

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 (mm ² /s)
Actuating time	< 1,3 s (opening) / < 1,3 s (closing)

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

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⁾

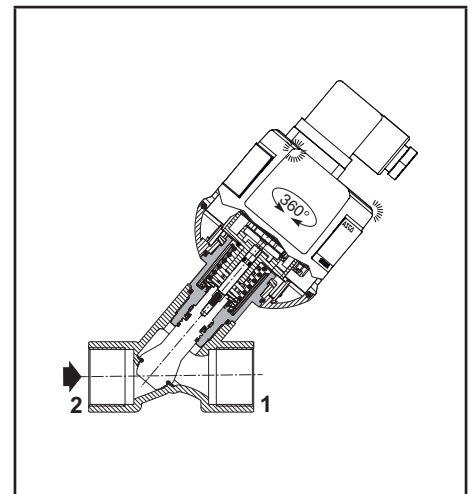
RECOMMENDATION FOR MAXIMUM DUTY CYCLE

FOR FPM / 316L «X» VERSION

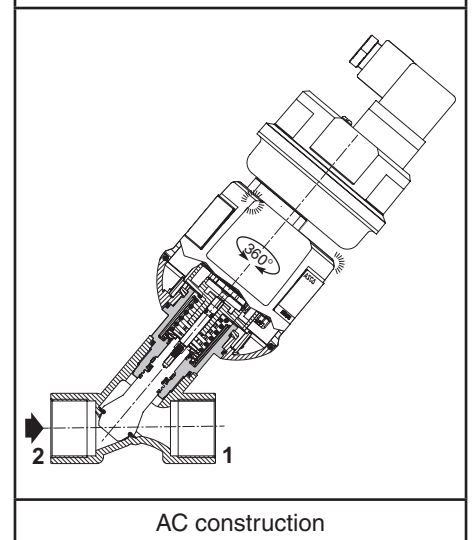
Ambient temperature:	+20°C	9 cycles/min ⁽¹⁾	fluid temp.:	+20°C
	+50°C (max.)	4 cycles/min ⁽¹⁾		+50°C
	+50°C (max.)	2 cycles/min ⁽¹⁾		+120°C
	+40°C (max.)	2 cycles/min ⁽¹⁾		+145°C

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

⁽¹⁾ For other cycles, contact us.



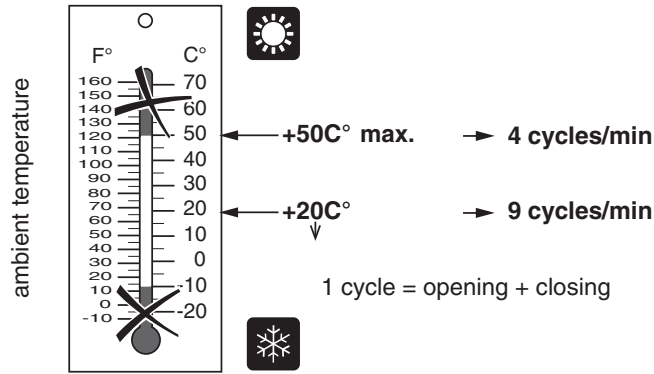
DC construction



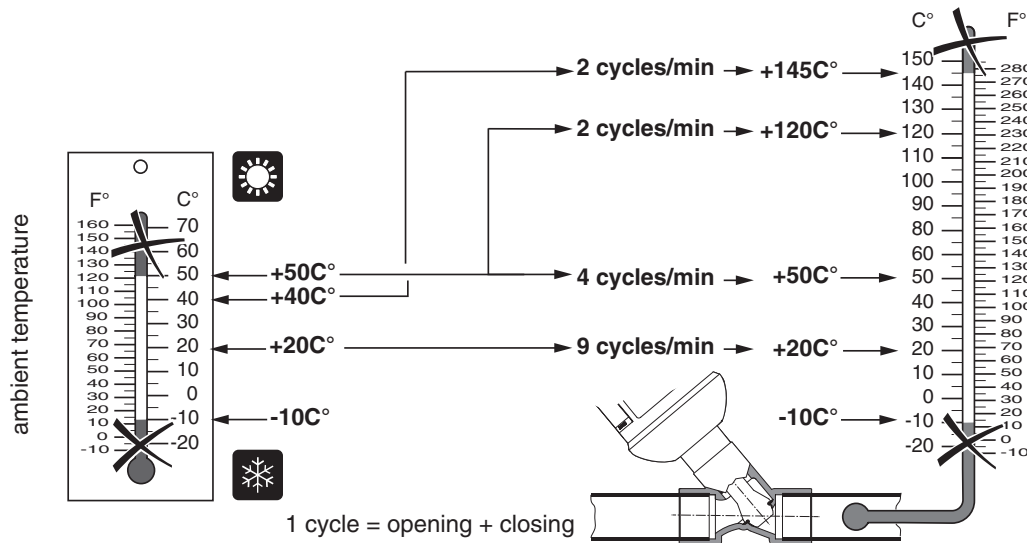
AC construction

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 (mm)	thread type	dimensions / type (1)	15-DIGIT PRODUCT CODE			
pipe size	DN	(m ³ /h)	(l/min)	min.	max.					basic code	voltage code		
					air, water, oil (*)	steam					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	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	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.

[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

Function
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

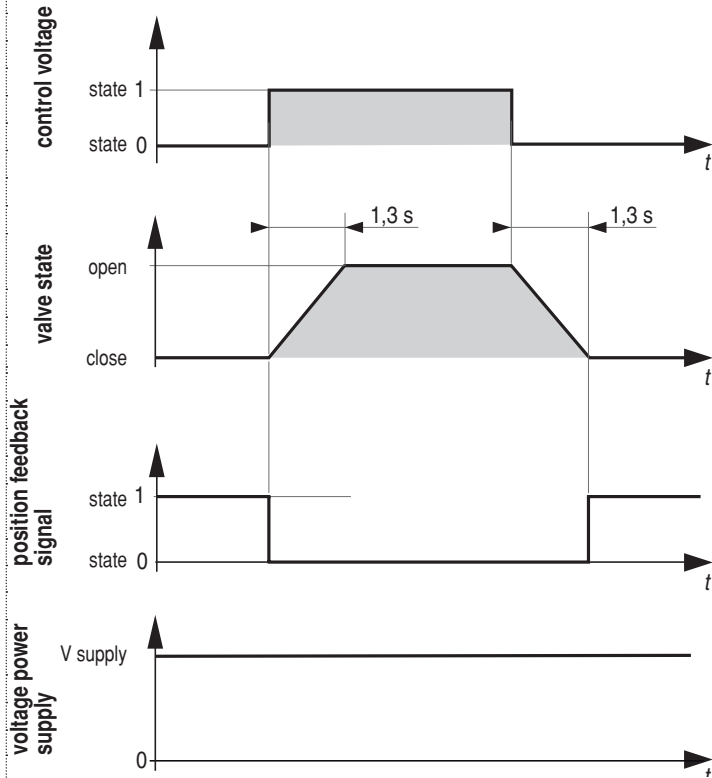
INSTALLATION

- 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

OPERATING DIAGRAM

standard



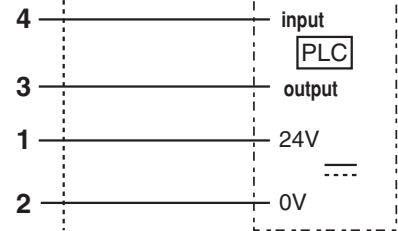
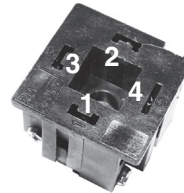
WIRING DC

24 V ±10 % / DC

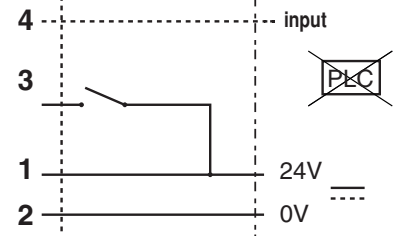
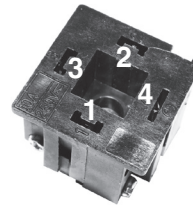


1	24 V / DC
2	0 V
3	control
4	feedback signal

With PLC

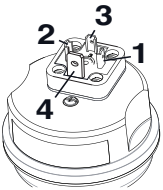


Without PLC



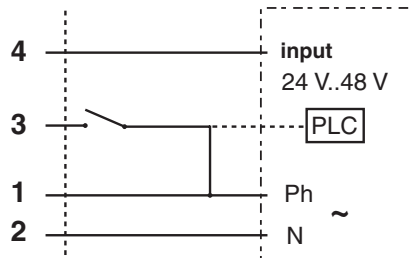
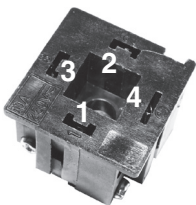
WIRING AC

24 V...48 V ±10 % / AC 50/60 Hz

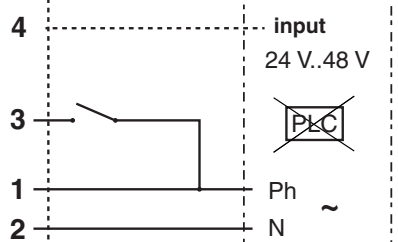
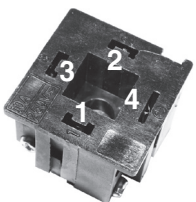


1	phase (Ph)
2	neutral (N)
3	control
4	feedback signal

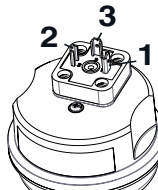
With PLC



Without PLC

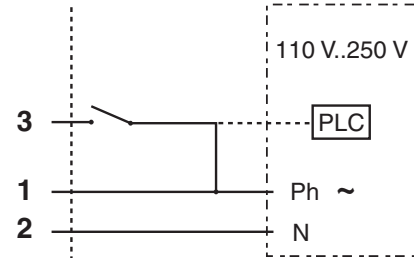
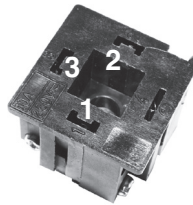


110 V...250 V / AC 50/60 Hz

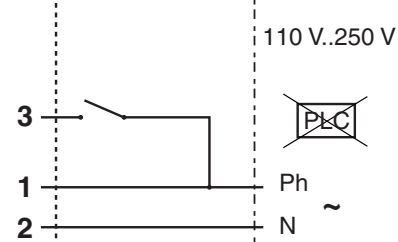
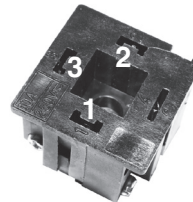


1	phase (Ph)
2	neutral (N)
3	control
-	-

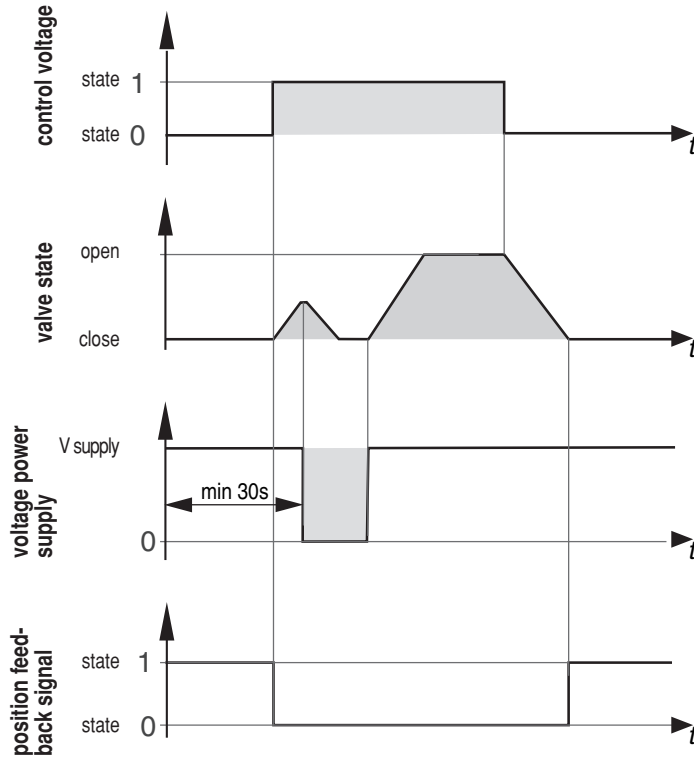
With PLC



Without PLC



OPERATING DIAGRAM fail closed



(*) Initialisation

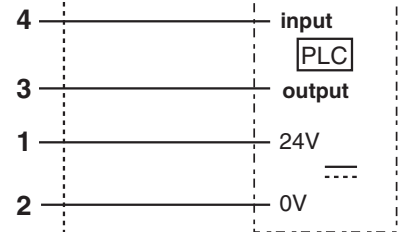
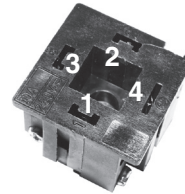
WIRING DC

24 V ±10 % / DC

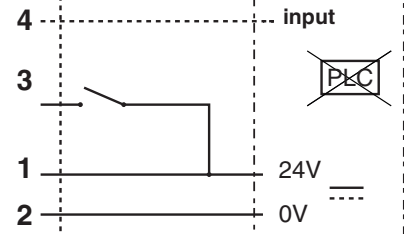
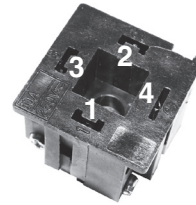


1	24 V / DC
2	0 V
3	control
4	feedback signal

With PLC

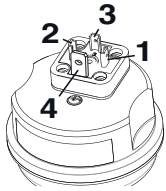


Without PLC



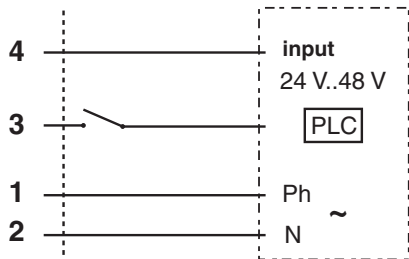
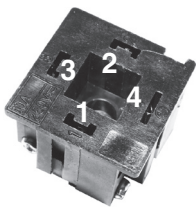
WIRING AC

24 V...48 V ±10 % / AC 50/60 Hz

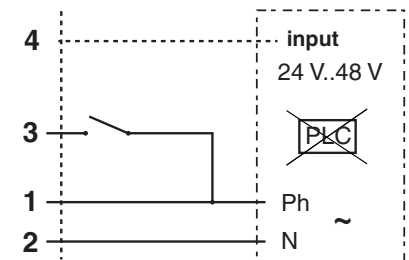
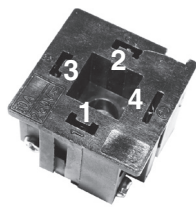


1	phase (Ph)
2	neutral (N)
3	control
4	feedback signal

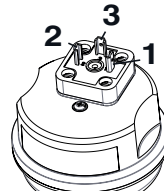
With PLC



Without PLC

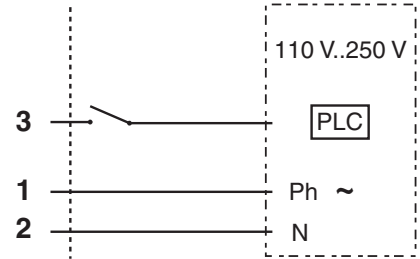
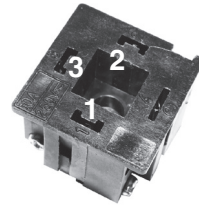


110 V...250 V / AC 50/60 Hz

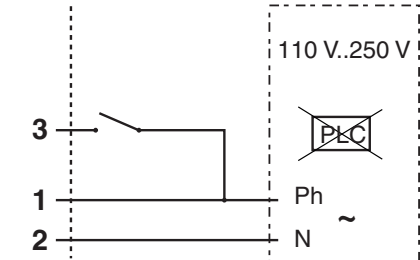
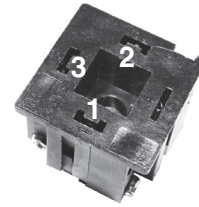



1	phase (Ph)
2	neutral (N)
3	control
-	-

With PLC



Without PLC



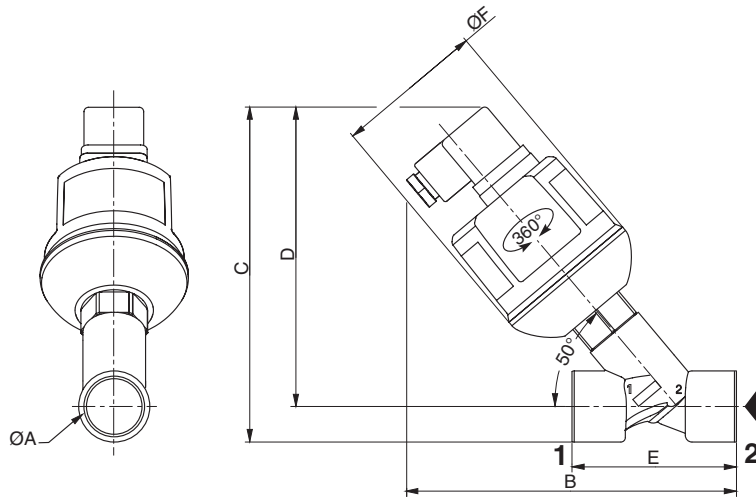
DIMENSIONS (mm), WEIGHT (kg) 

[Configurator - CAD Files](#)



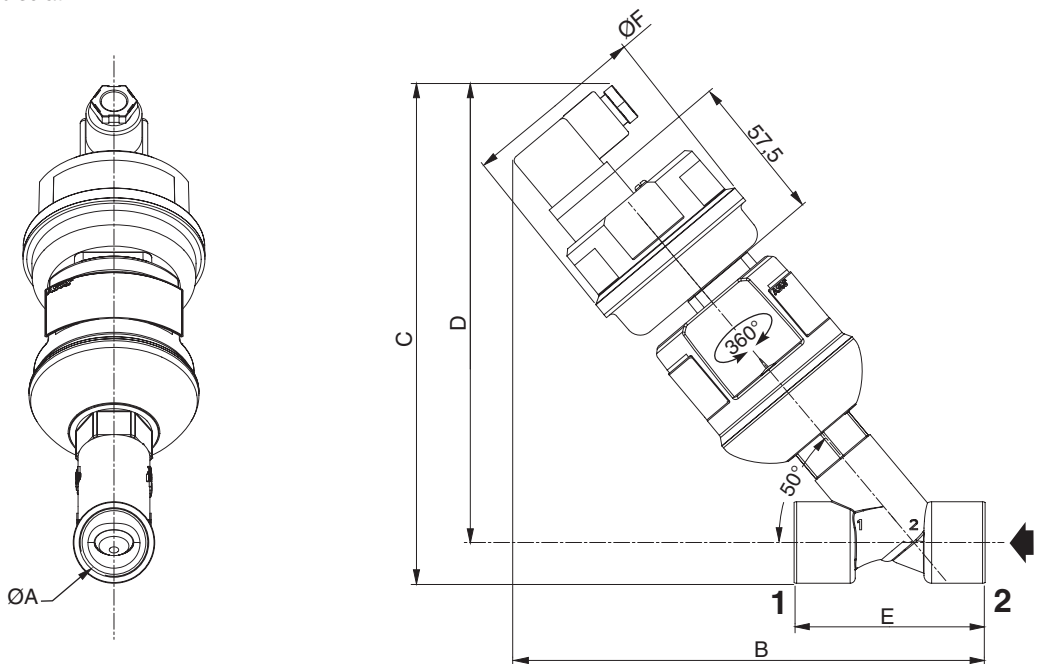
TYPE 01

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.

14 - Motorised Operated Valves (2/2)