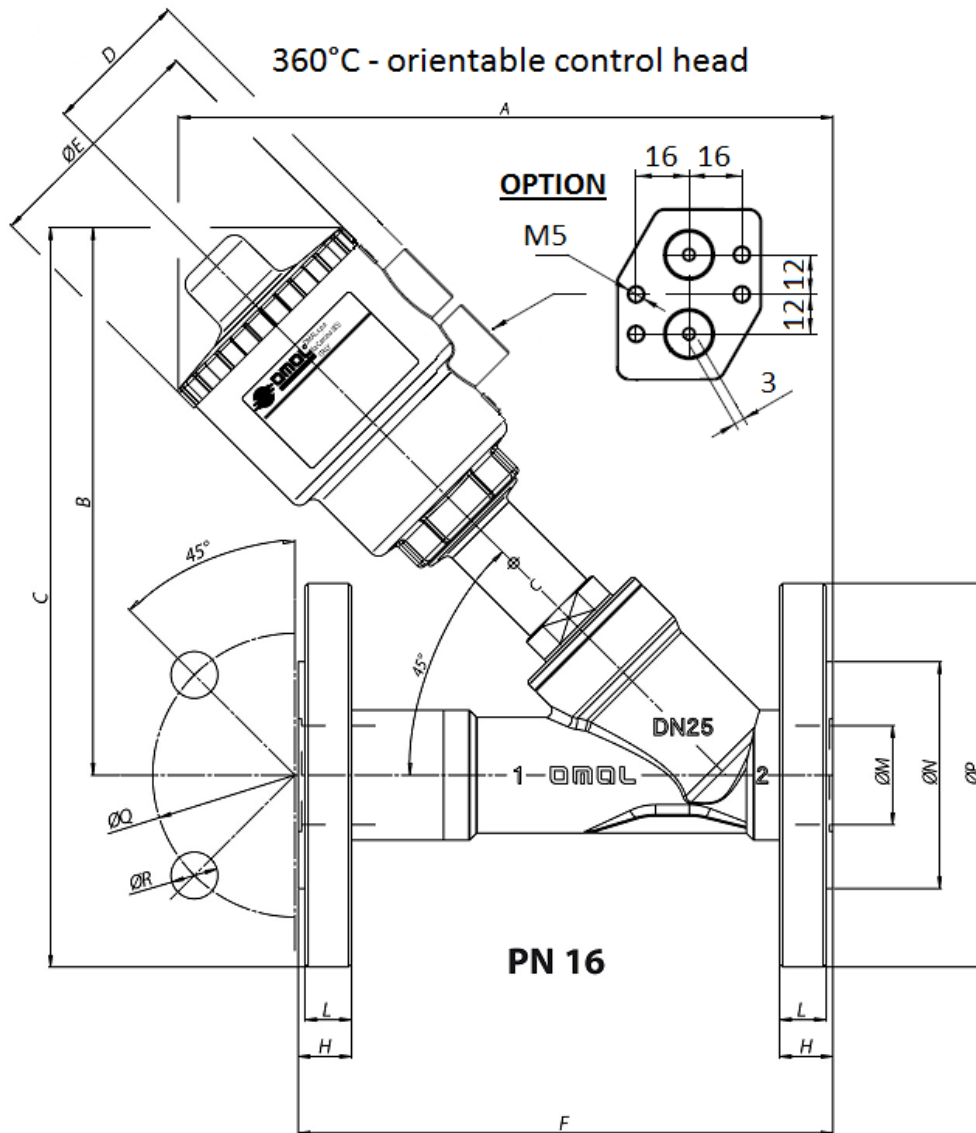
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STAINLESS STEEL ARES PNEUMATIC ANGLE-SEAT VALVE

DIMENSIONS (mm) - WEIGHT (kg) And Connections (1470 with flanges)

DN	∅ Head (1470)	A	B	C	D	∅E	F	H	L	∅M	∅N	∅P	∅Q	∅R	Weight (kg)
15	50	182.5	156	203.5	44	70	130	16	14	18.1	45	95	65	14	1
20	50	192.3	160	212.5	44	70	150	18	16	23.7	58	105	75	14	2.2
25	63	216.6	182	239.5	50.5	84.4	160	18	16	29.7	68	115	85	14	2.2
32	90	260.5	226	296	66.2	116.4	180	18	16	38.4	78	140	100	18	2
40	90	268.6	230	305	66.2	116.4	200	18	15	44.3	88	150	110	18	5.5
50	110	317.9	276	358.5	77.4	140.6	230	18	15	55.7	102	165	125	18	7



ARES with flanges

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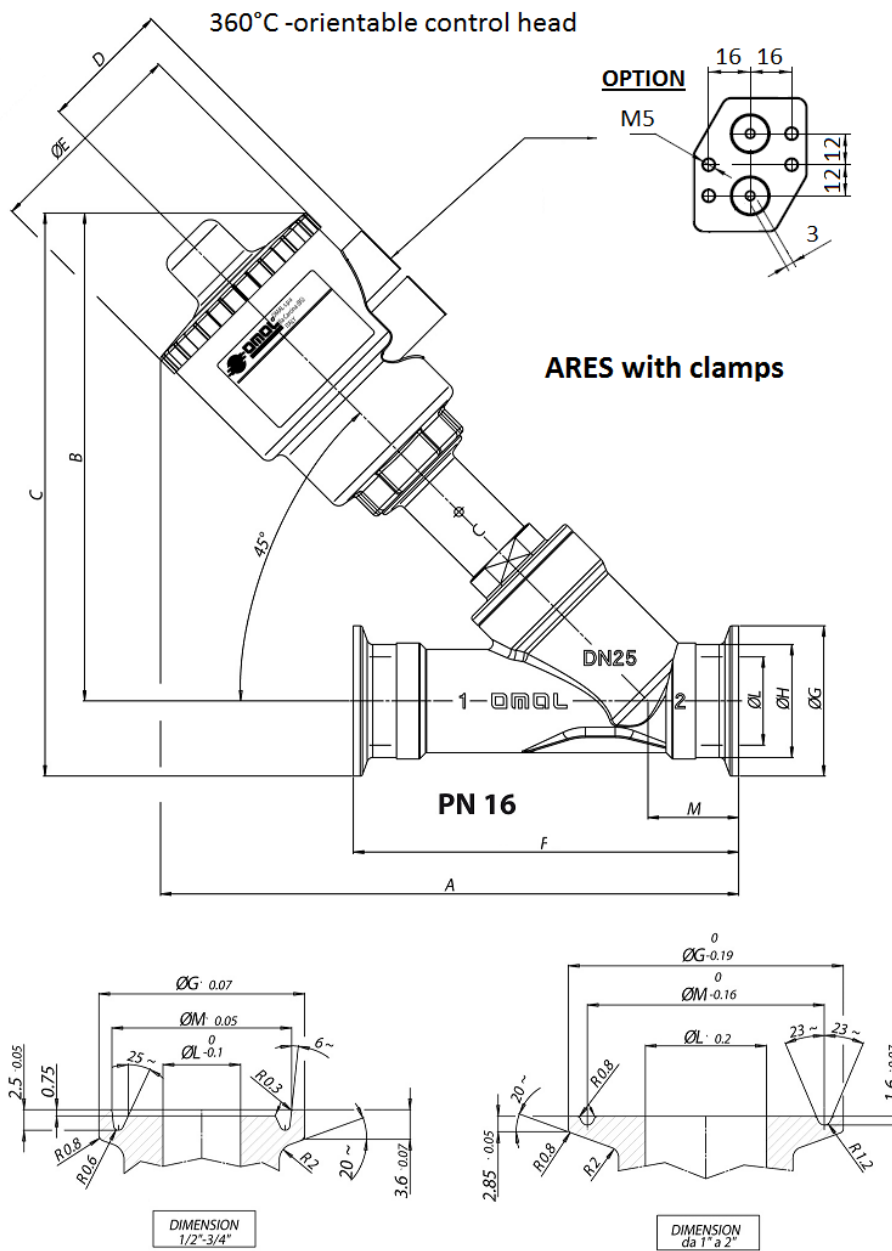
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DIMENSIONS (mm) - WEIGHT (kg) And Connections (1480 with clamp)

DN	∅ Head (1480)	Passage (mm)	A	B	C	D	∅E	F	∅G	∅H	∅L	M	Weight (kg)
G 1/2"	50	9.5*	179	156	168.5	44	70	100	25.2	19	9.5	22	1
G 3/4"	50	15	181.5	156	168.6	44	70	115	25.2	19	15.8	22	1.7
G 1"	63	20	207.3	178	203.3	50.5	84.4	130	50.5	23	22.2	43.5	2.1
G 1"1/2	90	32	214.6	186	211.3	50.5	84.4	160	50.5	38	34.9	43.5	2.8
G 2"	110	40	300.7	266	298	77.4	140.6	175	64	54	47.6	56.5	5

*The valve passage is 15 mm, and the reduction to 9.5 mm is due to the clamp passage



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INSTALLATION

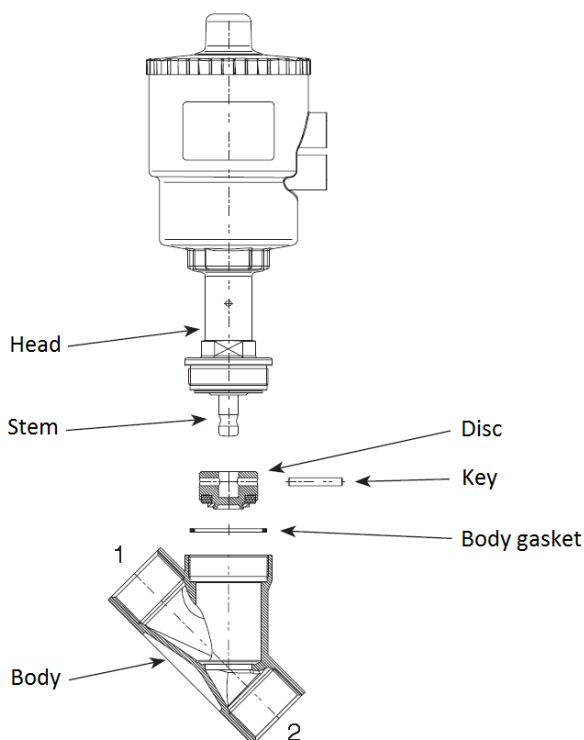
The ARES inclined-seat valve can be installed in any position. The actuator is 360° orientable clockwise to facilitate the assembly of the solenoid valve. The connection depends on the type of valve (Normally open or closed, with double effect).

- 1 - Before any installation, cut-off the piping upstream and downstream.
- 2 - Depressurise and purge the pipe.
- 3 - Wait for it to cool down to ambient temperature.
- 4 - Wear the safety equipment required for this type intervention (gloves and goggles).
- 5 - Screw the valve onto the piping following the assembly direction shown by the arrow on the body.
- 6 - Do not use the valve as a lever, and do not excessively tighten the fittings.
- 7 - Connect the actuator to the pneumatic control network.
- 8 - Check the valve operation using the indicator.

SERVICING

- 1 - The ARES valve does not require any special servicing.
- 2 - In case of loss sealing in-line, check the state of the disc reference mark 5, and the air supply pressure.
- 3 - In case of leak at the packing gland, check the state of the packing gland.
- 4 - In case of loss of tightness at the control head, check the state of the O-ring.

Tightening torque (Nm)	
G 3/8" - G 1/2"	40/45
G 3/4"	45/50
G 1"	55/60
G 1"1/4	65/70
G 1"1/2	75/80
G 2"	80/90



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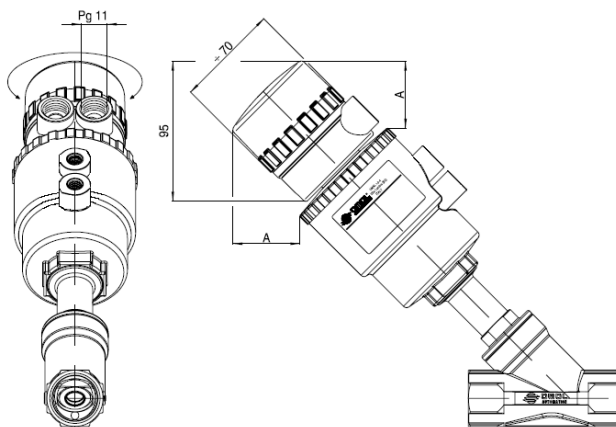
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ACCESSORIES

1 - Switch boxes

This closed position and open position limit switch box is suitable for all valves of the ARES range. It can receive two types of contacts: dry mechanical contacts or inductive detectors (see diagram below).

Features		Actuator	A (mm)	Code	
				Inductive detectors	Mechanical contacts
Body material	PA	DN 50	52.1	985016	985008
IP Code	IP 65	DN 63	47.5	985017	985009
Ambient temperature	- 20 °C / + 70 °C	DN 90	37.7	985018	985010
Electrical connection	2 x PG 11	DN 110	29.5	985019	985011



NAMUR EEx ia inductive detectors		Mechanical contacts	
Nominal voltage	8 Vdc	Upper contact: open valve	
Intensity at start	1 mA	Lower contact: closed valve	
Holding current	3 mA	AC maximum current	5A / 250V
Ambient temperature	- 25 °C / + 100 °C	DC maximum current	1A / 250V
Different possible configurations		Configuration	
1 Open valve position contact		2 x Open and closed valve position contacts	
1 Closed valve position contact			
2 x Open and closed valve position contacts			

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2 - Pilot solenoid valve

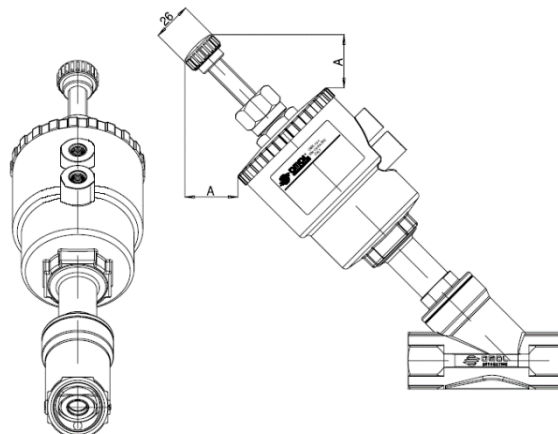
Two types of solenoid valves can be mounted :

- 3/2 solenoid valve with G 1/8" BSP connection.
- 3/2 or 5/2 solenoid valve with NAMUR interface. (Mounting pad option)

3 - Manual override

This accessory makes it possible to open the valve in case of emergency (Failure of the pilot pressure, loss of control signal). It is available on all NC versions.

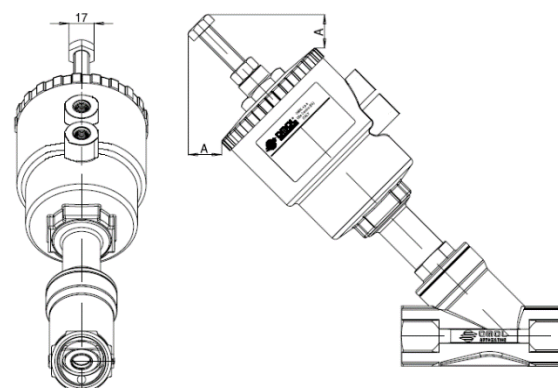
Actuator	A (mm)	Code
DN 50	35.8	985000
DN 63	35.8	985001
DN 90	29.5	985002
DN 110	29.5	985003



4 - travel limiter

This accessory limits the travel of the actuator piston during the opening stage, and thus controls the flow-rate. Available on all versions. On the NO single-effect versions, it can serve as manual override.

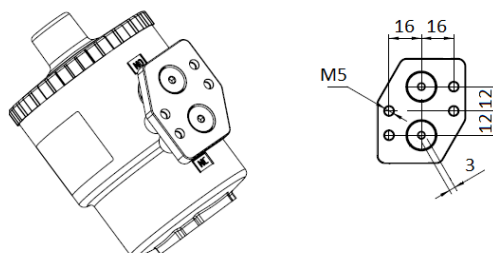
Actuator	A (mm)	Code
DN 50	25.5	985004
DN 63	21.5	985005
DN 90	5.2	985006
DN 110	5.9	985007



5 - OPTION (mounting pad)

Mounting pad with NAMUR interface for connection to a solenoid valve.

Mounting pad	Code
P.A	985020



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STAINLESS STEEL ARES PNEUMATIC ANGLE-SEAT VALVE

SPARE PARTS

Code	Name
985051	1/2" T50-63 Ares replacement kit
985052	3/4" T50-63 Ares replacement kit
985053	1" T50-63 Ares replacement kit
985054	1" T90-110 Ares replacement kit
985055	1/4" T50-63 Ares replacement kit
985056	1" 1/4 T90-110 Ares replacement kit
985058	1" 1/2 T90-110 Ares replacement kit
985060	2" T90-110 Ares replacement kit

The spare parts required for repairing the ARES inclined-seat valves are provided in a replacement KIT containing gaskets for the cover, the plug, and the disc. Maintenance can be carried out without removing the valve from the installation.

Information given as an indication only, and subject to possible modifications

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