

ARES type STAINLESS STEEL PNEUMATIC ACTUATED VALVE

CHARACTERISTICS

The ARES stainless steel pneumatic actuated valve is dedicated to the automatic shut-off of fluid pipework. The full bore angle body and the great flow rates permit to have very limited pressure drops. The ARES valve stainless steel body and internal parts permit its use on many fluids until a 16 bar pressure and 180 °C.

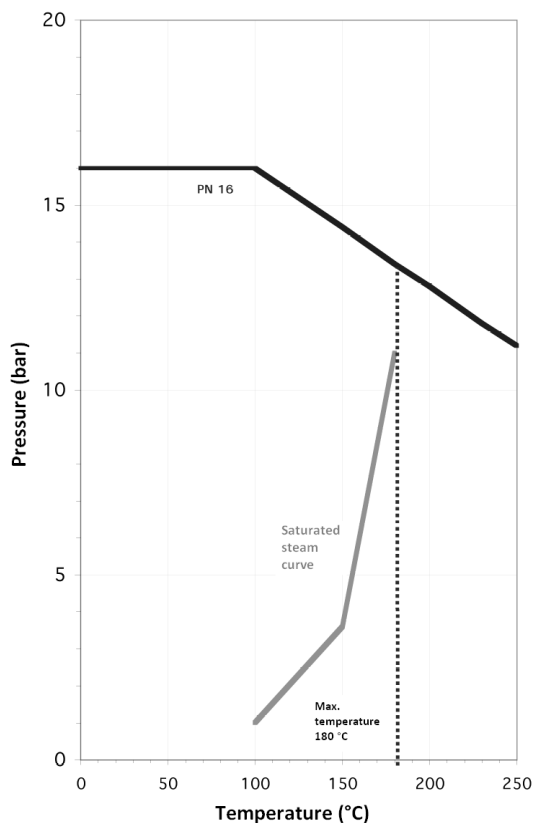
This PA pneumatic actuator can easily be oriented and has a NAMUR interface for the connection to single or double effect solenoid pilot valve.

The different allowable differential pressures vary depending on the electric actuator size and type and on the compressed air supply. Please refer to the diagrams for each application.

LIMITS OF USE

Max. body pressure	PN 16
Max. differential pressures	Refer to the below tables
Min. / max. allowable temperature (TS)	-10 °C / +180 °C
Room temperature	-10 °C / +60 °C
Max. fluid viscosity	600 cst

PRESSURE / TEMPERATURE DIAGRAM



AVAILABLE ITEMS

3/8" to 2" stainless steel, single effect NC and NO, double effect

KV VALUES (m³/h)

DN	3/8"	1/2"	3/4"	1"	1" 1/4	1" 1/2	2"
Kv	4,9	5,7	10,5	20	29	46	67

ALLOWABLE DIFFERENTIAL PRESSURES

NC single effect version: refer to FT1411 datasheet

NO single effect version: refer to FT1412 datasheet

Double effect version: refer to FT1412 datasheet

PILOT FLUIDS

Dry or lubricated compressed air, neutral fluids

Maximum pressure: 10 bar

Maximum temperature 60 °C

SOLENOID PILOT VALVE

Single effect 3/2 solenoid pilot valve

Double effect 5/2 solenoid pilot valve


Standard NAMUR interface

1/8" BSP connection

INSTALLATION

The ARES valve can be installed in any position.

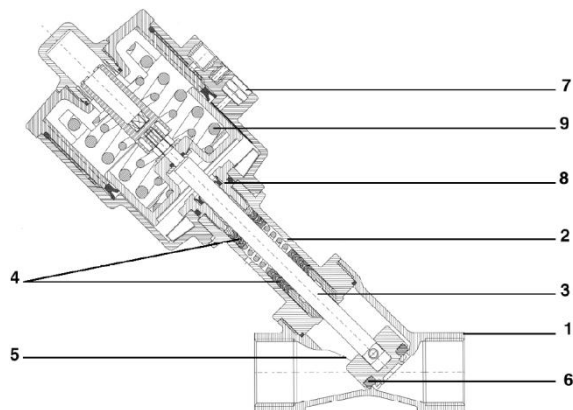
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CONSTRUCTION

1	Body	AISI 316 stainless steel
2	Bonnet	AISI 316 stainless steel
3	Stem	AISI 316 stainless steel
4	Gland packing	PTFE-Graphite
5	Clack	AISI 316 stainless steel
6	Bearing	PTFE
7	Actuator	PA 66 + fiberglass 30%
8	Guide	AISI 303
9	Piston	Chromium-plated brass



OPTIONS

NPT connections
 Solenoid pilot valve
 Stroke limiter
 Manual override
 Limit switch box (Refer to FT1413 datasheet)

MOUNTING AND MAINTENANCE DATASHEET

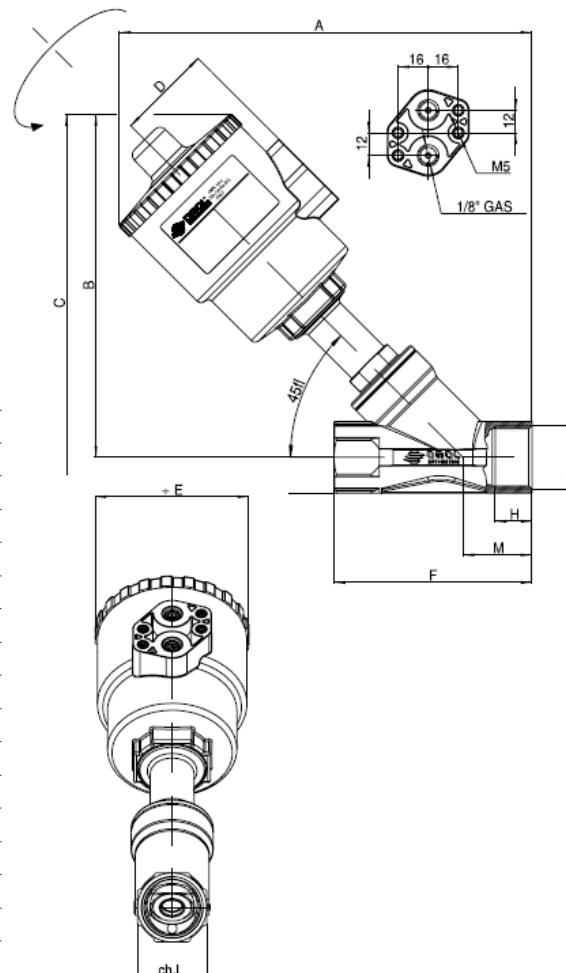
Refer to NO1410 datasheet

SPARE PARTS

Refer to NO1410 datasheet

DIMENSIONS (mm) AND WEIGHT (kg)

DN	G	Cylinder	A	B	C	D	E	F	H	Ch L	Weight
10	3/8"	50	190	156	169	44	70	85	12	25	1,1
15	1/2"	50	190	156	169	44	70	85	15	25	1
20	3/4"	50	195	160	176	44	70	95	16,3	31	1,2
20	3/4"	63	213	178	194,4	50,5	84,4	95	16,3	31	1,2
25	1"	50	200	164	183	44	70	105	19,5	38	1,6
25	1"	63	219	182	202	50,5	84,4	105	19,5	38	1,6
25	1"	90	259	222	242	66,2	116,4	105	19,5	38	1,7
32	1 1/4"	50	208	168	191	44	70	120	19	47	2
32	1 1/4"	63	226	186	209	50,5	84,4	120	19	47	2
32	1 1/4"	90	266	226	249	66,2	116,4	120	19	47	3
32	1 1/4"	110	302	261	285	77,4	140,6	120	19	47	3,6
40	1 1/2"	63	231	190	218	50,5	84,4	130	18	54	2,3
40	1 1/2"	90	271	230	258	66,2	116,4	130	18	54	3,4
40	1 1/2"	110	307	266	294	77,4	140,6	130	18	54	4
50	2"	63	245	200	233	50,5	84,4	150	20	66	3,4
50	2"	90	285	240	274	66,2	116,4	150	20	66	4,3
50	2"	110	321	276	310	77,4	140,6	150	20	66	5,3



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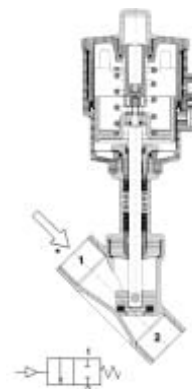
ARES type STAINLESS STEEL PNEUMATIC ACTUATED VALVE

DIFFERENTIAL PRESSURES FOR NORMALLY CLOSED (NC) SINGLE EFFECT VERSION

1. NC SINGLE EFFECT VERSION WITH FLUID INLET ABOVE THE CLACK

This version is recommended on compressible fluids, such as steam.

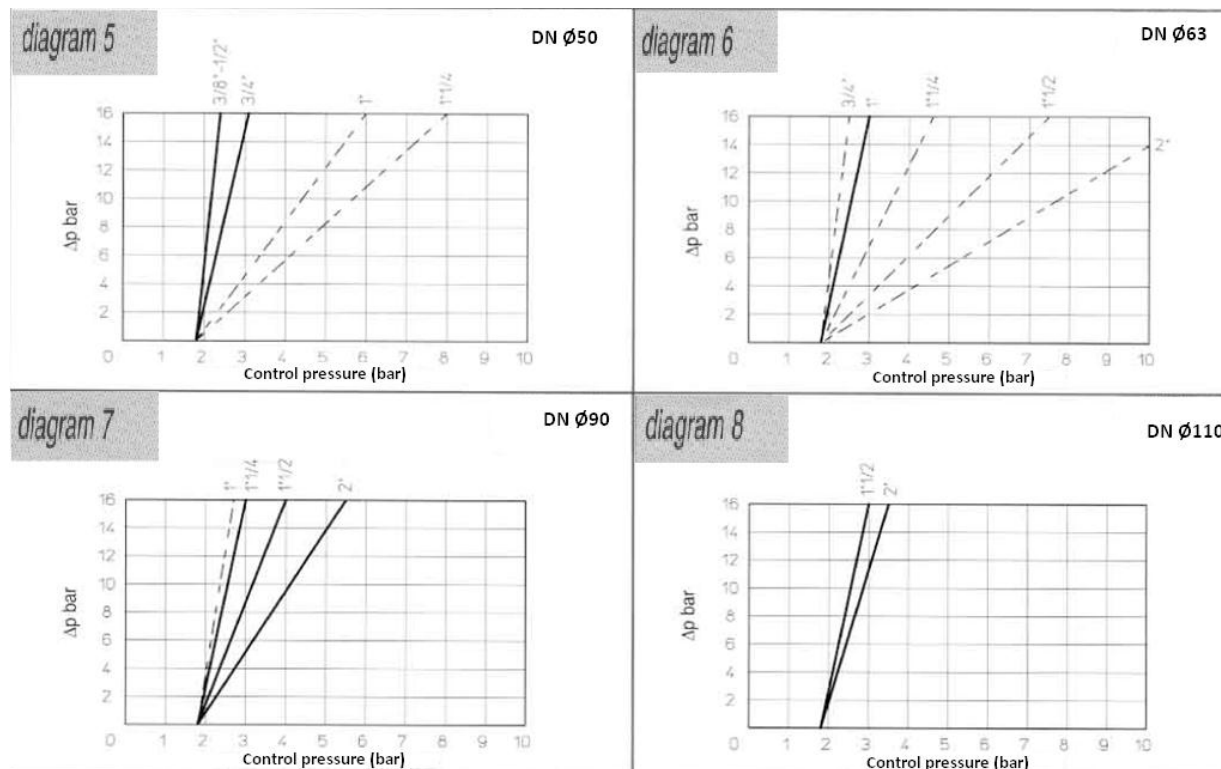
This version is not recommended on liquids as it generates water hammers.



CONTROL PRESSURES AND ALLOWABLE DIFFERENTIAL PRESSURES (FROM 1 TO 2)

Code	BSP	DN	Kv (m3/h)	Electric actuator	Min. control pressure	Max. control pressure	Diagram to refer to	Weight (kg)
	3/8"	10	4,9	50	4	10	5	1
	1/2"	15	5,7	50	4	10	5	1
	3/4"	20	10,5	50	4	10	5	1,2
	3/4"	20	10,8	63	4	10	6	1,6
	1"	25	20	63	4	10	7	3,1
	1 1/4"	32	29	90	4	10	7	3,7
	1 1/2"	40	46	90	4	8	8	4,6
	1 1/2"	40	46,5	110	4	8	7	4,4
	2"	50	67	110	4	8	8	7,6

The dotted lines indicate the items available on request.



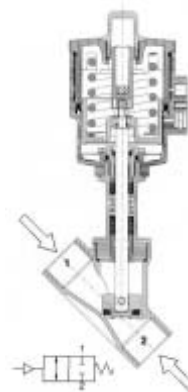
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2. NC SINGLE EFFECT VERSION WITH FLUID INLET BELOW THE CLACK

This version is recommended on liquids to prevent water hammers.



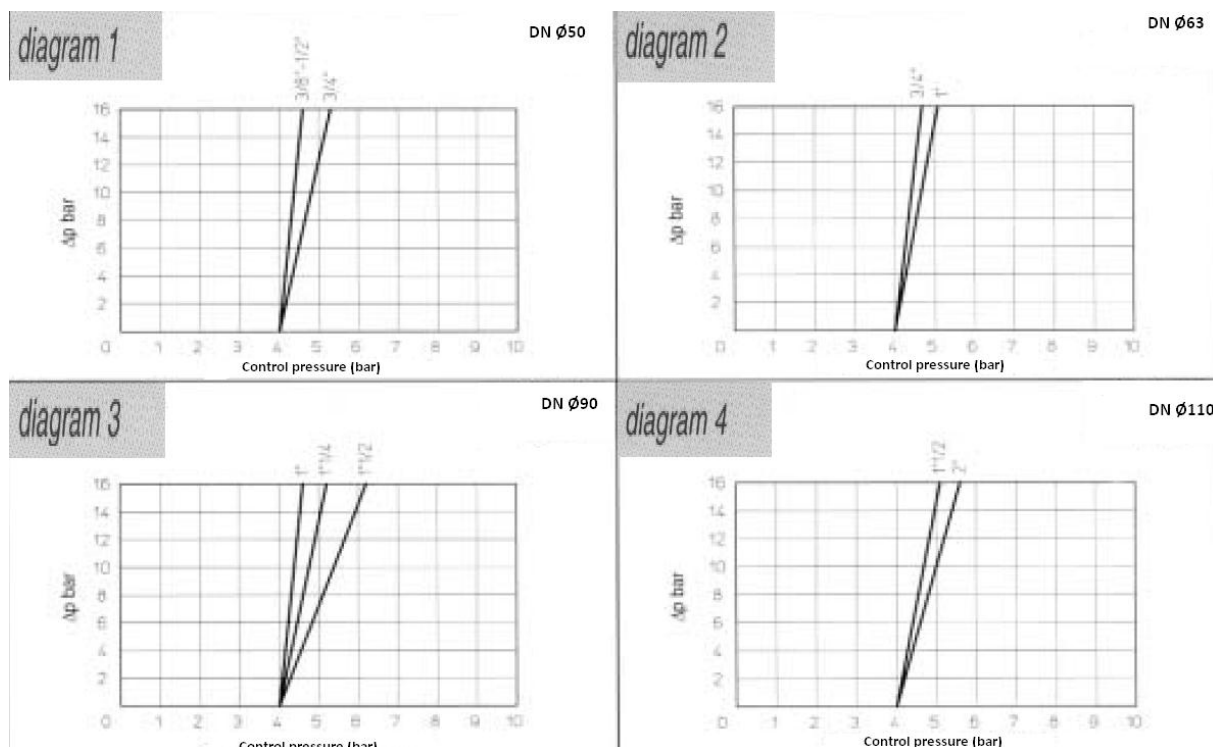
CONTROL PRESSURES AND ALLOWABLE DIFFERENTIAL PRESSURES

A- For the fluid flow below the clack (from 2 to 1)

Code	BSP	DN	Kv (m ³ /h)	Electric actuator	Min. control pressure	Max. control pressure	Max. differential pressure (bar)	Weight (kg)
	3/8"	10	4,9	50	4	10	16	1,1
	1/2"	15	5,7	50	4	10	16	1
	3/4"	20	10,5	50	4	10	10	1,2
	3/4"	20	10,8	63	4	10	16	1,2
	1"	25	20	63	4	10	11	1,6
	1"	25	20	90	4	8	16	1,7
	1"1/4	32	29	90	4	10	14	3
	1"1/2	40	46	90	4	8	11	3,4
	1"1/2	40	46,5	110	4	8	16	4
	2"	50	67	110	4	8	10	5,3

B- For the fluid flow above the clack (from 1 to 2), please refer to the below diagrams

The dotted lines indicate the items available on request.



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ARES type STAINLESS STEEL PNEUMATIC ACTUATED VALVE

DIFFERENTIAL PRESSURES FOR NORMALLY OPEN (NO) SINGLE AND DOUBLE EFFECT VERSIONS

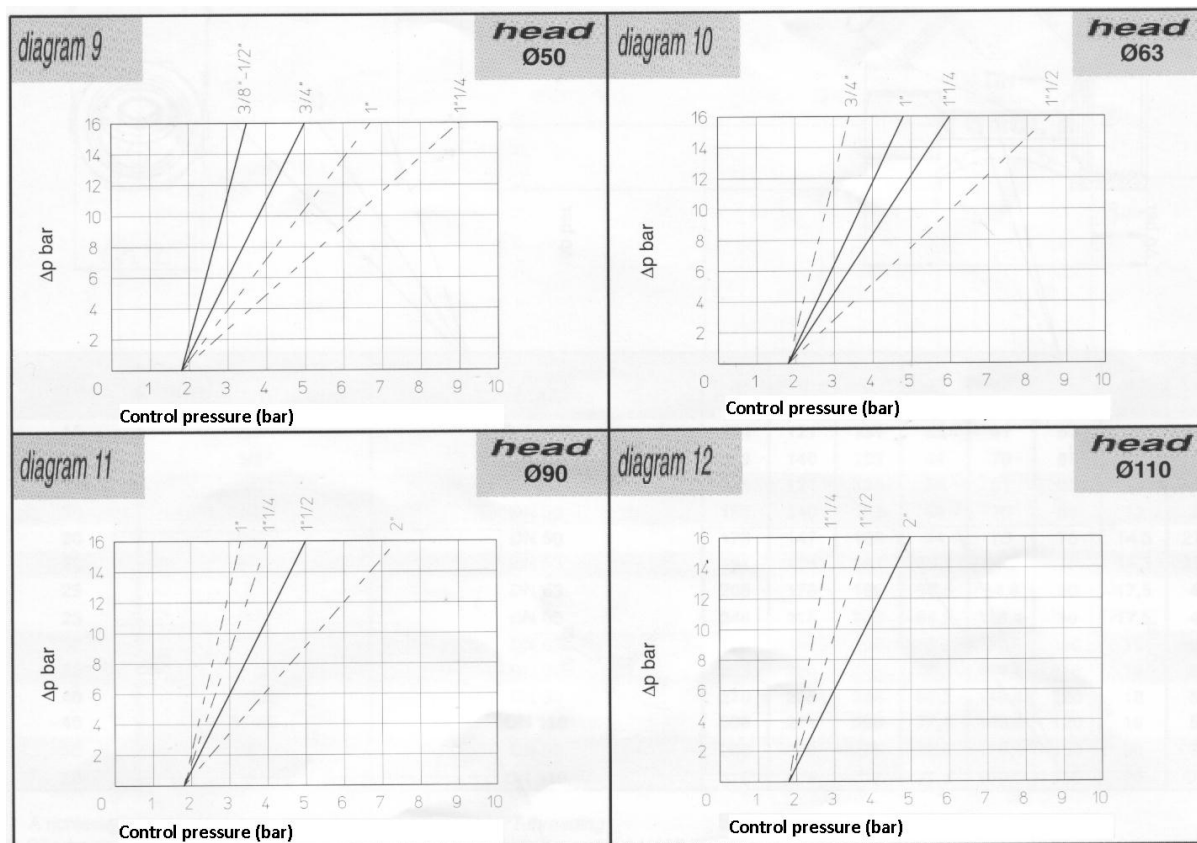
1 NORMALLY OPEN SINGLE EFFECT VERSION



CONTROL PRESSURES AND ALLOWABLE DIFFERENTIAL PRESSURES

Code	BSP	DN	Kv (m3/h)	Electric actuator	Min. control pressure	Max. control pressure	Diagram to refer to	Weight (kg)
	3/8"	10	4,9	50	1,8	10	9	1
	1/2"	15	5,7	50	1,8	10	9	1
	3/4"	20	10,5	50	1,8	10	9	1,2
	1"	25	20	63	1,8	10	10	1,6
	1" 1/4	32	28,5	63	1,8	10	10	2
	1" 1/2	40		90	1,8	8	11	3,7
	2"	50	46,5	110	1,8	8	12	7,6

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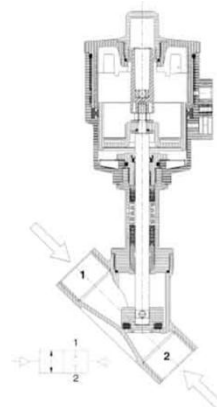


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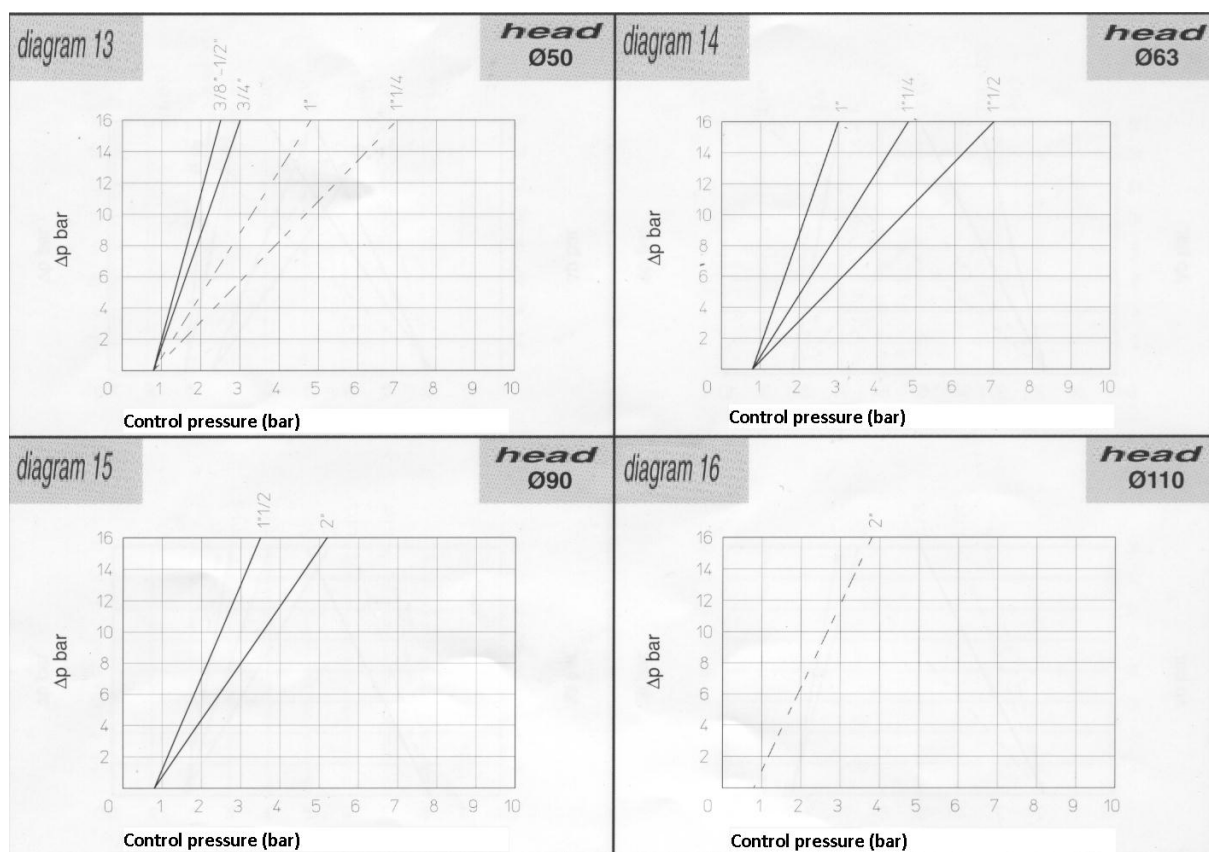
1 DOUBLE EFFECT VERSION



CONTROL PRESSURES AND ALLOWABLE DIFFERENTIAL PRESSURES

Code	BSP	DN	Kv (m3/h)	Electric actuator	Min. control pressure	Max. control pressure	Diagram to refer to	Weight (kg)
	3/8"	10	4,9	50	0,8	8	13	1,1
	1/2"	15	5,7	50	0,8	8	13	1
	3/4"	20	10,5	50	0,8	8	13	1,2
	1"	25	20	63	0,8	8	14	1,6
	1" 1/4	32	28,5	90	0,8	8	14	3
	1" 1/2	40	35	63	0,8	8	14	3,4
	1" 1/2	40	46	90	0,8	8	15	4
	2"	50	59	90	0,8	8	15	5,3

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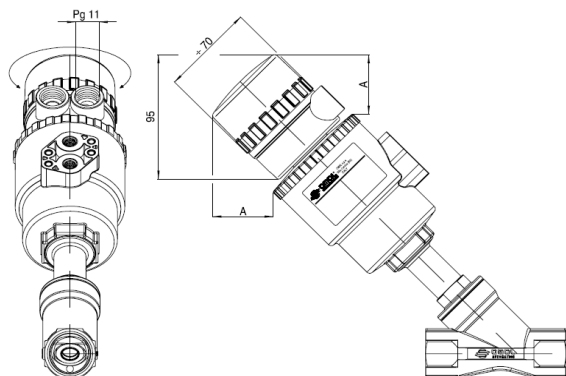
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ACCESSORIES

1- LIMIT SWITCH BOX



CHARACTERISTICS

This NC/NO limit switch box can be adapted on any ARES valve. It can be equipped with 2 types of contacts: mechanical dry contacts or inductive contacts (see below):

Body material	PA
Protection	IP 65
Min. room temperature	-20 °C
Max. room temperature	+70 °C
Electrical connection	2 x PG 11

Electric actuator	A (mm)
DN 50	52.1
DN 63	47.5
DN 90	37.7
DN 110	29.5

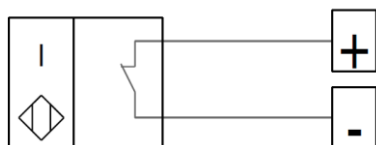
NAMUR EEx ia INDUCTIVE CONTACTS

Nominal voltage	8 V DC
Start-up current	1 mA
Maintained current	3 mA
Min. room temperature	-25 °C
Max. room temperature	+100 °C

DIFFERENT POSSIBLE CONFIGURATIONS

Configuration

- 1 contact for "valve open" position
- 1 contact for "valve closed" position
- 2 contacts for "valve open" / "valve closed" positions

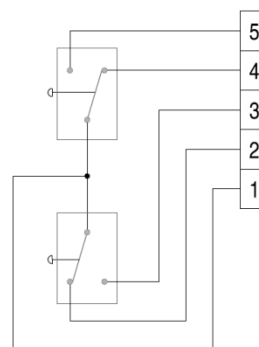


MECHANICAL CONTACTS

Upper contact	valve open
Lower contact	valve closed
Max. current AC	5 A / 250 V
Max. current DC	1 A / 250 V

Configuration

2 contacts for "valve open" / "valve closed" positions



2- PILOT VALVE

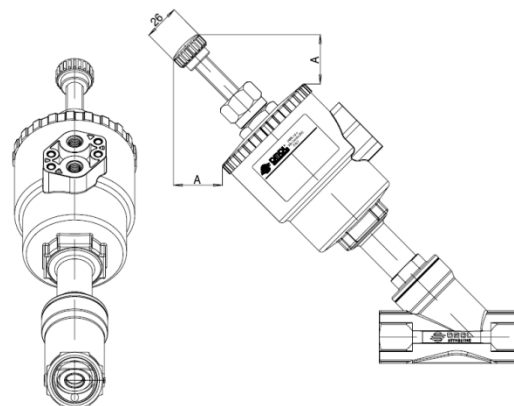
2 types of solenoid valves can be mounted:

- 3/2 solenoid valve with BSP 1/8" connections
- 3/2 or 5/2 solenoid valve with NAMUR interface

3- MANUAL OVERRIDE

This accessory permits to open the valve in case of emergency (failure of the pilot pressure, command signal loss). It is available on every NF version.

Electric actuator	A (mm)
DN 50	35.8
DN 63	35.8
DN 90	29.5
DN 110	29.5



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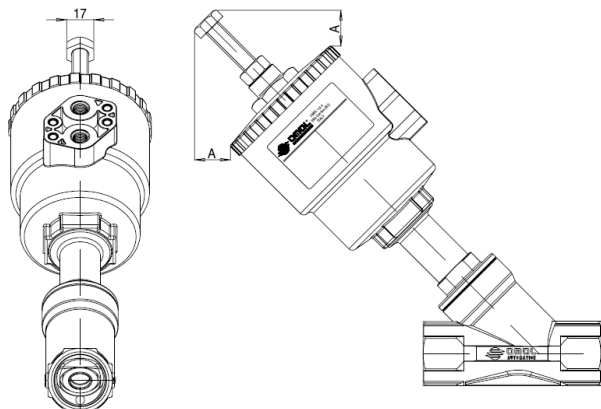
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4- STROKE LIMITER

This accessory permits to limit the electric actuator piston movement in the opening phase and thus to control the flow rate. It is available on every version. On NO simple effect version, it can be used as a manual override.

Electric actuator	A (mm)
DN 50	25.5
DN 63	21.5
DN 90	5.2
DN 110	5.9



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