CERTIFIED
ISO 9001 · ISO 14001
ISO 45001

LDM®

02 - 04.2
01.14.GB

CONTROL VALVES
800 line

POWER THROUGH IDEAS
www.ldmvalves.com

800 line

RV 805

Control valve, single-seated,
with weld ends, angle

RV 806

Control valve, single-seated,
with weld ends, „Z”-shaped

The control valves **800 line** are single-seated valves of a unit construction that provides a great variety of control elements. Thanks to such a combination, it is possible to satisfy the customers´ requirements and demands. The valve is equipped with "Live Loading” packing.
The valve connection is weld ends in **angle execution** (type RV 805) or **"Z"-shaped** execution (RV 806). Material of weld ends is optional. The dimensions of connection correspond to ČSN 13 1075 and their shape to EN 12 627.

Control

With electromechanical actuators of following producers: **ZPA Nová Paka, Regada, ZPA Pečky, Schiebel, Auma**
with pneumatic actuators **Flowserve**

Application

The valves series RV 805 and RV 806 are especially designed as control elements for control of injection water supply into steam pipeline. Thanks to their high nominal working pressure (PN 400) and ability to manage high differential pressures (ordinarily 15 MPa, max. 20 MPa), owing to a multi-step pressure reduction, the valves can be used in every application to which any other common valve cannot resist due to its low service life.

The max. permissible operating pressures correspond to EN 12 516-1 also mentioned on the page 21 of this catalogue.

Process media

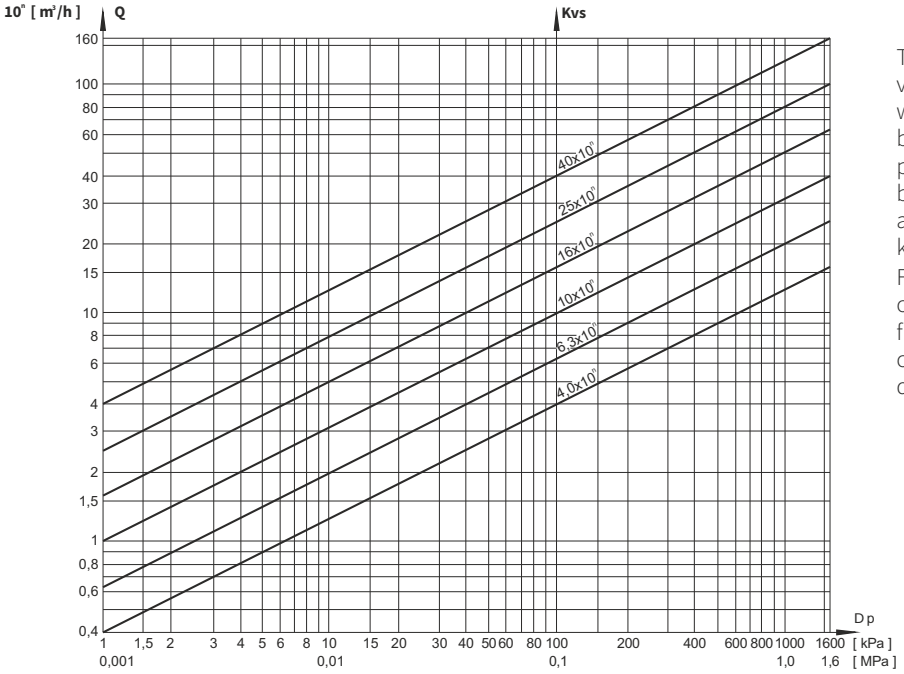
water, steam

The producer recommends to pipe a strainer into pipeline in front of the valve when impurities are present. Impurities can affect the quality and reliability of regulation and can cause a reduction of the valve service life. It is necessary to take into account the used materials when the valves is used for any other process media.

Installation

The valve can be piped in any way except the position when the actuator is under the valve body. The flow direction is indicated by the arrows on the valve body

Diagram for the valve Kvs value specification according to the required flow rate of water Q and the valve differential pressure Δp



The diagram serves to specify the valve Kvs value regarding to the required flow rate of water at a given differential pressure. It can be also used for finding out the differential pressure value of the existing valve in behaviour with the flow rate. The diagram apllies to water with the density of 1000 kg/m^3.

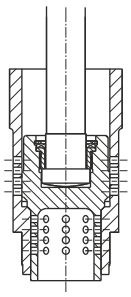
For the value Q = q .10^n, it is necessary to calculate with Kvs = k .10^n. Example: water flow rate of 16 .10^{-1} = 1,6 m^3/hour corresponds to Kv = 2,5 = 25. 10 when differential pressure 40kPa.

Application of multi-step pressure reduction

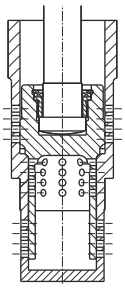
When the valves are designed for operating in a differential pressure higher than recommended or in above-critical differential pressure (p_1/p_2<0,54 when throttling steam and gases gases), it is effectual to use a throttling system in two or three steps to prevent the cavitation from creating and to ensure both a long service life of the valve inner parts and low noisiness when operating.

Type of trim: cage - perforated plug

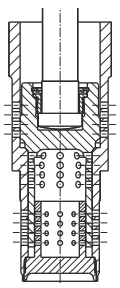
Two-step pressure reduction



Three-step pressure reduction

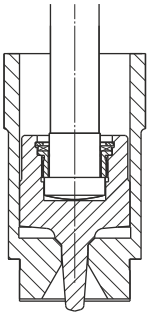


Four-step pressure reduction

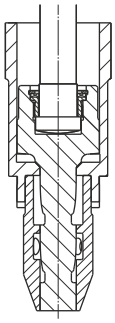


Type of trim: seat - contoured plug

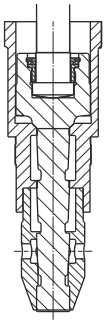
One-step pressure reduction



Two-step pressure reduction



Three-step pressure reduction



RV 805
RV 806

Control valves

DN 25, 40, 50, 65, 80, 100
PN 160, 250, 400

Technical data

Series	RV 805		RV 806	
Type of valve	**Control valve, single-seated, with weld ends**			
	angle		***"Z" shaped***	
Nominal size range	25, 40, 50 (unbalanced valve), 65, 80, 100 (balanced valve)			
Nominal pressure	160, 250, 400			
Body material	Stainless steel 1.4922 (X20CrMoV11-1)			
Material of weld ends	Cast steel 1.0425 (P 265 GH)	Alloy steel1.7335 (13CrMo4-5)	Cast steel 1.0425 (P 265 GH)	Alloy steel 1.7335 (13CrMo4-5)
Operating temp. range	-20 to 400 °C	-20 to 550 °C	-20 to 400 °C	-20 to 550 °C
Connection	weld ends ČSN 13 1075 (3/1991]			
Type of trim	Cage - perforated plug; seat - contoured plug (for small Kvs values)			
Dp_{max} for 1 step of reduction	4,0 MPa for perforated plug, 2,0 MPa for contoured plug			
Flow characteristic	Linear, equal-percentage acc. to ČSN EN 60534-1 (4/1997)			
Leakage rate	Class IV. acc. to ČSN EN 1349 (7/2012)			

Range of Kvs values

DN	Hodnoty Kvs [m^3 /h]								
	25	40	50	65	80, 100	25	40	50	65, 80, 100
Počet st. redukce	**Linear characteristic**					**Equal-percentage characteristic**			
	Type of trim: cage - perforated plug								
1		---		6.3 - 40	6.3 - 50		---		6.3 - 32
2	2.5 - 4.0	2.5 - 8.0	2.5 - 12.5	6.3 - 40	6.3 - 50	3.2 - 4.0	3.2 - 8.0	3.2 - 12.5	6.3 - 32
3	2.0 - 3.2	2.0 - 6.3	2.0 - 9.0	5 - 40	5 - 50	2.8 - 3.2	2.8 - 6.3	2.8 - 9.0	5 - 25
4	1.6 - 2.8	1.6 - 5.6	1.6 - 7.1	---	---	2.5 - 2.8	2.5 - 5.6	2.5 - 7.1	---
	Type of trim: seat - contoured plug								
1	0.63 - 4.5			---		1.6 - 4.5			---
2	1.0 - 2.24			---		1.4 - 2.8			---
3	0.8 - 1.8			---		1.0 - 2.5			---

Dimensions and weights (RV 805)

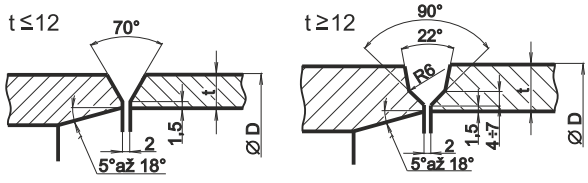
DN	PN 160, 250, 400						
	V1 [mm]	V2 [mm]	V3 [mm]	V4 [mm]	L [mm]	H [mm]	m [kg]
25	250	126	286	160	160	25	34
40	250	126	286	160	165	25	35
50	250	126	286	160	175	25	36
65	340	195	390	160	260	40	110
80	340	195	390	160	260	40	115
100	340	195	390	160	260	40	120

Dimensions and weights (RV 806)

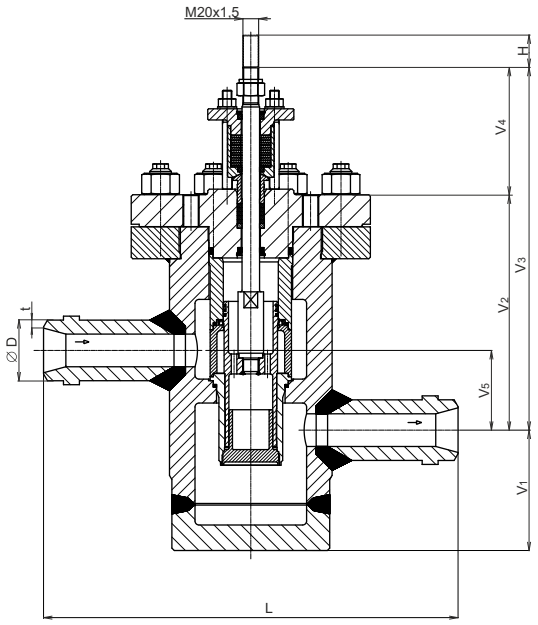
DN	PN 160, 250, 400							
	V1 [mm]	V2 [mm]	V3 [mm]	V4 [mm]	V5 [mm]	L [mm]	H [mm]	m [kg]
25	55	201	361	160	75	320	25	34
40	55	201	361	160	75	330	25	35
50	55	201	361	160	75	350	25	36
65	150	295	455	160	100	520	40	125
80	150	295	455	160	100	520	40	130
100	150	295	455	160	100	520	40	135

Connection dimensions of weld ends

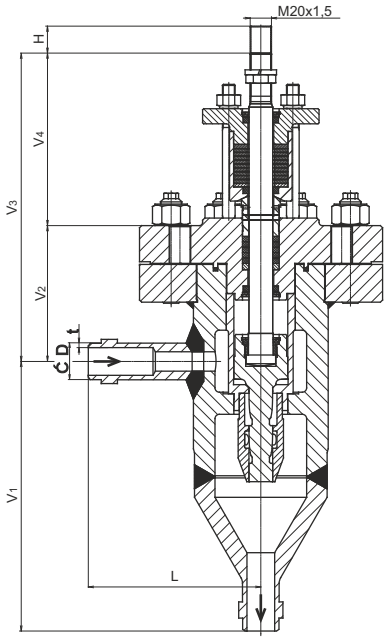
DN	PN 160		PN 250		PN 400	
	D [mm]	t [mm]	D [mm]	t [mm]	D [mm]	t [mm]
25	33.7	4	33.7	5	33.7	7.1
40	48.3	5	48.3	7	48.3	11
50	60.3	6.3	60.3	8	60.3	12.5
65	76.1	7	76.1	10	76.1	17.5
80	88.9	8	88.9	12.5	88.9	19
100	114.3	10	114.3	14	114.3	20



Other shapes of weld ends on customer demands



Control valve RV 806, "Z" shaped



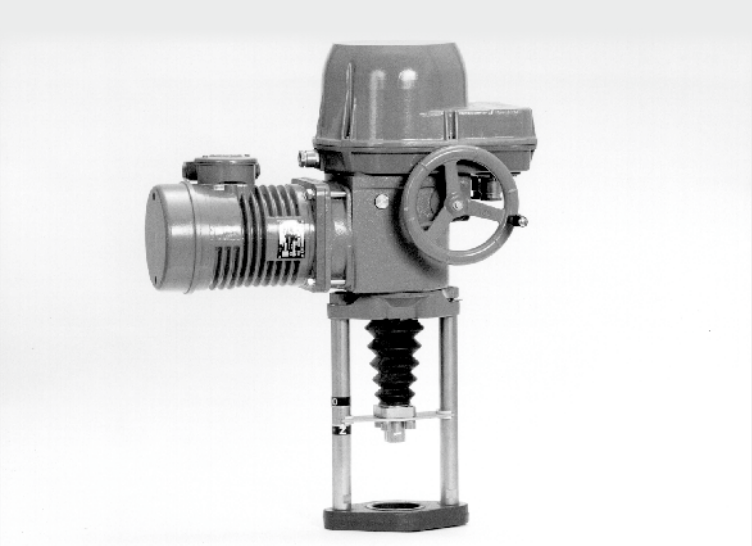
Control valve RV 805, angled

Schéma sestavení úplného typového čísla ventilů RV 805 a RV 806

		XX	XXX	XXX	XXXX	XX	-	XXX	/	XXX	-	XXX
1. Valve	Control valve	**RV**										
2. Series	Control valve, straight-through		**805**									
	Control valve "Z" shaped		**806**									
3. Type of actuating	Electric actuator			**E**								
	Pneumatic actuator			**P**								
	Electric actuator Modact MTR			**EPD**								
	Electric actuator Modact MTN Control			**EYA**								
	Electric actuator Modact MTN			**EYB**								
	Electric actuator Modact MOP 52 030			**EYE**								
	Electric actuator Modact MOP Control 52 030			**EYF**								
	Electric actuator Modact MOP 52 031			**EYG**								
	Electric actuator Modact MOP Control 52 031			**EYH**								
	Electric actuator Auma SAR 10.2			**EAJ**								
	Electric actuator Schiebel rAB8			**EZK**								
	Electric actuator Flowserve PO 1502			**PFD**								
4. Connection	Weld ends				**4**							
5. Weld ends material	Cast steel 1.0425 (P 265 GH) (-20 to 400 °C)				**2**							
(operating temp. ranges are specified in the parentheses)	Alloy steel 1.7335 (13CrMo4-5) (-20 to 550 °C)				**6**							
	Other material on request				**9**							
6. Packing	Graphite - Live Loading				**5**							
7. Multi-step pressure reduction	One-step pressure reduction				**1**							
	Two-step pressure reduction				**2**							
	Three-step pressure reduction				**3**							
	Four-step pressure reduction				**4**							
8. Flow characteristic	Linear					**L**						
	Equal-percentage					**R**						
9. No. of orifice plate	Without					**0**						
10. Nominal pressure PN	PN 160							**160**				
	PN 250							**250**				
	PN 400							**400**				
11. Operating temp. °C	Acc. to process medium									**XXX**		
12. Nominal size	DN - acc. to the valve selection											**XXX**

Order example: Control valve, angle, injecting, DN 40, PN 250, with electric actuator Modact Control MTN, body material: wrought carbon steel, packing: graphite, three-step pressure reduction, with linear flow characteristic, is specified as follows: **RV 805 EYA 4253 L0 250/400-40.**

Note: A different type of actuating can be delivered after agreement with the producer.



Electric actuators

Regada

Modact MTR

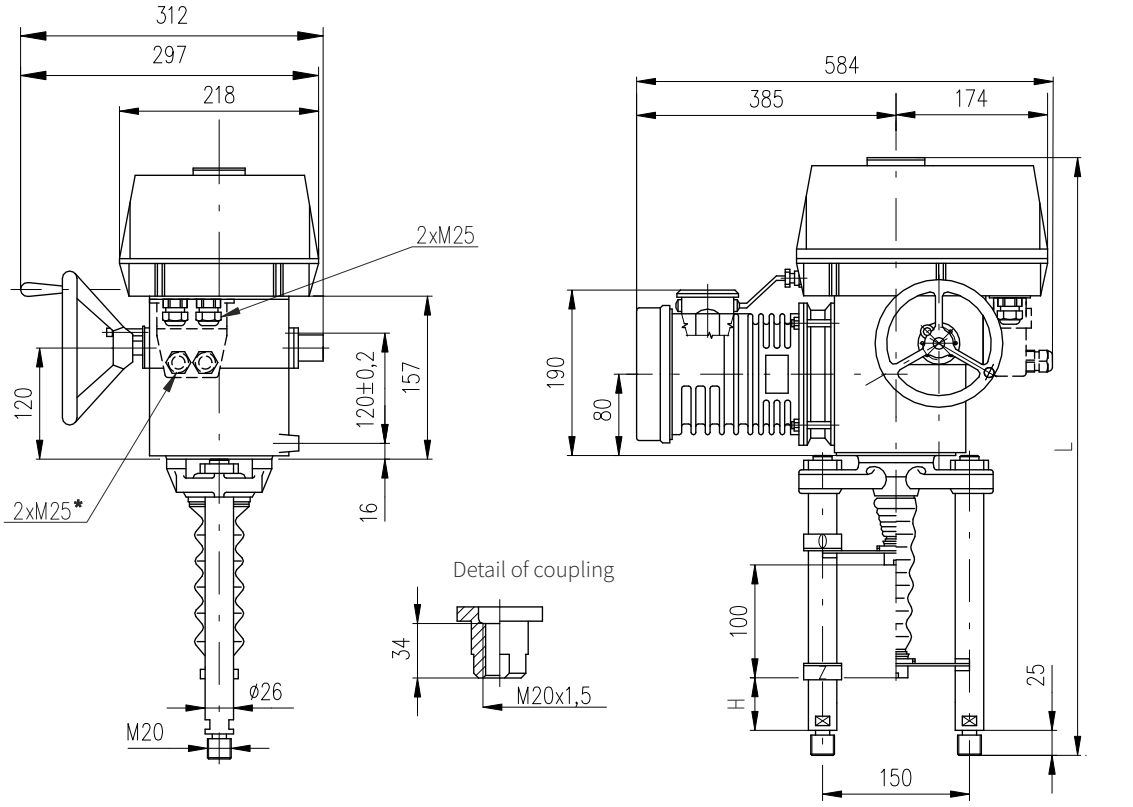
type no.
EPD

Technical data

Type	**Modact MTR**
Marking in valve specification No.	**EPD**
Voltage	230 V AC
Frequency	50 Hz
Motor power	16 or 25 W
Control	3 - pos. c. (in connection with NOTREP positioner - continuous)
Nominal force	25 kN
Travel	25 and 40 mm
Enclosure	IP 55 / IP 67
Process medium max. temperature	Acc. to used valve
Ambient temperature range	-25 to 55°C
Ambient humidity limit	90 %
Weight	27 to 31 kg

→ Detailed technical informations and wiring diagrams can be found in producer's datasheet or on the webside **www.regada.sk**

Dimensions of actuator Modact MTR



*only for version with connector

columns	with ball bolt	
version	A	B
P-1045a/H	130	702

Specification of actuator Modact MTR

Electric actuator MTR, linear								**52 420.**	X	-	X	X	X	X	X	/	X	X
Enviroment	Standard		-25°C to +55°C	Enclosure IP 55					0									
				Enclosure IP 67					1									
	Tropical		-25°C to +55°C	Enclosure IP 67					6									
Electric connection			**Voltage**															
To terminal board			230 V AC								9							
To connector											8							
Screw version		**Switching-off thrust** [32) 33)]	**Rated operating speed**	**Operating speed**	**Actuator** Power	Speed	Current											
ball screw	25 000/32-G	10.0 - 25.0 kN	32 mm/min.	38 - 32 mm/min.	25 W	1 250	0.41 A					G						
Control board version			**Operating stroke**		**Wiring diagram**													
Electromechanical control board - without local control			25 mm		Z298								C					
			40 mm		Z298								E					
Transmitter			**Connection**	**Output**														
Without transmitter			—	—										A				
Resistive	Single		—	1x100 Ω										B				
	Double			2x100 Ω										C				
	Single			1x2000 Ω										F				
	Double			2x2000 Ω										P				
Resistive with current converter	Wo power supply		2-wire	4 - 20 mA										S				
	Wi power supply													Q				
	Wo power supply			0 - 20 mA										T				
	Wi power supply													U				
	Wo power supply		3-wire	4 - 20 mA										V				
	Wi power supply													W				
	Wo power supply			0 - 5 mA										Y				
	Wi power supply													Z				
Capacitive CPT	Wo power supply		2-wire	4 - 20 mA										I				
	Wi power supply													J				
Mechanical connection	**Connecting hight / stroke**		**Pillar spacing / Bore of flange**	**Thread of stem** [3)]	**Dimensional drawing**													
Columns	130/100		150/ —	M20x1.5	P-1045a/C; P-1045a/H										C			

Additional equipment			
	Without additional equipment; adjusted max. switching-off thrust from range	0	1
A	2 additional position switches S5,S6	0	2
B	Adjustment of switching-off thrust for required value	0	3

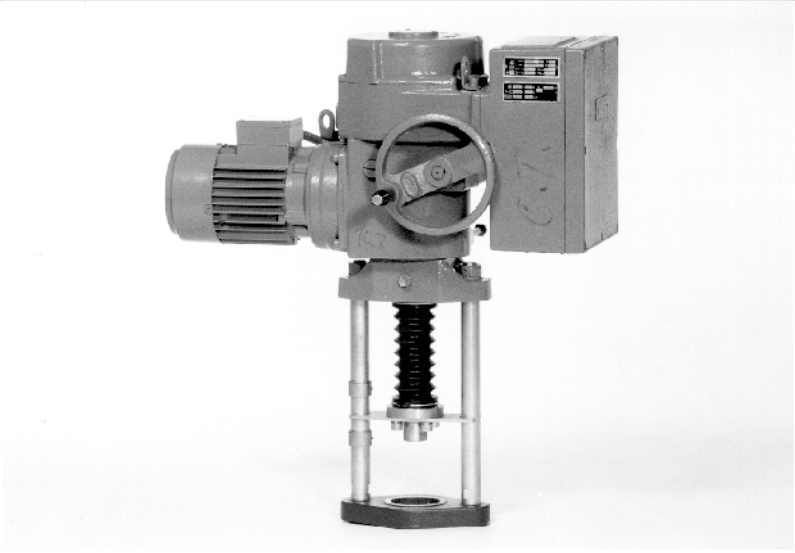
Combinations available and specification codes: A+B = 07

Notes:

[1)] State the switching-off thrust in your order by words. If not stated it is adjusted to the maximum rate of the corresponding range. Can not be adjust on site.

[2)] The maximum load thrust equals the max. Switching-off thrust multiplied by:
- 0.8 for duty cycle S2-10 min., Or S4-25%, 6 - 90 cycles per hour
- 0.6 for duty cycle S4-25%, 90 - 1200 cycles per hour

[3)] The thread in the coupling is to be specified in the order by words.



Electric actuators

ZPA Pečky

Modact MTN
Modact MTP
Modact MTN Control
Modact MTP Control

type 52 442

marking in type number:
EYA, EYB

Technical data

Type	Modact MTN Control	Modact MTN	Modact MTP Control	Modact MTP
Marking in valve spec. No.	**EYA**	**EYB**	**EYA**	**EYB**
Voltage	3 ~ 230 V AC / 400 V AC			
Frequency	50 Hz			
Power consumption	see specification table			
Control	3 - position; with regulator ZP2.RE5			
Nominal force	15 to 25 kN			
Stroke	10 to 100 mm			
Enclosure	IP 55		IP 67	
Process medium max. temp.	acc. to used valve			
Ambient temperatrure range	-25 to 70°C		-25 to 60°C	
Ambient humidity range	10 - 100 % with condensation			
Weight	33 to 45 kg			

→ **Note:** Specifications and technical data are for information only.
Detailed technical informations can be found in manufacturer's data sheet or on the webside **www.zpa-pecky.cz**

Specification of actuators Modact MTN, MTP a Modact MTN, MTP Control

Basic equipment

2 x power switches MO, MZ
2 x limit switches PO, PZ
2 x limit and signalisation switches SO, SZ
1 x position transmitter - resist 2x100 Ω or current
1 x heating element
2 x limit and signalisation switches SO, SZ

Basic technical parameters

Type	Switching-off thrust [kN]	Max. load thrust [kN]	Operating speed [mm.min^{-1}]	Stroke [mm]	Power [W]	Electromotor RPM 1/min	Electromotor In (400V) [A]	Electromotor Iz / In	Weight [kg]	Specification No. Basic	Specification No. Additional [2]
MTN 25 MTP 25	15 - 25	32,5	50	10 - 100	180	835	0.74	2.3	33	52 442	XX4XXM
			80		180	835	0.74	2.3			XX5XXM
			125		250	1350	0.77	3.0			XX6XXM
			36		120	645	0.51	2.2			XX7XXM
			27		120	645	0.51	2.2			XX8XXM

Execution, electric connection

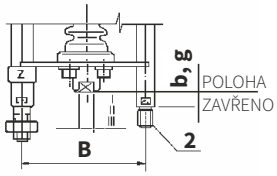
With terminal board	6XXXXM
With connector HARTING	7XXXXM
Execution Modact MTN; Modact MTN Control ... enclosure IP55	XXXXNM
Execution Modact MTP; Modact MTP Control ... enclosure IP67	XXXXPM

		Current transmitter CPT w/o source	Current trasmitter DCPT with source
Position transmitter	current 4 - 20 mA	XXX0XM	XXXRXM
	current 4 - 20 mA with BMO	XXX1XM	XXXSXM
	resistance 2x 100 Ω	XXX2XM	
	resistance 2x 100 Ω with BMO	XXX3XM	
	without transmitter, with BMO	XXXPXM	
	without transmitter, without BMO	XXXZXM	

Additional electric equipment [1]			Resist. transmitter 2x 100 Ω	Current transmitter CPT w/o source	Current transmitter DCPT with source
Control (with built-in contactor combination)	w/o BMO	without brake BAM and positioner	XXX4XM	XXXAXM	XXXKXM
		with brake BAM and without positioner	XXX5XM	XXXBXM	XXXLXM
		with brake BAM and with positioner		XXXCX5M [3]	
	with BMO	without brake BAM and positioner	XXX7XM	XXXDXM	XXXMXM
		with brake BAM and without positioner	XXX8XM	XXXEXM	XXXNXM
		with brake BAM and with positioner		XXXFX5M [3]	

Notes:
[1] When execution with flasher is requested, specify this requirment in writing: **Execution with flasher**
[2] Design without force locking after reversation have at the end position capital letter M (for example: 52442.6211NM)
[3] For actuators **MODACT MTN Control** with position controllers **ZP2.RE5** specify number 5 on place 11 (e.g.: 52442.6M5FN5M)

Connection dimensions - details of additional specification No. 52 442

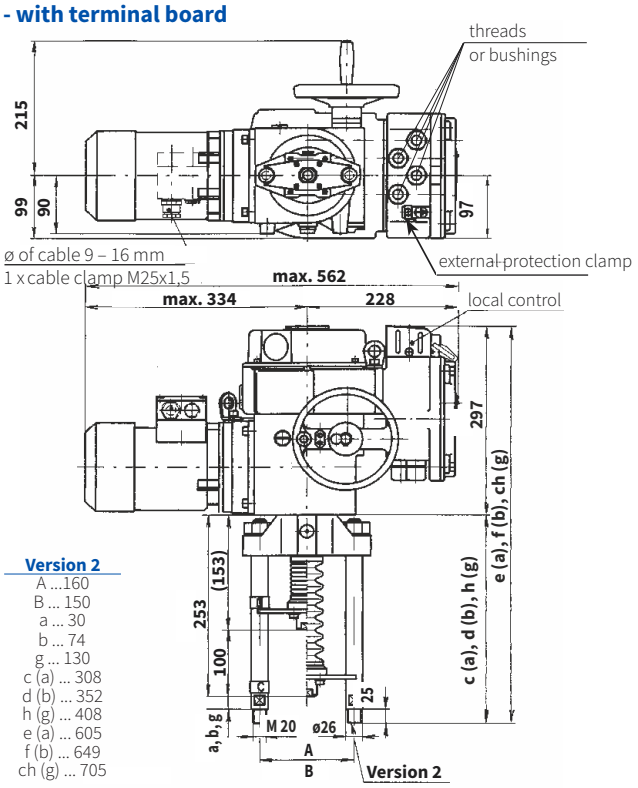


Columns pitch	B	150
Position "closed"	g	130
Coupling thread	l	M 20x1,5

Execution	Specification No. basic	Specification No. additional	For valves
Bg2l	52 442	XRXXXM	RV 80x DN 25 to 100

Dimensions of actuator Modact MTN, MTP

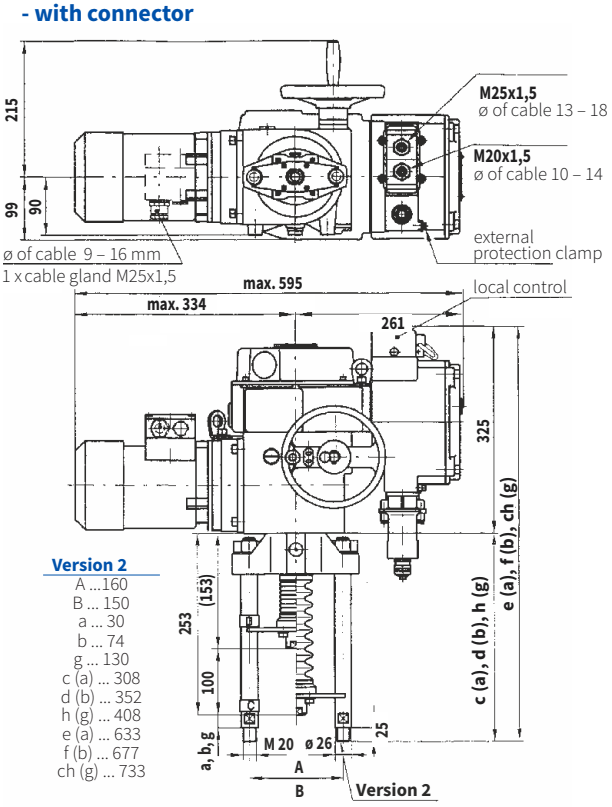
- with terminal board



Version 2
A ...160
B ... 150
a ... 30
b ... 74
g ... 130
c (a) ... 308
d (b) ... 352
h (g) ... 408
e (a) ... 605
f (b) ... 649
ch (g) ... 705

Dimensions of actuator Modact MTN, MTP and Modact MTN, MTP Control

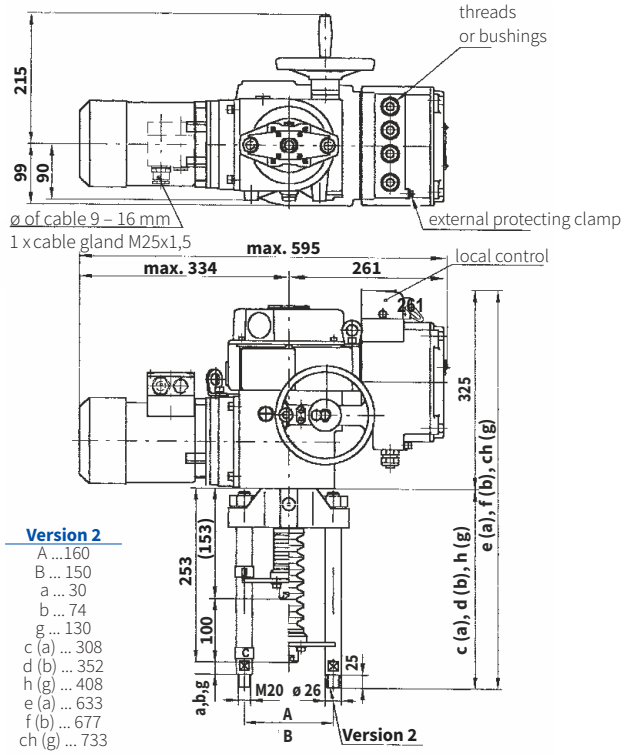
- with connector



Version 2
A ...160
B ... 150
a ... 30
b ... 74
g ... 130
c (a) ... 308
d (b) ... 352
h (g) ... 408
e (a) ... 633
f (b) ... 677
ch (g) ... 733

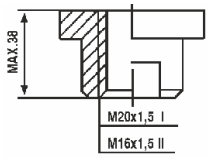
Dimensions of actuator Modact MTN, MTP Control

- with terminal board



Version 2
A ...160
B ... 150
a ... 30
b ... 74
g ... 130
c (a) ... 308
d (b) ... 352
h (g) ... 408
e (a) ... 633
f (b) ... 677
ch (g) ... 733

Detail of coupling



Electric actuator

ZPA Pečky

Modact MOP
Modact MOP Control

marking in type number:
EYE, EYF, EYG, EYH

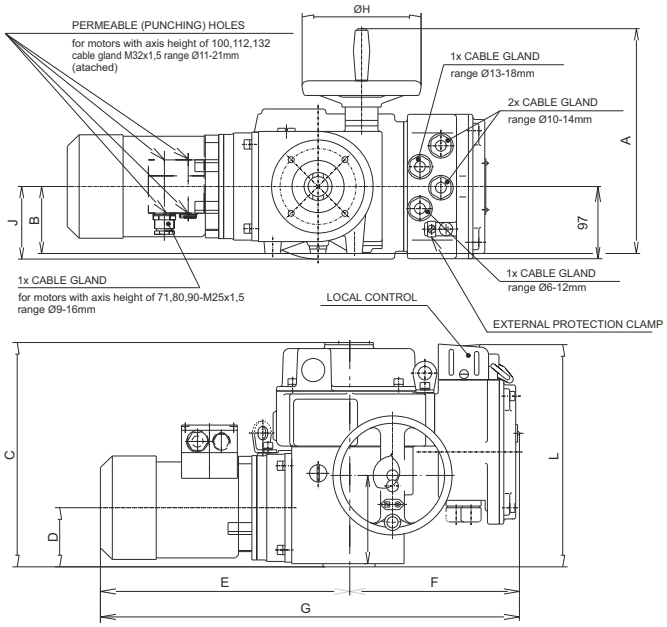
Technical data

Type	52 030 MOP	52 030 MOP Control	520 31 MOP	52 031 MOP Control
Marking in valve specification No.	**EYE**	**EYF**	**EYG**	**EYH**
Voltage	3 ~ 230/400 V			
Frequency	50 Hz			
Motor power	See specification table			
Control	3 - position control or continuous			
Nominal force	100 Nm ~ 27 kN; 120 Nm ~ 32 kN			
Travel	Acc. to given stroke			
Enclosure	IP 67			
Process medium max. temperature	Acc. to used valve			
Ambient temperature range	-50 to 60°C acc. to ČSN 33 2000-3, class AA7, AB7, AC1, AD5, AE5, AF2, AG2, AH2, Ak2, AL2, AM2, AN2, AP3, BA4, BC3			
Working condition	Loading S2 acc. to ČSN EN 60 034-1			
Weight	23 - 36 kg		33 - 59 kg	

Dimensions of actuator Modact MOP

DIMENSIONAL DRAWING OF ACTUATORS MODACT MOP

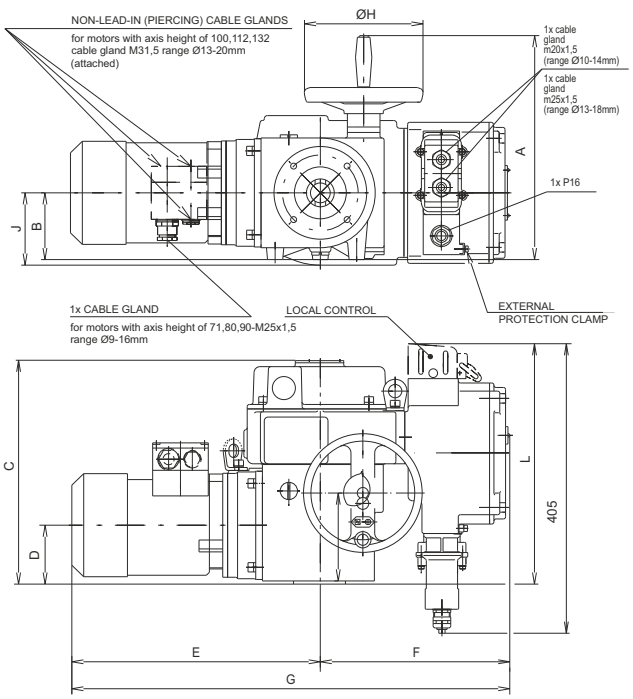
52 030 a 52 031 VERSION WITH TERMINAL BOARD



Type marking	A	B	C	D	E	F	G	ØH	J	K	L
52 030	305	90	300	78	334	228	562	160	99	120	300
52 031	376	120	328	92	436	228	664	200	-	144	328

DIMENSIONAL DRAWING OF ACTUATORS MODACT MOP

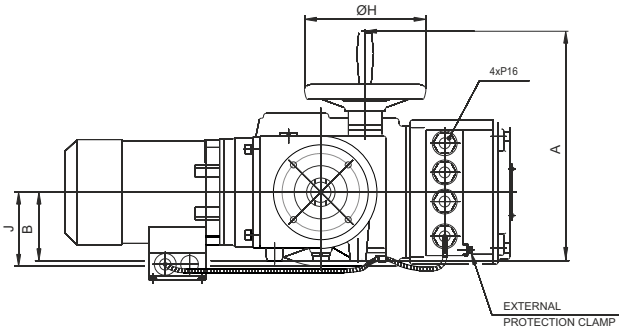
52 030 a 52 031 VERSION WITH TERMINAL BOARD

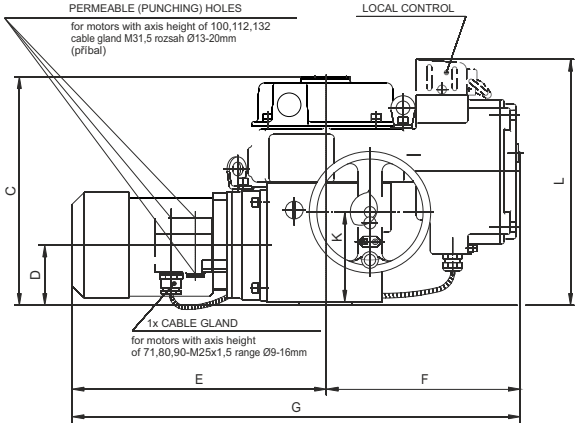


Type marking	A	B	C	D	E	F	G	ØH	J	K	L
52 030	305	90	300	78	334	258	592	160	99	120	325
52 031	376	120	328	92	436	258	694	200	-	144	350

ROZMĚROVÝ NÁČRTEK SERVOMOTORŮ MODACT MOP CONTROL

52 030 a 52 031





Type marking	A	B	C	D	E	F	G	ØH	J	K	L
52 030	305	90	300	78	334	258	592	160	99	120	325
52 031	376	120	328	92	436	258	694	200	-	144	328

Specification of actuatorModact MOP

			XX XXX	X	X	X	X X X(X)
Connection dimensions	**Output shaft type A**	To terminal board		**5**			
		To connector		**F**			
Local control, position indicator							
Resistance transmitter or execution without transmitter		Without local control, without position indicator			**1**		
		Local control			**4**		
		Local control for actuators Modact MOP Control			**7**		
Capacity transmitter CPT 1/A		Without local control, without position indicator			**B**		
		Local control			**E**		
		Local control for actuators Modact MOP Control			**H**		

Type marking	**Control**	**Moment**		**Runnng speed**	**Stroke**	**Electric motor**							
		Tripping	**Starting**			**Power**	**RPM**	**I_n (400V)**	**I_z / I_n**				
		(Nm)	**(Nm)**	**(1/min.)**	**(ot)**	**(kW)**	**(1/min.)**	**(A)**	**(-)**				
MOP 125/200 - 7	C	80-125	200	7	2-250	0,12	645	0,51	2,2	**52 030**		**L**	
MOP 125/220 - 9			220	9		0,18	850	0,74	2,3			**C**	
MOP 125/200 - 15			200	15		0,25	860	0,79	2,7			**D**	
MOP 120/155 - 25		80-120	155	25		0,37	1370	1,05	3,3			**E**	
MOP 115/150 - 50		80-115	150	50		0,55	2800	1,36	4,3			**H**	
MOP 160/210 - 9		100-160	210	9		0,18	850	0,74	2,3	**52 031**		**6**	
MOP 160/220 - 16			220	16		0,37	920	1,20	3,1			**7**	
MOP 160/250 - 25			250	25		0,55	910	1,60	3,4			**8**	
MOP 160/245 - 40			245	40		0,75	1395	1,86	4,0			**9**	
MOP 160/300 - 65			300	65		1,5	1420	3,40	5,0			**A**	
MOP 160/250 - 80			250	80		1,5	2860	3,25	5,5			**H**	
MOP 160/210 - 100			210	100		1,5	1420	3,40	5,0			**B**	
MOP 160/250 - 145			250	145		2,2	2880	4,55	6,3			**J**	

the table continues on the next page

continuation of the table of the specification of Modact MOP from the previous page

			XX XXX	X	X	X	X	X	X(X)
Signalization, position transmitter, blinker									
Only for actuators Modact MOP	Without signalisation, position transmitter and blinker						**0**		
	Position transmitter						**1**		
	Signalization switches						**2**		
	Signalization switches and position transmitter						**3**		
	Blinker						**4**		
	Position transmitter, blinker						**5**		
	Signalization switches and blinker						**6**		
	Signalization switches, position transmitter, blinker						**7**		
Signalization, position transmitter, blinker									
Only for actuators Modact MOP Control	**Complete equipment** [1]	Vysílač polohy					**A**		
		Signalizační vypínače a vysílač polohy					**B**		
		Vysílač polohy, blikač					**C**		
		Signalizační vypínače, vysílač polohy a blikač					**D**		
	Without psitioner	Bez signalizace, vysílače polohy a blikače					**E**		
		Vysílač polohy					**F**		
		Signalizační vypínače					**G**		
		Signalizační vypínače a vysílač polohy					**H**		
		Blikač					**I**		
		Vysílač polohy, blikač					**J**		
		Signalizační vypínače a blikač					**K**		
		Signalizační vypínače, vysílač polohy a blikač					**L**		
	Withoiut positioner and brake BAM	Bez signalizace, vysílače polohy a blikače					**M**		
		Vysílač polohy					**N**		
		Signalizační vypínače					**O**		
		Signalizační vypínače a vysílač polohy					**P**		
		Blikač					**R**		
		Vysílač polohy, blikač					**S**		
		Signalizační vypínače a blikač					**T**		
		Signalizační vypínače, vysílač polohy a blikač					**U**		
This mark is valid for the the types of the actuators								**P**	
Ambient temperature range	-25 to 60°C								**-**
	-40 to 60°C								**F1**
	-50 to 60°C								**F**

[1] The Control execution of actuators with ZP2.RE5 regulator - the digit “5” is put on the 11th place. (for example 52030.57D1P5F1)

Electric actuators

Auma

SA 10.2

Technical data

Type	**SAR 10.2**
Marking in valve spec. No.	**EAJ**
Voltage	3 ~ 380 or 400 V AC
Frequency	50 Hz
Power consumption	See specification table
Control	3 - position control or with signal of 4 - 20 mA
Nominal torque	100 Nm ~ 27 kN; 120 Nm ~ 32 kN
Stroke	25 a 40 mm
Enclosure	IP 67
Process medium max. temp.	Acc. to used valve
Ambient temperatrure range	-40 to 60°C
Ambient humidity range	100 %
Weight	1-phase motor 49 kg; 3-phase motor 22 kg

→ **Note:** Specifications and technical data are for information only.
Detailed technical informations can be found in producer's data sheet or on the webside **www.auma.com**

Specifikace pohonů Auma

		SA	X	XX	10.2
Type		**SA**			
Duty	control		**R**		
	ON - OFF				
Version	normal				
	non-explosive			**Ex**	
Actuator size					**10.2**

Output drive shaft A (thread TR 36x6 LH, flange F10)

Output RPM	Tripping torgue	SAR 10.2	Výkon motoru [kW]	SAR 10.2 S4-25%
4				0,09
5,6				0,09
8				0,18
11		60-120 Nm		0,18
16				0,37
22				0,37
32				0,75
45				0,75

Accessories

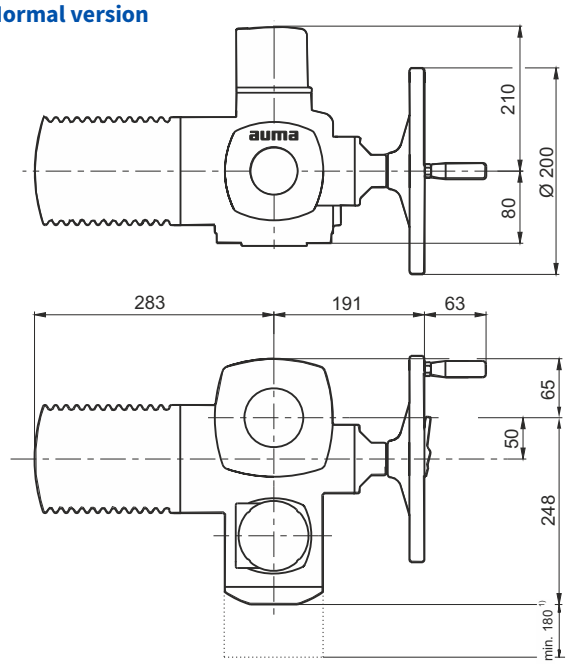
- → 2 TANDEM switches
- → Gearing for signalisation of position
- → Mechanical position indicator
- → Potentiometer 1 x 200 Ω
- → Electronic position transmitter RWG (potentiometer included), 4 - 20 mA, 2-wire
- → Electronic position transmitter RWG (potentiometer included), 4 - 20 mA, 3/4-wire
- → Inductive position transmitter IWG, 4 - 20 mA
- → MATIC - for continuous control (spec. of accessories acc. to catalogue of producer), weight + 7kg
- → AUMATIC - for continuous control (spec. of accessories acc. to ctlg of producer), weight + 7kg

Other accessories acc. to catalogue of producer of actuators **(www.auma.com)**

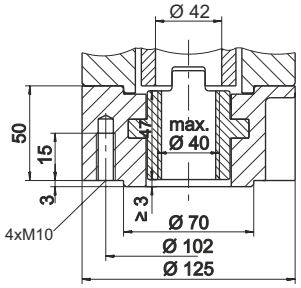
Dimensions of actuators Auma series 10.2

(for 3-phase execution only, dimensions for 1-phase execution according to catalogue sheets of the producer)

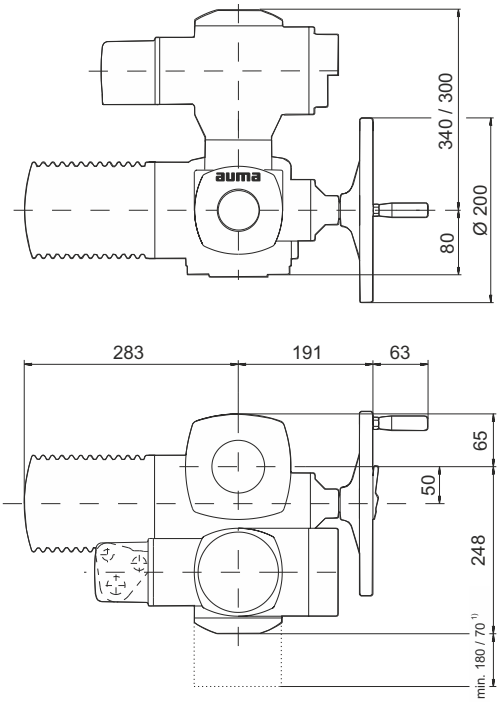
Normal version



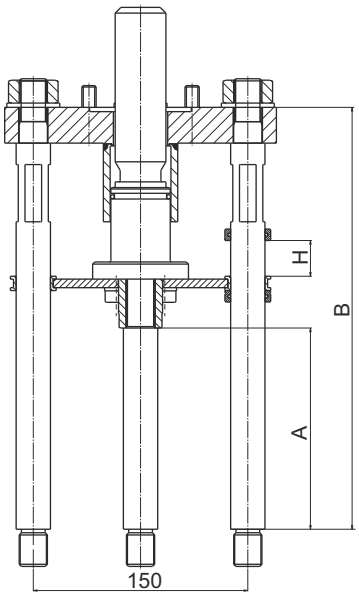
Outpt drive A, F10



Version MATIC / AUMATIC

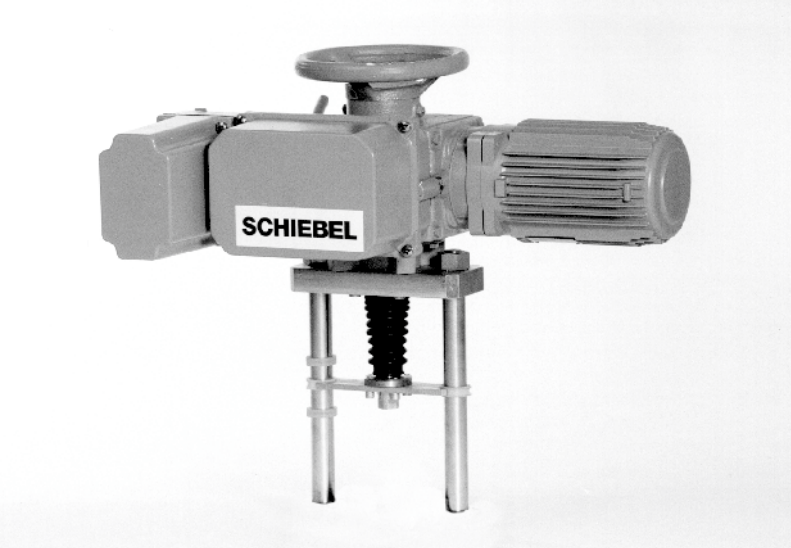


Connection acc. to ISO 5210
Output drive A, F10, Tr36x6-LH



[1] Space needed for opening the cover

For valves	Number of columns	A	B	H	Weight [kg]
RV 80x DN 25 - 50	4	130	295	25	~ 12 kg
RV 80x DN 65 - 100	4	130	310	40	~ 15 kg



Electric actuators

Schiebel

AB8

Technical data

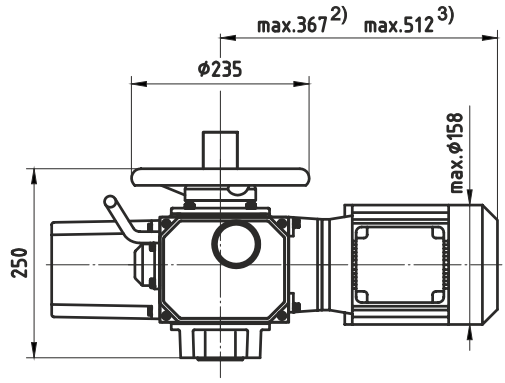
Type	**rAB8**
Marking in valve spec. No.	**EZK**
Voltage	400 / 230 V; 230 V
Frequency	50 Hz
Power consumption	see specification table
Control	3-position or with signal 4 - 20 mA
Nominal force	100 Nm ~ 27 kN; 120 Nm ~ 32 kN
Stroke	40, 63, 80, 100 mm
Enclosure	IP 66
Process medium max. temp.	acc. to used valve
Ambient temperatrure range	-25 to 60 °C
Ambient humidity range	90 % (tropical execution: 100 % with condensation)
Weight	24 - 35 kg

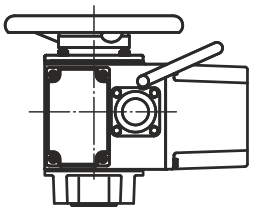
→ **Note:** Specifications and technical data are for information only.
Detailed technical informations can be found in producer's data sheet or on the webside **www.schiebel.com**

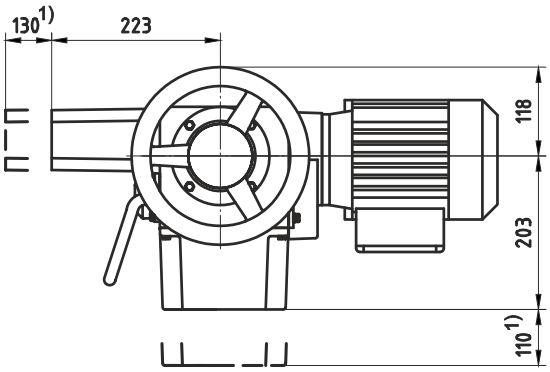
Specification of actuators

							xx	x	XXX	X	X	+	XXXXX
Execution			normal										
Function			control					**r**					
Actuator size									**AB8**				
Output shaft type A (thread TR 36x6 LH, flange F10)										**A**			
Output RPM		**Torgue**	**rAB8**	**Motor power [kW]**	**rAB8**								
					400/230V	**230V**							
	2,5		Switching-off 50 - 120 Nm		0,06	0,12					**2,5**		
	5				0,12	0,25					**5**		
	7,5				0,18	0,37					**7,5**		
	10				0,18	0,75					**10**		
	15		Modulating 30 - 80 Nm		0,37	0,75					**15**		
	20				0,37	1,10					**20**		
	30				0,75	1,10					**30**		
	40				0,75	1,10					**40**		
Accessories				Potentiometer 1 x 1000 Ω									**F**
				Double potentiometer 2 x 1000 Ω									**FF**
				Electronic transmitter 4 - 20 mA									**ESM21**
				Position regulator ACTUMATIC R									**CMR**
				Control unit SMARTCON									**CSC**

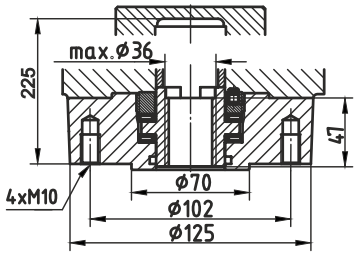
Dimensions of actuators ...AB8



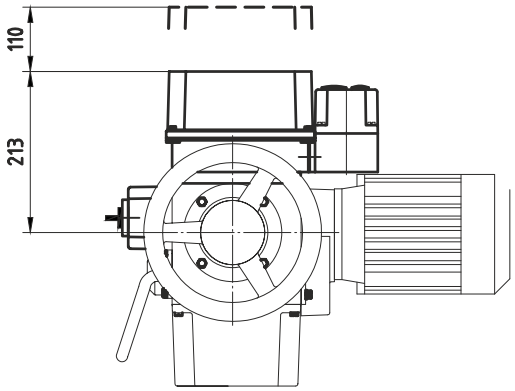




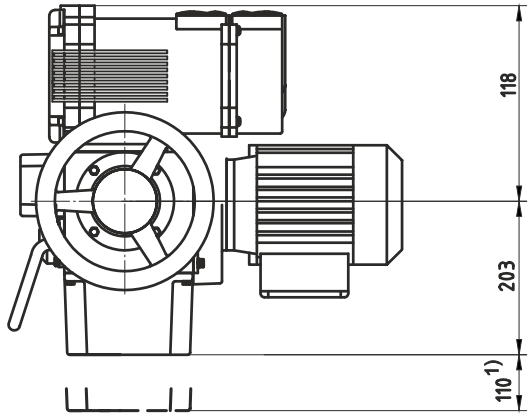
Output drive shaft A, F10



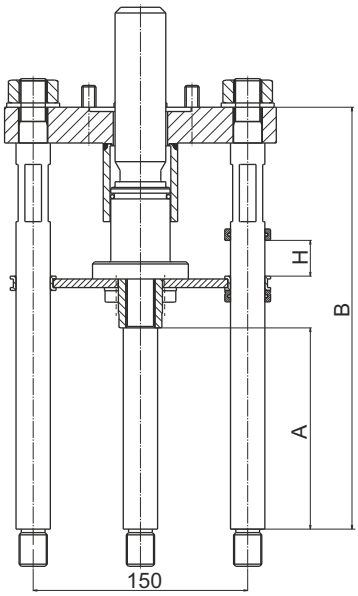
With position regulator ACTUMATIC R



With SMARTCON control unit



Connection acc. to ISO 5210, Drive shaft A, F10, Tr36x6-LH



1) space needed to open the bonnet
2) version without the brake
3) version with the brake

For valves	No. of columns	A	B	H	Weight
RV 80x DN 25 to 50	4	130	295	25	~ 12 kg
RV 80x DN 65 to 100	4	130	310	40	~ 15 kg

Pneumatic actuators

Flowserve

PO 1502

Technical data

Type	**PO 1502 / PB 1502**
Marking in valve spec. No.	**PFD**
Feeding pressure	p_{max} = 0,6 MPa, p_{min} - see table
Function	direct / indirect
Control	pneumatic signal 20 - 100 kPa current signal 0(4) - 20 mA
Nominal force	according to table of nominal forces
Stroke	60 mm
Enclosure	IP 54
Process medium max. temp.	acc. to used valves
Ambient temperatrure range	-40 to 80 °C
Ambient humidity range	95 %
Weight	see dimensions table

→ **Note:** Specifications and technical data are for information only. Detailed technical informations can be found in producer's data sheet or on the webside **www.flowserve.com**

Accessories

Electropneumatic positioner (analog) type SRI 990	Device with electric input of 4 (0) - 20 mA and direct output of controlling air into actuator. Adjusted by switches and potentiometers
Electropneumatic positioner (intelligent) type SRD 991	Device with electric input of 4 (0) - 20 mA and direct output of controlling air into actuator. Adjusted by PC and special software
Pneumatic positioner type SRP 981	Device with pneumatic input of 20 - 100 kPa for control with pneumatic control signal
Signalisation switches type SGE985	Adjustable end position switches
Electropneumatic positioner type SRI 986	Analog positioner with input signal 4(0) - 20 mA
Air set type A 3420 (0 to 50°C)	Reduces supply air pressure to a value requied
Air set type FRS923 (-40 to 80°C)	Reduces supply air pressure to a value requied
Electropneumatic positioner SIPART PS2	Digital positioner with electric input of 4(0) – 20 mA
Solenoid valve standard type SC G327A001	Direct operated electromagnetic valve, design 3/2, function U (universal), G 1/4“
Solenoid valve explosion-proof EEx em type EM G327A001	Direct operated electromagnetic valve, design 3/2, function U (universal), G 1/4“, modification with the increased safety / epoxy encapsulation operator
Solenoid valve explosion-proof EEx d type NF G327A001	Direct operated electromagnetic valve, design 3/2, function U (universal), G 1/4“, flameproof enclosure
Booster-valve type EIL 100	Flow air volume increaser
Air lock relay, type EIL 200	Retaining device for closing of air pipeline on a pressure drop

Operating conditions

Pneumatic actuators Flowserve can operate with extremely high ambient temperatures with unique resistance to shock loads. They excel with resistance to vibrations and reached 10 of cycles in operation. It is possible to deliver the actuator with both fail to open and fail to close function, possibly with a position blocking (air lock) upon feeding pressure air supply failure. Various accessories can be delivered together with the actuator.

Direct and indirect functions

Direct function ensures that actuator's stem retracts upon control air supply failure (valve opens).
Indirect function ensures that actuator's stem extends upon control air supply failure (valve closes).

Valve specification No. of Flowserve actuators

		PX XXXX	X	XX	X	X	X
Actuator type		**PO 1502**					
Colour	white		**B**				
Spring range [bar]	2,0 - 3,5			**FS**			
	1,5 - 2,7			**VC**			
Hand wheel	without wheel				**O**		
	side wheel light				**S**[1)]		
Function	direct					**A**	
	indirect					**Z**	
Stroke [mm]	60						**C**

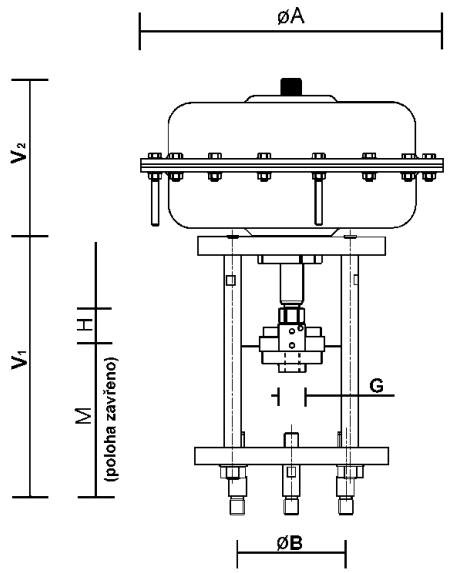
DN	Actuator type	Function	Actuator stroke [mm]	Valve stroke [mm]	Spring range [bar]	Spring setting [bar]	Napájecí tlak min. [bar]
25, 40, 50	**PO 1502 BVCxZC**	fail to close NC	60	25	1,5 - 2,7	2,2 - 2,7	5
	PO 1502 BFSOAC	fail to open NO	60	25	2 - 3,5	2 - 2,6	5
60, 80, 100	**PO 1502 BVCxZC**	fail to close NC	60	40	1,5 - 2,7	1,9 - 2,7	5
	PO 1502 BFSOAC	fail to open NO	60	40	2 - 3,5	2 - 3	5

1) The closing function only **Note:** Appoint insted of „x": O - without hand wheel, S - with side wheel

Specification of Flowserve

DN	Actuator	H	A	B	G	M	V1	V2	m [kg]
25, 40, 50	PO 1502	25	550	150	M20x1,5	160	308	409	148
60, 80, 100		40							

Note: Face to face dimensions [mm]



Maximal permissible pressure values acc. to EN 12 516-1 [MPa]

Material	PN	Temperature [°C]									
		200	250	300	350	400	450	500	525	550	575
Cast steel 1.0425 (11 416.1)	160	11,4	10,4	9,4	8,8	8,4	---	---	---	---	---
	250	17,8	16,2	14,7	13,7	13,2	---	---	---	---	---
	400	28,4	26,0	23,5	21,9	21,1	---	---	---	---	---
Alloy steel 1.7335 (15 121.5)	160	14,9	14,3	13,3	12,3	11,5	10,7	8,9	---	---	---
	250	23,3	22,3	20,8	19,3	18,0	16,7	13,9	---	---	---
	400	37,4	35,7	33,3	30,9	28,9	26,7	22,3	---	---	---

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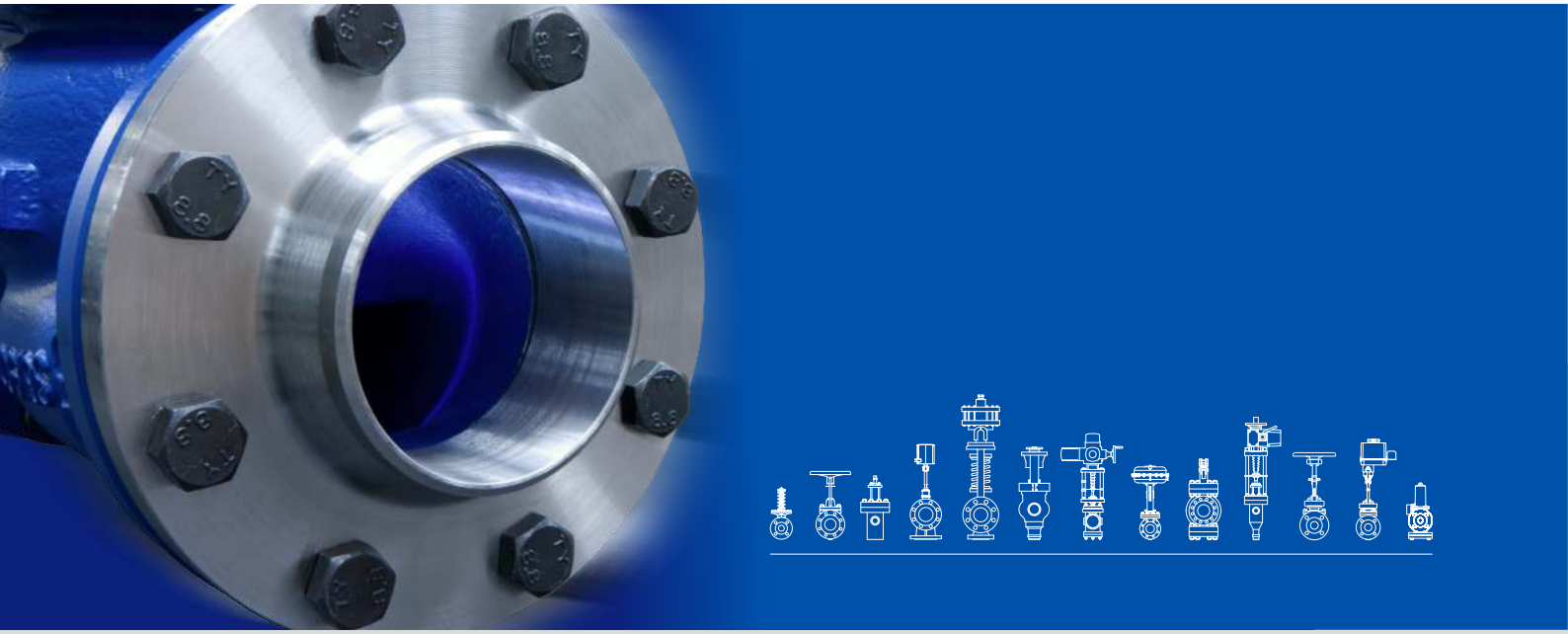

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