

**02 - 07.5**

04.14.GB

**Three-way control cock  
RK 601**





## Three-way control cock

### Description

Control cock type RK601 is a three-way valve with diverting function designed especially for a heavy power station operation. Construction of the cock type RK601 allows the distribution of flow with a large capacity and a low pressure drop. The throttling organ (segment) with an optimized shape opens or closes the channels and controls the flow to the pipeline branches. Construction of the cock doesn't allow to close the flow of the medium.

Packing box of the cock is made from a graphite string.

The cocks are supplied in weld ends execution having faces acc. to ČSN 13 1075 or acc. to the customer's requirements and demands.

Control cock type RK601 is designed for connection with rotary electromechanical actuators of various producers, like Sipos, Auma, Schiebel, ZPA Pečky, etc., with flange F14 acc. to ČSN EN ISO 5210.

### Process media

Control cock type RK601 is designed for the distribution of the flow of liquids, vapours and gases without abrasive particles and compatible with materials of the cock body and inner parts. The manufacturer is responsible for the material compatibility acc. to the information about the process medium given by the customer. The most common process

medium is steam.

To ensure a reliable operation, the producer recommends to pipe a strainer in front of the cock into pipeline or ensure in any other way that process medium does not contain abrasive particles or impurities.

### Recommended differential pressures

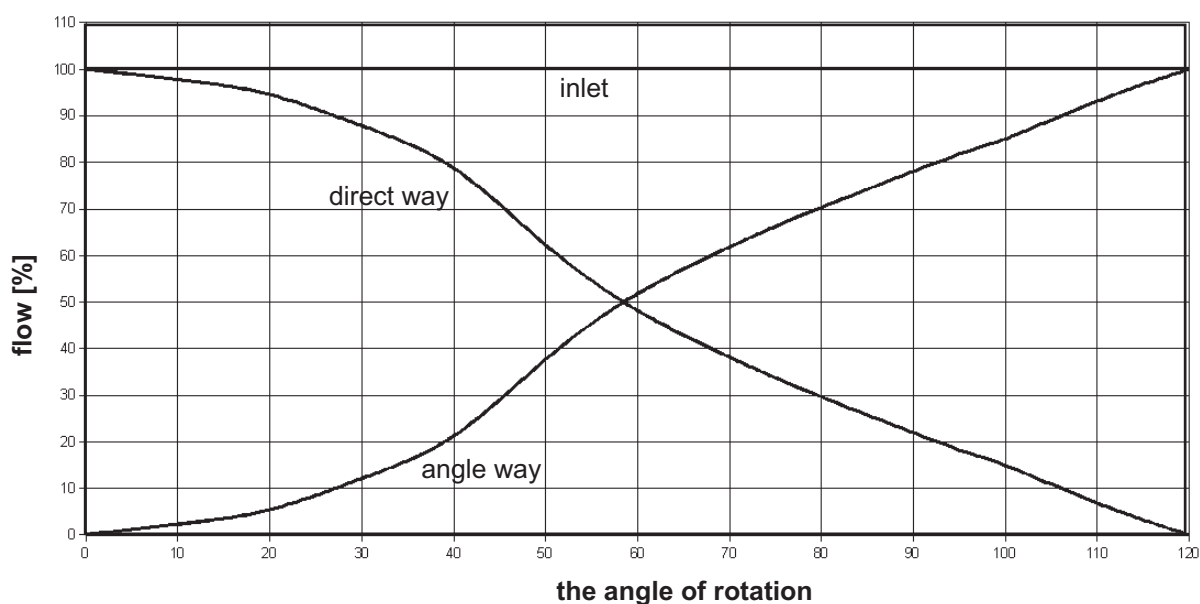
Max. permissible differential pressure is 5 bar. Permanent differential pressure must be less than 1 bar.

### Installation

The cock type RK601 must be piped the way so that the process medium flow will coincide with the arrows indicated on the cock body or on the label. If the flow direction isn't indicated with the arrows, the cock must be piped that the inlet pipe will be directed to one of the straight branches of the cock body.

The cock can be installed in any position except the position when the actuator is under the cock.

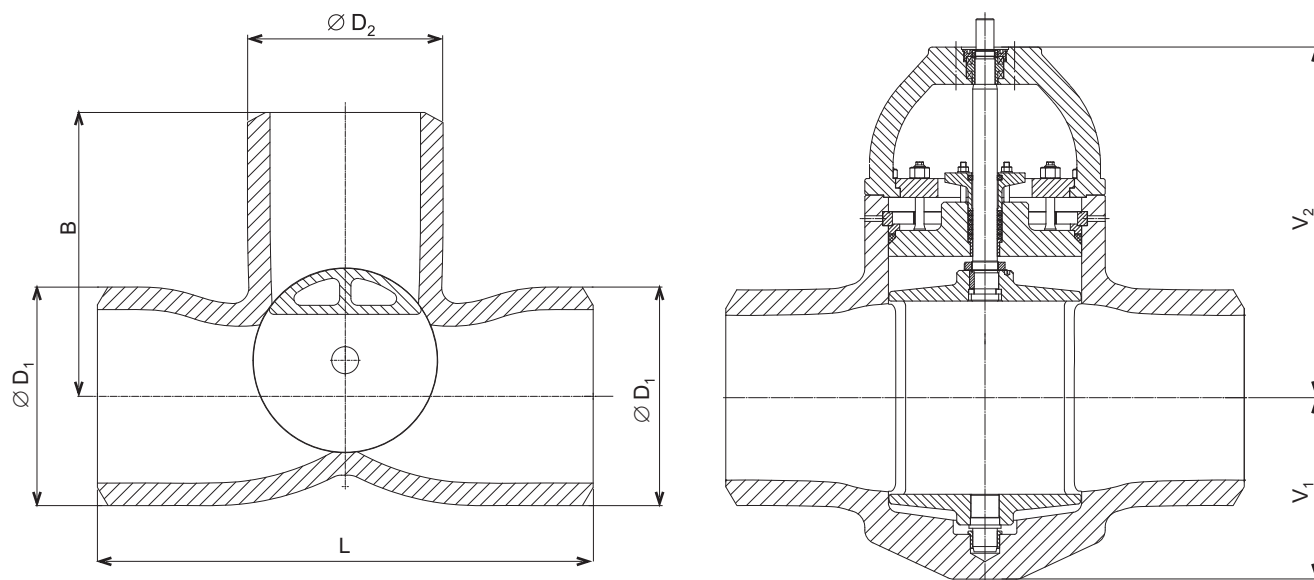
### RK 601 flow characteristics



## Dimensions, weights and Kvs for the valve type RK 601 with weld ends

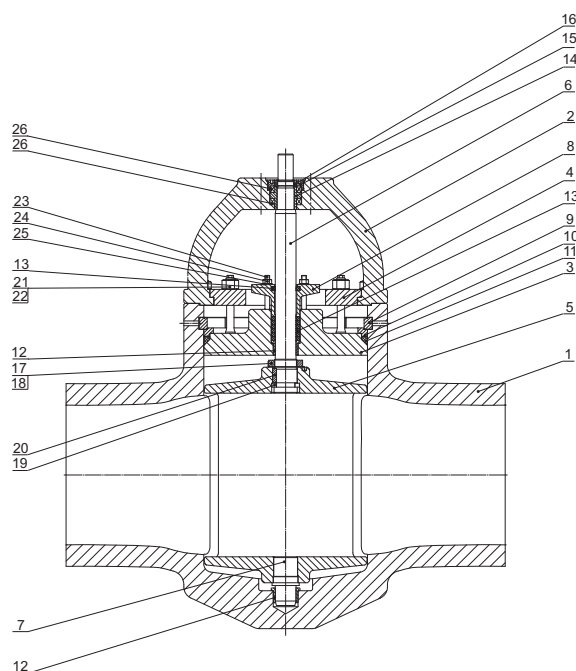
DN	L	B	D <sub>1</sub>	D <sub>2</sub>	V <sub>1</sub>	V <sub>2</sub>	m	K <sub>vs</sub>	
								direct way	angle way
	[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[kg]	[m <sup>3</sup> /h]	[m <sup>3</sup> /h]
100	310	175	114	114	---	---	---	---	---
150	440	250	168	168	---	---	---	---	---
200	570	320	219	219	---	---	---	---	---
250	750	420	273	273	---	---	---	---	---
300	840	470	324	324	---	---	---	---	---
350	900	505	356	356	320	650	622	5000	3000
400	1030	580	406	406	---	---	---	---	---
450	1100	630	457	406	380	744	1145	15000	9000
500	1300	725	508	508	---	---	---	---	---
600	1550	870	610	610	---	---	---	---	---

Connecting dimensions of weld ends can be modified on request by the customer.



## Maximal permissible pressure values [MPa]

Material	PN	Temperature [ °C ]											
		100	150	200	250	300	350	400	450	500	550	575	600
Cast steel 1.0619	40	3.41	3.17	2.84	2.60	2.35	2.19	2.11	---	---	---	---	---
	63	5.37	4.99	4.48	4.09	3.71	3.45	3.33	---	---	---	---	---
	100	8.53	7.92	7.11	6.50	5.89	5.48	5.28	---	---	---	---	---
Alloy steel 1.7357	40	4.07	3.96	3.74	3.57	3.33	3.09	2.89	2.67	2.23	0.88	---	---
	63	6.41	6.24	5.88	5.63	5.24	4.86	4.55	4.20	3.51	1.39	---	---
	100	10.17	9.90	9.34	8.93	8.32	7.71	7.22	6.67	5.57	2.21	---	---
Alloy steel 1.7379	40	4.07	3.96	3.85	3.66	3.38	3.18	2.89	2.67	2.23	1.23	0.86	---
	63	6.41	6.24	6.06	5.76	5.33	5.00	4.55	4.20	3.51	1.93	1.35	---
	100	10.17	9.90	9.63	9.14	8.46	7.94	7.22	6.67	5.57	3.07	2.14	---
Stainless steel 1.4931	40	4.07	3.96	3.85	3.66	3.38	3.18	2.89	2.67	2.23	1.97	1.61	1.06
	63	6.41	6.24	6.06	5.76	5.33	5.00	4.55	4.20	3.51	3.10	2.53	1.68
	100	10.17	9.90	9.63	9.14	8.46	7.94	7.22	6.67	5.57	4.92	4.01	2.66



### Description of material:

Position	Name	Material	Position	Name	Material
1	Body	1.0619 (1.7357, 1.7379, 1.4931)	14	Bushing	17 027.6
2	Yoke	1.0619 (1.7357, 1.7379, 1.4931)	15	Nut	17 027.6
3	Bonnet	1.0425 (1.7335, 1.7380/1.7383, 1.4903)	16	Nut	17 027.6
4	Plate	1.0425 (1.7335, 1.7380/1.7383, 1.4903)	17	Nut	17 027.6
5	Segment	1.7357	18	Washer	17 021.6
6	Stem	1.4305	19	Ring	17 027.6
7	Pin	1.4305	20	Feather	1.7335
8	Stuffind box	17 027.6	21	Bolt	15 320.5
9	Ring	1.4301	22	Nut	15 236.6
10	Ring	1.4301	23	Bolt	15 320.5
11	Sealing	exp. grafit	24	Nut	15 236.6
12	Bushing	17 023.6	25	Washer	ČSN 02 1702
13	Packing set	exp. grafit	26	Axial bearing	-

### Valve complete specification No. for ordering RK 601

		XX	X X X	X X X	X X X X	XXX	/	XXX	-	XXXxXXXxXXX
1. Kohout	Control cock	RK								
2. Series			601							
3. Type of actuating	Electric actuator			E						
	Electric actuator Auma SAR 07.6			E A G						
	Electric actuator Auma SAR Ex 07.6			E A H						
	Electric actuator Schiebel rAB5			E Z G						
	Electric actuator Schiebel exrAB5			E Z H						
4. Connection	Weld ends				4					
5. Body material	Cast steel 1.0619 (-20 to 400°C)				1					
	Stainless steel 1.4931 (-20 to 600°C)				5					
	Alloy steel 1.7357 (-20 to 550°C)				7					
	Other material on request				9					
6. Packing	Grafit				5					
7. Pressure reduction	One-step pressure reduction					1				
8. Nominal pressure	PN						040			
	PN						063			
	PN						100			
9. Operation temperature °C	Acc. to process medium							XXX		
10. Nominal size	DN									XXXxXXXxXXX

Ordering example: RK601 EAG 4151 040/400-450x450x400

# EAG, EAH



## Electric actuators SAR 07.6, SAR Ex 07.6 Auma

### Technical data

Typ	SAR 07.6	SAR Ex 07.6
Marking in valve specification No.	EAG	EAH
Voltage	380 or 400 V	
Frequency	50 Hz	
Motor power	See specification table	
Control	3 - position control or with signal 4 - 20 mA	
Enclosure	IP 67	
Process medium max. temperatur.	According to used valve	
Ambient temperature range	-25 to 60°C	-20 to 40°C
Ambient humidity limit	100 %	
Weight	20 to 25 kg	

Note: Detailed technical informations can be found in producer's data sheet or on the webside [www.auma.com](http://www.auma.com)

### Specification of Auma actuators

Type		SA	X	XX	07.6
Duty	control	SA	R		
	ON - OFF				
Provedení	Standard				
	Non-explosive			Ex	
Actuator's size					07.6

Output shaft type B (acc. to DIN 6885; flange F07 / F10)

Output speed (rpm)	Tripping torque	SAR 07.6 SAREx 07.6	Motor power [ kW ]	SAR 07.6	SAR Ex 07.6
		30-60 Nm			
4				0,045	0,045
5,6				0,045	0,045
8				0,09	0,09
11				0,09	0,09
16				0,18	0,18
22				0,18	0,18
32				0,37	0,37
45				0,37	0,37

Note: Actuators are assembled in combination with the gearbox, for example Auma GS80.3

## Accessories

2 TANDEM switches

Gearing for signalisation of position

Mechanical position indicator

Potentiometer 1x200 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

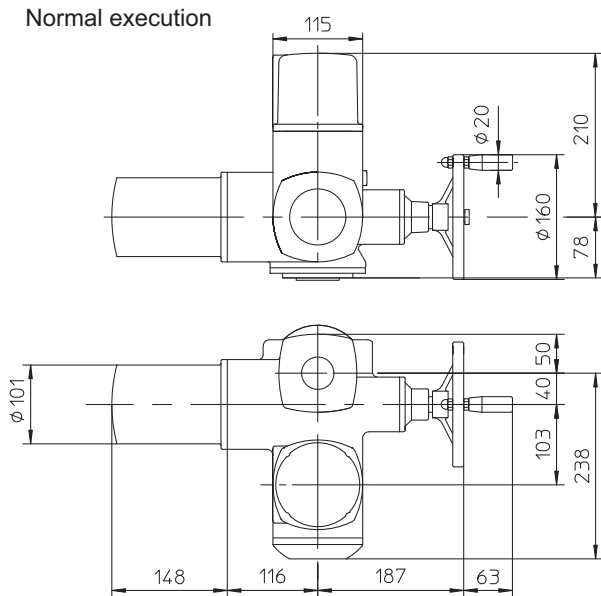
MATIC - for continuous control (specification of accessories acc. to catalogue of producer)

AUMATIC - for continuous control (specification of accessories acc. to catalogue of producer)

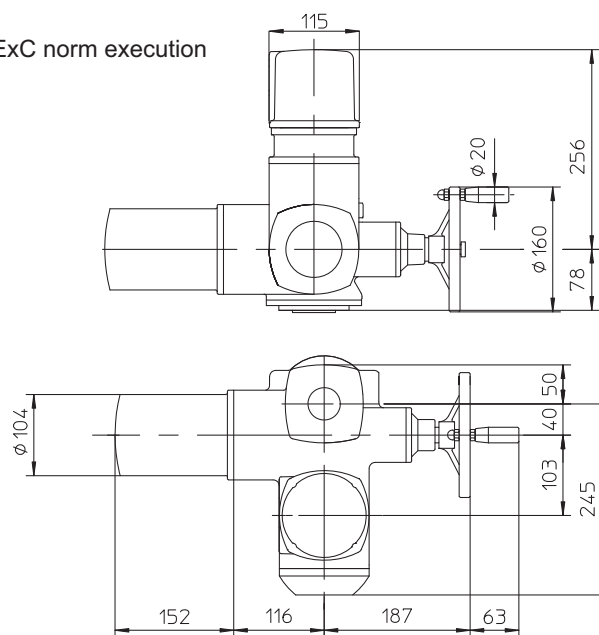
Other accessories acc. to catalogue of producer of actuators.

## Dimension of Auma actuators 07.6

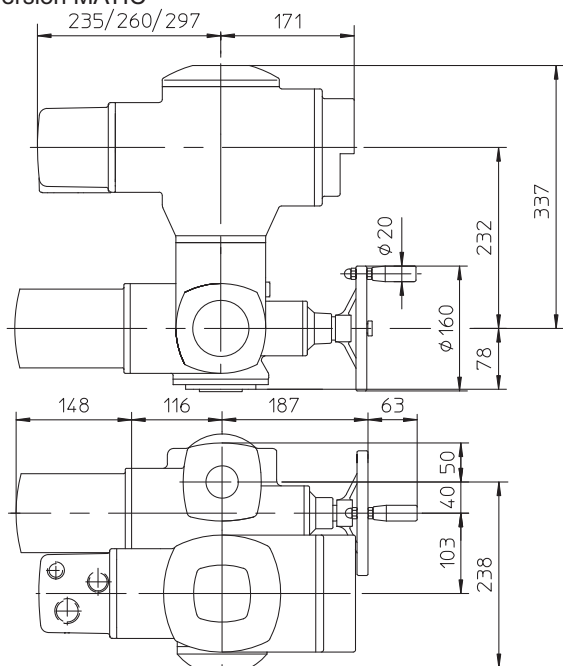
Normal execution



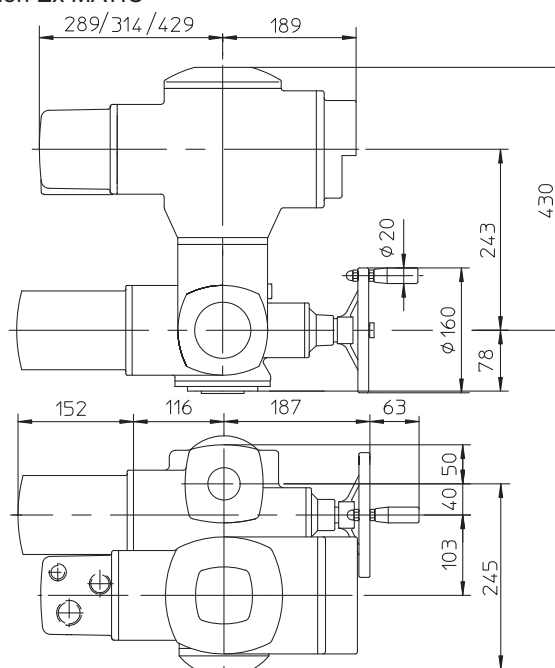
ExC norm execution



Version MATIC



Version Ex MATIC





## Electric actuators ...AB5 Schiebel

### Technical data

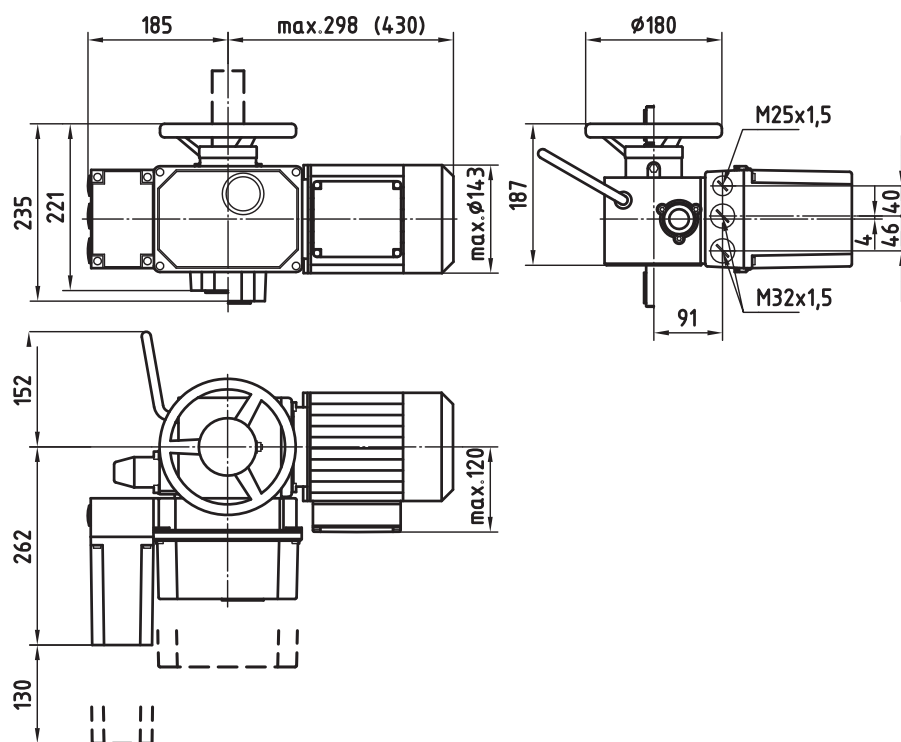
Type	rAB5	exrAB5
Marking in the valve's specification No.	EZG	EZH
Voltage	400 / 230 V; 230 V	400 / 230 V
Frequency	50 Hz	
Motor power	See specification table	
Control	3 - position control or with signal 4 - 20 mA	
Enclosure	IP 66	IP 65
Process medium max. temperature	Acc. to used valve	
Ambient temperature range	-25 to 80°C	-20 to 40°C
Ambient humidity limit	90 % (tropical version 100 % with condensation)	
Weight	16 - 18 kg	16 kg

### Specification of actuators

				XX	X	AB5	B	X	+	XXX	
Execution				Non-explosive		ex					
				Standard							
Duty				Control		r					
Actuator's torque						AB5					
Output shaft type B (acc.to DIN 6885; flange F07 / F10)							B				
Output speed (rpm)	Tripping torque	rAB5		rAB5		exrAB5					
		exrAB5		400/230V	230V	400/230V					
		2,5	10-30 Nm	0,09	0,09	0,09					2,5
		5		0,12	0,12	0,12					5
		7,5		0,09	0,09	0,09					7,5
		10		0,12	0,12	0,18					10
		15		0,18	0,18	0,18					15
		20		0,18	0,18	0,37					20
		30		0,37	0,37	0,37					30
40	0,37	0,37		0,37		40					
Příslušenství				Potentiometer 1 kΩ						F	
				Double potentiometer 2x1 kΩ						FF	
				Electronic transmitter 4 - 20 mA, two-wire						ESG-Z	
				Electronic transmitter 4 - 20 mA, two-wire, opto						ESM21	
				SMARTCON control unit						CSC	
				Auxiliary torque switches						2DER 2DEL	
				Auxiliary signalisation switches						2WER 2WEL	

Note: Actuators are assembled in combination with the gearbox, for example Auma GS80.3

## Dimensions of actuators ...AB5





## The gearbox type Auma GS 80.3

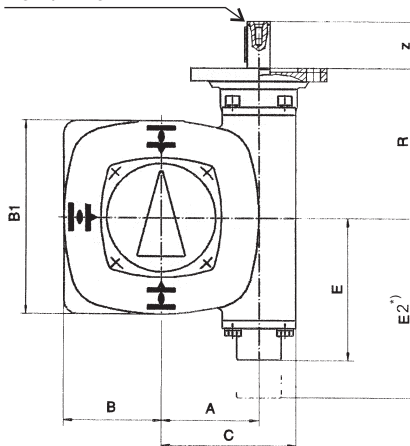
Dimensions	GS 80.3
EN ISO 5211	F14
Transmission ratio	53:1
A	80
B	88
B1	175
C	111
E	133
E2 *	155
F	170
H	107
I	4
J	57
K	16
R	130
L max.	90
z	40

\* Adjustable angle of rotation, max. 190°

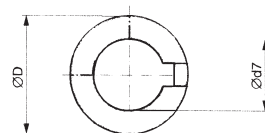
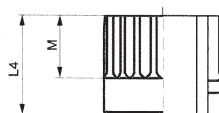
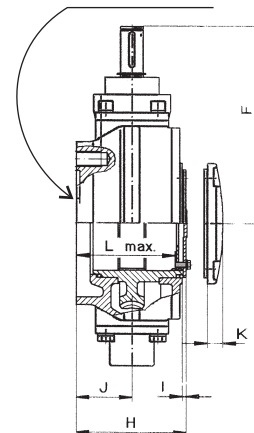
### Detail of coupling

Type	GS 80.3
EN ISO 5211	F14
ØD	81.6
Ød7 max.	60
L4	65
M	47

Connection to an actuator  
F07 / F10



Connection to a cock  
F14





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