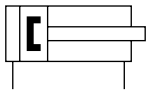
Piston rod cylinder → Supplementary products

Guide cylinders, Series GPC-TL

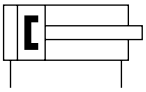
► Ø 12 - 20 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston



Working pressure min./max.	2 bar / 8 bar
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/m³ - 5 mg/m³
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 compressed air must remain constant during the life cycle.
■ Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
■ The product is a part of the EasyHandling system.

Piston Ø	[mm]	12	16	20		
Port		M5	M5	M5		
Retracting piston force	[N]	53	95	148		
Extracting piston force	[N]	71	127	198		
Speed max.	[m/s]	0.5	0.5	0.5		
Impact energy	[J]	0.1	0.11	0.15		

	Piston Ø Piston rod Ø	12 6	16 8	20 10		
	Stroke 10	0822060600	0822061600	0822062600		
	20	0822060601	0822061601	0822062601		
	25	0822060607	0822061607	0822062607		
	30	0822060602	0822061602	0822062602		
	40	0822060603	0822061603	0822062603		
	50	0822060604	0822061604	0822062604		
	75	0822060605	0822061605	0822062605		
	100	0822060606	0822061606	0822062606		

Weight [kg]	Piston Ø	12	16	20		
	Stroke 10	0.48	0.49	0.6		
	20	0.48	0.49	0.6		
	25	0.48	0.49	0.6		
	30	0.48	0.49	0.64		
	40	0.45	0.57	0.73		
	50	0.49	0.63	0.8		
	75	0.61	0.77	0.98		
	100	0.73	0.91	1.16		

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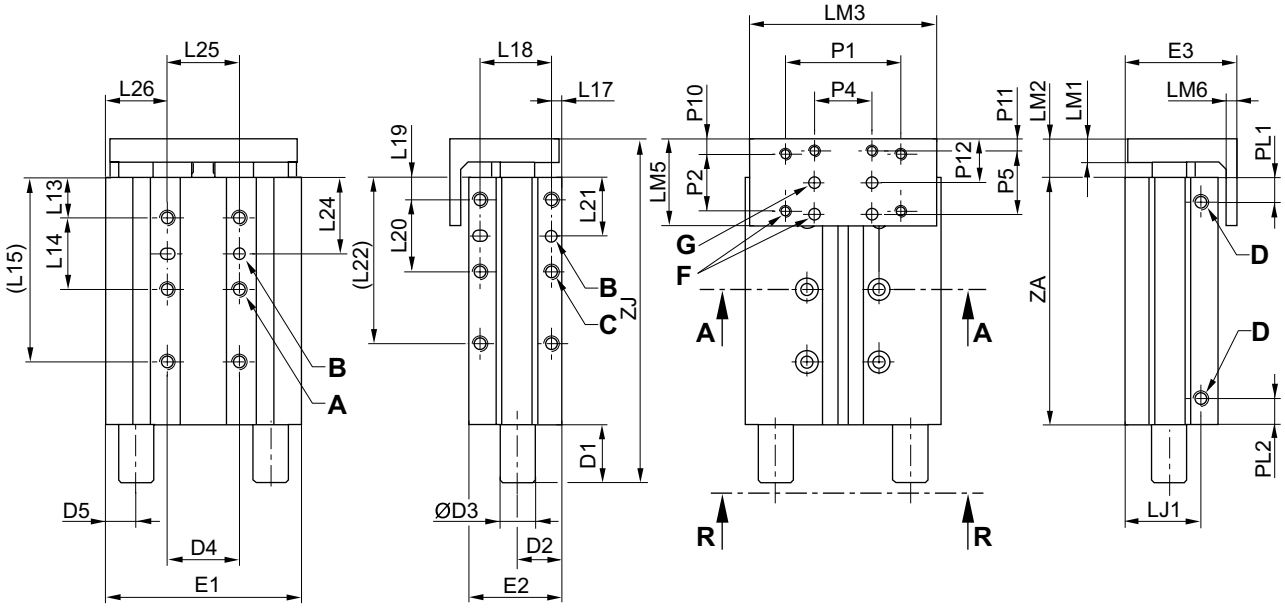
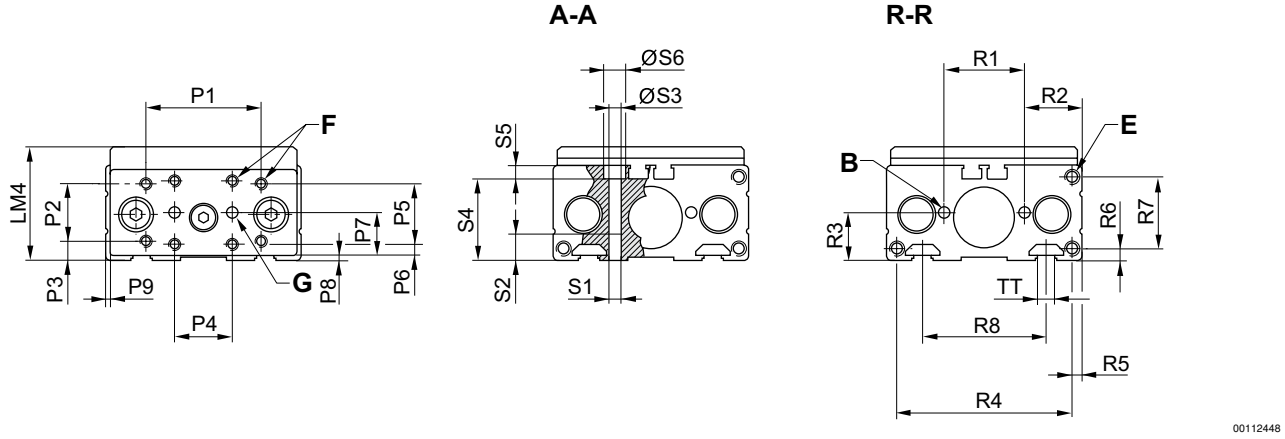
Dimensions





Piston Ø	A 1)	B 1)	C 1)	D	D1 S>30	D2	D3	D4	D5	E 1)	E1	E2	E3
12	M5x8	4 H7x4	M5x8	M5	17.6	14.5	10	40	9	M5x8	58	30.5	36.5
16	M5x8	4 H7x4	M5x8	M5	20	15.8	12	47	10.5	M5x8	68	33	39.5
20	M6x10	4 H7x4	M5x10	M5	20	16.5	12	54	13	M5x10	80	36	43.5

Piston Ø	F	G	L13	L14 S=10	L14 S=20	L14 S>20	L15 S=50−150	L17	L18	L19	L20 S=10
12	M4	4 H9	14.5	-	18	22	58.5	4	22	8	20
16	M4	4 H9	14	18	25	25	64	4	25	8	18
20	M5	4 H9	15	16	24	24	63	4.5	24	8	20

Piston Ø	L20 S=20-150	L21 S=10	L21 S>10	L22 S=50−150	L24 S=10	L24 S>10	L25	L26	LJ1	LM1	LM2	LM3
12	20	18	18	48	25.5	25.5	20	19	24.8	8	12.7	55
16	25	20.5	20.5	58	26.5	26.5	25	21.5	27	8	13.5	65

Supplementary products
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Piston rod cylinder → Supplementary products

Guide cylinders, Series GPC-TL

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Piston Ø	L20 S=20-150	L21 S=10	L21 S>10	L22 S=50–150	L24 S=10	L24 S>10	L25	L26	LJ1	LM1	LM2	LM3
20	30	18	23	68	23	27	30	25	26.5	10	15.5	77

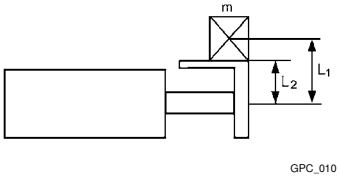
Piston Ø	LM4	LM5	LM6	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
12	35	28	4	40	20	3.5	20	20	3.5	13.5	1.5	1.5	4
16	38	30	4	40	20	5	20	22	4	15	1.5	1.5	5
20	42	35	5	50	25	4	25	25	4	16.5	1.5	1.5	5

Piston Ø	P11	P12	PL1	PL2	R1±0,04	R2	R3	R4	R5	R6	R7	R8	S1
12	4	14	8.5	8.5	23	17.5	15	50	4	4	22	–	M5
16	4	15	8.8	8.8	28	20	16.5	61	3.5	4	25	43	M5
20	5	17.5	10	10	30	25	18	70	5	3.5	29	50	M6

Piston Ø	S2	S3	S4	S5	S6	TT	ZA	ZJ S=10–30	ZJ S>30				
12	8	4.2	20	10.2	7.6	–	34.4	47.1	64.7				
16	8	4.2	28.5	4.6	7.6	N6	36	49.5	69.5				
20	10	5.2	30.5	5.5	9.5	N6	36	51.5	71.5				

S = stroke
1) Dimension x depth

Permissible dynamic load m [kg]

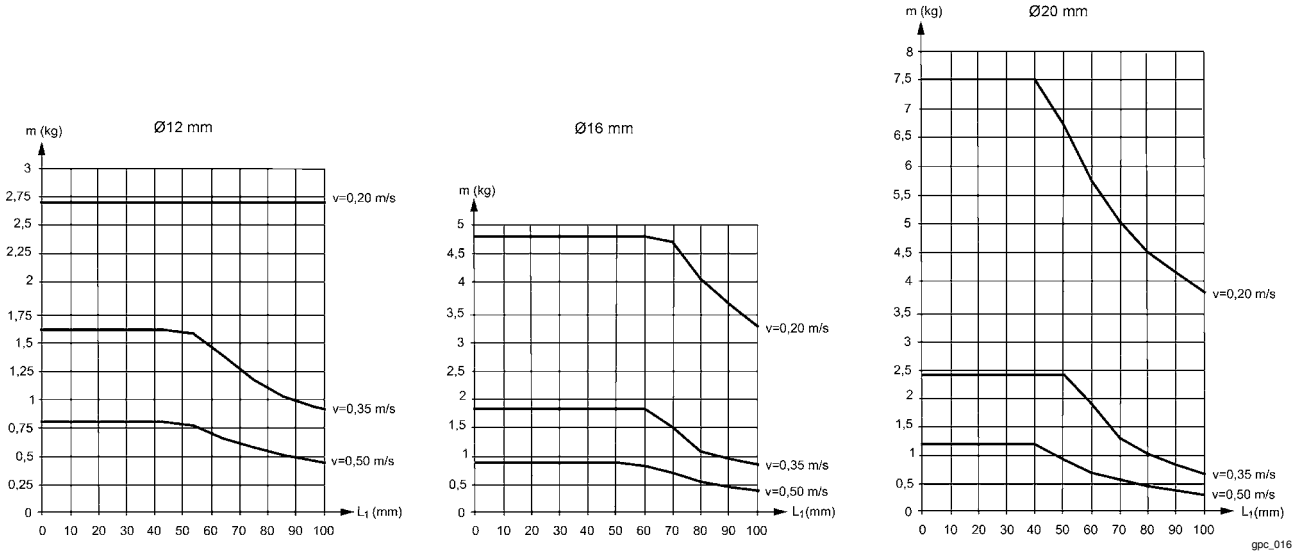


Piston Ø	L2												
12	22												
16	23.7												
20	27												

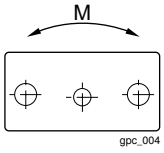
Piston rod cylinder → Supplementary products

Guide cylinders, Series GPC-TL

► Ø 12 - 20 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston

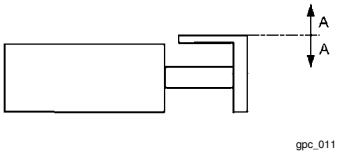


Permissible static moment M [Nm]



Piston Ø	S=10	S=20	S=25	S=30	S=40	S=50	S=75	S=100					
12	0.56	0.48	0.46	0.42	0.62	0.56	0.44	0.38					
16	1.48	1.32	1.25	1.2	1.72	1.57	1.29	1.15					
20	1.7	1.51	1.43	1.38	1.97	1.81	1.49	1.32					
S = stroke													

Play



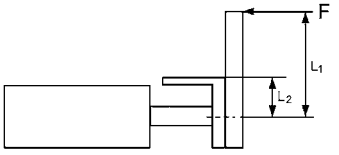
Piston Ø	A 1)											
12	0.11											
16	0.11											
20	0.11											
1) Piston rod deflection at a stroke of 50 mm and a load of 10 N (mm)												

Piston rod cylinder → Supplementary products

Guide cylinders, Series GPC-TL

► Ø 12 - 20 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston

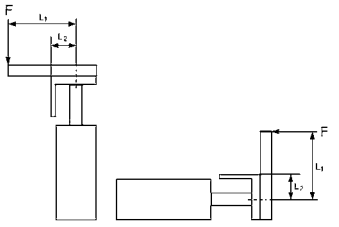
Permissible lever arm length L1 at 6 bar with static load



gpc_012

Piston Ø	F [N]	L1	L2								
12	67	290	22								
16	120	215	23.7								
20	180	140	27								

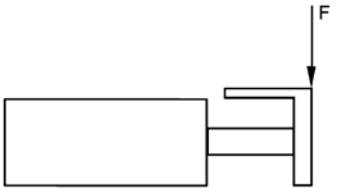
Permissible lever arm length L1 at 6 bar with dynamic load



gpc_014

Piston Ø	F [N]	F [N] 1)	L1	L2									
12	67	23	250	22									
16	120	40	200	23,7									
20	180	65	125	27									
1) Horizontal situation max. force [N]													

Permissible static side force F [N]

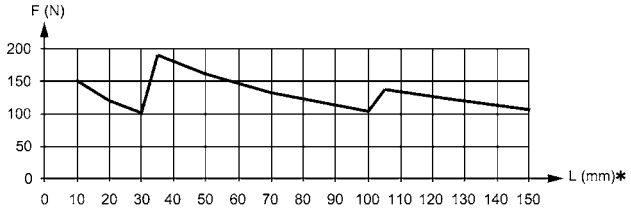


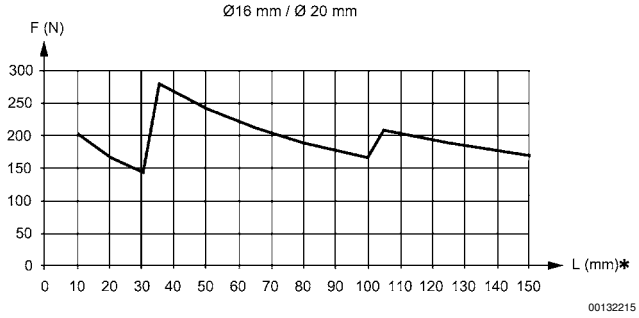
GPC_009

Piston rod cylinder → Supplementary products

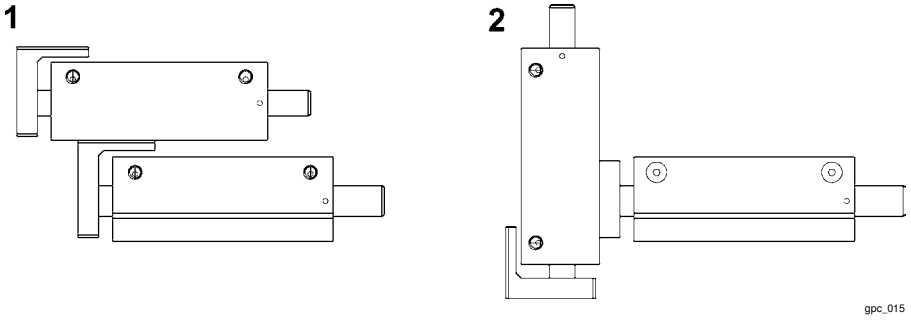
Guide cylinders, Series GPC-TL

► Ø 12 - 20 mm ► double-acting ► Plain bearing ► cushioning: elastic ► with magnetic piston





GPC combinations



The GPC-TL can be directly mounted on the front plate of next bigger standard GPC in radial direction, and on next bigger GPC-TL in axial direction.

Combination in axial direction (1)

Piston Ø		GPC-TL 16	GPC-TL 20								
16	GPC-TL 12	M4x25 1)	–								
20	GPC-TL 16	–	M5x35 1)								
1) Screw according to ISO 4762 - M4x25											

Combination radial direction (2)

Piston Ø		GPC 16	GPC 20	GPC 25			
12	GPC-TL 12	M5x15 1)	–	–			
16	GPC-TL 16	–	M5x15 1)	–			
20	GPC-TL 20	–		M6x15 1)			
1) Screw according to ISO 4762 - M4x25							