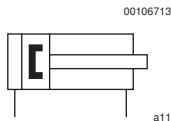


## Piston rod cylinders → Guide cylinders

## Guide cylinder, Series GPC-BV

► Ø 10 - 100 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston



Ambient temperature min./max.	-10 °C / +70 °C
Medium temperature min./max.	-10 °C / +70 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m <sup>3</sup> - 5 mg/m <sup>3</sup>
Pressure for determining piston forces	6,3 bar

Materials:	
Housing	Aluminum, anodized
Seal	Polyurethane
Front plate	Steel galvanized
Guide rod	Stainless steel
Bearing	Sintered bronze
Piston rod	Stainless steel

## Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- Note: Only the Ø10 variants fits to sensor series ST4. The sensor series ST6 and SN3 can be used for all other Ø variants.

Piston Ø	[mm]	10	12	16	20	25
Port		M5	M5	M5	M5	G 1/8
Working pressure min./max.	[bar]	2 / 8	2 / 8	2 / 8	2 / 8	1.5 / 8
Retracting piston force	[N]	42	53	95	148	260
Extending piston force	[N]	49	71	127	198	309
Speed max.	[m/s]	0.5	0.5	0.5	0.5	0.8
Impact energy	[J]	0.04	0.1	0.11	0.15	0.35


Piston Ø	[mm]	32	40	50	63	80
Port		G 1/8	G 1/8	G 1/4	G 1/4	G 1/4
Working pressure min./max.	[bar]	1.3 / 8	1 / 8	1 / 8	1 / 8	1 / 8
Retracting piston force	[N]	435	720	1110	1837	2969
Extending piston force	[N]	507	792	1237	1964	3167
Speed max.	[m/s]	0.6	0.6	0.6	0.6	0.4
Impact energy	[J]	0.4	0.52	0.64	0.75	0.75

Piston Ø	[mm]	100				
Port		G 3/8				
Working pressure min./max.	[bar]	1 / 8				
Retracting piston force	[N]	4639				
Extending piston force	[N]	4948				
Speed max.	[m/s]	0.4				
Impact energy	[J]	1				

## Piston rod cylinders → Guide cylinders

## Guide cylinder, Series GPC-BV


► Ø 10 - 100 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston

	Piston Ø Piston rod Ø	10 4	12 6	16 8	20 10	25 10	
	Stroke 10	<b>R402000294</b>	<b>0822060000</b>	<b>0822061000</b>	<b>0822062000</b>	<b>0822063000</b>	
	20	<b>R402000296</b>	<b>0822060001</b>	<b>0822061001</b>	<b>0822062001</b>	<b>0822063001</b>	
	25	<b>R402000297</b>	<b>0822060007</b>	<b>0822061007</b>	<b>0822062007</b>	<b>0822063007</b>	
	30	<b>R402000298</b>	<b>0822060002</b>	<b>0822061002</b>	<b>0822062002</b>	<b>0822063002</b>	
	40	<b>R402000300</b>	<b>0822060003</b>	<b>0822061003</b>	<b>0822062003</b>	<b>0822063003</b>	
	50	<b>R402000302</b>	<b>0822060004</b>	<b>0822061004</b>	<b>0822062004</b>	<b>0822063004</b>	
	75	<b>R402000307</b>	<b>0822060005</b>	<b>0822061005</b>	<b>0822062005</b>	<b>0822063005</b>	
	100	<b>R402000312</b>	<b>0822060006</b>	<b>0822061006</b>	<b>0822062006</b>	<b>0822063006</b>	
	125	-	0822060024	0822061024	0822062024	0822063024	
	150	-	0822060029	0822061029	0822062029	0822063029	
	160	-	-	-	-	0822063031	
	200	-	-	-	-	<b>0822063039</b>	
		<b>Piston Ø Piston rod Ø</b>	<b>32 12</b>	<b>40 12</b>	<b>50 16</b>	<b>63 16</b>	<b>80 20</b>
	Stroke 10	-	-	-	-	-	-
	20	-	-	-	-	-	-
	25	<b>0822064000</b>	<b>0822065000</b>	<b>0822066000</b>	<b>0822067000</b>	R402000914	
	30	-	-	-	-	-	
	40	-	-	-	-	-	
	50	<b>0822064001</b>	<b>0822065001</b>	<b>0822066001</b>	<b>0822067001</b>	R402000915	
	75	<b>0822064002</b>	<b>0822065002</b>	<b>0822066002</b>	<b>0822067002</b>	R402000916	
100	<b>0822064003</b>	<b>0822065003</b>	<b>0822066003</b>	<b>0822067003</b>	R402000917		
125	<b>0822064004</b>	<b>0822065004</b>	<b>0822066004</b>	<b>0822067004</b>	R402000918		
150	-	-	-	-	-		
160	<b>0822064005</b>	<b>0822065005</b>	<b>0822066005</b>	<b>0822067005</b>	R402000919		
200	<b>0822064006</b>	<b>0822065006</b>	<b>0822066006</b>	<b>0822067006</b>	R402000920		
	<b>Piston Ø Piston rod Ø</b>	<b>100 25</b>					
Stroke 10	-						
20	-						
25	R402000928						
30	-						
40	-						
50	R402000929						
75	R402000930						
100	R402000931						
125	R402000932						
150	-						
160	R402000933						
200	R402000934						

## Piston rod cylinders → Guide cylinders

**Guide cylinder, Series GPC-BV**

► Ø 10 - 100 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston

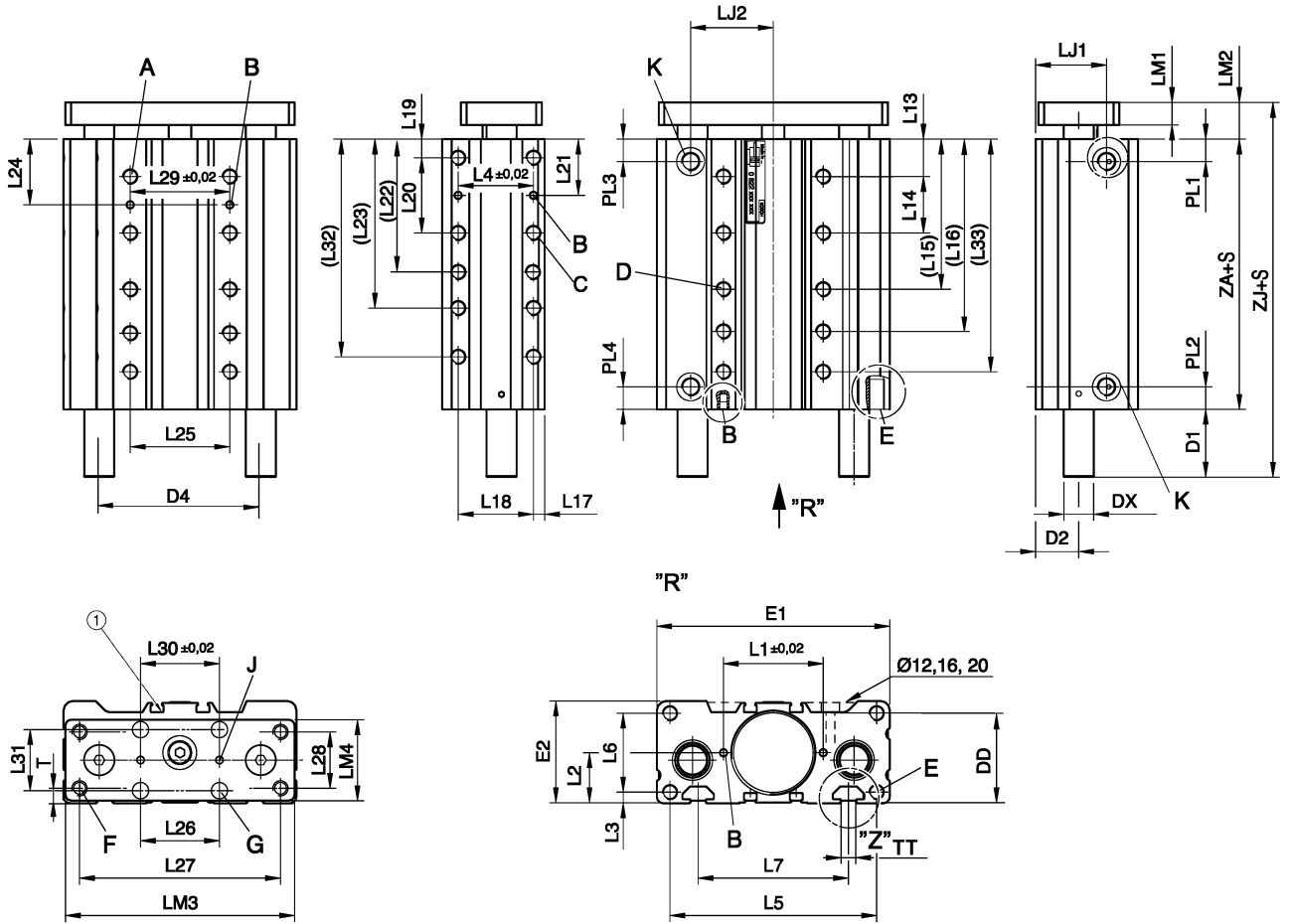
Weight [kg]	Piston Ø	10	12	16	20	25	
	Stroke 10	0.19	0.3	0.38	0.5	0.82	
	20	0.22	0.34	0.44	0.57	0.92	
	25	0.23	0.37	0.46	0.6	1.05	
	30	0.24	0.39	0.49	0.64	1.05	
	40	0.27	0.45	0.57	0.73	1.14	
	50	0.29	0.49	0.63	0.8	1.25	
	75	0.36	0.61	0.77	0.98	1.56	
	100	0.42	0.73	0.91	1.16	1.83	
	125	-	0.85	1.06	1.35	2.15	
	150	-	0.97	1.2	1.52	2.35	
	160	-	-	-	-	2.53	
	200	-	-	-	-	2.97	
		<b>Piston Ø</b>	<b>32</b>	<b>40</b>	<b>50</b>	<b>63</b>	<b>80</b>
		Stroke 10	-	-	-	-	-
		20	-	-	-	-	-
		25	1.56	1.8	3	3.8	7.3
		30	-	-	-	-	-
		40	-	-	-	-	-
		50	1.93	2.2	3.6	4.5	8.3
		75	2.26	2.6	4.2	5.2	9.3
		100	2.62	3.08	4.8	5.9	10.3
		125	3.06	3.6	5.6	6.86	11.6
		150	-	-	-	-	-
		160	3.57	4.1	6.4	7.78	12.9
		200	4.17	4.8	7.3	8.9	14.5
	<b>Piston Ø</b>	<b>100</b>					
	Stroke 10	-					
	20	-					
	25	8.8					
	30	-					
	40	-					
	50	10					
	75	11.1					
	100	12.2					
	125	13.7					
	150	-					
	160	15.2					
	200	17					

Piston rod cylinders → Guide cylinders

Guide cylinder, Series GPC-BV

► Ø 10 - 100 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston

Dimensions



S = stroke

1) View for sensor groove

Note: Only the Ø10 variants fits to sensor series ST4. The sensor series ST6 and SN3 can be used for all other Ø variants.

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Outer dimensions

Piston Ø	D2	D4	E1	E2	K	L1	L2	L3	L4	L5	L6	L7	L17
10	7	36	50	21	M5	20 ±0,04	10.5	3	–	20	15	–	15
12	14.5	40	58	30.5	M5	23 ±0,04	15	4	22	50	22	–	4
16	15.8	47	68	33	M5	28 ±0,04	16.5	4	25	61	25	43	4
20	16.5	54	80	36	M5	30 ±0,04	18	3.5	24	70	29	50	4.5
25	18	59	95	43	G 1/8	35	20.5	4.5	25	85	34	52	5.5
32	23	75.6	114	48.5	G 1/8	44	24	5	33	105	26	70	6.5
40	23	86	124	54.5	G 1/8	53	27	6	40	110	42	80	6
50	27.5	104	148	64	G 1/4	66	32	8	48	133	34.5	93	7.5
63	35	124	162	78.5	G 1/4	84	39	8	60	147	62	112	11
80	39.5	152	202	91.5	G 1/4	100	46	9	60	182	54.4	132	12
100	39.5	174	226	111	G 3/8	120	55.5	9	60	206	76	155	12

Piston Ø	L18	L25	L26	L27	L28	L29	L30	L31	LJ1	LJ2	LM1	LM2	LM3
10	–	20	–	20	10	20	–	–	15.8	15	8	13.5	48
12	22	20	–	40	20	20	–	–	24.8	17.5	8	12.7	55

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for detailed information Pneumatics catalog, online PDF, as of 2010-03-19, © Bosch Rexroth AG, subject to change

## Piston rod cylinders → Guide cylinders

## Guide cylinder, Series GPC-BV

► Ø 10 - 100 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston

Piston Ø	L18	L25	L26	L27	L28	L29	L30	L31	LJ1	LJ2	LM1	LM2	LM3
16	25	25	20	40	20	25	20	22	27	21	8	13.5	65
20	24	30	25	50	25	30	25	25	26.5	25	10	15.5	77
25	25	32	30	81	23	32	30	24	29.6	32	10	15.5	93
32	33	42	32	97	30	42	32	25	40	40.5	12	18.5	112
40	40	53	42	107	30	53	42	32.5	37.8	44	12	19.5	122
50	48	63	53	134	40	63	53	40	54.5	50.5	15	23.5	146
63	60	80	63	140	48	80	63	48	57	59	15	24	160
80	60	96	80	176	52	96	80	60	77.5	74.5	20	30	200
100	60	119	96	204	64	119	96	60	68.5	86.5	20	31	224

Piston Ø	LM4	PL1	PL2	PL3	PL4	T	TT	ZA	DX				
10	19	8	8	8	8	5.5	–	36	8				
12	27	8.5	8.5	8.5	8.5	5	–	34.4	10				
16	30	8.8	8.8	8.8	8.8	6.5	N6	36	12				
20	33	10	10	10	10	5.5	N6	36	12				
25	33	11	11	11	11	6.5	N6	42	16				
32	43	13.5	13.5	13.5	13.5	8	N8	46.5	20				
40	43	12	12	12	12	8	N8	44	20				
50	52	13	13	13	13	7.5	N8	46	25				
63	67	13.7	13.7	13.7	13.7	11	N10	51	25				
80	76	23	23	23	23	13.5	N10	77	32				
100	84	21.5	21.5	21.5	21.5	18.5	N10	77	32				

To determine the cylinder length (ZA) for intermediate strokes (i.e. stroke 10 with dia. 40), the next available standard stroke size must be used

## Mounting holes position top/bottom, side, stroke: 10

Piston Ø	S=10 L13	S=10 L14	S=10 L19	S=10 L20	S=10 L21 2)	S=10 L24	S=10 ZJ						
10	15	–	8	20	13	25	63						
12	14.5	–	8	20	18	25.5	47.1						
16	14	18	8	18	20.5	26.5	49.5						
20	15	16	8	20	18	23	51.5						
25	16.5	19	8	22	19	26	57.5						

S = stroke

2) Two holes C-C 10 mm.

## Mounting holes position top/bottom, side, stroke: 20

Piston Ø	S=20 L13	S=20 L14	S=20 L19	S=20 L20	S=20 L21	S=20 L22	S=20 L24	S=20 ZJ					
10	15	20	8	20	13	48	25	63					
12	15	20	8	20	13	48	25	63					
16	15	20	8	20	13	48	25	63					
20	15	20	8	20	13	48	25	63					
25	15	20	8	22	13	–	25	63					

S = stroke

## Piston rod cylinders → Guide cylinders

## Guide cylinder, Series GPC-BV

▶ Ø 10 - 100 mm ▶ double-acting ▶ Plain bearing ▶ cushioning: elastic ▶ with magnetic piston

## Mounting holes position top/bottom, side, stroke: 25

Piston Ø	S=25 L13	S=25 L14	S=25 L19	S=25 L20	S=25 L21 2)	S=25 L22	S=25 L24	S=25 ZJ					
10	15	20	8	20	13	48	25	63					
12	14.5	22	8	20	18	–	25.5	47.1					
16	14	25	8	25	20.5	–	26.5	49.5					
20	15	24	8	30	23	–	27	51.5					
25	16.5	25	8	32	24	–	29	57.5					
32	20.5	30	10	35	27.5	–	35.5	82					
40	20	30	10	30	25	–	35	82.6					
50	23	25	12	30	27	–	35.5	94.5					
63	24	28	12	30	27	–	38	94.6					
80	33.5	35	13	47	36.5	–	51	117.5					
100	32.5	37	13	49	37.5	–	51	117.5					

S = stroke

## Mounting holes position top/bottom, side, stroke: 30

Piston Ø	S=30 L13	S=30 L14	S=30 L19	S=30 L20	S=30 L21	S=30 L22	S=30 L24	S=30 ZJ					
10	15	20	8	20	13	48	25	63					
12	14.5	22	8	20	18	–	25.5	47.1					
16	14	25	8	25	20.5	–	26.5	49.5					
20	15	24	8	30	23	–	27	51.5					
25	16.5	25	8	32	24	–	29	57.5					

S = stroke

## Mounting holes position top/bottom, side, stroke: 40

Piston Ø	S=40 L13	S=40 L14	S=40 L15	S=40 L19	S=40 L20	S=40 L21 2)	S=40 L22	S=40 L24	S=40 L33	S=40 ZJ				
10	15	20	55	8	20	13	48	25	–	63				
12	14.5	22	–	8	20	18	–	25.5	–	64.8				
16	14	25	–	8	25	20.5	–	26.5	–	69.6				
20	15	24	–	8	30	23	–	27	–	71.6				
25	16.5	25	–	8	32	24	60	29	65.5	57.5				

S = stroke

## Mounting holes position top/bottom, side, stroke: 50

Piston Ø	S=50 L13	S=50 L14	S=50 L15	S=50 L19	S=50 L20	S=50 L21 2)	S=50 L22	S=50 L24	S=50 ZJ					
10	15	20	55	8	20	13	48	25	63					
12	14.5	22	58.5	8	20	18	48	25.5	64.8					
16	14	25	64	8	25	20.5	58	26.5	69.6					
20	15	24	63	8	30	23	68	27	71.6					
25	16.5	25	66.5	8	32	24	70	29	57.5					
32	20.5	33	76	10	42	31	–	37	82					
40	20	40	–	10	53	36.5	–	40	82.6					
50	23	48	–	12	30	27	–	47	94.5					
63	24	28	–	12	30	27	–	38	94.6					

S = stroke

## Piston rod cylinders → Guide cylinders

## Guide cylinder, Series GPC-BV

► Ø 10 - 100 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston

Piston Ø	S=50 L13	S=50 L14	S=50 L15	S=50 L19	S=50 L20	S=50 L21 2)	S=50 L22	S=50 L24	S=50 ZJ				
80	33.5	60	–	13	47	36.5	–	63.5	117.5				
100	32.5	60	–	13	49	37.5	–	62.5	117.5				

S = stroke

## Mounting holes position top/bottom, side, stroke: 75

Piston Ø	S=75 L13	S=75 L14	S=75 L15	S=75 L16	S=75 L19	S=75 L20	S=75 L21 2)	S=75 L22	S=75 L23	S=75 L24	S=75 ZJ		
10	15	20	55	–	8	20	13	48	–	25	63		
12	14.5	22	58.5	–	8	20	18	48	–	25.5	64.8		
16	14	25	64	–	8	25	20.5	58	–	26.5	69.6		
20	15	24	63	–	8	30	23	68	–	27	71.6		
25	16.5	25	66.5	91.5	8	32	24	72	95	29	68.5		
32	20.5	33	86.5	–	10	42	31	94	–	37	82		
40	20	40	100	–	10	53	36.5	91	–	40	82.6		
50	23	48	–	–	12	63	43.5	–	–	47	94.5		
63	24	60	–	–	12	80	52	–	–	54	94.6		
80	33.5	60	–	–	13	96	61	–	–	63.5	117.5		
100	32.5	60	–	–	13	49	37.5	–	–	62.5	117.5		

S = stroke

## Mounting holes position top/bottom, side, stroke: 100

Piston Ø	S=100 L13	S=100 L14	S=100 L15	S=100 L16	S=100 L19	S=100 L20	S=100 L21 2)	S=100 L22	S=100 L23	S=100 L24	S=100 L33	S=100 ZJ	
10	15	20	55	–	8	20	13	48	–	25	–	63	
12	14.5	22	58.5	–	8	20	18	48	–	25.5	–	64.8	
16	14	25	64	–	8	25	20.5	58	–	26.5	–	69.6	
20	15	24	63	–	8	30	23	68	–	27	–	71.6	
25	16.5	25	66.5	91.5	8	32	24	72	104	29	125.5	68.5	
32	20.5	33	86.5	119.5	10	42	31	94	122.5	37	–	82	
40	20	40	100	–	10	53	36.5	116	–	40	–	82.6	
50	23	48	119	–	12	63	43.5	116	–	47	–	94.5	
63	24	60	127	–	12	80	52	–	–	54	–	94.6	
80	33.5	60	143.5	–	13	96	61	–	–	63.5	–	117.5	
100	32.5	60	143.5	–	13	119	72.5	–	–	62.5	–	117.5	

S = stroke

## Mounting holes position top/bottom, side, stroke: 125

Piston Ø	S=125 L13	S=125 L14	S=125 L15	S=125 L16	S=125 L19	S=125 L20	S=125 L21 2)	S=125 L22	S=125 L23	S=125 L24	S=125 L32	S=125 L33	S=125 ZJ
12	14.5	22	58.5	–	8	20	18	48	–	25.5	–	–	79.8
16	14	25	64	–	8	25	20.5	58	–	26.5	–	–	84.6
20	15	24	63	–	8	30	23	68	–	27	–	–	86.6
25	16.5	25	66.5	91.5	8	32	24	72	104	29	145	150.5	84.5
32	20.5	33	86.5	119.5	10	42	31	94	136	37	–	151	100
40	20	40	100	140	10	53	36.5	116	–	40	–	–	100.6
50	23	48	119	148	12	63	43.5	138	–	47	–	–	124.4

S = stroke

## Piston rod cylinders → Guide cylinders

## Guide cylinder, Series GPC-BV

▶ Ø 10 - 100 mm ▶ double-acting ▶ Plain bearing ▶ cushioning: elastic ▶ with magnetic piston

Piston Ø	S=125 L13	S=125 L14	S=125 L15	S=125 L16	S=125 L19	S=125 L20	S=125 L21 2)	S=125 L22	S=125 L23	S=125 L24	S=125 L32	S=125 L33	S=125 ZJ
63	24	60	144	–	12	80	52	142	–	54	–	–	124.6
80	33.5	60	153.5	–	13	96	61	160	–	63.5	–	–	145.5
100	32.5	60	153.5	–	13	119	72.5	–	–	62.5	–	–	145.5

S = stroke

## Mounting holes position top/bottom, side, stroke: 150

Piston Ø	S=150 L13	S=150 L14	S=150 L15	S=150 L16	S=150 L19	S=150 L20	S=150 L21 2)	S=150 L22	S=150 L23	S=150 L24	S=150 L32	S=150 L33	S=150 ZJ
12	14.5	22	58.5	–	8	20	18	48	–	25.5	–	–	79.8
16	14	25	64	–	8	25	20.5	58	–	26.5	–	–	84.6
20	15	24	63	–	8	30	23	68	–	27	–	–	86.6
25	16.5	25	66.5	91.5	8	32	24	72	104	29	180	185.5	84.5

S = stroke

## Mounting holes position top/bottom, side, stroke: 160

Piston Ø	S=160 L13	S=160 L14	S=160 L15	S=160 L16	S=160 L19	S=160 L20	S=160 L21 2)	S=160 L22	S=160 L23	S=160 L24	S=160 L32	S=160 L33	
25	16.5	25	66.5	91.5	8	32	24	72	104	29	180	185.5	84.5
32	20.5	33	86.5	119.5	10	42	31	94	136	37	182.5	186	100
40	20	40	100	140	10	53	36.5	116	169	40	–	184	100.6
50	23	48	119	167	12	63	43.5	138	176	47	–	–	124.5
63	24	60	144	–	12	80	52	172	–	54	–	187	124.6
80	33.5	60	153.5	203.5	13	96	61	195	–	63.5	–	–	145.5
100	32.5	60	153.5	203.5	13	119	72.5	195	–	62.5	–	–	145.5

S = stroke

## Mounting holes position top/bottom, side, stroke: 200

Piston Ø	S=200 L13	S=200 L14	S=200 L15	S=200 L16	S=200 L19	S=200 L20	S=200 L21	S=200 L22	S=200 L23	S=200 L24	S=200 L32	S=200 L33	S=200 ZJ
25	16.5	25	66.5	91.5	8	32	24	72	104	29	220	225.5	84.5
32	20.5	33	86.5	119.5	10	42	31	94	136	37	222.5	226	100
40	20	40	100	140	10	53	36.5	116	169	40	216	224	100.6
50	23	48	119	167	12	63	43.5	138	201	47	–	223	124.5
63	24	60	144	–	12	80	52	172	217	54	–	204	124.6
80	33.5	60	153.5	213.5	13	96	61	205	–	63.5	–	–	145.5
100	32.5	60	153.5	213.5	13	119	72.5	235	–	62.5	–	–	145.5

S = stroke

## Mounting holes position, size x depth [mm]

Piston Ø	A	B	C	Ø D 1)	DD	E	F 1)	G 1)	J 1)			
10	M4x6	4 H7x4	M4x6	3.2	17.4	M4x8	M4	–	–			
12	M5x8	4 H7x4	M5x8	4.6	20	M5x8	M4	–	–			
16	M5x8	4 H7x4	M5x8	4.6	28.5	M5x8	M4	5.5	4 H9			
20	M6x10	4 H7x4	M6x10	5.5	30.5	M5x10	M5	5.5	4 H9			
25	M6x10	4 H7x4	M6x10	5.5	35	M6x12	M6	6.5	4 H8			

1) Through hole



Piston rod cylinders → Guide cylinders

**Guide cylinder, Series GPC-BV**

► Ø 10 - 100 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston

Piston Ø	A	B	C	Ø D 1)	DD	E	F 1)	G 1)	J 1)			
32	M8x14	4 H7x4	M8x14	7.4	42.5	M6x12	M8	6.5	4 H8			
40	M8x14	4 H7x4	M8x14	7.4	48.5	M8x16	M8	8.5	4 H8			
50	M10x20	5 H7x5	M10x20	9.3	56	M8x16	M8	8.5	4 H8			
63	M10x20	5 H7x5	M10x20	9.3	66.5	M10x20	M10	10.5	5 H8			
80	M12x24	6 H7x6	M12x25	11.2	79.5	M12x25	M12	10.5	5 H7			
100	M12x24	6 H7x6	M12x25	11.2	86	M12x25	M12	12.5	6 H7			

1) Through hole

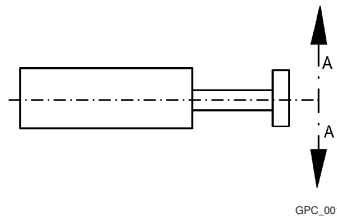
**Guide rod dimensions, plain bearing**

Piston Ø	S 10-30 D1	S 10-30 ZJ	S 10-50 D1	S 10-50 ZJ	S 25-100 D1	S 25-100 ZJ	S 40-100 D1	S 40-100 ZJ	S 75-100 D1	S 75-100 ZJ
10	13.5	63	-	-	-	-	13.5	63	-	-
12	-	47.1	-	-	-	-	17.1	64.8	-	-
16	-	49.5	-	-	-	-	21.2	69.6	-	-
20	-	51.5	-	-	-	-	21.2	71.6	-	-
25	-	-	-	57.5	-	-	-	-	11	68.5
32	-	-	-	-	17	82	-	-	-	-
40	-	-	-	-	19	82.6	-	-	-	-
50	-	-	-	-	25	94.5	-	-	-	-
63	-	-	-	-	19	94.6	-	-	-	-
80	-	-	-	-	10.5	117.5	-	-	-	-
100	-	-	-	-	9.5	117.5	-	-	-	-

Piston Ø	S>100 D1	S>100 ZJ	DX									
10	13.5	63	8									
12	32.1	79.8	10									
16	36.2	84.6	12									
20	36.2	86.4	12									
25	27	84.5	16									
32	35	100	20									
40	37	100.6	20									
50	55	124.5	25									
63	49	124.6	25									
80	38.5	145.5	32									
100	37.5	145.5	32									

S = stroke

**Play**



## Piston rod cylinders → Guide cylinders

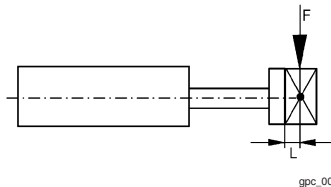
## Guide cylinder, Series GPC-BV

▶ Ø 10 - 100 mm ▶ double-acting ▶ Plain bearing ▶ cushioning: elastic ▶ with magnetic piston

Piston Ø	A 1)												
10	0.16												
12	0.13												
16	0.13												
20	0.13												
25	0.17												
32	0.17												
40	0.17												
50	0.17												
63	0.17												
80	0.17												
100	0.17												

1) Piston rod deflection at a stroke of 50 mm and a load of 10 N (mm)

## Permissible static side force F [N]

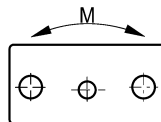


Ø 10, 12: L = 25 mm; Ø 16-100: L = 50 mm

Piston Ø	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100	S=125	S=150	S=160	S=200	
10	12	11	11	10	10	9	8	7	-	-	-	-	
12	28	24	23	21	31	28	22	19	16	13	-	-	
16	63	56	53	51	73	67	55	49	42	35	-	-	
20	63	56	53	51	73	67	55	49	42	35	-	-	
25	53	48	46	44	41	38	59	52	65	-	57	50	
32	156	144	139	134	126	118	103	90.8	116	-	102	90	
40	155	143	138	134	125	118	102	90	116	-	102	90	
50	242	226	218	211	198	187	164	146	215	-	191	169	
63	241	224	217	210	197	186	163	145	214	-	190	169	
80	430	404	392	381	361	342	304	273	356	-	318	284	
100	427	402	390	379	359	341	302	272	354	-	318	284	

S = stroke

## Permissible static moment M [Nm]



Piston Ø	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100	S=125	S=160	S=200		
10	1.75	1.5	1.4	1.3	1.2	1.1	0.85	0.75	-	-	-		

S = stroke

Piston rod cylinders → Guide cylinders

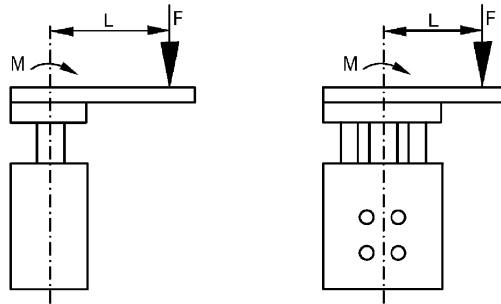
**Guide cylinder, Series GPC-BV**

► Ø 10 - 100 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston

Piston Ø	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100	S=125	S=160	S=200		
12	0.56	0.48	0.46	0.42	0.62	0.56	0.44	0.38	0.32	0.26	-		
16	1.48	1.32	1.25	1.2	1.72	1.57	1.29	1.15	0.99	0.82	-		
20	1.7	1.51	1.43	1.38	1.97	1.81	1.49	1.32	1.13	0.95	-		
25	3.11	2.6	-	2.23	1.96	1.74	2.41	2.02	2.42	2.05	1.75		
32	-	-	8.17	-	-	6.4	5.26	4.47	5.45	4.67	4.01		
40	-	-	9.19	-	-	7.22	5.95	5.05	6.17	5.29	4.55		
50	-	-	17	-	-	13.6	11.4	9.73	13.6	11.8	10.3		
63	-	-	20.1	-	-	16.1	13.4	11.5	16.1	14	12.2		
80	-	-	42.1	-	-	34.9	29.8	26	32.4	28.5	24.9		
100	-	-	47.8	-	-	39.7	33.9	29.6	37	32.5	28.5		

S = stroke

**Permissible static moment M [Nm]**



$M = F \times L$

GPC\_006

Piston Ø	S 5-30	S>30	S 35-50	S 55-100	S>100								
10	1,5	1,5	-	-	-								
12	2	3.5	-	-	-								
16	4.5	14	-	-	-								
20	4.5	14	-	-	-								
25	4.6	-	4.9	9.4	14.5								
32	15.2	-	16.5	17.2	26.4								
40	15.3	-	15.3	17.2	26.4								
50	26	-	26	28.9	51.6								
63	26	-	26	28.9	51.6								
80	52.1	-	52.1	57.9	90.3								
100	52.3	-	52.3	57.9	90.4								

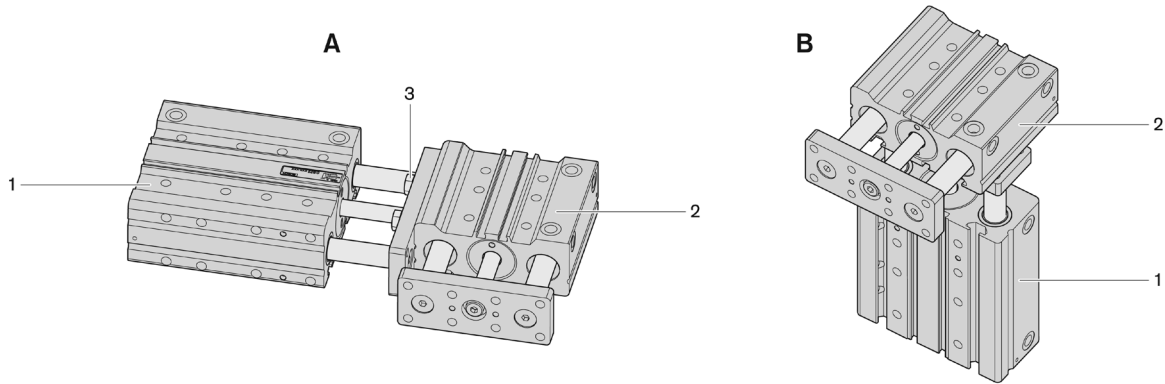
S = stroke

Piston rod cylinders → Guide cylinders

**Guide cylinder, Series GPC-BV**

► Ø 10 - 100 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston

**GPC combinations**



gpc\_007

**Minimum strokes for cylinder 1 when using 2 assembled guide cylinders**

Piston Ø	S												
32	25												
40	25												
50	30												
63	30												
80	35												
100	40												

S = stroke

**Minimum strokes for cylinder 2 when using 2 assembled guide cylinders**

Stroke	Ø 2	A	B	3			
10	12	–	–	M4x12			
20	12	–	–	M4x12			
25	12	–	–	M4x12			
30	12	–	–	M4x12			
40	12	–	–	M4x12			
50	12	–	–	M4x12			
75	12	–	–	M4x12			
100	12	–	–	M4x12			
10	16	–	–	M5x15			
20	16	–	–	M5x15			
25	16	–	–	M5x15			
30	16	–	–	M5x15			
40	16	–	–	M5x15			
50	16	–	–	M5x15			
75	16	–	–	M5x15			
100	16	–	–	M5x15			
125	16	–	–	M5x15			
150	16	–	–	M5x15			
10	20	–	–	M5x18			
20	20	–	–	M5x18			

A = min.stroke: assembly A  
 B = min.stroke: assembly B  
 3 = screw

## Piston rod cylinders → Guide cylinders

## Guide cylinder, Series GPC-BV

▶ Ø 10 - 100 mm ▶ double-acting ▶ Plain bearing ▶ cushioning: elastic ▶ with magnetic piston

Stroke	Ø 2	A	B	3			
25	20	–	–	M5x18			
30	20	–	–	M5x18			
40	20	–	–	M5x18			
50	20	–	–	M5x18			
75	20	–	–	M5x18			
100	20	–	–	M5x18			
125	20	–	–	M5x18			
150	20	–	–	M5x18			
10	25	–	–	M6x20			
20	25	–	–	M6x20			
25	25	–	–	M6x20			
30	25	–	–	M6x20			
40	25	–	–	M6x20			
50	25	–	–	M6x20			
75	25	–	–	M6x20			
100	25	–	–	M6x20			
125	25	–	–	M6x20			
150	25	–	–	M6x20			
25	32	25	15	M6x20			
50	32	25	15	M6x20			
75	32	25	15	M6x20			
100	32	25	15	M6x20			
125	32	25	15	M6x20			
160	32	25	15	M6x20			
200	32	25	15	M6x20			
25	40	30	30	M8x25			
50	40	30	30	M8x25			
75	40	30	30	M8x25			
100	40	30	30	M8x25			
125	40	30	30	M8x25			
160	40	30	30	M8x25			
200	40	30	30	M8x25			
25	50	30	30	M8x30			
50	50	30	30	M8x30			
75	50	30	30	M8x30			
100	50	30	30	M8x30			
125	50	30	30	M8x30			
160	50	30	30	M8x30			
200	50	30	30	M8x30			
25	63	55	30	M10x30			
50	63	55	30	M10x30			
75	63	55	30	M10x30			
100	63	55	30	M10x30			
125	63	55	30	M10x30			
160	63	55	30	M10x30			
200	63	55	30	M10x30			
25	80	55	55	M10x35			
50	80	55	55	M10x35			
75	80	55	55	M10x35			
100	80	55	55	M10x35			

A = min.stroke: assembly A

B = min.stroke: assembly B

3 = screw

## Piston rod cylinders → Guide cylinders

**Guide cylinder, Series GPC-BV**

▶ Ø 10 - 100 mm ▶ double-acting ▶ Plain bearing ▶ cushioning: elastic ▶ with magnetic piston

Stroke	Ø 2	A	B	3			
125	80	55	55	M10x35			
160	80	55	55	M10x35			
200	80	55	55	M10x35			
25	100	55	30	M12x40			
50	100	55	30	M12x40			
75	100	55	30	M12x40			
100	100	55	30	M12x40			
125	100	55	30	M12x40			
160	100	55	30	M12x40			
200	100	55	30	M12x40			

A = min.stroke: assembly A

B = min.stroke: assembly B

3 = screw