

High Temperature Valve 8024

with integrated positioner

GS3 series DN 15 up to DN 200

SCHUBERT & SALZER
**CONTROL
SYSTEMS**

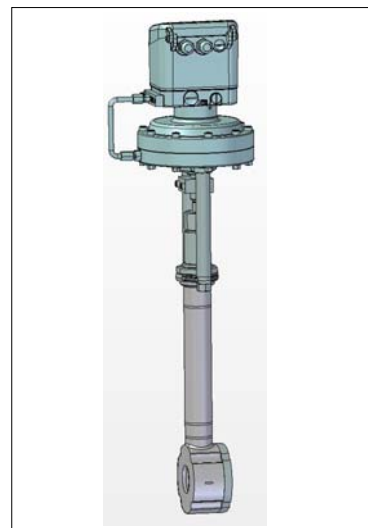
Pneumatic control valve with integrated positioner for the control of neutral through to highly aggressive media

- Space saving wafer type construction
- Lowest possible weight
- Quiet operation
- Fast response time
- Control of high differential pressures with small actuators
- Greatly reduced energy consumption rates due to short strokes and low actuating forces on the throttle element
- High Kvs-(Cv)-values

Technical Information

Body design	Flangeless, wafer-type construction further versions see data-sheet 8023-GS1	
Nominal sizes	DN 15 to DN 200	
Nominal pressure	PN 40 (fits also to PN 10-25)	DN 15 - DN 150
	PN 100	DN 15 - DN 80
	PN 16	DN 200
Nominal pressure acc. ANSI	ANSI 150	DN15 - DN 200
	ANSI 300	DN 15 - DN 150
	ANSI 600	DN 15 - DN 80
Supply air pressure	max. 6 bar	
Media temperature	-60°C up to +450°C for function unit Carbon-stainless steel -60°C up to +450°C for function unit STN2 up to +530°C with Inconel 625 bellows and STN 2 function unit	
Rangeability	40 : 1	
Leakage rate (% of Kvs-value)	Function unit: Carbon-stainless steel < 0.0001	Function unit: STN2 < 0.001

K_{vs}-values see data sheet 8001.



Options

- Metal bellows
- External i/p-converter
- Positioner (also EEx ib IICT6)

Materials

Valve body	stainless steel 1.4571 or 1.4581	
Head section	stainless steel 1.4571	
Diaphragm casing	aluminium, KTL-coated	
Actuator springs	stainless steel 1.4310	
Packing	carbon-filled PTFE (1.4310)	
Valve stem	stainless steel 1.4571, roller burnished	
Fixed disc	stainless steel, stellite coated	STN2-disc
Sliding disc	special carbon material	STN2-disc

По вопросам продаж и поддержки обращайтесь:
Екатеринбург (343)384-55-89, Казань (843)206-01-48, Краснодар (861)203-40-90,
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High Temperature Valve 8024-GS3

with integrated p/p and i/p - positioner



Admissible differential pressures
(For temperatures of up to 120°C)

For temperatures of 120°C and above:
obey application limits !

Disc pair: carbon - stainless steel coated

Actuator Size	125 cm²				250 cm²				500 cm²			
Spring Range (bar)	1,5 up to 3,0		1,8 up to 3,8		1,2 up to 2,2		1,5 up to 2,7		1,2 up to 2,2		1,5 up to 2,7	
Supply air (bar)	4		5		3		4		3		4,5	
	max. admissible differential pressure for PN100-body (bar)											
DN	Control	On-Off	Control	On-Off	Control	On-Off	Control	On-Off	Control	On-Off	Control	On-Off
15	100	100	100	100	100	100	100	100	-	-	-	-
20	77	77	96	96	100	100	100	100	-	-	-	-
25	57	57	71	71	98	98	100	100	100	100	100	100
32	42	42	52	58	73	73	88	88	100	100	100	100
40	29	29	36	44	49	49	60	60	100	100	100	100
50	17	19	21	29	29	29	35	40	60	60	72	72
65	14	16	17	24	24	24	29	34	49	49	59	59
80	8	10	10	15	14	14	17	22	29	29	35	44
100	5	6	6	10	9	9	10	14	18	18	22	28
125	3	4	4	6	6	6	7	9	12	12	14	19
150	2	3	3	5	4	4	5	7	9	9	10	14
200	2	2	2	3	3	3	3	4	5	5	6	8
Spring Configuration	3 (Standard)		4		3 (Standard)		4		6 (Standard)		8	

Standard

Upper limits for admissible pressures in bar						
	PN16	PN40	PN100	ANSI 150	ANSI 300	ANSI 600
P max.	16	40	100	16	40	80

Disc pair: STN2

Disc part: G1/2"

Actuator Size	125 cm²				250 cm²				500 cm²			
Spring Range (bar)	1,5 to 3,0		1,8 to 3,8		1,2 to 2,2		1,5 to 2,7		1,2 to 2,2		1,5 to 2,7	
Supply Air (bar)	4		5		3		4		3		4,5	
	max. admissible differential pressure for PN100-body (bar)											
DN	Control	On-Off	Control	On-Off	Control	On-Off	Control	On-Off	Control	On-Off	Control	On-Off
15	55	55	68	70	95	95	100	100	100	100	100	100
20	37	37	46	53	64	64	78	78	100	100	100	100
25	25	26	31	40	43	43	53	55	89	89	100	100
32	17	19	22	30	30	30	36	40	62	62	75	80
40	11	13	14	20	19	19	24	27	40	40	48	58
50	6	8	8	12	11	11	13	17	23	23	27	35
65	5	6	6	10	9	9	11	14	18	18	22	28
80	3	4	4	6	5	5	6	8	11	11	13	17
100	2	2	2	3	3	3	4	5	6	6	8	10
125	-	-	2	2	2	2	3	4	4	4	5	7
150	-	-	1	2	2	2	2	3	3	3	4	5
200	-	-	-	-	-	-	-	-	-	-	-	-
Spring Configuration	3 (Standard)		4		3 (Standard)		4		6 (Standard)		8	

Standard

Upper limits for admissible pressures in bar						
	PN16	PN40	PN100	ANSI 150	ANSI 300	ANSI 600
P max.	16	40	100	16	40	80

High Temperature Valve 8024-GS3

with integrated digital positioner

(also on-off valves and valves with other side-mounted positioner)



Admissible Differential Pressures
(For temperatures of up to 120°C)

For temperatures of 120°C and above:
obey application limits !

Disc pair: carbon - stainless steel coated

Actuator Size	125 cm ²		250 cm ²		500 cm ²	
Supply air (bar)	4,5	5,5	3,0	4,0	3,0	4,5
DN	max. admissible differential pressure for PN 100-body (bar)					
15	100	100	100	100	-	-
20	100	100	100	100	-	-
25	100	100	100	100	-	-
32	88	100	100	100	-	-
40	67	83	100	100	-	-
50	44	54	75	91	100	100
65	37	45	63	76	80	80
80	23	29	40	48	48	48
100	15	16	25	31	33	33
125	10	11	17	21	23	23
150	7	8	13	15	16	16
200	4	5	7	9	15	16
Spring Configuration	3 (Standard)	4	3 (Standard)	4	6 (Standard)	8

Standard

Upper limits for admissible pressures in bar						
	PN16	PN40	PN100	ANSI 150	ANSI 300	ANSI 600
P max.	16	40	100	16	40	80

Disc pair: STN2

Actuator Size	125 cm ²		250 cm ²		500 cm ²	
Supply air (bar)	4,5	5,5	3,0	4,0	3,0	4,5
DN	max. admissible differential pressure for PN100-body (bar)					
15	100	100	100	100	-	-
20	81	100	100	100	-	-
25	60	75	100	100	100	100
32	45	56	77	93	100	100
40	31	38	53	64	72	72
50	18	22	31	38	64	77
65	15	18	26	31	53	62
80	9	10	15	19	32	36
100	5	6	9	11	19	23
125	3	4	6	7	13	16
150	2	3	4	5	9	11
200	-	-	-	-	-	-
Spring Configuration	3 (Standard)	4	3 (Standard)	4	6 (Standard)	8

Standard

Upper limits for admissible pressures in bar						
	PN16	PN40	PN100	ANSI 150	ANSI 300	ANSI 600
P max.	16	40	100	16	40	80

High Temperature Valve 8024-GS3

with integrated positioner

Positioner

	Digital positioner Type 8048	i/p-positioner Type 8047	p/p-positioner Type 8047
Input signal range	0/4 - 20 mA, 0/2 - 10 V	0/4 - 20 mA, 0/2 - 10 V	0,2 - 1 bar
Supply voltage, electrical	24 V DC, maximum 10 W	none	none
Supply air pressure	max. 6 bar	max. 6 bar	max. 6 bar
Hysteresis	< 0,5 %	< 1 %	< 1 %
Rangeability	40 : 1	30 : 1	30 : 1
Characteristics	linear, equal percentage, user-defined, process optimized*	Characteristics of function unit	Characteristics of function unit
Adjustment (Stroke, zero point)	self-adapting	mechanical	mechanical
Ambient temperature	-20°C up to + 75°C	-20°C up to +60°C	-20°C up to +80°C
Protection class acc. DIN 40050	IP65	IP 54	IP 54
Ex-proof (Optional)	-	 II 2 G EEx ib IIC T6 up to 45°C  II 2 G EEx ib IIC T5 up to 60°C	-

*Produces a linear process flow characteristic for optimal control. After entering a few process data points (e.g. upstream and downstream pressures) the optimised flow characteristic is calculated by the positioner configuration software and stored in the positioner memory.

Digital Positioner Type 8049

Version	4-wire	2-wire	AS-I
Set point signal	0/4 - 20 mA	4 - 20 mA	Single Slave, Slave Profil S - 7.3.4
Burden voltage	1,2 V	14 V	-
Supply energy, electrical	24 VDC	none	supply with AS-I
Adaption to range and zero	self-learning		
Configuration	with PC-Software		
Air delivery*	50 NI/min.	according the version	50 NI/min.
System air consumption	none		
Ambient temperature limits	-20 up to +75°C	-10 up to +75°C	-20 up to +75°C
Supply connection	G 1/8"		
Class of protection acc. DIN 40050	IP 65		
Accessories	Analogue feedback module RM-1 2 wire design, feedback signal 4 - 20 mA		

* 6 bar supply air

Ordering Number System

[illegible]


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

1 - 5 : Please quote all 5 sections.

6 - 16: Quote only if required.

1. Valve type		2. Body design		3. Body material		4. Safety function		5. Actuator		6. Special version		7. Springs		8. Stem sealing	
R	GS-Control Valve with pneumatic actuator (type 8024)	E	GS3 - flangeless design acc. ANSI 150	1	Stainless steel 1.4571	0	spring closes	3	Diaphragm actuator 125 cm²	M	To state if some sections 7 - 16 are quoted	-	Standard	-	PTFE-packing self-adjusting (Standard)
		F	GS3 - flangeless design acc. ANSI 300		1.4581	1	spring opens	4	Diaphragm actuator 250 cm²	A	Nut and nut acc. DIN2512	4	8 springs	1	additional bellow 1.4571
		K	GS3 - flangeless design acc. ANSI 600					5	Diaphragm actuator 500cm²	C	Nut and tongue acc. DIN 2512	8	16 springs	3	additional Inconel 625 bellow 2.4856
		G	GS3 - flangeless design acc. DIN, PN10-40							E	2x low ered face acc. DIN 2513				
		H	GS3 - flangeless design acc. DIN, PN100							H	Low ered and raised face acc. DIN 2513				

9. Moving disc		10. Fixed disc		11. Kvs-Values		12. Flow characteristic		13. Accessories		14. Positioners		15. Signalling equipment		16. Further versions	
-	carbon	-	Stainless steel 1.4571, coated	-	100 % (stand.)	-	linear	Z	State, if in following sections accessories are quoted.	-	without	-	without	S	Other special versions have to be quoted in letters
B	carbon, fibre reinforced	1	STN2 (only in combination with preceding section "9" STN2)	A	red. to 63 %	1	equal-%			1	p/p positioner Type 8047	0	2 limit switches M12x1 DC 10-30V PNP		
9				1	red. to 40 %					3	i/p positioner Type 8047				
				2	red. to 16 %					6	i/p positioner Type 8047				
				3	red. to 10 %						Eex ib IIC T6 with plug conn. M12x1				
				4	red. to 6,3 %					8	i/p positioner with Type 8047				
				5	red. to 2,5 %						plug conn. M12x1				
				6	red. to 1%					A	process controller Type 8048 IPC				
				7	red. to 20%					C	digital positioner, Type 8049, 4 wire				
				8	red. to 12%					D	digital positioner, Type 8048, IP65				
				9	red. to 2%					R	digital positioner, Type 8049, 2 wire				
					red. to 0,4 %					T	digital positioner, Type 8049, AS-i version				

Ordering Example: 8024/050VRG103M-----Z3

GS3-Control Valve Type 8024 with pneumatic actuator, DN 50, PN 10 - PN 40, body material stainless steel, spring closes, actuator 125 cm², PTFE-V-shaped sealings, function unit: carbon-stainless steel 1.4571 coated, linear characteristic, i/p-positioner

High Temperature Valve 8024-GS3

with integrated positioner

Application limitations for GS3 valves in stainless steel

These pressure must not be exceeded for GS-valves from the GS3-series made of stainless steel, even though the actuator power might allow it.

PN 40

DN	Sliding unit: carbon - stainless steel, coated					
	max. admissible diff. pressures for GS3-valves					
	200°C	250°C	300°C	350°C	400°C	450°C
15 - 65	34	32	31	29	27	25
80	34	32	31	29	27	25
100	29	27	25	24	24	23
125	20	19	18	17	16	16
150	14	13	12	12	11	11
200 (PN16 only)	14	13	12	11	10	9

DN	Sliding unit: STN2							
	max. admissible diff. pressures for GS3-valves							
	200°C	250°C	300°C	350°C	400°C	450°C	500°C	530°C
15 - 65	34	32	31	29	27	25	15	5
80	33	26	22	19	16	14	13	5
100	26	24	20	17	15	13	12	5
125	17	16	13	11	10	9	8	5
150	13	11	9	8	7	6	6	5

PN 100

DN	Sliding unit: carbon - stainless steel, coated					
	max. admissible diff. pressures for GS3-valves					
	200°C	250°C	300°C	350°C	400°C	450°C
15	87	82	77	72	67	64
20	87	82	77	72	67	64
25	87	82	77	72	67	64
32	87	82	77	72	67	64
40	87	82	77	72	67	64
50	87	82	77	72	67	64
65	72	67	62	60	58	56
80	43	40	37	36	35	33

DN	Sliding unit: STN2							
	max. admissible diff. pressures for GS3-valves							
	200°C	250°C	300°C	350°C	400°C	450°C	500°C	530°C
15	87	82	77	72	67	64	37	13
25	87	82	77	72	67	64	37	13
40	65	53	43	37	32	29	26	13
50	70	56	46	40	35	31	28	13
65	56	45	37	32	28	25	22	13
80	33	26	22	19	16	14	13	12

High Temperature Valve 8024-GS3

with integrated positioner

ANSI #150

	Sliding unit: carbon - stainless steel, coated					
	max. admissible diff. pressures for GS3-valves					
DN	200°C	250°C	300°C	350°C	400°C	450°C
15 - 125	13	12	10	8	6,5	4,5
150	13	12	10	8	6,5	4,5
200	13	12	10	8	6,5	4,5

	Sliding unit: STN2							
	max. admissible diff. pressures for GS3-valves							
DN	200°C	250°C	300°C	350°C	400°C	450°C	500°C	530°C
15 - 125	13	12	10	8	6,5	4,5	1,5	0,3
150	13	11	9,5	8	6,5	4,5	1,5	0,3

ANSI #300

	Sliding unit: carbon - stainless steel, coated					
	max. admissible diff. pressures for GS3-valves					
DN	200°C	250°C	300°C	350°C	400°C	450°C
15 - 65	35	33	31	30	29	28
80	35	33	31	30	29	28
100	29	27	25	24	24	23
125	20	19	18	17	16	16
150	14	13	12	12	11	11
200 (PN16 only)	14	13	12	11	10	9

	Sliding unit: STN2							
	max. admissible diff. pressures for GS3-valves							
DN	200°C	250°C	300°C	350°C	400°C	450°C	500°C	530°C
15 - 65	35	32	31	29	27	25	16	5
80	33	26	22	19	16	14	13	5
100	26	24	20	17	15	13	12	5
125	17	16	13	11	10	8,5	8	5
150	13	11	9	8	7	6	5,5	5

ANSI #600

	Sliding unit: carbon - stainless steel, coated					
	max. admissible diff. pressures for GS3-valves					
DN	200°C	250°C	300°C	350°C	400°C	450°C
15 - 32	71	66	63	60	58	56
40	71	66	63	60	58	56
50	71	66	63	60	58	56
65	71	66	62	60	58	56
80	43	40	37	36	35	33

	Sliding unit: STN2							
	max. admissible diff. pressures for GS3-valves							
DN	200°C	250°C	300°C	350°C	400°C	450°C	500°C	530°C
15 - 32	71	66	63	60	52	46	33	11
40	65	53	43	37	32	29	26	11
50	70	56	46	40	35	31	28	11
65	56	45	37	32	28	25	22	11
80	33	26	22	19	16	14	13	11

High Temperature Valve 8024-GS3

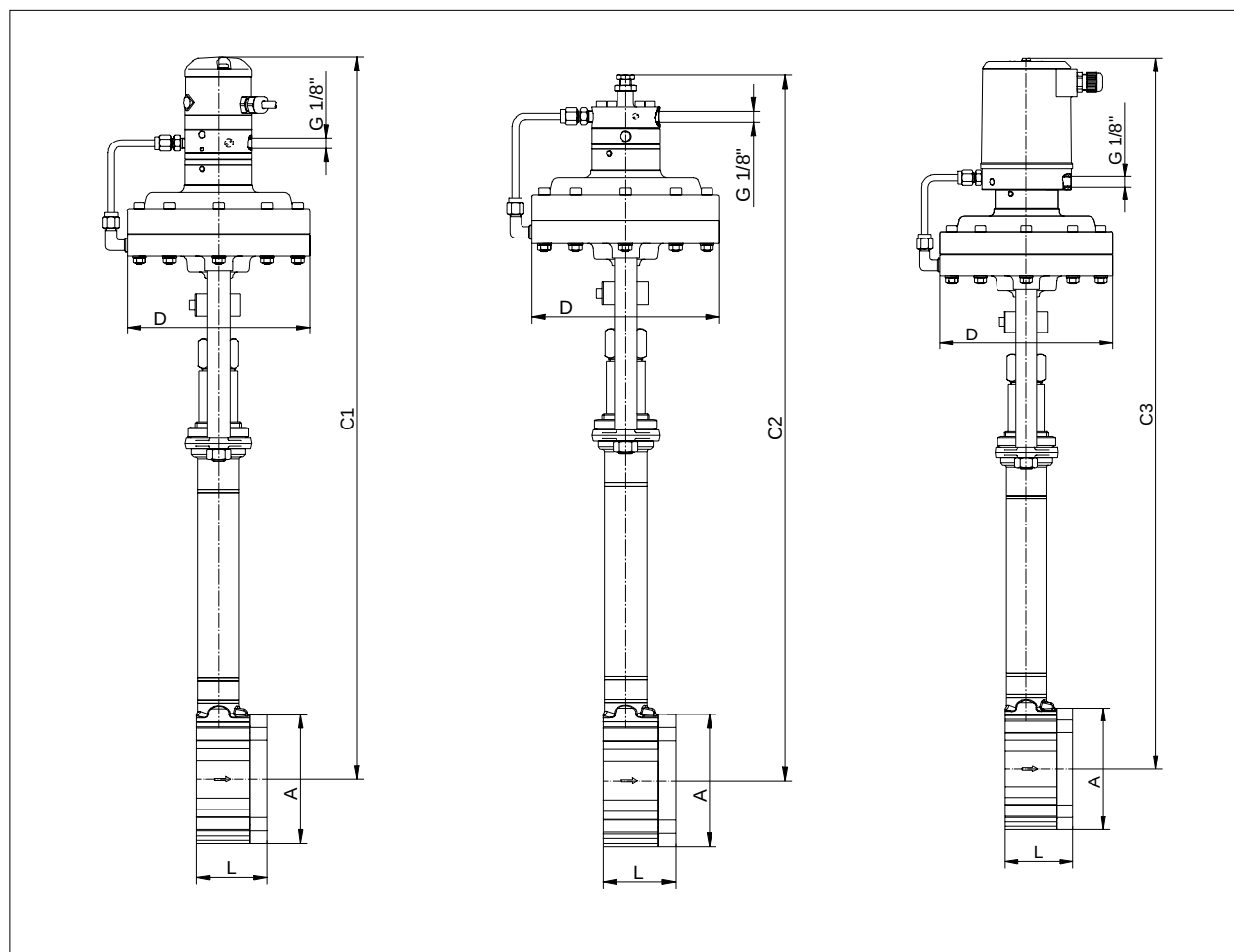
with integrated positioner

Dimensions and Weights

DN	Ø A	C1 *	C2 *	C3 *	Ø D for actuator			L	Stroke	Weight (kg) for actuator		
					D 125	D 250	D 500			D 125	D 250	D 500
15	64	620	590	650	165	222	222	56	6	8,5	10,7	14,4
20	72	625	595	655	165	222	222	56	6	8,7	10,9	14,6
25	82	630	600	660	165	222	222	56	6	9,1	11,3	15,0
32	89	635	605	665	165	222	222	56	6	9,5	11,7	15,4
40	99	640	610	670	165	222	222	56	6	9,9	12,1	15,8
50	116	650	620	680	165	222	222	64	8	11,5	13,7	17,4
65	138	660	630	690	165	222	222	68	8	13,3	15,5	19,2
80	153	670	640	700	165	222	222	70	8	14,4	16,6	20,3
100	184	680	650	710	165	222	222	75	8,5	17,9	20,1	23,8
125	212	695	665	725	165	222	222	80	8,5	22,1	24,3	28,0
150	242	710	680	740	165	222	222	80	8,5	25,8	28,0	31,7
200	302	740	710	770	165	222	222	92,5	8,5	42,7	44,9	48,6

* For actuator D500: +47,5 mm

Dimensions in mm



**i/p - positioner
Type 8047**

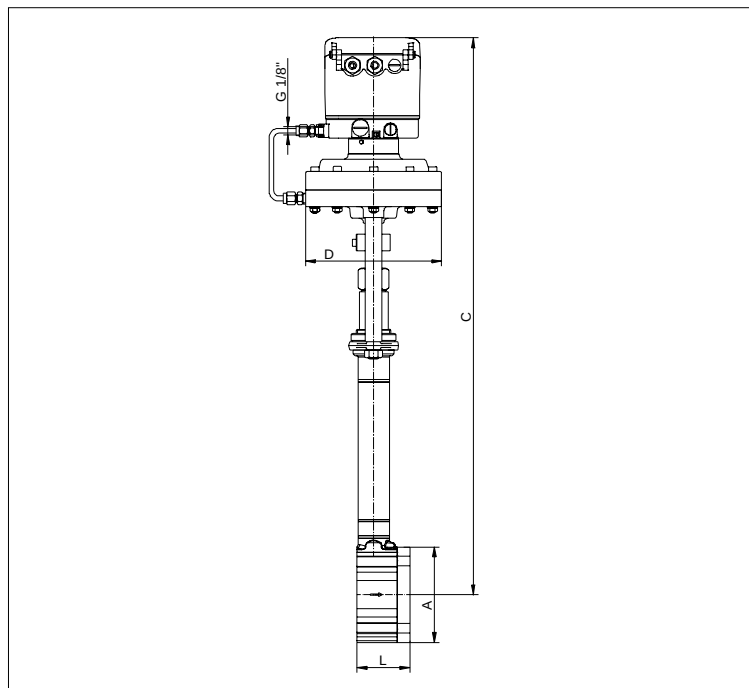
**p/p - positioner
Type 8047**

**digitaler - positioner
Type 8048**

High Temperature Valve 8024-GS3

with integrated positioner

Dimensions and Weights



digitaler - positioner Type 8049

DN	Ø A	C *	Ø D for actuator			L	Stroke	Weight (kg) for actuator		
			D 125	D250	D500			D 125	D 250	D 500
15	64	655	165	222	222	56	6	8,5	10,7	14,4
20	72	660	165	222	222	56	6	8,7	10,9	14,6
25	82	665	165	222	222	56	6	9,1	11,3	15,0
32	89	670	165	222	222	56	6	9,5	11,7	15,4
40	99	675	165	222	222	56	6	9,9	12,1	15,8
50	116	685	165	222	222	64	8	11,5	13,7	17,4
65	138	695	165	222	222	68	8	13,3	15,5	19,2
80	153	705	165	222	222	70	8	14,4	16,6	20,3
100	184	715	165	222	222	75	8,5	17,9	20,1	23,8
125	212	730	165	222	222	80	8,5	22,1	24,3	28,0
150	242	745	165	222	222	80	8,5	25,8	28,0	31,7
200	302	775	165	222	222	93	8,5	42,7	44,9	48,6

* for actuator D500 +47,5mm

Dimensions in mm

По вопросам продаж и поддержки обращайтесь:
Екатеринбург (343)384-55-89, Казань (843)206-01-48, Краснодар (861)203-40-90,
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