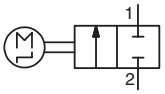
MOTORISED VALVES

stainless steel body

threaded ports, 3/8 - 1/2 - 3/4



2/2
Series
290

FEATURES

- *High flow due to angled seat design*
- *Anti-waterhammer design (fluid entry under the disc)*
- *Actuator rotatable through 360°*
- *In option closing of the valve in case of power failure*
- *Fluid isolation between electrical actuator and valve body*
- *LED valves status display*
- *The valves satisfy Pressure Equipment Directive 2014/68/EU, article 3.3*
- *The motorised valves comply with the essential requirements of EMC Directive 2014/30/EU (EN-IEC 61000-6-2 and EN-IEC 61000-6-4) and Low Voltage Directive 2014/35/EU (EN-IEC 60730)*
- *Vacuum operation up to 10^{-2} mbar*
- *The valves satisfy all relevant EC Directives and with the provisions of the Directive RoHS 2*



GENERAL

Differential pressure	See «SPECIFICATIONS» [1 bar =100 kPa]
Maximum allowable pressure	10 bar
Ambient temperature range	-10°C to +50°C -10°C to +40°C (for steam at 145°C)
Maximum viscosity	600 cSt (mm²/s)
Actuating time	< 1,3 s (opening) / < 1,3 s (closing)

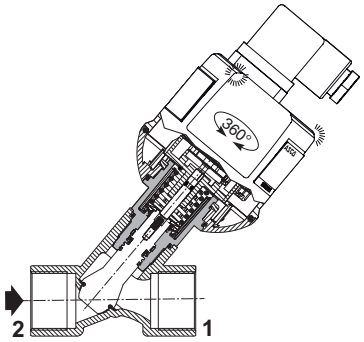
fluids (✳)	temperature range (TS)	seal materials (✳)
air and gas groups 1 & 2 water, oil, liquids groups 1 & 2	-10°C to +90°C	NBR (nitrile)
steam	up to +145°C	FPM (fluoroelastomer)

CONSTRUCTION

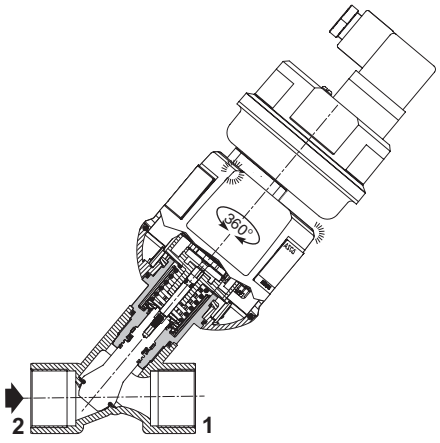
MATERIALS IN CONTACT WITH FLUID

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

	NBR / PBT «K»	FPM / 316L «X»
Valve body	AISI 316L	AISI 316L
Stuffing box housing	PBT, GF reinforced	AISI 316L
Stem valve	AISI 316L	AISI 316L
Stuffing box packing	NBR	FPM
Wiper seal	NBR	FPM
Disc seal	NBR	FPM



DC construction



AC construction

OTHER MATERIALS

Top cover operator	Translucent polyamide (PA)
AC to DC housing (AC)	PA66, GF reinforced

ELECTRICAL CHARACTERISTICS

Connector	Spade plug (cable Ø 6-10 mm)
Connector specification	ISO 4400 / EN 175301-803, form A
Motor consumption	12 W in operation, 0 W hold Max. peak current: 0,7 A
Visualisation valve (switching)	LED
Electrical safety (adapter AC to DC)	IEC 335 (EN-IEC 60730), class 2
Electrical enclosure protection	IP65 (EN 60529)
Standard voltages	DC (=) : 24V ±10 %, max. ripple 5%
(EN-IEC 61131-2)	AC (~) : 110V to 250V / 50-60 Hz 24V to 48V ±10 % / 50-60 Hz

RECOMMENDATION FOR MAXIMUM DUTY CYCLE FOR NBR / PBT "K" VERSION

Ambient temperature:	**+20°C**	9 cycles/min (1)
	+50°C (max.)	4 cycles/min (1)

RECOMMENDATION FOR MAXIMUM DUTY CYCLE FOR FPM / 316L "X" VERSION

Ambient temperature:	**+20°C**	9 cycles/min (1)	**fluid temp.:**	**+20°C**
	+50°C (max.)	4 cycles/min (1)		**+50°C**
	+50°C (max.)	2 cycles/min (1)		**+120°C**
	+40°C (max.)	2 cycles/min (1)		**+145°C**

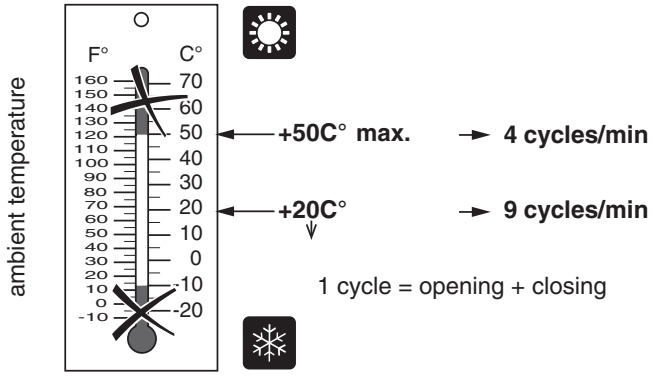
(✳) Ensure that the compatibility of the fluids in contact with the materials is verified.

(1) For other cycles, contact us.

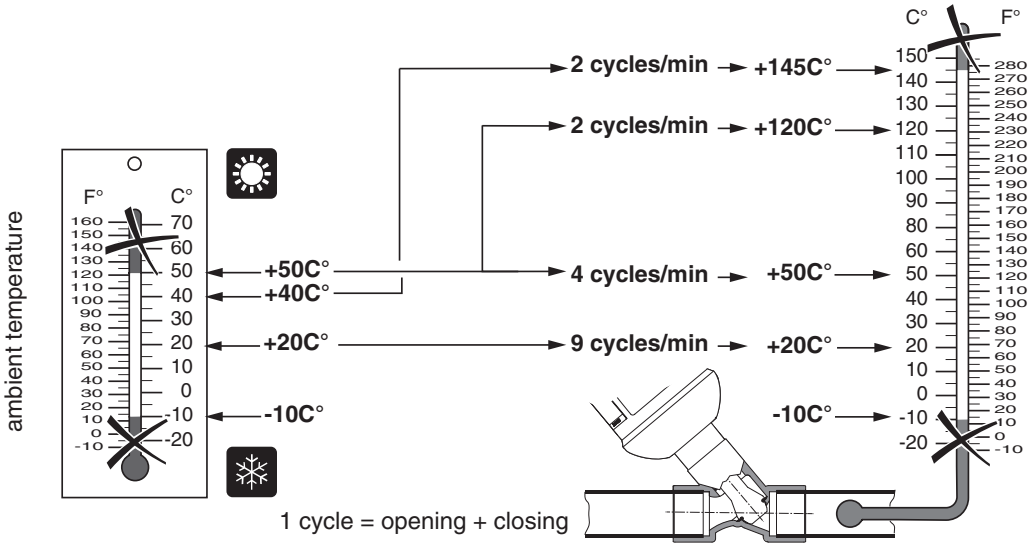
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OPERATING CONDITIONS
RECOMMENDATION FOR MAXIMUM DUTY CYCLE

NBR / PBT «K» version



FPM / 316L «X» version



ACCESSORIES

AC to DC adapter: 110V to 250V/50-60 Hz
code: **P290CA430078001**
24V to 48V ±10 % / 50-60 Hz
code: **P290CA438907001**

OPTIONS

Fail closed (closing of the valve in case of power failure)

SPECIFICATIONS

piping (ISO 6708)		flow coefficient Kv		operating pressure differential (bar)			operator diameter			15-DIGIT PRODUCT CODE			
pipe size	DN			min.	max.			thread type	dimensions / type (1)	basic code	voltage code		
		(m³/h)	(l/min)		air, water, oil (✳)	steam	(mm)				24 V...48 V / 50-60 Hz	110 V...250 V / 50-60 Hz	24 V/DC
Motorised valve, entry under the disc - NBR / PBT «K» version													
3/8	10	2,7	45	0	6	-	67	G*	1	**E290C52V0KA00**			
1/2	15	3,8	63	0	5	-	67	G*	1	**E290C53V0KA00**	**UA**	**VW**	**V1**
3/4	20	6	100	0	4	-	67	G*	1	**E290C54V0KA00**			
Motorised valve, entry under the disc - FPM / 316L «X» version													
3/8	10	2,7	45	0	6	4	67	G*	1	**E290C52V0XA00**			
1/2	15	3,8	63	0	5	4	67	G*	1	**E290C53V0XA00**	**UA**	**VW**	**V1**
3/4	20	6	100	0	4	4	67	G*	1	**E290C54V0XA00**			

(1) For dimensions, see drawing(s) for each construction type on the following page(s).

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

All leaflets are available on: **www.asco.com**

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Configurator - CAD Files

15-DIGIT PRODUCT CODE

E	290	C	5	4	V	0	K	A00	V1

Pipe thread
E = ISO 228/1 & ISO 7/1 (combination thread)
8 = NPT (on request)

Product series
290

Revision letter
C = Initial release

Fonction
5 = Standard

DN
2 = DN 10
3 = DN 15
4 = DN 20

Motorised operator dia.
V = Ø 67 mm

Voltage
V1 = 24 V DC - class B
VW = 110 V...250 V 50/60 Hz - class B
UA = 24 V...48 V 50/60 Hz - class B

A00 = Standard
Options
EFC = Fail closed

Materials
K = AISI 316L body,
SS 316L stem,
PBT stuffing box & NBR
X = AISI 316L body,
SS 316L stem,
AISI 316L stuffing box & FPM

Port
0 = 2 way

INSTALLATION

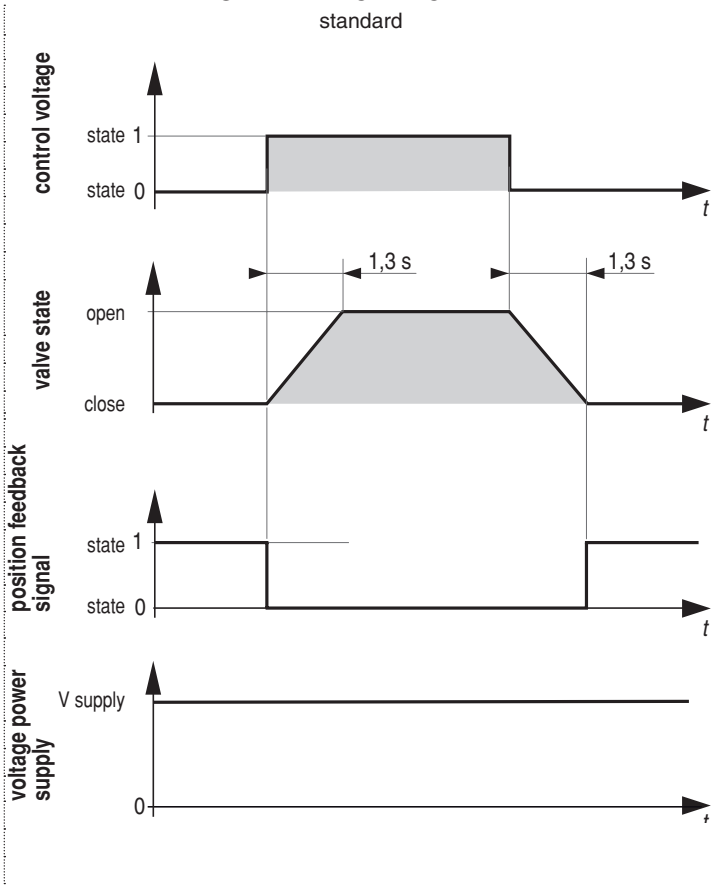
- The valves can be mounted in any position without affecting operation
- Pipe connections (G*) have standard combination thread according to ISO 228/1 and ISO 7/1
- Other pipe connections are available on request
- Installation/maintenance instructions are included with each valve
- LED indicators for operating status display

status	valve OPEN	green
	valve CLOSED	orange
	valve moves to open	green flashing
	valve moves to close	orange flashing

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OPERATING DIAGRAM

standard



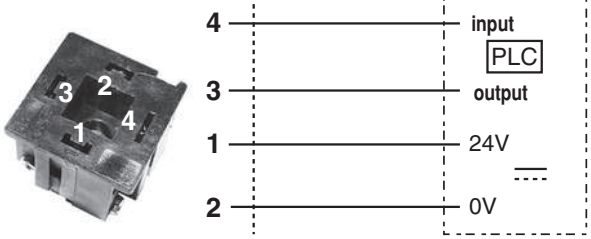
WIRING DC

24 V ±10 % / DC

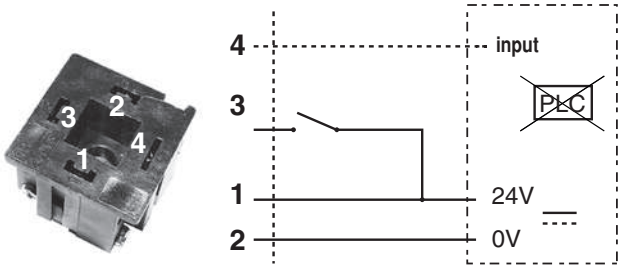


1	24 V / DC
2	0 V
3	control
4	feedback signal

With PLC

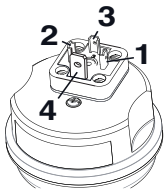


Without PLC



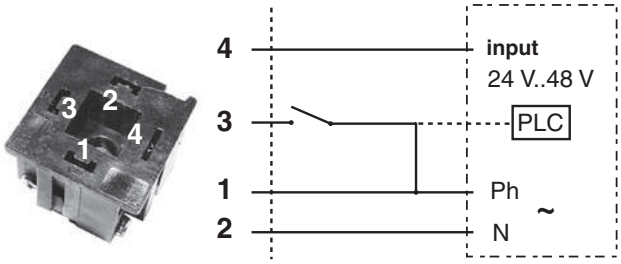
WIRING AC

24 V...48 V ±10 % / AC 50/60 Hz

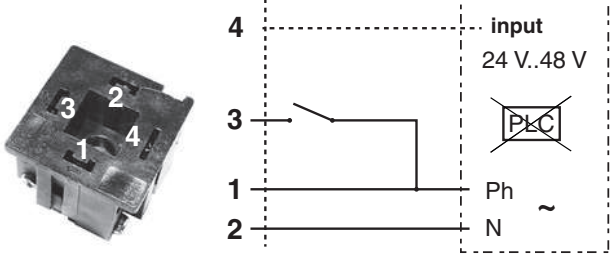


1	phase (Ph)
2	neutral (N)
3	control
4	feedback signal

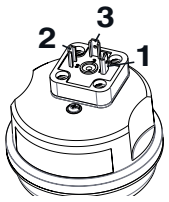
With PLC



Without PLC

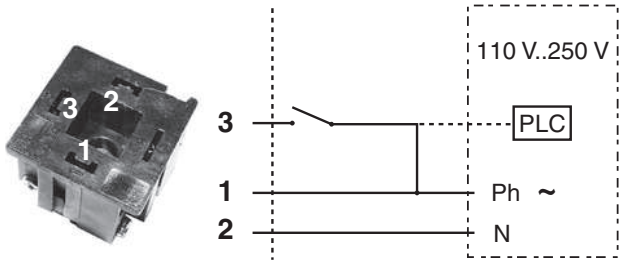


110 V...250 V / AC 50/60 Hz

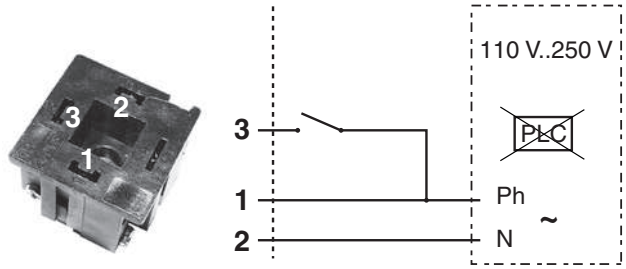


1	phase (Ph)
2	neutral (N)
3	control
-	-

With PLC



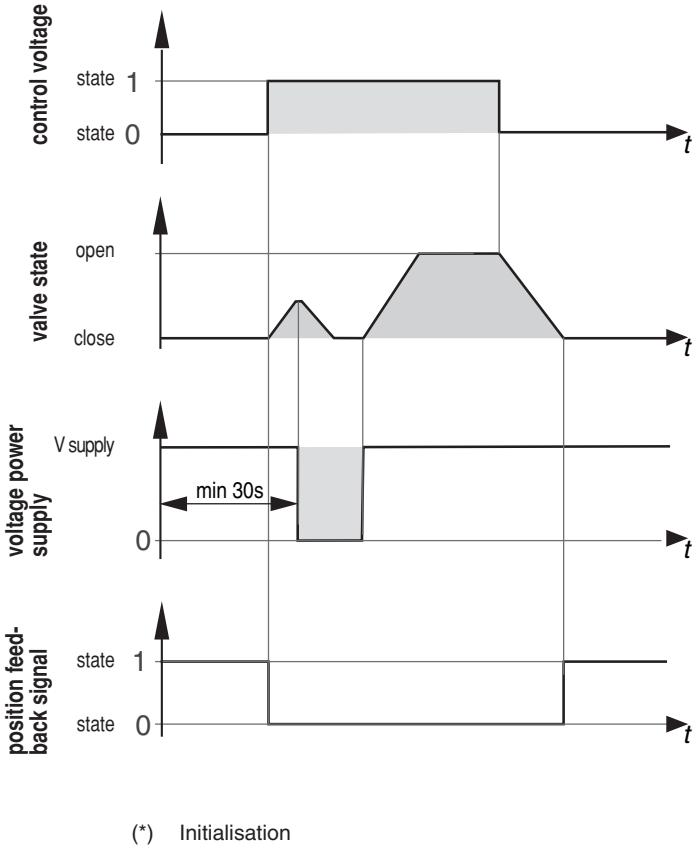
Without PLC



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OPERATING DIAGRAM

fail closed



(*) Initialisation

WIRING DC

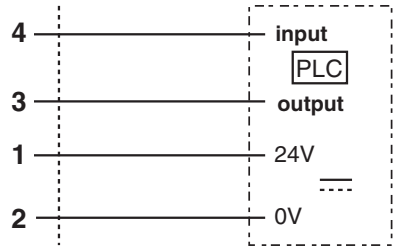
24 V ±10 % / DC



1	24 V / DC
2	0 V
3	control
4	feedback signal

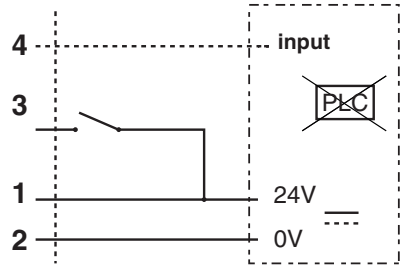
With PLC





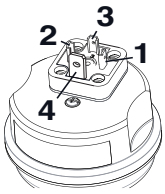
Without PLC





WIRING AC

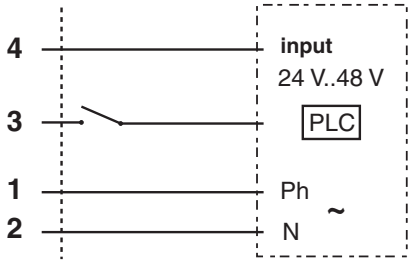
24 V...48 V ±10 % / AC 50/60 Hz



1	phase (Ph)
2	neutral (N)
3	control
4	feedback signal

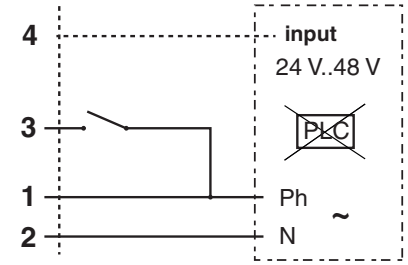
With PLC



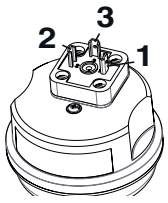


Without PLC



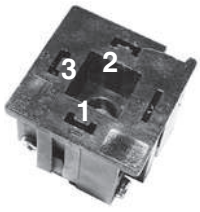


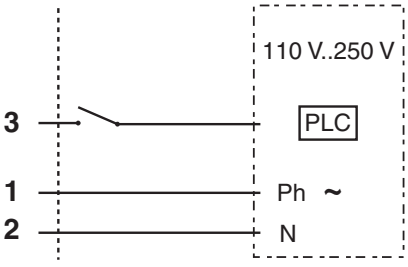
110 V...250 V / AC 50/60 Hz



1	phase (Ph)
2	neutral (N)
3	control
-	-

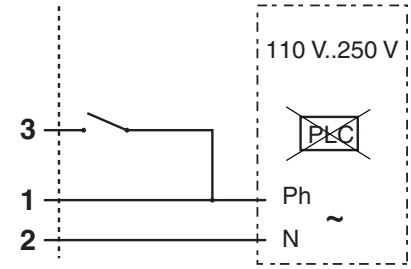
With PLC





Without PLC





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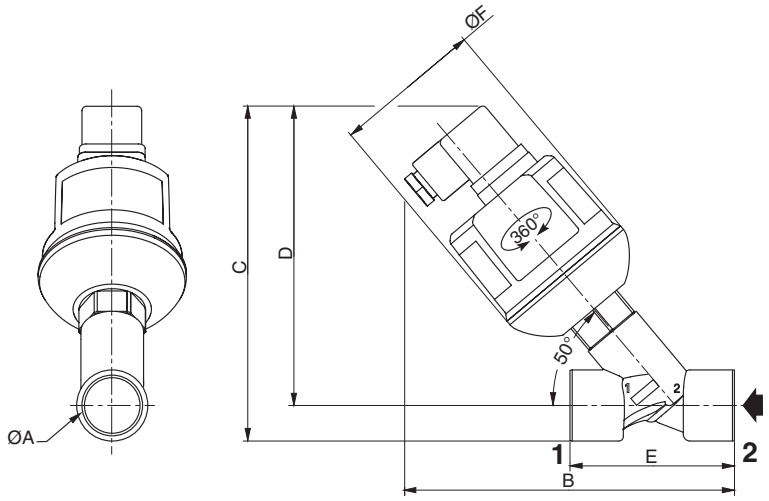
DIMENSIONS (mm), WEIGHT (kg)

Configurator - CAD Files



TYPE 01

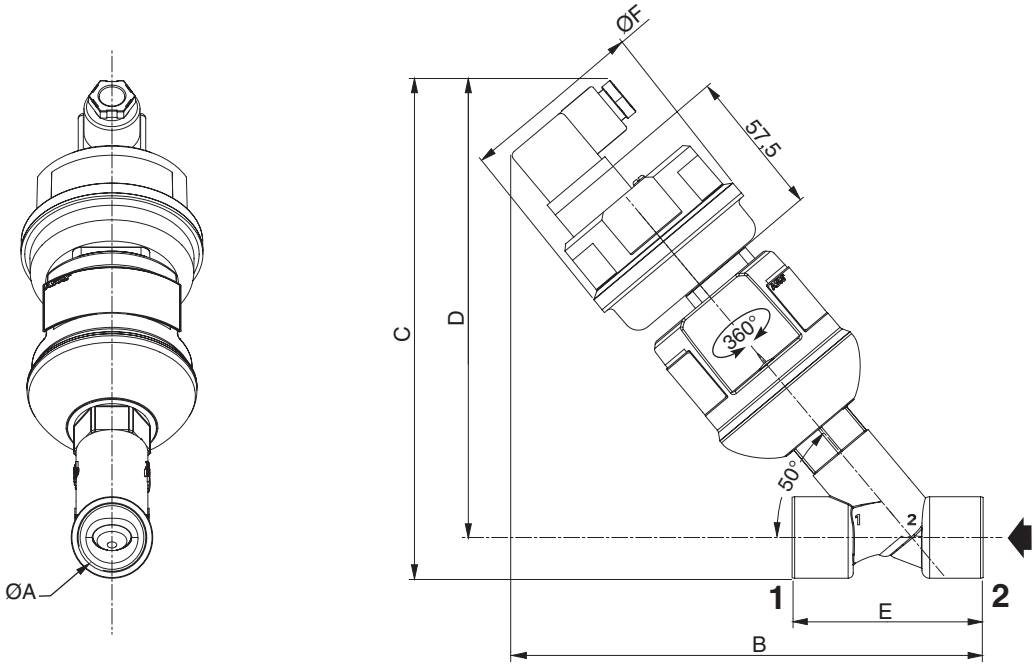
DC version
67 mm motorised operator
Fluid entry: under the disc at 2
ISO 4400 connector





TYPE 02

AC version (accessories)
67 mm motorised operator with AC adapter
Fluid entry: under the disc at 2
ISO 4400 connector



type	Ø A	B	C	D	E	Ø F	weight (1)	
							NBR / PBT «K»	FPM / 316L «X»
DC version								
01	3/8	135	141	129	55	67	0,40	0,45
	1/2	142	145	131	65	67	0,45	0,55
	3/4	150	152	136	75	67	0,55	0,65
AC version								
02	3/8	171	189	175	55	71	0,50	0,60
	1/2	178	191	177	65	71	0,55	0,65
	3/4	186	196	180	75	71	0,65	0,75

(1) Incl. connector.

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