

ZEUS type BRONZE PNEUMATIC ACTUATED VALVE

CHARACTERISTICS

The ZEUS bronze 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 ZEUS valve bronze body and stainless steel internal parts enable 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. 4 options are available: box with 2 limit switches, solenoid pilot valve, manual override, stroke limiter.

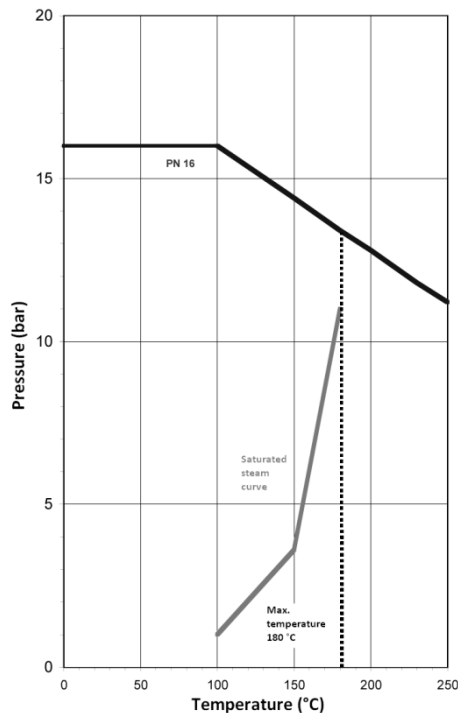
The diameter 40 economical electric actuator (head) which can be mounted until 1/2" does not have a NAMUR interface and cannot be equipped with any option. The different allowable differential pressures vary depending on the electric actuator size and type and on the compressed air supply. Please refer to the diagrams for each application.



LIMITS OF USE

Max. body pressure	PN 16
Max. differential pressures	Refer to FT1421 and 1422 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" bronze, single effect NC and NO, double effect

KV VALUES (m³/h)

Refer to the FT1421 and 1422 information sheet tables

ALLOWABLE DIFFERENTIAL PRESSURES

NC single effect version: refer to FT1421 datasheet

NO single effect version: refer to FT1421 datasheet

Double effect version: refer to FT1422 datasheet

PILOT FLUIDS

Dry or lubricated compressed air, neutral fluids

Maximum pressure: 10 bar

Maximum temperature 60 °C

SOLENOID PILOT VALVE

Standard NAMUR interface for the solenoid pilot valve (except T40 head)

Single effect 3/2 solenoid pilot valve

Double effect 5/2 solenoid pilot valve

1/8" BSP connection

For the solenoid valve selection, please refer to FT1413 datasheet

INSTALLATION

The ZEUS valve can be installed in any position.

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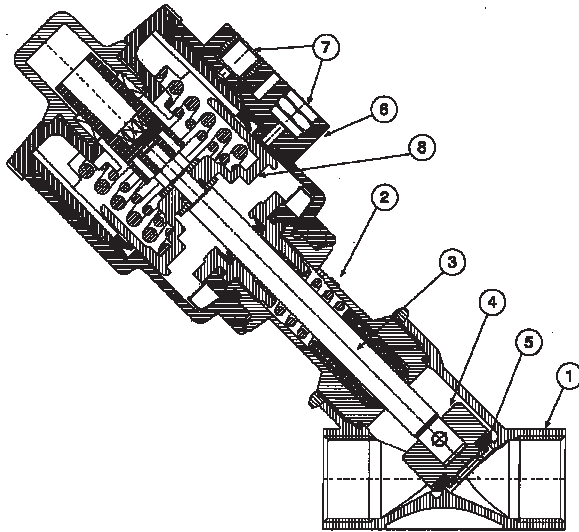
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CONSTRUCTION

1	Body	Bronze RG 5
2	Bonnet	Brass
3	Stem	AISI 316 stainless steel
4	Clack	AISI 316 stainless steel
5	Bearing	PTFE
6	Actuator	PA 66 + fibre glass 30%
7	Inserts	AISI 303
8	Piston	Chromium plated brass PBT+GF30% for T40head



OPTIONS

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

MOUNTING AND MAINTENANCE DATASHEET

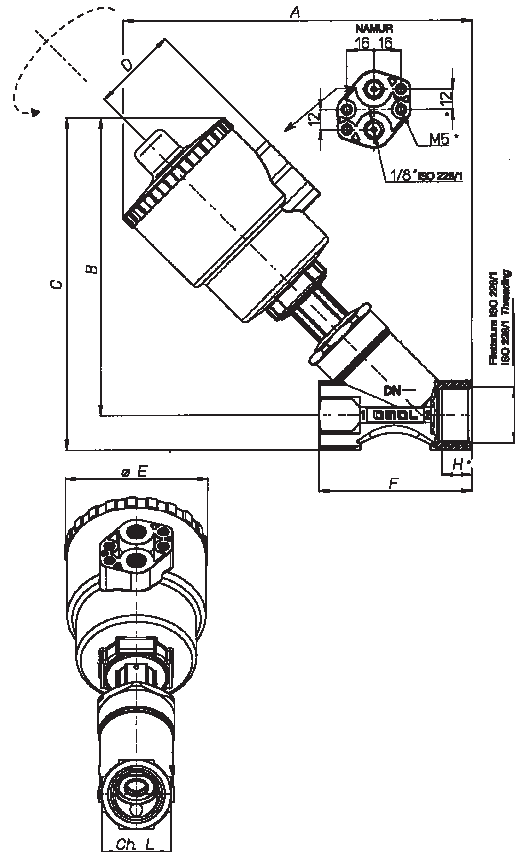
Refer to NO1410 datasheet

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"	40	144	121	134	35	61	65	12	27	1
10	3/8"	50	163	140	153	44	70	65	12	27	1
15	1/2"	40	144	121	134	35	61	65	13	27	1
15	1/2"	50	163	140	153	44	70	65	13	27	1
20	3/4"	50	173	147	163	44	70	75	14,3	27,5	1,2
20	3/4"	63	191	165	181	50,5	84,4	75	14,3	27,5	1,2
25	1"	63	206	176	196	50,5	84,4	90	17,5	41	1,6
25	1"	90	246	216	236	66,2	116,4	90	17,5	41	1,6
32	1 1/4"	63	215	180	205	50,5	84,4	110	19	50	2
32	1 1/4"	90	255	220	245	66,2	116,4	110	19	50	3,1
40	1 1/2"	90	270	235	264	66,2	116,4	120	18	58	3,7
40	1 1/2"	110	306	271	300	77,4	140,6	120	18	58	4,6
50	2"	90	280	240	275	66,2	116,4	150	20	70	4,4
50	2"	110	316	276	311	77,4	140,6	150	20	70	7,6



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ZEUS type BRONZE PNEUMATIC ACTUATED VALVE

DIFFERENTIAL PRESSURES FOR NORMALLY CLOSED (NC) SINGLE EFFECT VERSION

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

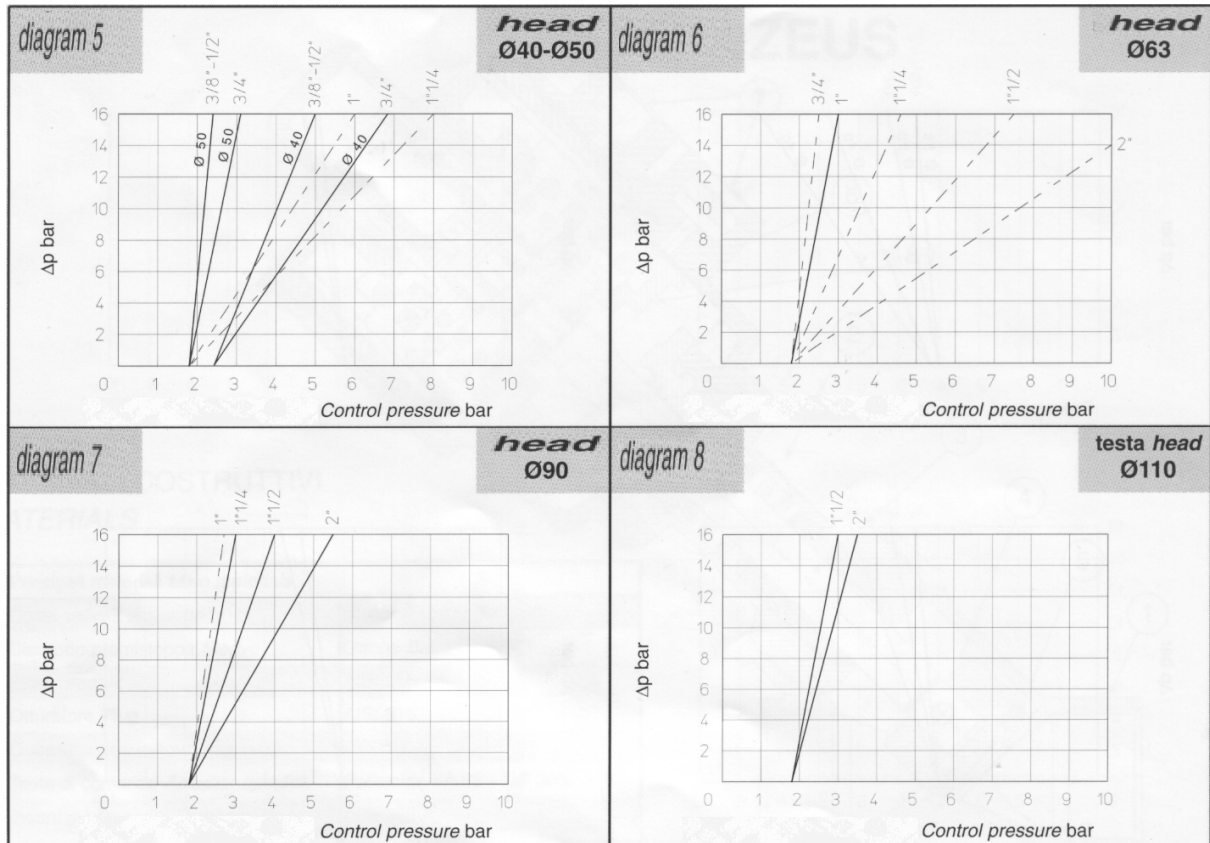
This version is recommended on compressible fluids, such as steam.
This version is not recommended on liquids as it generates water hammers.



CONTROL PRESSURES AND ALLOWABLE DIFFERENTIAL PRESSURES

Code	BSP	DN	Kv (m3/h)	Electric actuator	Min. control pressure	Max. control pressure	Diagram to refer to	Weight (kg)
	3/8"	10	4,5	40	2,5	10	5	1
	3/8"	10	4,9	50	1,8	10	5	1
	1/2"	15	5,3	40	2,5	10	5	1
	1/2"	15	5,7	50	1,8	10	5	1
	3/4"	20	10,5	50	1,8	10	5	1,2
	1"	25	20	63	1,8	10	6	1,6
	1" 1/4	32	29	90	1,8	8	7	3,1
	1" 1/2	40	46	90	1,8	8	7	3,7
	1" 1/2	40	46,5	110	1,8	8	8	4,6
	2"	50	59	90	1,8	8	7	4,4
	2"	50	67	110	1,8	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.



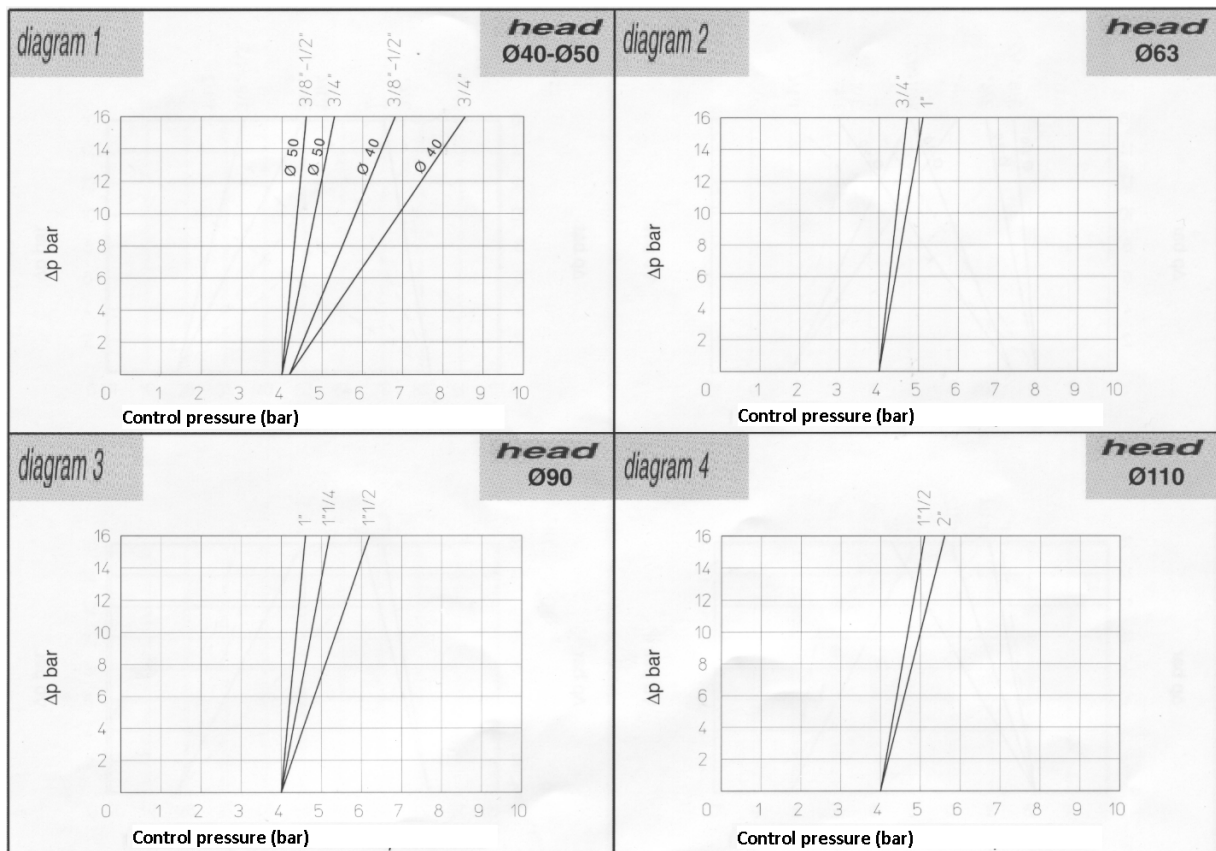
CONTROL PRESSURES AND ALLOWABLE DIFFERENTIAL PRESSURES

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

Code	BSP	DN	Kv (m3/h)	Electric actuator	Min. control pressure	Max. control pressure	Max. differential pressure (bar)	Weight (kg)
	3 / 8 "	10	4,5	40	4,2	10	16	1,1
	3 / 8 "	10	4,9	50	2	10	16	1,1
	1 / 2 "	15	5,3	40	4,2	10	16	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	8	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 above the clack, please refer to the below diagrams

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ZEUS type BRONZE PNEUMATIC ACTUATED VALVE

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

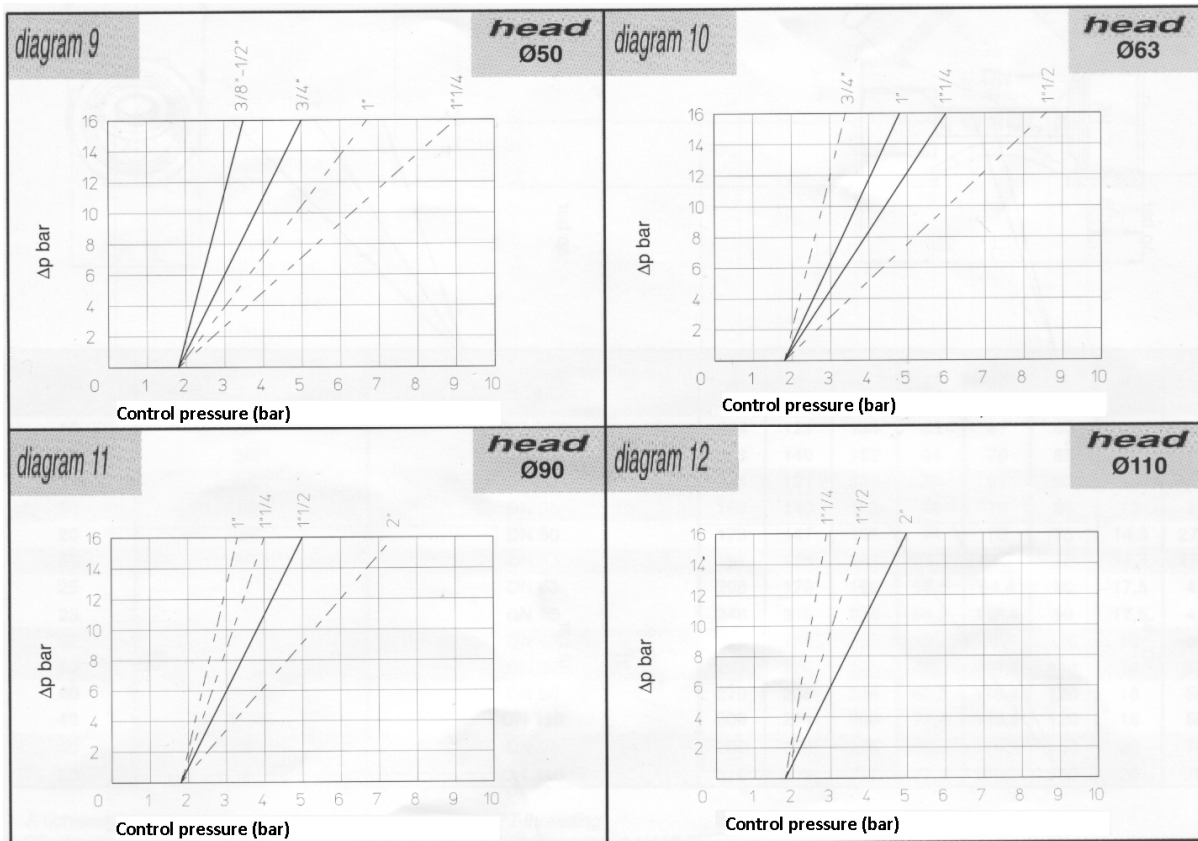
1 NORMALLY OPEN SINGLE EFFECT VERSION



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	46	90	1,8	8	11	3,7
	2 "	50	67	110	1,8	8	12	7,6

The dotted lines indicate the items available on request.

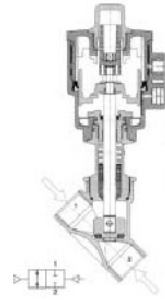


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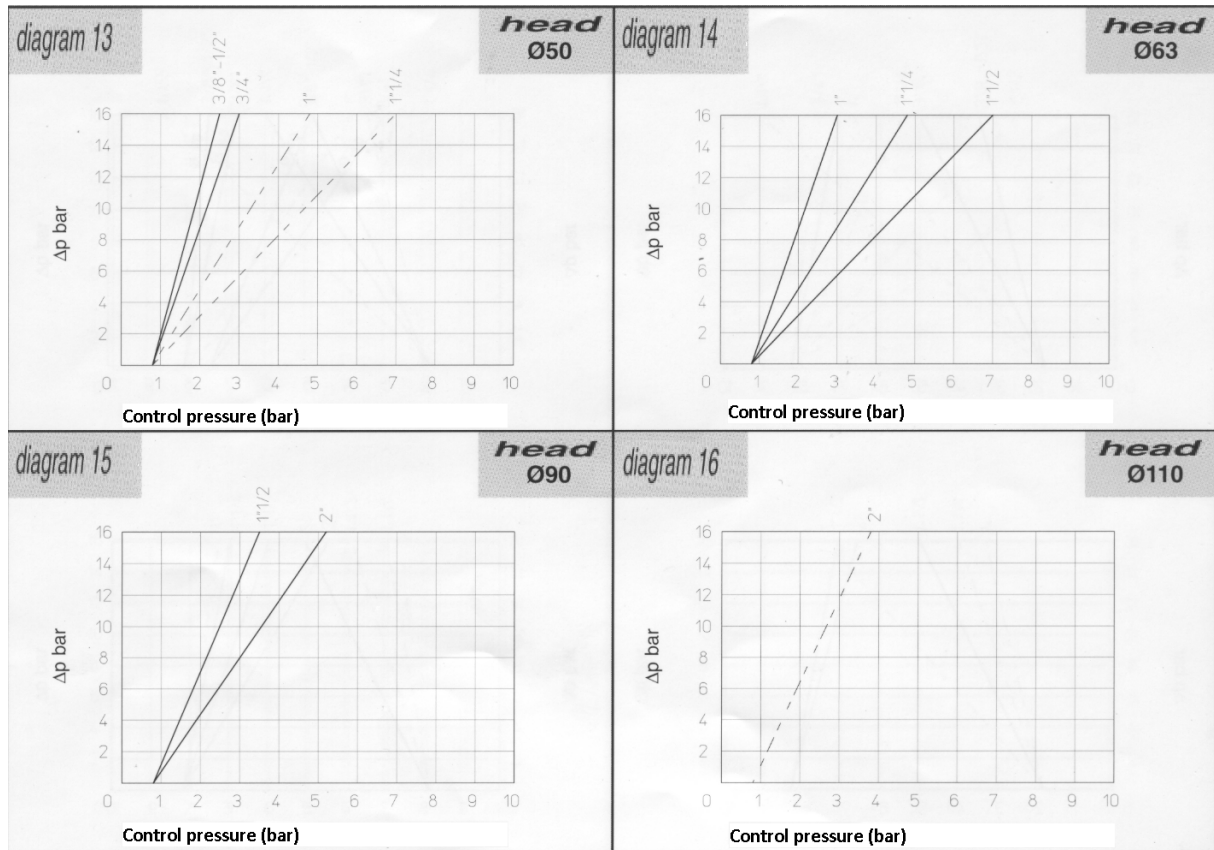
2 DOUBLEEFFECT VERSION



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 / 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	1,9
	1" 1 / 2	40	35	63	0,8	8	14	2,3
	1" 1 / 2	40	46	90	0,8	8	15	3,6
	2 "	50	59	90	0,8	8	15	4,3

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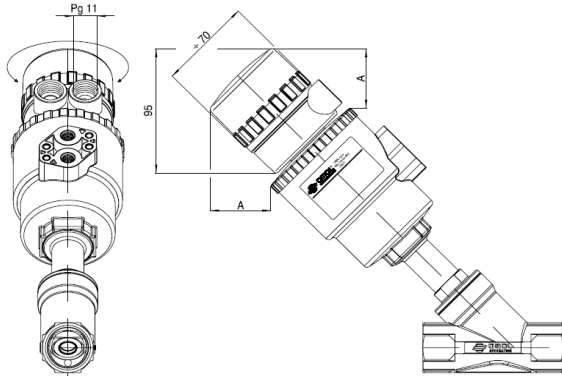
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ACCESSORIES

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

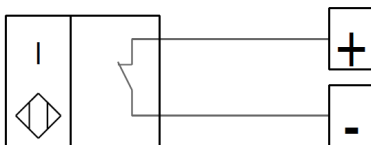
NAMUR EEx ia INDUCTIVE CONTACTS

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

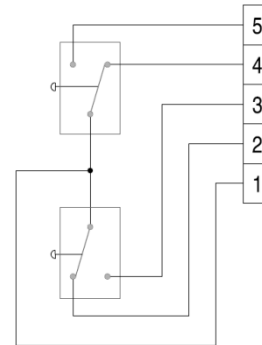


MECHANICAL CONTACTS

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

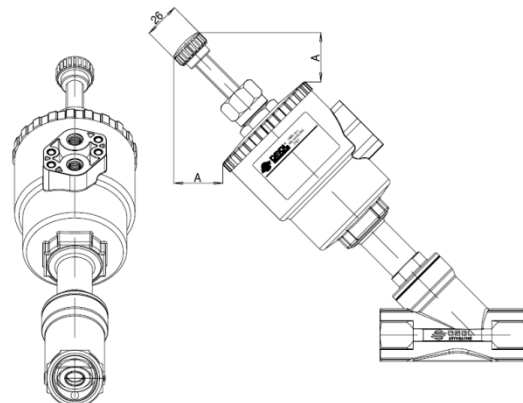
2 types of solenoid valves can be mounted:

- 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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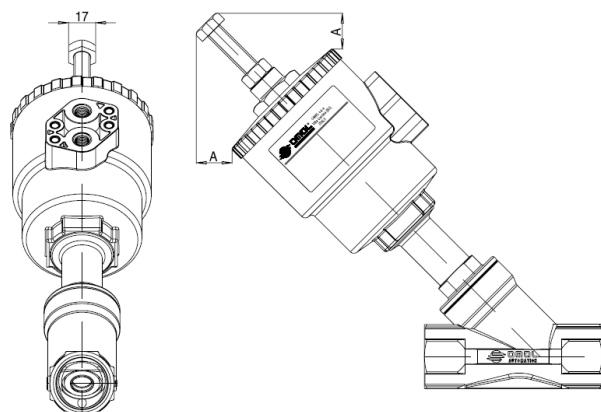
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4- STROKE LIMITER

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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