

## GS 1 series, DN 15 up to DN 125

**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 580 psi
- Control of high differential pressures with small actuators
- Actuators with control function also available with safety position
- Meets the requirements of TA-Luft 2021



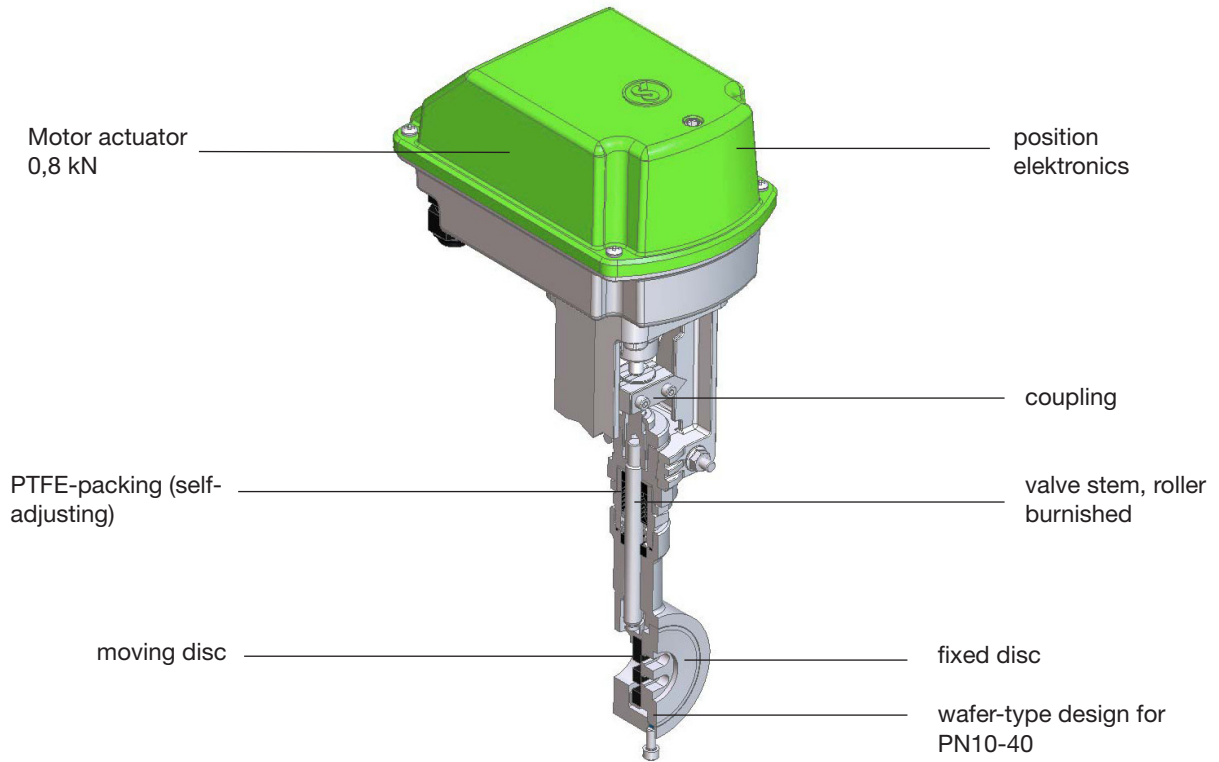
### Technical Information Valve

Design	Flangeless design Dimensions acc. DIN EN 558-1 series 20 for flanges acc. DIN EN 1092-1 form B		
Nominal size	DN 15 up to DN 125		
Nominal pressure	PN 40 acc. DIN 2401 also for flanges PN 10 up to PN 25		
Fluid temperature	Body carbon steel:	-10 up to +230°C	
	Body stainless steel:	-20 up to +230°C optional -60°C up to +230°C	
Flange gaskets (customer side)	DIN EN 1514-1 or ANSI B16.21 in the respective nominal pressure rating		
Rangeability	30 : 1		
Leakage	Disc pair Carbon-stainless steel	Disc pair SFC	Disc pair STN 2
% of Kvs	< 0,0001	< 0,0005	< 0,001
IEC 60534-4	IV-S1	IV-S1	IV
EN 12266-1	E	F	F
Packing leakage	ISO FE - BH - CC3 - SSA0 - t (-40°C / +350 °C) - PN40 - ISO 15848-1		

\* With DN15 with reduction of less than 25%, different leakage rates possible.

K<sub>vs</sub>-values see data sheet 8001.

# Motor Valve compact 8231-GS1



## Materials

Body	Carbon steel 1.0619	Stainless steel 1.4408	
Packing	PTFE (carbon filled), spring 1.4310		
Actuating stem	Stainless steel, roller burnished		
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		

## Technical Information CA-Actuator

Function	Control				On/Off	
	CA24C	CA260C	CA24C-R	CA260C-R	CA24	CA260
Motor type	24V AC/DC	90-260V AC	24V AC/DC	90-260V AC	24V AC/DC	90-260V AC
Mains connection	(0)2-10V / (0)4-20mA				3-term**	
Set point range	(0)2-10V / (0)4-20mA				optional	
Feedback	2				optional	
Limit switch	-				optional	
Potentiometer feedback	24V AC/DC 200 mA				250V AC/DC 1A	
Max. switching capacity	1.5 / 2 / 3 s/mm (Standard: 2 s/mm)				2 or 3 s/mm (Standard: 3 s/mm)	
Actuating speed	Monitoring of tensile force, set point, temperature of the electronics, etc.				Tensile force monitoring	
Safety functions	Storage of motor and total operating time, temperature and directional classes, etc.				-	
Diagnostic functions	-	-	freely adjustable		-	
Fail Safe position	500 Ω for current set point / 95 kΩ for voltage set point					
Load	13 W	12 W	13 W	12 W	13 W	12 W
Max. input	10 W					
Input heating resistor	6 A	2,5 A	6 A	2,5 A	6 A	2,5 A
Starting current heating resistor	800 N					
Actuating power	IP 65					
Protection class (EN 60529)	-10°C to +60°C					
Adm. Ambient temperature	100%					
Duty cycle						

\*: for control with volt-signal split range adjustments are possible

\*\* : minimum switch on time 200ms

Wiring diagrams of the actuators can be found in the manual.

## Motor Stroking Times for CA-actuators

Stroking times in seconds			
Setting	DN 15 - DN 40	DN 50 - DN 80	DN 100 - DN 125
1,5 s/mm	9,5	12,5	13
2 s/mm	12,5	16,5	17
3 s/mm	19	25	26

## Admissible Differential Pressures

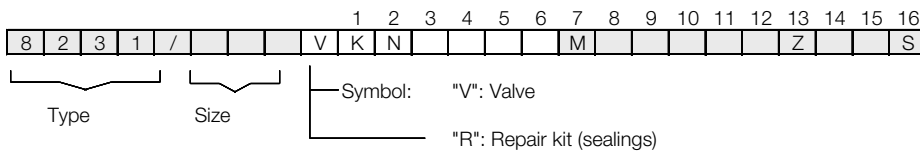
Nominal Size	maximum differential pressure [bar]									
	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125
Unit carbon/SFC-stainless steel	40	40	40	40	30	20	17	11	7	4,5
STN 2-unit	40	37	28	20	14	8,5	7	4	2,5	1,5

## Applications limits for GS1-Valves

### PN 40

DN	Couple glissières: carbone/SFC - inox Pression max en bar pour vannes GS1				Couple glissières: STN 2 Pression max en bar pour vannes GS3 en inox			
	100°C	150°C	200°C	230°C	100°C	150°C	200°C	230°C
15 - 25	40	36	31	30	40	36	31	30
32	40	36	31	30	40	36	31	24
40	40	36	31	30	26	25	24	15
50	40	36	31	30	40	36	31	26
65	40	36	31	30	37	35	31	21
80	40	36	31	30	22	20	19	12
100	24	23	22	20	13	12	12	7
125	16	15	14	13	8	8	7	4
150	16	16	16	16	10	10	9	6

### Ordering Number System



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

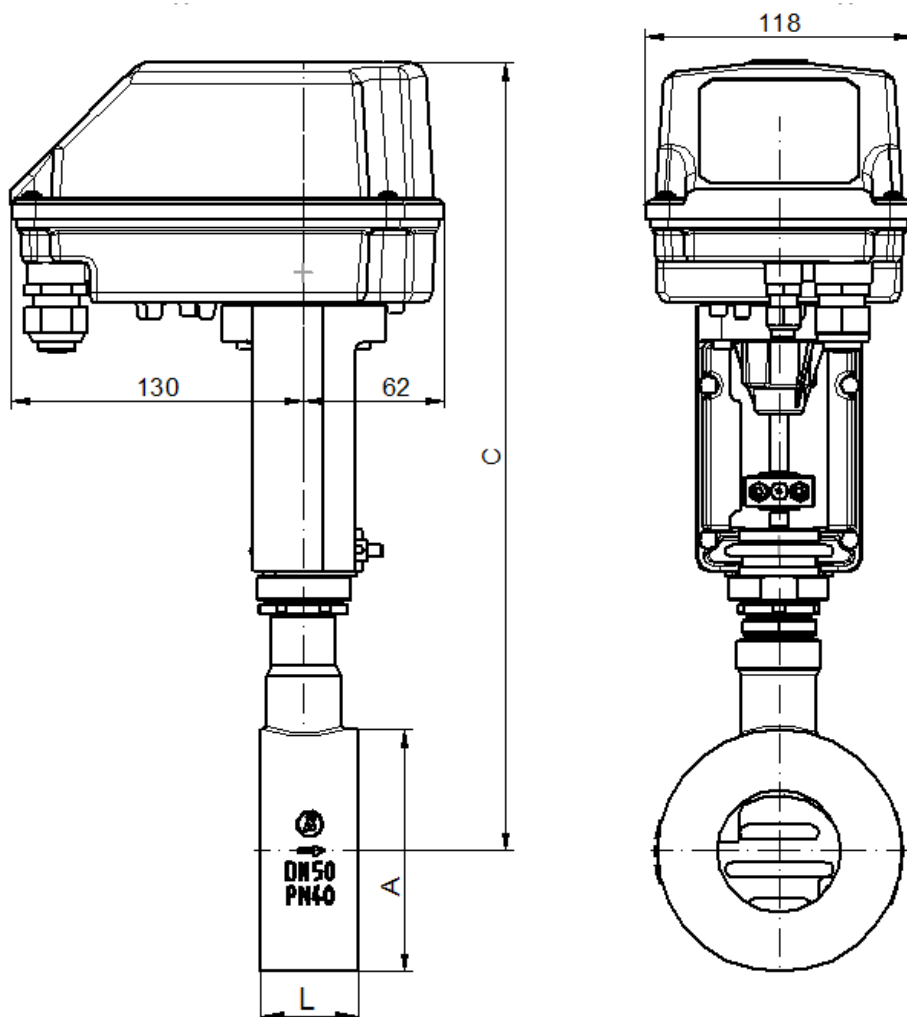
1. Motor design	2. Function	3. Connection	4. Body material	5. Safety position	6. Motor actuator	7. Special versions	8. Stem sealing
K compact actuator	N control valve with Motor actuator (type 8231, short design)	0 flangeless design for flanges acc. DIN 2632-2635 (PN10-PN40)	0 C-Steel 1.0619 stainless steel 1.4408	- without safety position 2 Fail-Safe: normally closed at power failure 3 Fail-Safe: normally open at power failure 4 Fail Safe: position acc. customer request	C Control actuator CA24C, 24V AC/DC, with position electronic, standard adjustment: control signal 4-20mA, feedback 4-20mA, 2 limit switch D Control Actuator CA260C, 90-260V 50/60Hz, with position electronic, Standard adjustment 4-20mA, feedback 4-20mA, 2 limit switch E On-Of (3-point) actuator CA24, 24V AC/DC F On-Off (3-point) actuator CA260, 90-260V, 50/60Hz	M to state if some of sections 8 - 15 are quoted	- PTFE-packing self-adjusting (standard)
9. Moving disc	10. Fixed disc	11. Kvs-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 (only in combination with pos."9" 3 STN3-disc (only in combination with pos."9")	- 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 equal percentage 1	Z accessories (pos. 14 ff.)	- standard 2-10V or 4-20 mA signal opens	- standard: control actuators: 2 s/mm On-off actuators: 3 s/mm 4 3 s/mm CA-actuators only 5 1,5 s/mm CA-actuators only	

#### Ordering example

8231/050VKN010C

GS-Motor valve compact type 8231, DN 50, flangeless design PN10-PN40, stainless steel body, spring closes, control actuator CA24C, 24V AC/DC, control electronics 4-20 mA, stroke feedback 4-20 mA, 2 limit switches, linear flow characteristic, Kvs-value 100 %

## Dimensions and Weights CA-Actuators



DN	A	C		L	stroke	weight kg
		stainless steel body	carbon steel body			
15	53	311	334	33	6	3,0
20	62	316	339	33	6	3,1
25	72	323	344	33	6	3,2
32	82	325	347	33	6	3,2
40	92	330	352	33	6	3,4
50	108	353	353	43	8	4,5
65	126	365	365	46	8	5,0
80	142	375	375	46	8	5,7
100	164	385	385	52	8,5	6,9
125	194	398	398	56	8,5	8,7

Dimensions in mm