

# Motor Valve compact 8230

## GS 3 series, DN 15 up to DN 50



**Motor valve for control and switching of neutral through to highly aggressive media in process engineering, chemical industries and for plant equipment.**

- Space saving wafer type construction
- Lowest possible weight
- Low operation noise level (quiet operation)
- Self adaption
- Operating pressures up to 40 bar
- Control of high differential pressures with small actuators
- Available also with „spring return“



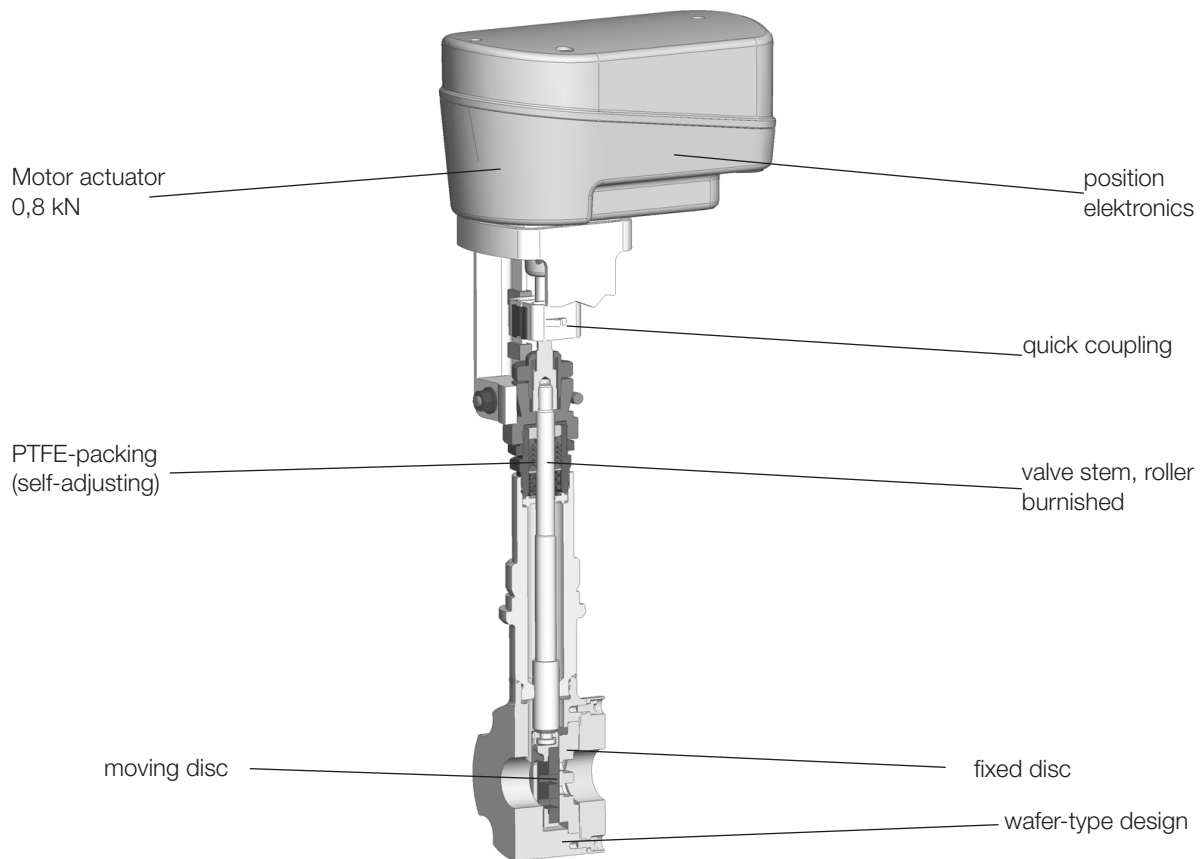
### Technical Information Valve

Design	Flangeless design further versions see data sheet 8230-GS1		
Nominal size	DN 15 up to DN 50		
Nominal pressure acc. DIN 2401 for flanges with facing type B	PN 40 (fits also to PN 10-25)		
Nominal pressure acc. ANSI for flanges acc. ASME B16.5 RF	ANSI 150 ANSI 300		
Nominal pressure acc. JIS for "raiced face" flanges	10K 20K	DN 15 - DN 40	
Media temperature	Carbon steel body	-10°C up to +300°C	
	Stainless steel body	-60°C up to +350°C	
Rangeability	30 : 1		
Leakage (% of Kvs)	Disc unit Carbon-stainless steel < 0,0001	Disc unit SFC < 0,0005	Disc unit STN 2 < 0,001

Kvs-values see data sheet 8001.

### Technical Information Motor Actuators

Type of motor	BM24C	BM24C/I	BM24C/IOS2	BM250C/IO2	BM24	BM115	BM230
Function	Control	Control	Control	Control	On/Off	On/Off	On/Off
Nominal voltage	24 V AC/DC	24 V AC/DC	20-30V AC 20-45V DC	85-250V AC 120-250V DC	24 V AC/DC	115V AC	230 V AC
Set point	2 - 10 V	4 - 20 mA	4 - 20 mA	4 - 20 mA	3-step	3-step	3-step
Load	100 kOhm	500 Ohm	500 Ohm	500 Ohm	-	-	-
Position feedback	2 - 10 V	2 - 10 V	4 - 20 mA	4 - 20 mA	-	-	-
external load	-	-	< 700 Ohm	< 700 Ohm	-	-	-
limit switches	-	-	2 x	2 x	-	-	-
max. switching load	-	-	24V AC/DC 70mA	24V AC/DC 70mA	-	-	-
Power consumption	3 W	3 W	3 W	4 W	3 W	6 W	6 W
Stroking time (standard)	3,50 s/mm	3,50 s/mm	3,50 s/mm	3,50 s/mm	7,5 s/mm	7,5 s/mm	7,5 s/mm
Thrust	800 N						
Class of protection	IP 65						
Ambient temperature	-10°C up to +60°C						



## Admissible Differential Pressures

Nominal size	maximum differential pressure [bar]					
	DN15	DN20	DN25	DN32	DN40	DN50
Unit carbon/SFC-stainless steel	40	40	40	40	30	20
STN2 Unit	40	37	28	20	14	8,5

## Materials

Body	Carbon steel 1.0570 /1.0619	Stainless steel 1.4571 /1.4581	
Head section	Carbon steel 1.0570 /1.0619	Stainless steel 1.4571 /1.4581	
Packing	PTFE (carbon filled), spring 1.4310		
Actuating stem	Stainless steel, roller burnished		
Bellow	Stainless steel 1.4571		
Fixed plate	Stainless steel 1.4571, plated	STN2-disc	
Sliding disc	Standard: special carbon material	SFC-disc	STN2-disc
Coupling ring for discs	Stainless steel 1.4581		

## Motor Stroking Times

Stroking times for control actuators in sec.		
Setting	DN 15 - DN 40	DN 50
1,75 s/mm	11	14
3,5 s/mm	22*	29*
7,0 s/mm	44	58
14,0 s/mm	88	116

Stroking times for on/off-actuators in sec.		
Setting	DN 15 - DN 40	DN 50
7,5 s/mm	47*	62*
4,5 s/mm	28	37

\*Standard

## Ordering Number System

8	2	3	0	/	V	K	M	M	Z	S
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Type
Size

—Symbol: "V": Valve  
 "R": Repair kit (sealings)

1 - 6 : Please quote all 6 sections.  
 7 - 16: Quote only if required.

1. Motor design	2. Function	3. Connection	4. Body material	5. Safety position	6. Motor	7. Special versions	8. Stem sealing																																		
K	Compact actuator	M	Motor control valve type 8230	E	GS3 flangeless design acc. ANSI 150	F	GS3 flangeless design acc. ANSI 300	G	GS3 flangeless design acc. DIN, PN10-PN40	0	carbon steel 1.0570/ 1.0619	1	stainless steel 1.4571/1.4581 (316Ti or 318)	-	Without safety position spring closes	0	control actuator BM250C/IOS2 85-250V AC/120-250V DC control electronics 4-20 mA, feedback 4-20 mA, 2 limit switches	1	control actuator BM24C - 24V AC/DC, control electronics 2-10 V, feedback 2-10 V	2	control actuator BM24C/I - 24V AC/DC, control electronics 4-20 mA, feedback 2-10 V	6	on-off actuator BM24, 24 V AC/DC	7	on-off actuator BM230; 230V AC	8	on-off actuator BM115; 115V AC	9	control actuator BM24C/IOS2 20-30V AC/20-45V DC control electronics 4-20 mA feedback 4-20 mA, 2 limit switches	M	to state if some of sections 8 - 15 are quoted	A	Nut and nut acc. DIN 2512	C	Nut and tongue acc. DIN 2512	E	2x lowered face acc. DIN 2513	H	Lowered and raised face acc. DIN 2513	-	PTFE-packing self-adjusting (standard) stainless steel bellow 316Ti

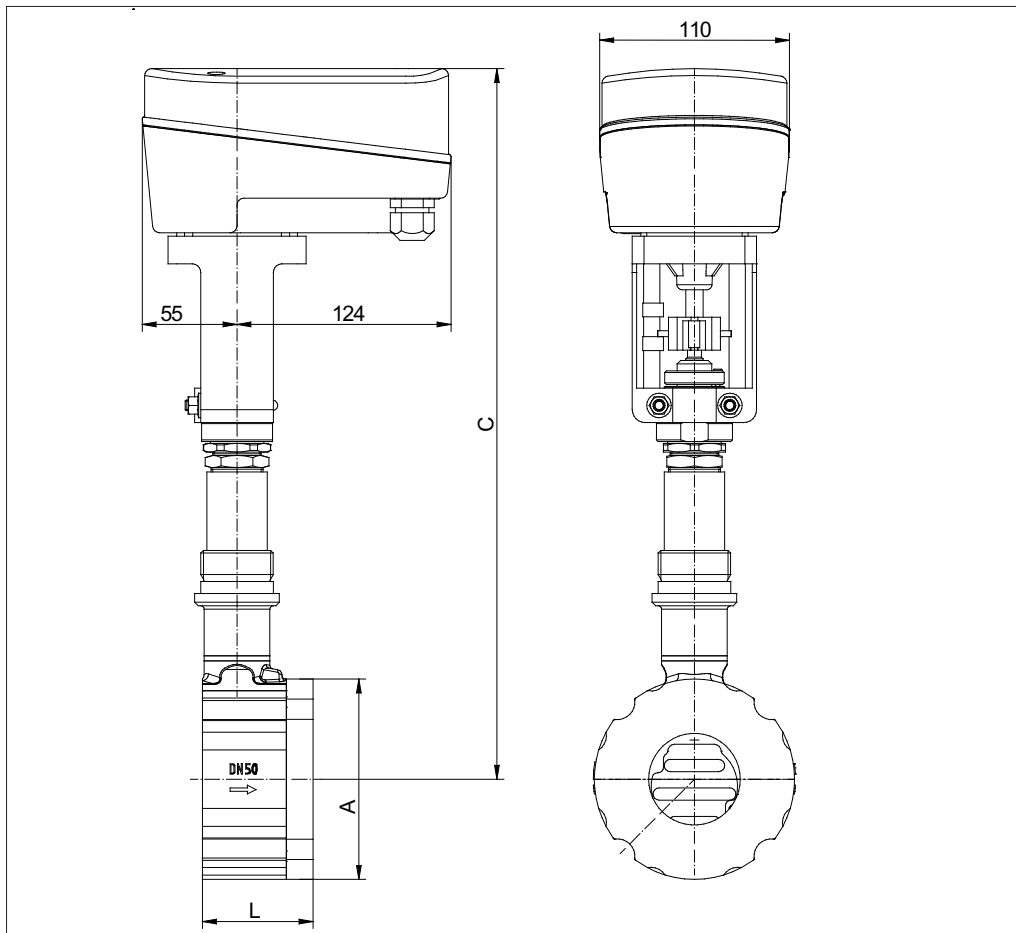
9. Moving disc	10. Fixed disc	11. Cv-values	12. Flow characteristic	13. Accessories	14. Set point signal	15. Stroking times	16. Special versions
- carbon 9 STN2/STN3-disc S SFC-disc	- stainless steel 1 STN2-disc 3 STN3-disc	- 100% (stand.) A red. to 63% 1 red. to 40% B red. to 25% 2 red. to 16% C red. to 10% 3 red. to 6,3% 4 red. to 2,5% 5 red. to 1% 6 red. to 20% 7 red. to 12% 8 red. to 2% 9 red. to 0,4%	- linear 1 equal percentage	Z accessories (pos.14 ff.)	- standard 2-10V or 4-20 mA signal opens	- standard: control actuat. 3,5 s/mm On-off actuators: 7,5s/mm L 4,5 s/mm on/off-actuators only 1 1,75 s/mm control actuators only 2 7,0 s/mm control actuators only 3 14,0 s/mm control actuators only	

Ordering example:

8230/050VKME103

GS-Motor Valve compact type 8230, DN 50, flangeless design ANSI 150, stainless steel body, spring closes, control actuator BM24C/IOS, 24V AC/DC, control electronics 4-20 mA, stroke feedback 4-20 mA, 2 limit switches, linear characteristic, Kvs-value 100 %

## Dimensions and Weights



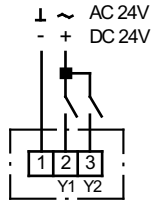
DN	A	C	L	Stroke	Weight kg
15	64	385	56	6	3,8
20	72	390	56	6	4
25	82	395	56	6	4,3
32	86	400	56	6	4,5
40	99	405	56	6	4,8
50	116	415	64	8	6,3

Dimensions in mm

## On/Off-Actuators

### Actuator: BM24

24V AC/DC  
3-step drive



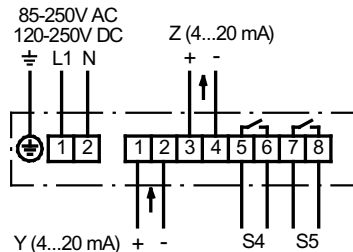
### Actuator: BM230, BM115

230V 50/60 Hz  
115V 50/60 Hz  
3-step drive

## Control Actuators

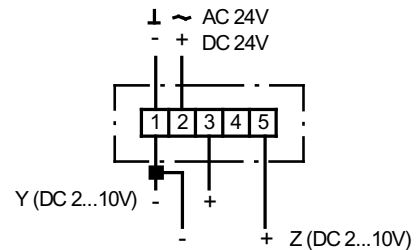
### Actuator: BM250C/IOS2, BM230C/IOS2-R

85-250V AC 120-250V DC  
input signal 4-20mA  
feedback signal 4-20mA  
2 limit switches



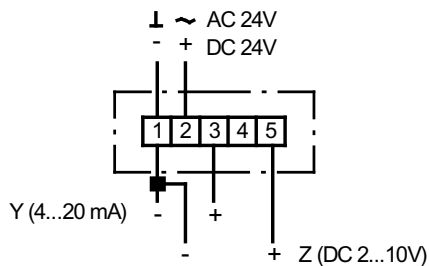
### Actuator: BM24C, BM24C-R

24V AC/DC  
input signal 2-10V  
feedback signal 2-10V



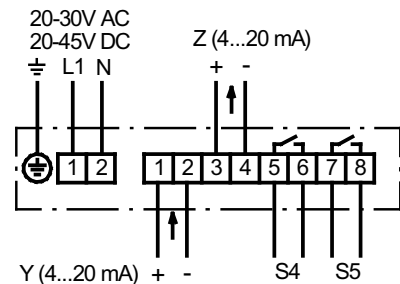
### Actuator: BM24C/I, BM24C/I-R

24V AC/DC  
input signal 4-20mA  
feedback signal 2-10V



### Actuator: BM24C/IOS2

20-30V AC 20-45V DC  
input signal 4-20mA  
feedback signal 4-20mA  
2 limit switches



BM.....-R: version with safety position  
Y: signal, Z: feedback signal