GSP-P

2-Finger Parallel Gripper

Type	parallel
Number fingers	2
Repeatability	0,02 mm
Lubrication	endurance lubrication
Ambient temperature min./max.	+5°C / +60°C
Medium	compressed air
Max. particle size	5 µm
Compressed air oil content	0 mg/m³ - 5 mg/m³
Operating pressure min./max.	see table below
Pressure for determining the forces	6 bar
Materials:	
Housing	Aluminium, anodized
Guide housing	Aluminium, hard anodized
Seal	NBR + PU (NBR + Polyurethane)
Functional parts	Steel, hardened

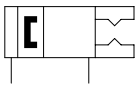
Technical Notes

The pressure dew point must be 15 °C below the environmental and medium temperatur and must not be higher than 3 °C.

The compressed air oil content must stay constant during the whole life cycle.

Type	Material number	SCHUNK ID
GSP-P-08	R412000411	311010
GSP-P-08-NC	R412000412	311011
GSP-P-08-NO	R412000413	311012
GSP-P-10	R412000414	311020
GSP-P-10-NC	R412000415	311021
GSP-P-10-NO	R412000416	311022
GSP-P-16	R412000417	311030
GSP-P-16-NC	R412000418	311031
GSP-P-16-NO	R412000419	311032

Type	Material number	SCHUNK ID
GSP-P-20	R412000420	311250
GSP-P-20-NC	R412000421	311251
GSP-P-20-NO	R412000422	311052
GSP-P-25	R412000423	311060
GSP-P-25-NC	R412000424	311061
GSP-P-25-NO	R412000425	311062
GSP-P-40	R412000426	311080
GSP-P-40-NC	R412000427	311081
GSP-P-40-NO	R412000428	311082

	Type	Operating principle	Operating pressure min./max.	Connection	Effective gripping force I.D gripper per finger, min.	Effective gripping force O.D gripper per finger, min.	Material number
			[bar]		[N]	[N]	
	GSP-P-08	double-acting	2 / 8	M3	18	13	R4120004 11
	GSP-P-10			M3	35	29	R412000414
	GSP-P-16			M5	69	60	R412000417
	GSP-P-20			M5	140	120	R412000420
	GSP-P-25			M5	219	190	R412000423
	GSP-P-40			G 1/8	464	420	R412000426
	GSP-P-08	double-acting, closed without pressure	4,5 / 6,5	M3		16	R412000412
	GSP-P-10			M3		37	R412000415
	GSP-P-16			M5	-	70	R412000418
	GSP-P-20			M5		140	R412000421
	GSP-P-25			M5		230	R412000424
	GSP-P-40			G 1/8		545	R412000427
	GSP-P-08	double-acting, opened without pressure	4,5 / 6,5	M3	21		R412000413
	GSP-P-10			M3	43		R412000416
	GSP-P-16			M5	79		R412000419
	GSP-P-20			M5	160	-	R412000422
	GSP-P-25			M5	269		R412000425
	GSP-P-40			G 1/8	589		R412000428

GSP-P

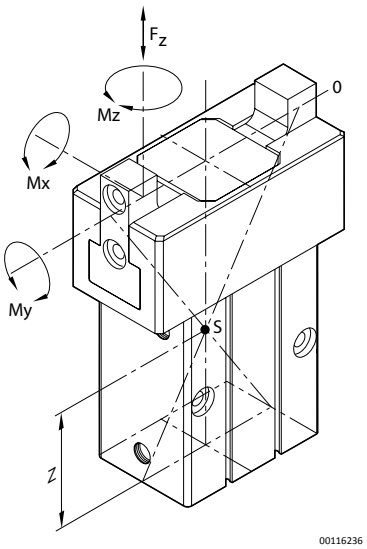
2-Finger Parallel Gripper

Material number	Effective total gripping force I.D. gripper min.	Effective total gripping force O.D. gripper min.	Gripping force maintenance via spring min./max.	Max. permitted finger length	Max. permitted finger mass	Mass moment of inertia	Closing times for 6 bar	Opening times for 6 bar
	[N]	[N]	[N]	[mm]	[kg]	[kgcm²]	[s]	[s]
R4120004 11	36	26		20	0,025	0,024	0,01	0,01
R412000414	70	58		25	0,04	0,075	0,01	0,01
R412000417	138	120		32	0,06	0,31	0,02	0,02
R412000420	280	240	-	40	0,09	0,62	0,03	0,03
R412000423	438	380		50	0,12	1,85	0,05	0,05
R412000426	928	840		64	0,3	14,1	0,1	0,1
R412000412		32	3 / 6	20	0,025	0,025	0,01	0,02
R412000415		74	8 / 13	25	0,04	0,076	0,01	0,02
R412000418	-	140	10 / 25	32	0,06	0,32	0,02	0,03
R412000421		280	20 / 50	40	0,09	0,63	0,02	0,04
R412000424		460	40 / 80	50	0,12	1,86	0,04	0,07
R412000427		1090	125 / 225	64	0,3	14,3	0,08	0,12
R412000413	42		3 / 6	20	0,025	0,025		
R412000416	86		8 / 13	25	0,04	0,076		
R412000419	158		10 / 25	32	0,06	0,32		
R412000422	320	-	20 / 50	40	0,09	0,63	0,01	0,01
R412000425	538		40 / 80	50	0,12	1,86		
R412000428	1178		125 / 225	64	0,3	14,3		

Material number	Closing/opening times only with spring	Recommended workpiece mass	Air consumption per double stroke for 1 bar	Weight	Notes
		[kg]	[cm³]	[kg]	
R4120004 11		0,13	0,9	0,04	
R412000414		0,29	1,8	0,07	
R412000417		0,6	7	0,15	
R412000420	-	1,2	13	0,25	1)
R412000423		1,9	27	0,46	
R412000426		4,2	89	1,48	
R412000412	0,15	0,13	0,9	0,04	
R412000415	0,2	0,29	1,8	0,07	
R412000418	0,3	0,6	7	0,16	
R412000421	0,4	1,2	13	0,26	2)
R412000424	0,5	1,9	27	0,48	
R412000427	0,6	4,2	89	1,57	
R412000413		0,13	0,9	0,04	
R412000416		0,29	1,8	0,07	
R412000419		0,6	7	0,16	
R412000422	-	1,2	13	0,26	3)
R412000425		1,9	27	0,48	
R412000428		4,2	89	1,57	

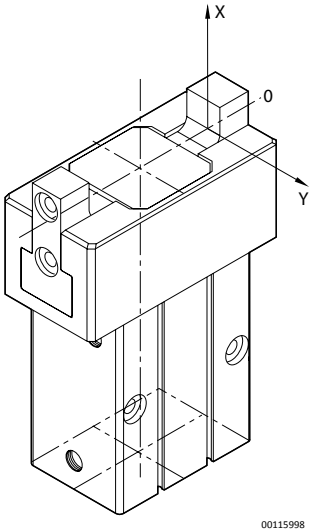
1) Gripper type: O.D./I.D.
2) Gripper type: O.D.
3) Gripper type: I.D.
Max. permitted finger length: measured starting from the upper edge of the housing
Permitted inertia (kg m²) depending on the size and angular velocity (1/s)

Max. permitted forces and torques for gripper



Type	Z	Max. permitted Force Fz	Torque (Mx)	Torque (My)	Torque (Mz)				
		[N]	[Nm]	[Nm]	[Nm]				
GSP-P-08	21,5	120	1,3	1	0,25				
GSP-P-10	34,9	140	2	1,5	0,5				
GSP-P-16	37,9	200	3	2,5	1				
GSP-P-20	41,4	250	5,5	5	2,5				
GSP-P-25	47,7	450	9	9	6				
GSP-P-40	57,6	800	18	18	13				

Permitted gripping range

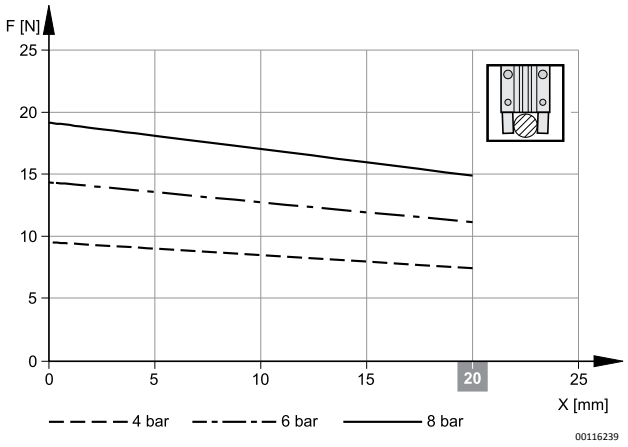


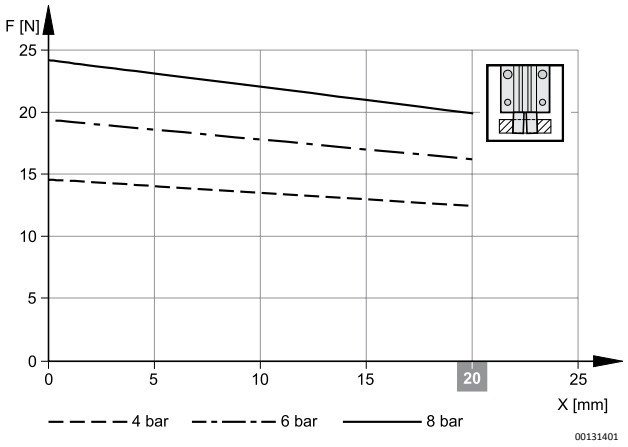
X = Clamping height
Y = Clamping width

GSP-P

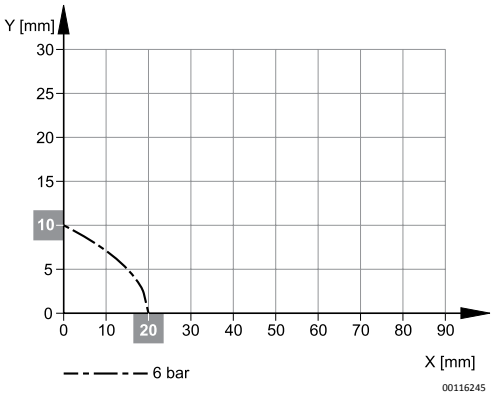
2-Finger Parallel Gripper

GSP-P-08 Gripping force/finger

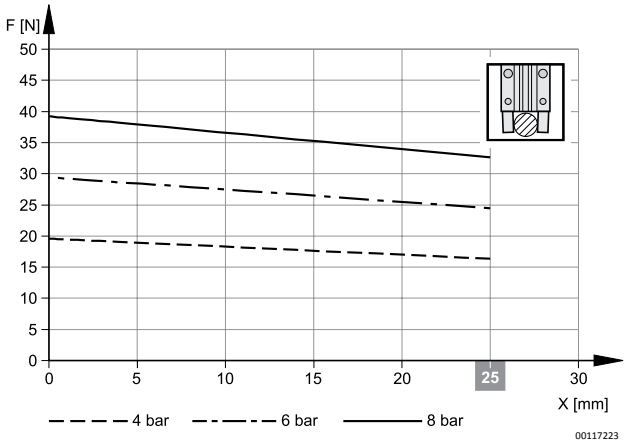


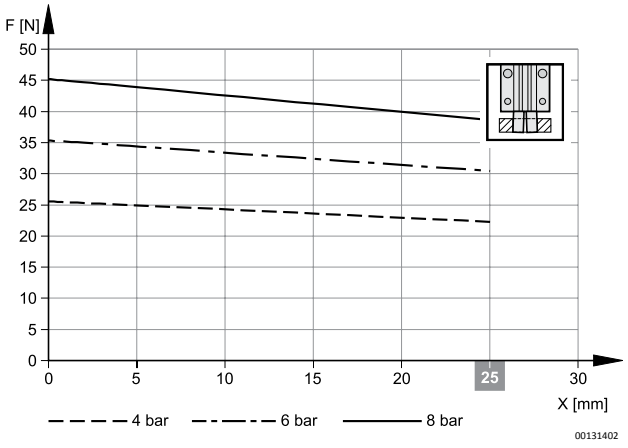


GSP-P-08 Gripping range

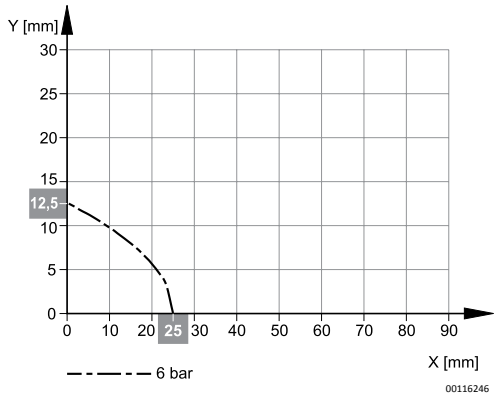


GSP-P-10 Gripping force/finger

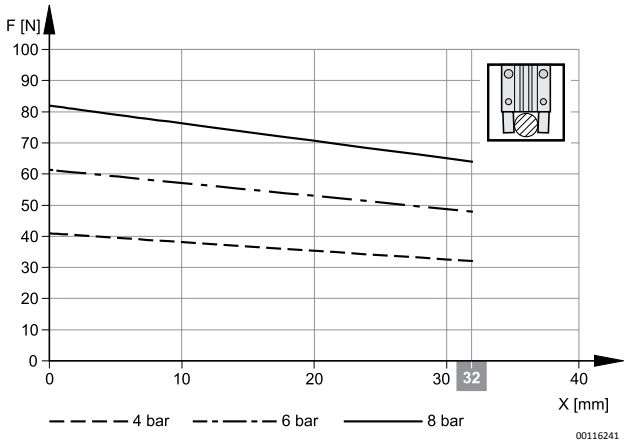


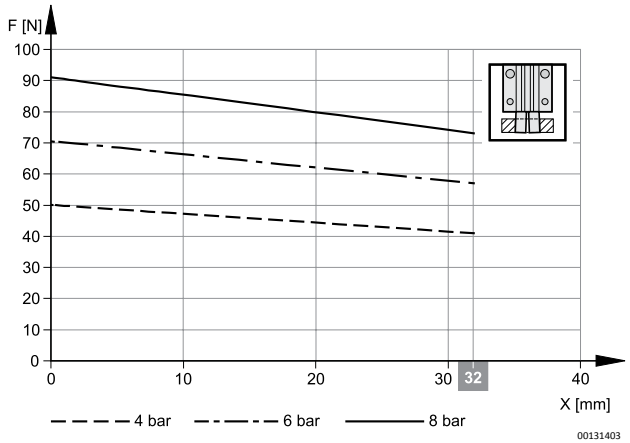


GSP-P-10 Gripping range

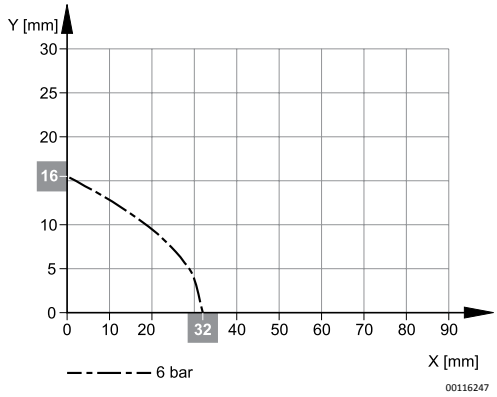


GSP-P-16 Gripping force/finger





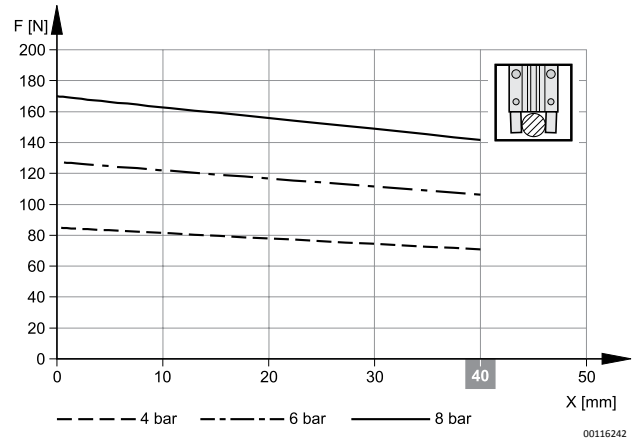
GSP-P-16 Gripping range

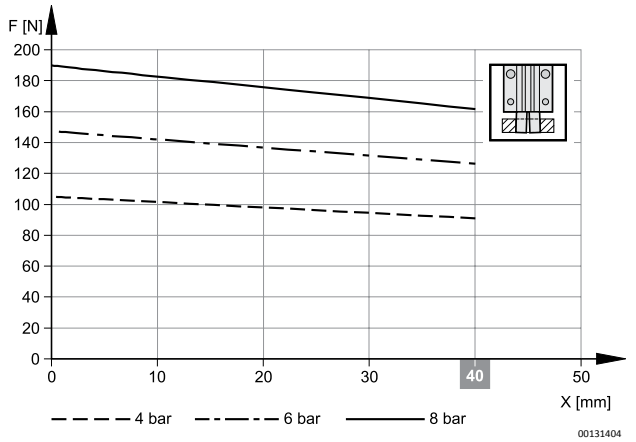


GSP-P

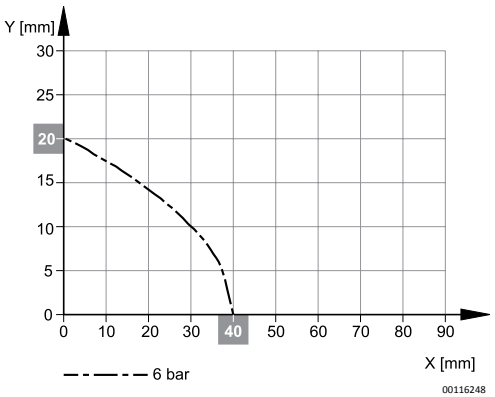
2-Finger Parallel Gripper

GSP-P-20 Gripping force/finger

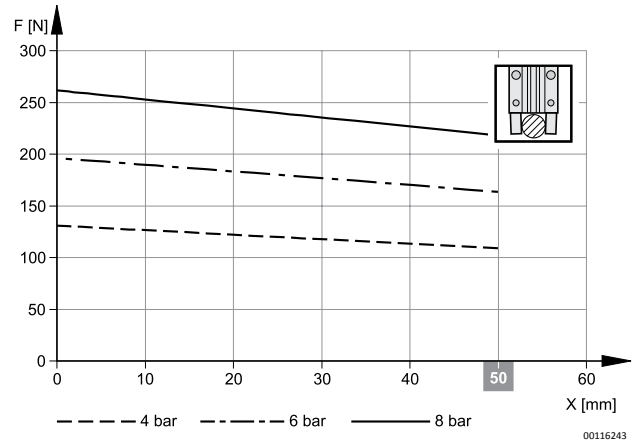


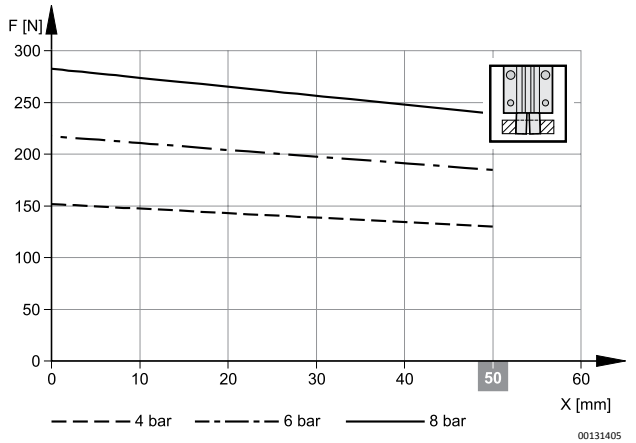


GSP-P-20 Gripping range

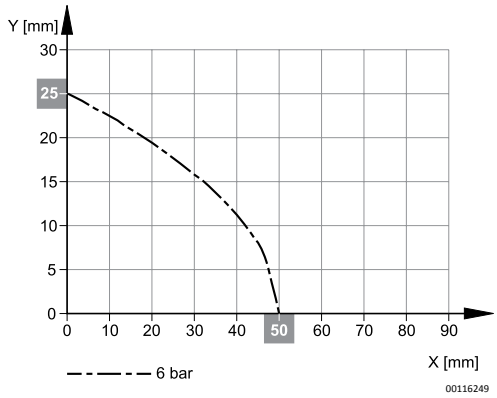


GSP-P-25 Gripping force/finger

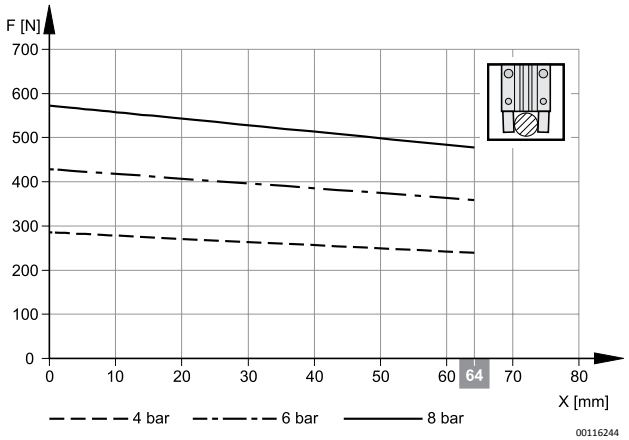


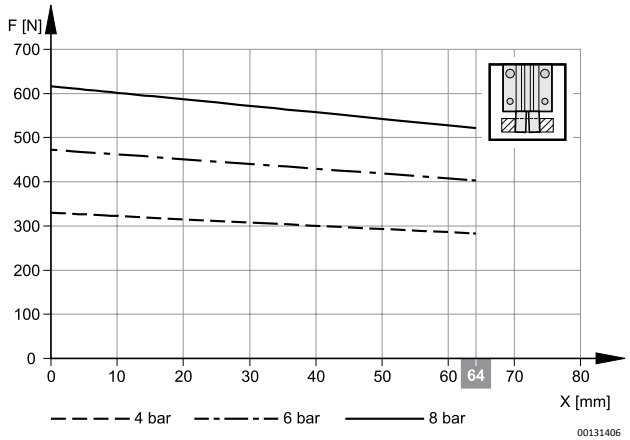


GSP-P-25 Gripping range

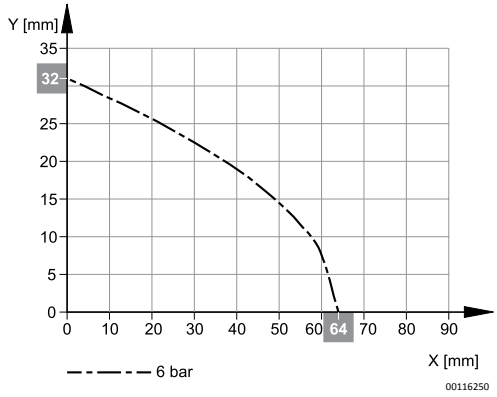


GSP-P-40 Gripping force/finger





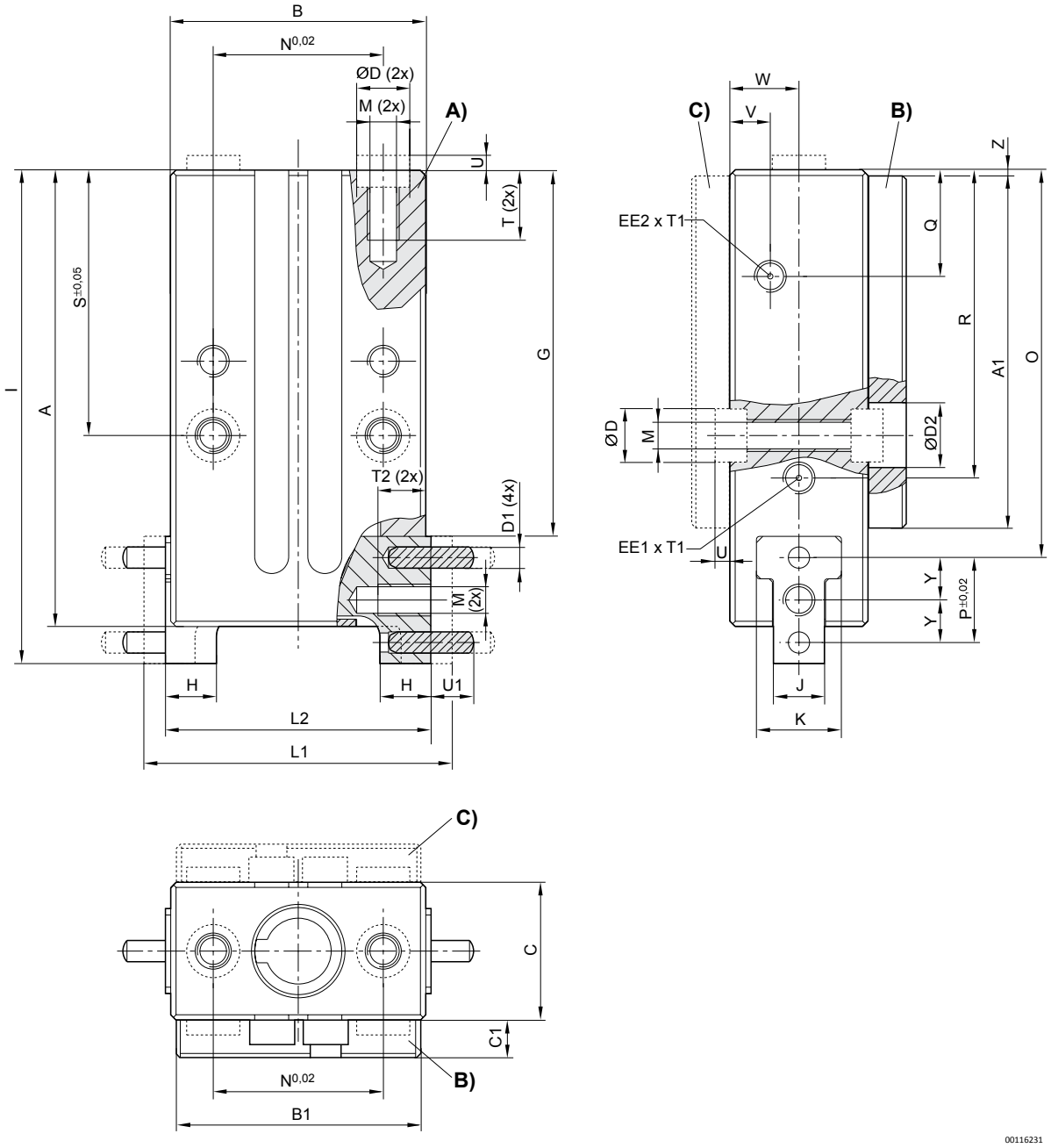
GSP-P-40 Gripping range



GSP-P

2-Finger Parallel Gripper

GSP-P-08



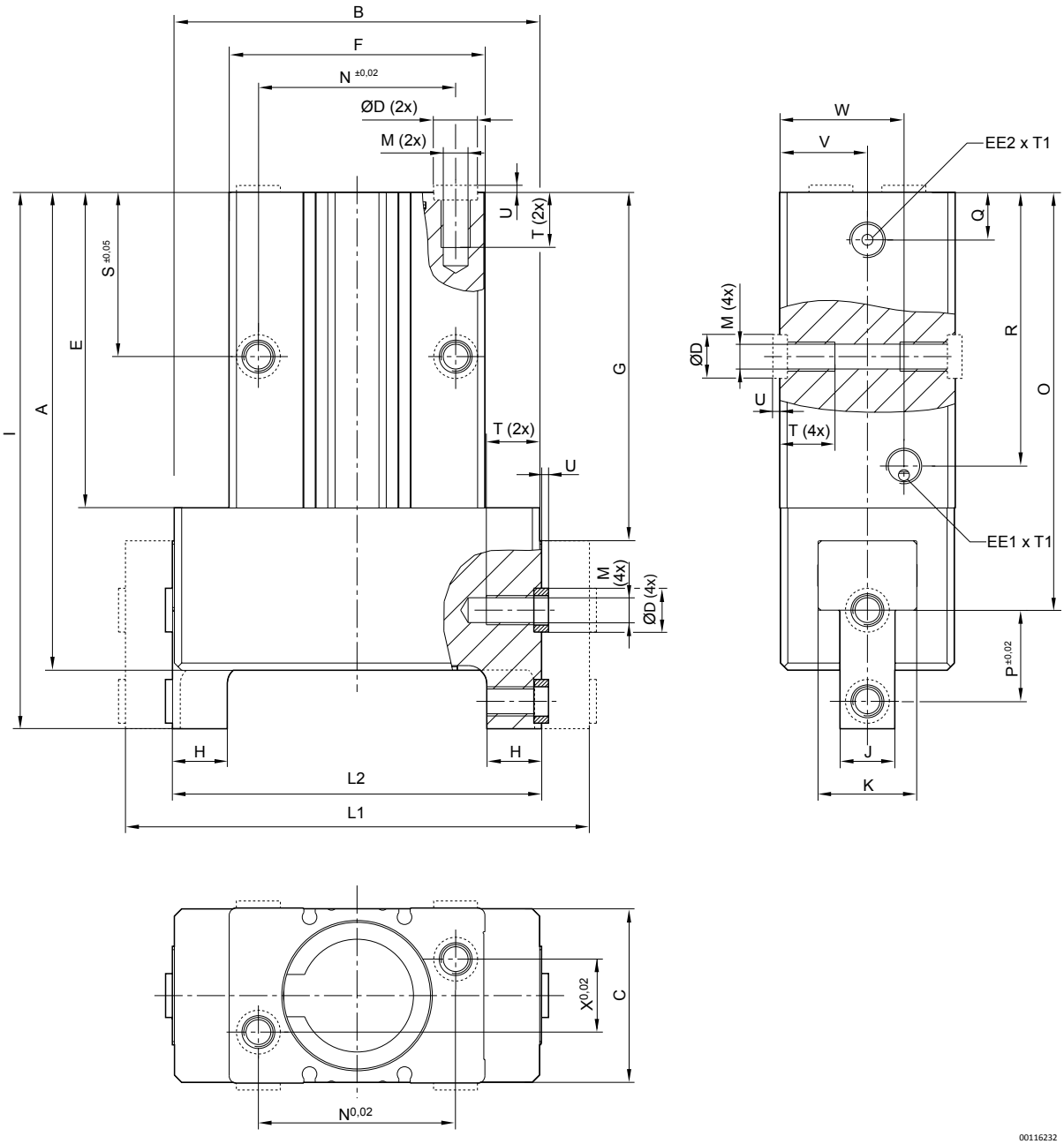
L1 = Gripper open
L2 = Gripper closed
EE1 = Close gripper air connection
EE2 = Open gripper air connection
Centering rings (2 pieces) and cylindrical pins are included in the scope of delivery.
A) Pictured without clamp mounting
B) Clamp mounting for fixing the sensors and socket head screws M3x6 (DIN 7984) are included in the scope of delivery.
C) Clamp mounting can be modified as required by the customer.

Type	A	A1	B	B1	C	C1	D	D1	D2	EE1	EE2	G
GSP-P-08	43	33	24	23	13	3,5	Ø 5 K6	Ø 2 M6	Ø 6	M3	M3	34,5

Type	H	I	J	K	L1	L2	M	N	O	P	Q	R
GSP-P-08	4,8	46,5	4,8	8	29	25	M3	16	36,5	8	10	29

Type	S	T	T1	T2	U	U1	V	W	Y	Z		
GSP-P-08	25	6,5	4	5	1,6	4	3,8	6,5	4	0,5		

GSP-P-10-...-40



L1 = Open gripper
L2 = Close gripper
EE1 = Air connection close gripper
EE2 = Air connection open gripper
Centering rings (6 pieces) are included in the scope of delivery.

GSP-P

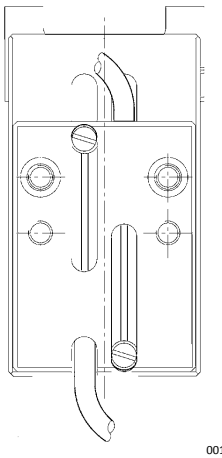
2-Finger Parallel Gripper

Type	A	B	C	D K6	E	EE1	EE2	F	G	H	I	J
GSP-P-10	56	32	16	Ø 5	41	M3	M3	28	44	6	61	6
GSP-P-16	68	46	20	Ø 5	47	M5	M5	36	51	7	74,5	7
GSP-P-20	79	50	24	Ø 7	53,5	M5	M5	42	58,5	8	87	8
GSP-P-25	95	64	30	Ø 7	63	M5	M5	50	69	10	106	10
GSP-P-40	131	100	48	Ø 12	86,5	G 1/8	G 1/8	70	95,5	15	147	15

Type	K	L1	L2	M	N	O	P	Q	R	S	T	T1
GSP-P-10	10	39	33	M3	20	52	6	10,5	32	21	6,5	4
GSP-P-16	12	57	47	M3	28	61,5	10	11	41	24	6,5	5
GSP-P-20	14	63	51	M4	32	70,5	12	11	46	27	8,5	6
GSP-P-25	17	81	65	M5	40	85,5	16	11	55	32	11,5	6
GSP-P-40	27	127	101	M8	54	114,5	25	13	75	45	15	6

Type	U	V	W	X
GSP-P-10	1,6	5,3	11,2	–
GSP-P-16	1,6	5,5	14,5	–
GSP-P-20	1,6	6,5	17,5	–
GSP-P-25	1,6	9	21	–
GSP-P-40	2,1	24	34	20

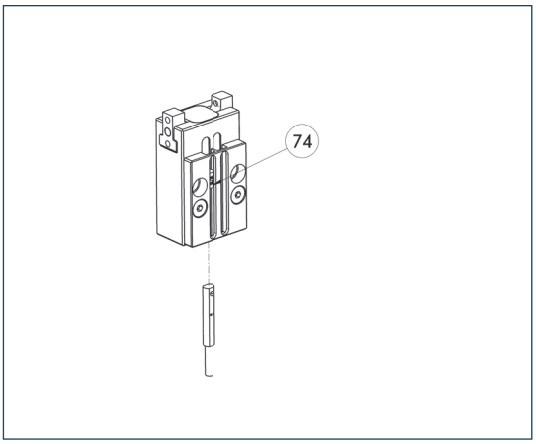
Sensor ST4, ST4-2P



00115999

Groove width = 4 mm
The sensors must be ordered from Aventics.

Sensor MMS-P 22



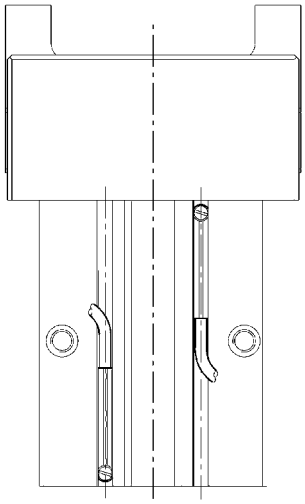
Position monitoring with two programmable positions for each sensor.
End position monitoring installed in C-groove.

Designation	ID-No.	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	0301370	•
MMSK-P 22-S-PNP	0301371	
Connection cable		
KA BG08-L 4P-0500	0307767	
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-1000	0307766	
KA BW08-L 4P-0500	0307765	
Sensor distributor		
V2-M8-4P-2XM8-3P	0301380	

ⓘ Observe the minimum permitted bending radii for sensor cables.
The minimum permitted bending radius is usually 35 mm.

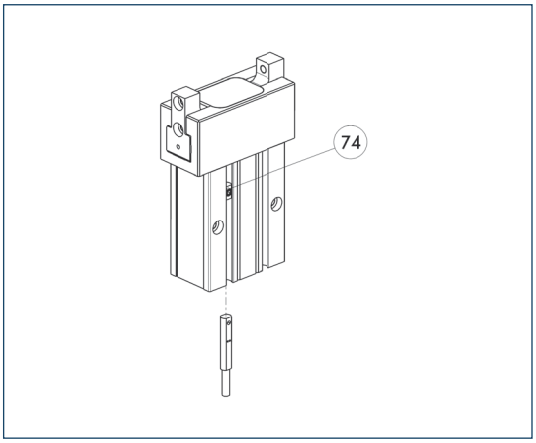
ⓘ One sensor (turnkey/S) is needed for each gripper and additionally optional extension cables.

Sensor ST4, ST4-2P



Groove width = 4 mm
The sensors must be ordered from Aventics.

Sensor MMS-P 22



Position monitoring with two programmable positions for each sensor.
End position monitoring installed in C-groove.

Designation	ID-No.	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	0301370	•
MMSK-P 22-S-PNP	0301371	
Connection cable		
KA BG08-L 4P-0500	0307767	
KA BG08-L 4P-1000	0307768	
KA BW08-L 4P-1000	0307766	
KA BW08-L 4P-0500	0307765	
Sensor distributor		
V2-M8-4P-2XM8-3P	0301380	

ⓘ Observe the minimum permitted bending radii for the sensor cables.
The minimum permitted bending radius is usually 35 mm.

ⓘ One sensor (turnkey/S) is needed for each gripper and additonally optional extension cables.