LGR

Sizes
10 ... 40

Weight
0.07 kg ... 1.27 kg

Gripping moment
0.3 Nm ... 15 Nm

Angle per jaw
90°

Workpiece weight
0.07 kg ... 1066 kg

Application example

Rotational adjustment for reorientation of workpieces

1 2-Finger Radial Gripper LGR

2 Rotary Actuator SRU-plus

Universal Gripper
universal 180°-angular gripper with excellent cost-performance ratio

Field of application
for universal use in clean and slightly dirty environments

Your advantages and benefits

Function optimized gripper type
for maximum cost effectiveness

Matching SCHUNK C-slot switch
for process reliable position interrogation

Hard-anodized or hardened functional components
for long lifetime

Centering sleeves
for a repeat accurate exchange of grippers and fingers

Compact dimensions
for minimized interfering contours

General note to the series

Principle of function
Wedge-hook kinematics

Housing material
Aluminum alloy, hard-anodized

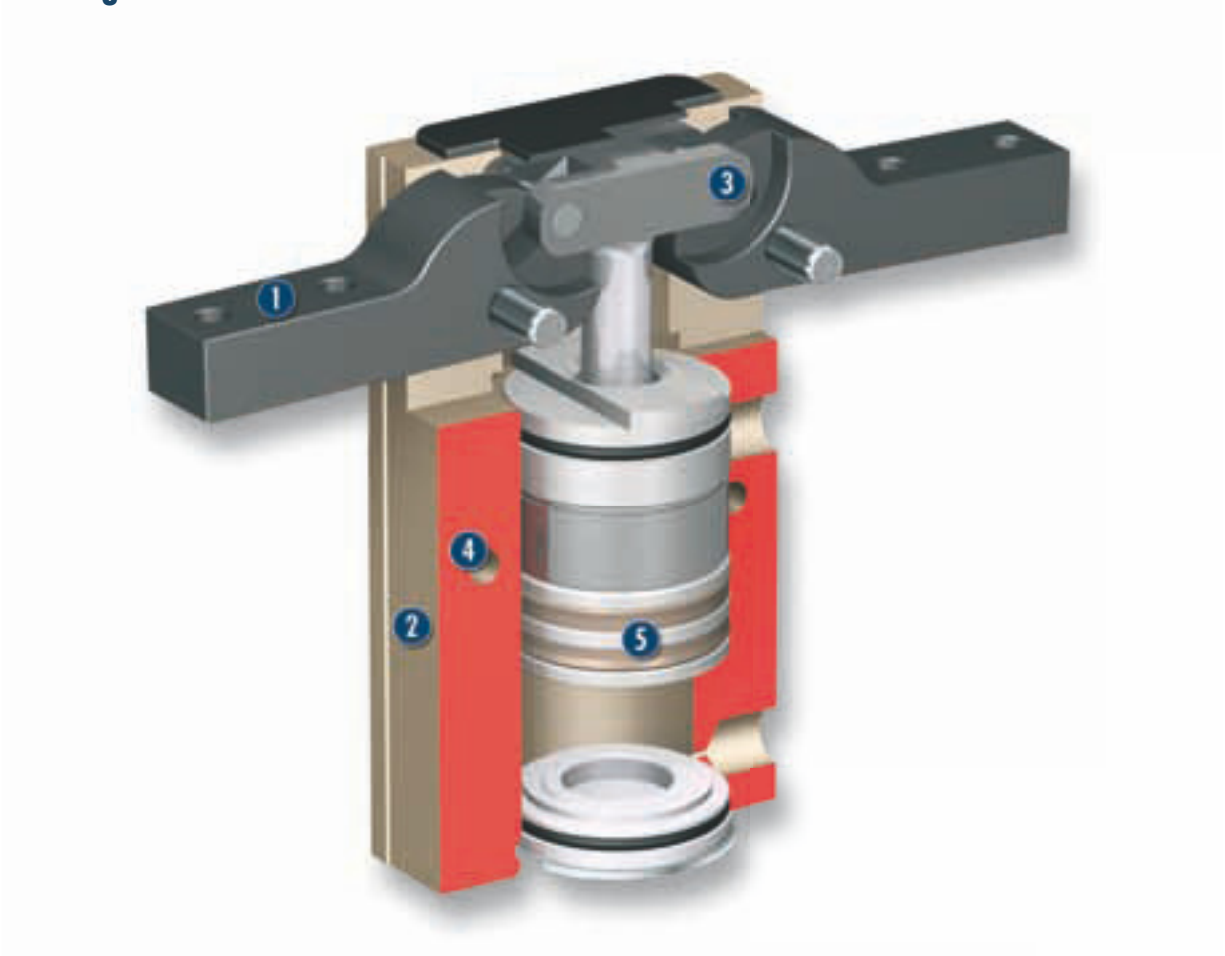
Base jaw material
Steel

Actuation
pneumatic, with filtered compressed air (10 microns): dry, lubricated or non-lubricated
Pressure medium: Required quality class of compressed air according to
DIN ISO 8573-1: 6 4 4

Warranty
24 months (details, general terms and conditions and operation manuals can be downloaded under www.schunk.com)

Scope of delivery
Centering elements, assembly and operating instruction with manufacturer's declaration

Sectional diagram



1 Base jaw
for the connection of workpiece-specific gripper fingers

2 Housing
weight-optimized through application of hard-anodized, high-strength aluminum alloy

3 Crank mechanism
for centric gripping

4 Centering and mounting possibilities
for universal assembly of the gripper

5 Drive
pneumatic piston drive

Functional description

180° angular grippers (radial grippers) are advantageous in order to avoid additional stroke motions. Since each jaw rotates away by 90°, they are mostly removed from the work area; a stroke motion to retract the entire gripper can be omitted.

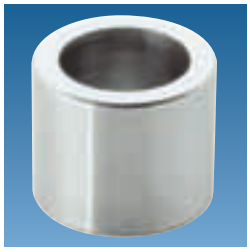
Options and special information

Monitoring with a SCHUNK MMS 22 or RMS 22 sensor is not possible. The use of the recommended sensors MZN and RZN is not compulsory.

Accessories

Accessories from SCHUNK – the suitable supplement for maximum functionality, reliability and performance of all automation modules.

Centering sleeves



Fittings

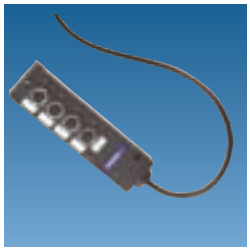
Inductive proximity switches

Programmable magnetic switch

Pressure maintenance valve

Sensor cables

Sensor Distributor



ⓘ For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You will find more detailed information on our accessory range in the "Accessories" catalog section.

General note to the series

Gripping moment
Gripping moment is the arithmetic total of gripping moments for each claw jaw.

Finger length
The finger length is measured from the upper edge of the gripper housing in direction to the main axis. If the max. admissible finger length is exceeded, the speed of jaw motions have to be reduced and/or the opening angle has to be diminished, as it is done with heavy fingers. The service life of the gripper can shorten.

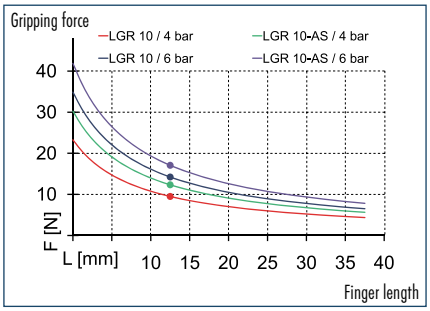
Repeat accuracy
is defined as the spread of the limit position after 100 consecutive strokes.

Workpiece weight
The recommended workpiece weight is calculated for a force-type connection with a coefficient of friction of 0.1 and a safety factor of 2 against slippage of the workpiece on acceleration due to gravity g. Considerably heavier workpiece weights are permitted with form-fit gripping.

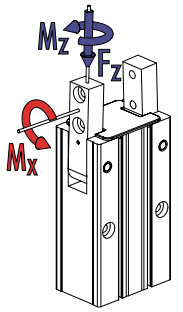
Closing and opening times
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.

LGR 10

Gripping force, O.D. gripping



Finger load



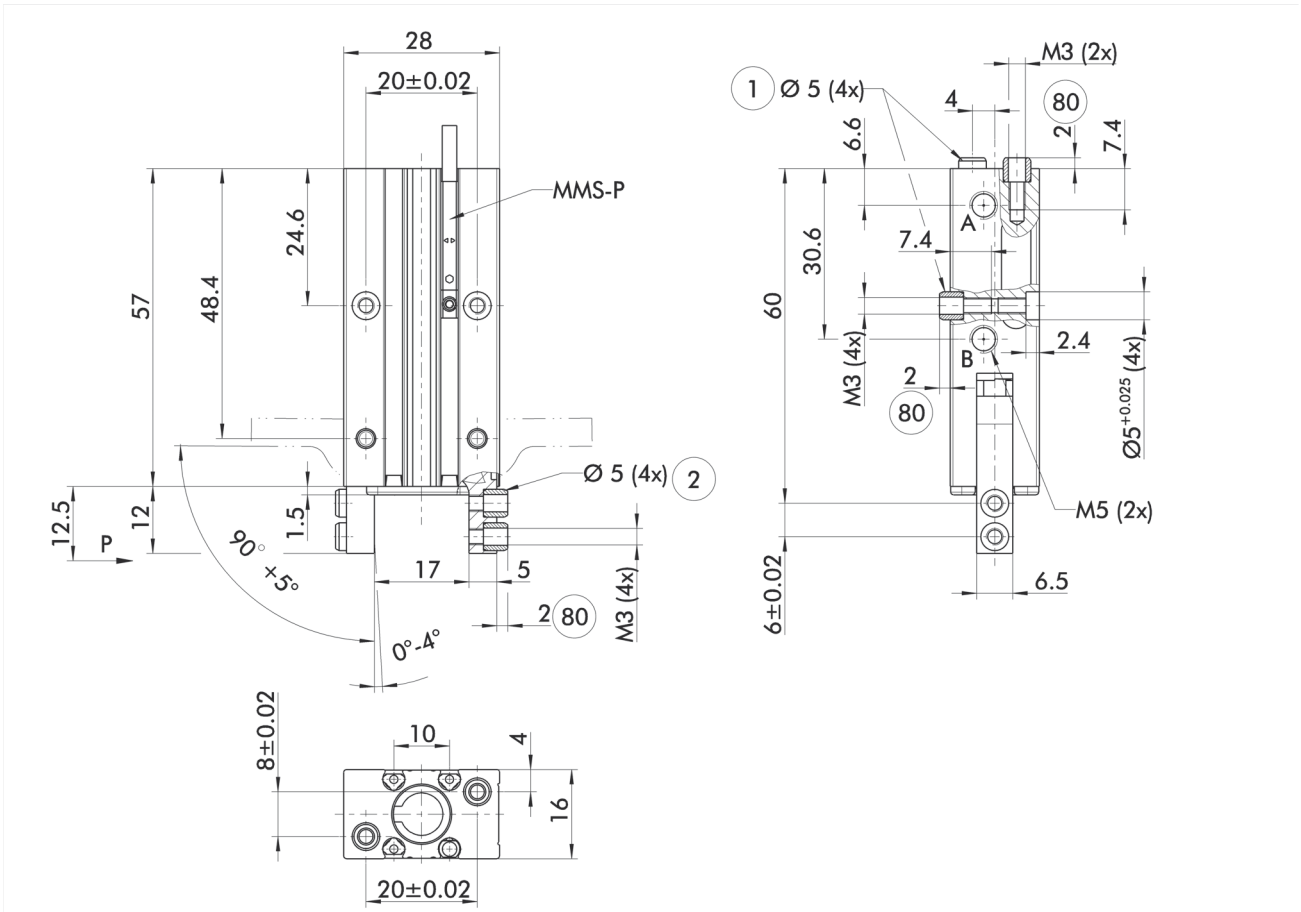
M_x max. 0.50 Nm
M_z max. 0.50 Nm
F_z max. 18.0 N

ⓘ The indicated moments and forces are statical values, apply for each base jaw and should not appear simultaneously. If the maximum admissible finger weight is exceeded, throttling is necessary in order to ensure a smooth jaw motion without jerks or bounces. The life-time may reduce.

Technical data

Description		LGR 10	LGR 10-AS
ID		0312970	0312971
Opening angle per jaw	[°]	90	90
Closed angle per jaw up to	[°]	4	4
Closing moment	[Nm]	0.3	0.36
Spring-actuated closing moment	[Nm]		0.06
Weight	[kg]	0.07	
Recommended workpiece weight	[kg]	0.07	0.09
Air consumption per double stroke	[cm³]	1.2	1.45
Min./max. operating pressure	[bar]	2/8	4/6.5
Nominal operating pressure	[bar]	6	6
Closing/opening time	[s]	0.07/0.08	0.08/0.09
Max. permitted finger length	[mm]	25	25
Max. permitted weight per finger	[kg]	0.04	0.04
IP class		40	40
Min./max. ambient temperature	[°C]	-10/90	-10/90
Repeat accuracy	[mm]	0.02	0.02

Main view

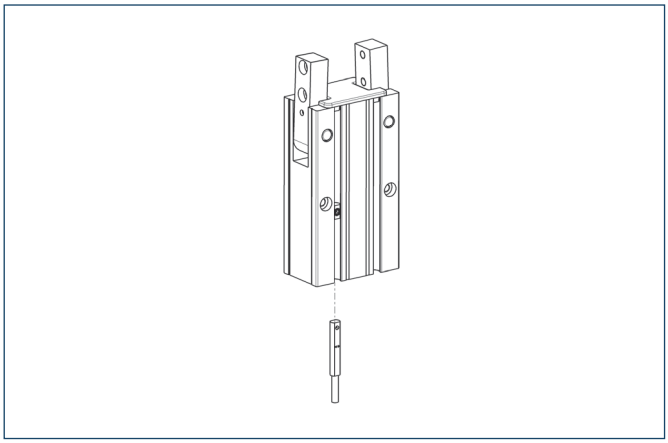


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

A, a Main/direct connection, gripper opening
B, b Main/direct connection, gripper closing
① Gripper connection
② Finger connection
(80) Depth of the centering sleeve hole in the matching part

Programmable magnetic switch



Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	**0301370**	•
MMSK-P 22-S-PNP	**0301371**	
Connection cables		
KA BG08-L 4P-0500	**0307767**	
KA BG08-L 4P-1000	**0307768**	
KA BW08-L 4P-0500	**0307765**	
KA BW08-L 4P-1000	**0307766**	
Sensor Distributor		
V2-M8-4P-2XM8-3P	**0301380**	

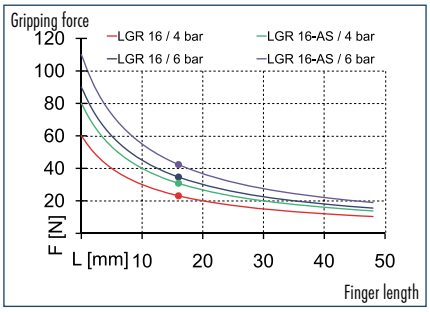
ⓘ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.
ⓘ Per gripper one sensor (closer/NO) is required, optionally a cable extension.

You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

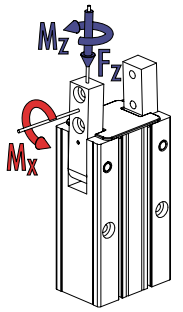
LGR 16

Pneumatic • 2-Finger Radial Gripper • Universal Gripper

Gripping force, O.D. gripping



Finger load



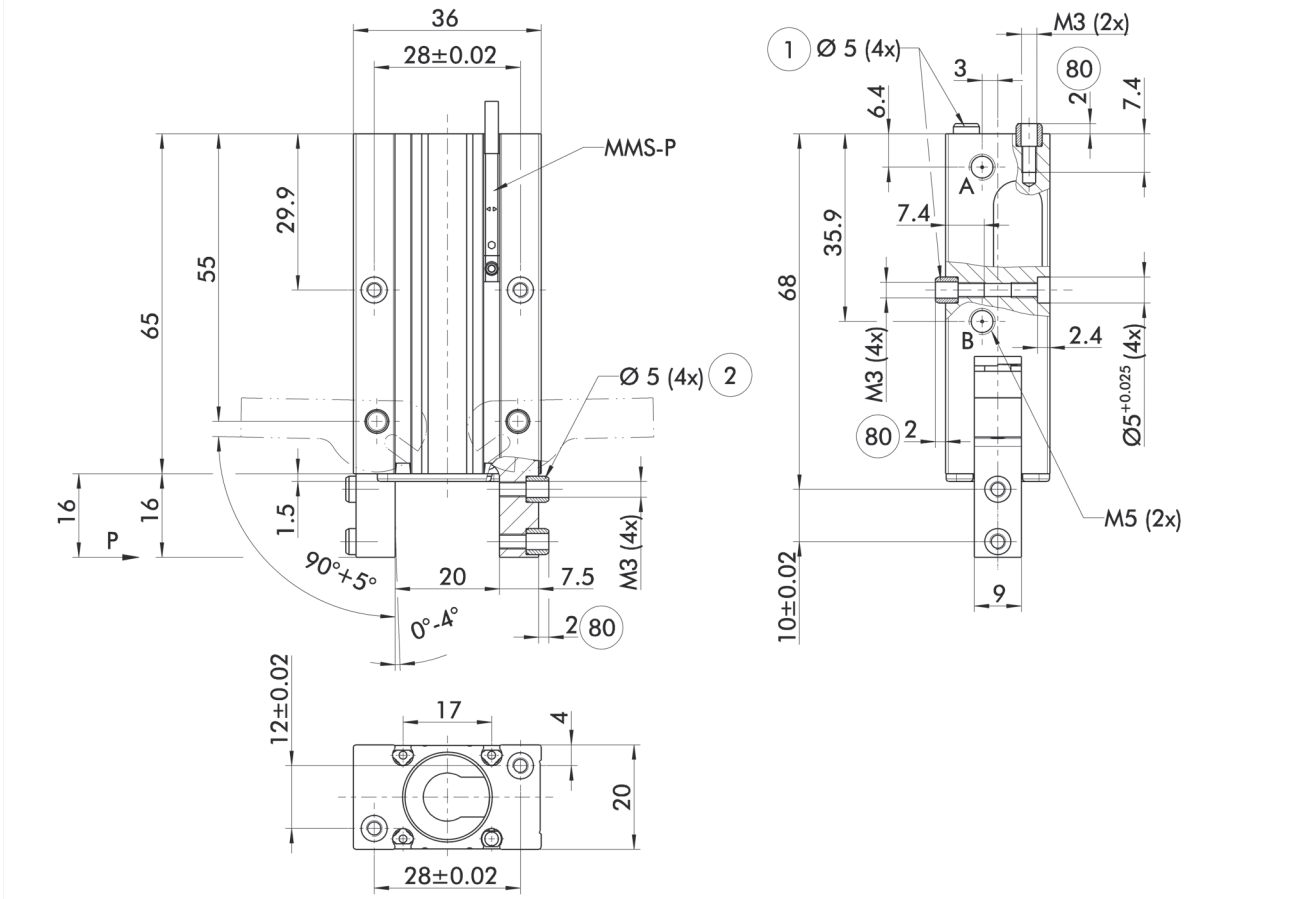
M_x max. 1.50 Nm
M_z max. 1.10 Nm
F_z max. 35.0 N

ⓘ The indicated moments and forces are statical values, apply for each base jaw and should not appear simultaneously. If the maximum admissible finger weight is exceeded, throttling is necessary in order to ensure a smooth jaw motion without jerks or bounces. The life-time may reduce.

Technical data

Description		LGR 16	LGR 16-AS
ID		0312972	0312973
Opening angle per jaw	[°]	90	90
Closed angle per jaw up to	[°]	4	4
Closing moment	[Nm]	0.9	1.1
Spring-actuated closing moment	[Nm]		0.2
Weight	[kg]	0.14	0.14
Recommended workpiece weight	[kg]	0.17	0.21
Air consumption per double stroke	[cm³]	3.8	3.82
Min./max. operating pressure	[bar]	2/8	4/6.5
Nominal operating pressure	[bar]	6	6
Closing/opening time	[s]	0.08/0.09	0.1/0.15
Max. permitted finger length	[mm]	32	32
Max. permitted weight per finger	[kg]	0.05	0.05
IP class		40	40
Min./max. ambient temperature	[°C]	-10/90	-10/90
Repeat accuracy	[mm]	0.02	0.02

Main view

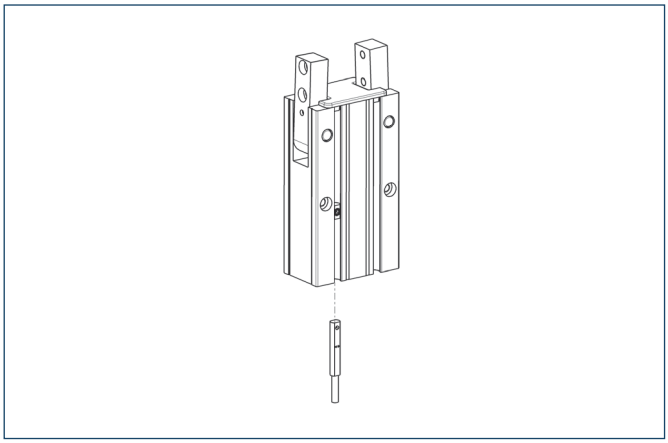


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

A, a Main/direct connection, gripper opening
B, b Main/direct connection, gripper closing
① Gripper connection
② Finger connection
(80) Depth of the centering sleeve hole in the matching part

Programmable magnetic switch



Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

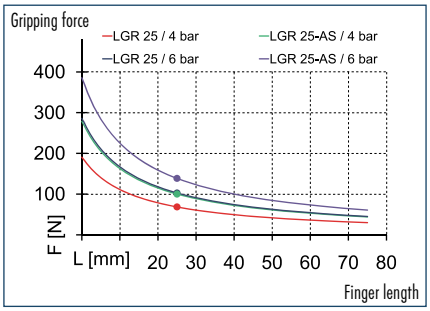
Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	**0301370**	•
MMSK-P 22-S-PNP	**0301371**	
Connection cables		
KA BG08-L 4P-0500	**0307767**	
KA BG08-L 4P-1000	**0307768**	
KA BW08-L 4P-0500	**0307765**	
KA BW08-L 4P-1000	**0307766**	
Sensor Distributor		
V2-M8-4P-2XM8-3P	**0301380**	

ⓘ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.
ⓘ Per gripper one sensor (closer/NO) is required, optionally a cable extension.

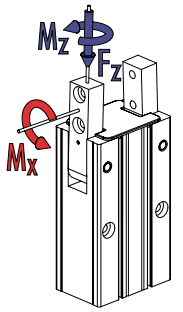
You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

LGR 25

Gripping force, O.D. gripping



Finger load



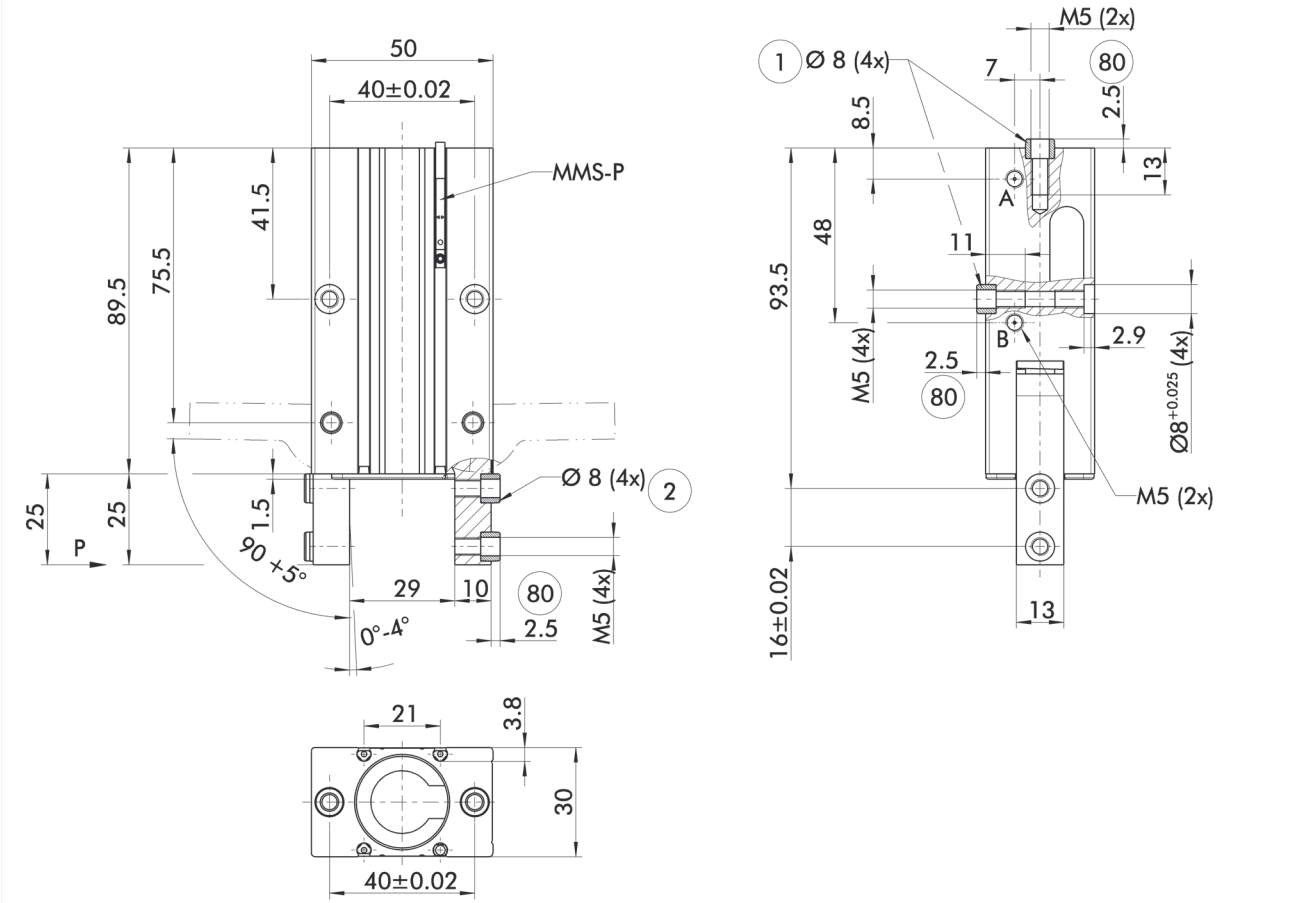
M_x max. 3.70 Nm
M_z max. 2.50 Nm
F_z max. 58.0 N

ⓘ The indicated moments and forces are statical values, apply for each base jaw and should not appear simultaneously. If the maximum admissible finger weight is exceeded, throttling is necessary in order to ensure a smooth jaw motion without jerks or bounces. The life-time may reduce.

Technical data

Description		LGR 25	LGR 25-AS
ID		0312974	0312975
Opening angle per jaw	[°]	90	90
Closed angle per jaw up to	[°]	4	4
Closing moment	[Nm]	4	5.4
Spring-actuated closing moment	[Nm]		1.4
Weight	[kg]	0.4	0.41
Recommended workpiece weight	[kg]	0.52	0.7
Air consumption per double stroke	[cm³]	13	9.31
Min./max. operating pressure	[bar]	2/8	4/6.5
Nominal operating pressure	[bar]	6	6
Closing/opening time	[s]	0.1/0.12	0.11/0.16
Max. permitted finger length	[mm]	50	50
Max. permitted weight per finger	[kg]	0.1	0.1
IP class		40	40
Min./max. ambient temperature	[°C]	-10/90	-10/90
Repeat accuracy	[mm]	0.02	0.02

Main view

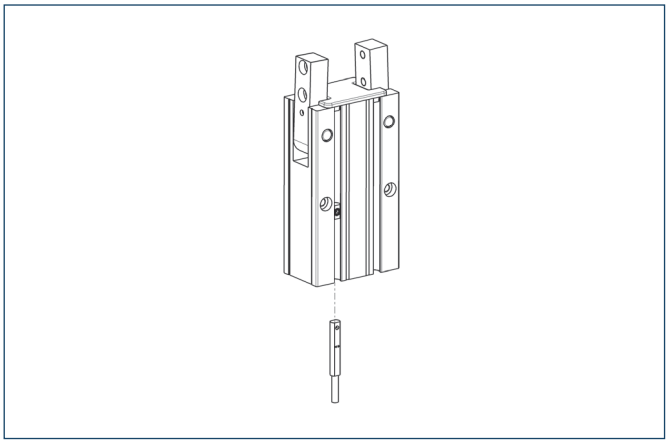


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

A, a Main/direct connection, gripper opening
B, b Main/direct connection, gripper closing
① Gripper connection
② Finger connection
(80) Depth of the centering sleeve hole in the matching part

Programmable magnetic switch



Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	**0301370**	•
MMSK-P 22-S-PNP	**0301371**	
Connection cables		
KA BG08-L 4P-0500	**0307767**	
KA BG08-L 4P-1000	**0307768**	
KA BW08-L 4P-0500	**0307765**	
KA BW08-L 4P-1000	**0307766**	
Sensor Distributor		
V2-M8-4P-2XM8-3P	**0301380**	

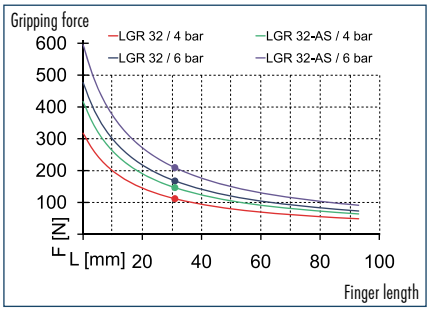
ⓘ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.
ⓘ Per gripper one sensor (closer/NO) is required, optionally a cable extension.

You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

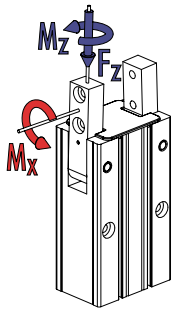
LGR 32

Pneumatic • 2-Finger Radial Gripper • Universal Gripper

Gripping force, O.D. gripping



Finger load



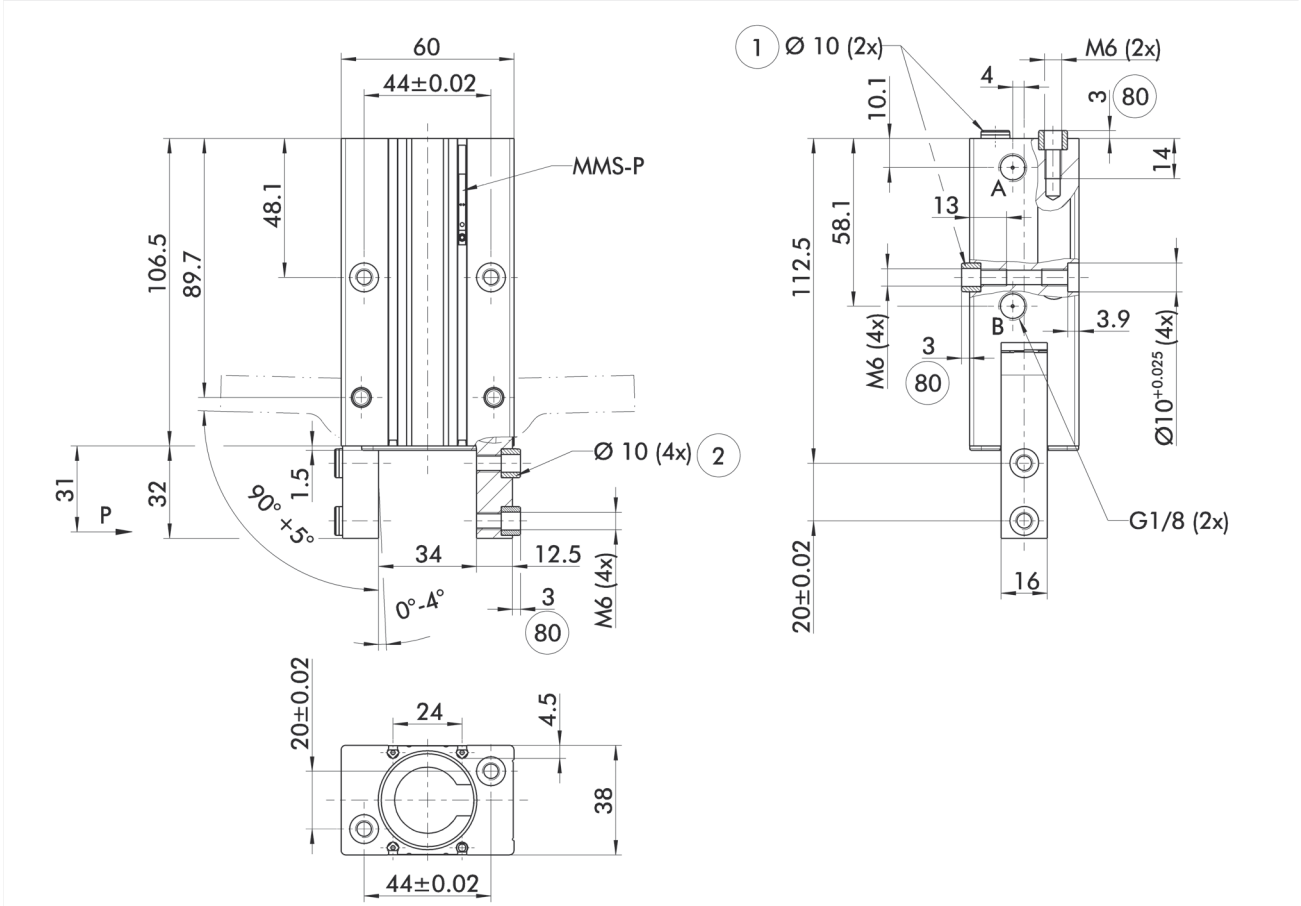
M_x max. 5.50 Nm
M_z max. 3.90 Nm
F_z max. 80.0 N

ⓘ The indicated moments and forces are statical values, apply for each base jaw and should not appear simultaneously. If the maximum admissible finger weight is exceeded, throttling is necessary in order to ensure a smooth jaw motion without jerks or bounces. The life-time may reduce.

Technical data

Description		LGR 32	LGR 32-AS
ID		0312976	0312977
Opening angle per jaw	[°]	90	90
Closed angle per jaw up to	[°]	4	4
Closing moment	[Nm]	8	10
Spring-actuated closing moment	[Nm]		2
Weight	[kg]	0.74	0.75
Recommended workpiece weight	[kg]	0.85	1.07
Air consumption per double stroke	[cm³]	25	15.3
Min./max. operating pressure	[bar]	2/8	4/6.5
Nominal operating pressure	[bar]	6	6
Closing/opening time	[s]	0.13/0.17	0.14/0.2
Max. permitted finger length	[mm]	62	62
Max. permitted weight per finger	[kg]	0.13	0.13
IP class		40	40
Min./max. ambient temperature	[°C]	-10/90	-10/90
Repeat accuracy	[mm]	0.02	0.02

Main view

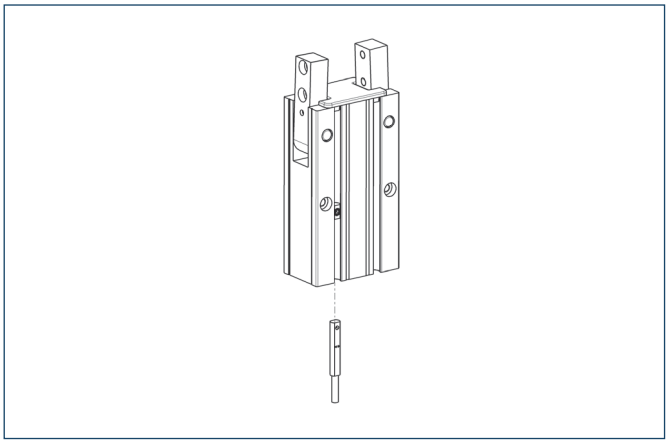


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

A, a Main/direct connection, gripper opening
B, b Main/direct connection, gripper closing
① Gripper connection
② Finger connection
(80) Depth of the centering sleeve hole in the matching part

Programmable magnetic switch



Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	**0301370**	•
MMSK-P 22-S-PNP	**0301371**	
Connection cables		
KA BG08-L 4P-0500	**0307767**	
KA BG08-L 4P-1000	**0307768**	
KA BW08-L 4P-0500	**0307765**	
KA BW08-L 4P-1000	**0307766**	
Sensor Distributor		
V2-M8-4P-2XM8-3P	**0301380**	

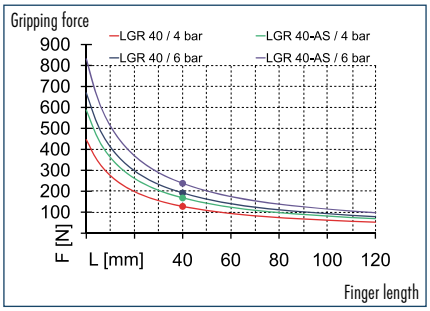
ⓘ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.
ⓘ Per gripper one sensor (closer/NO) is required, optionally a cable extension.

You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.

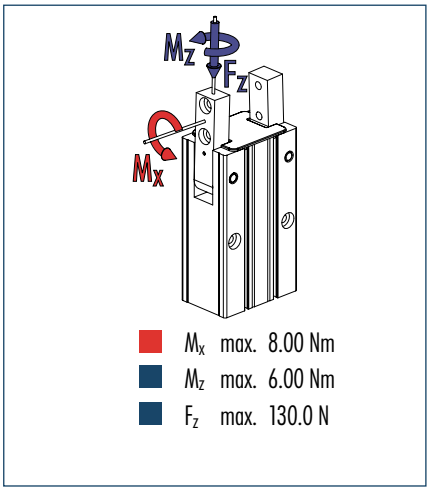
LGR 40

Pneumatic • 2-Finger Radial Gripper • Universal Gripper

Gripping force, O.D. gripping



Finger load

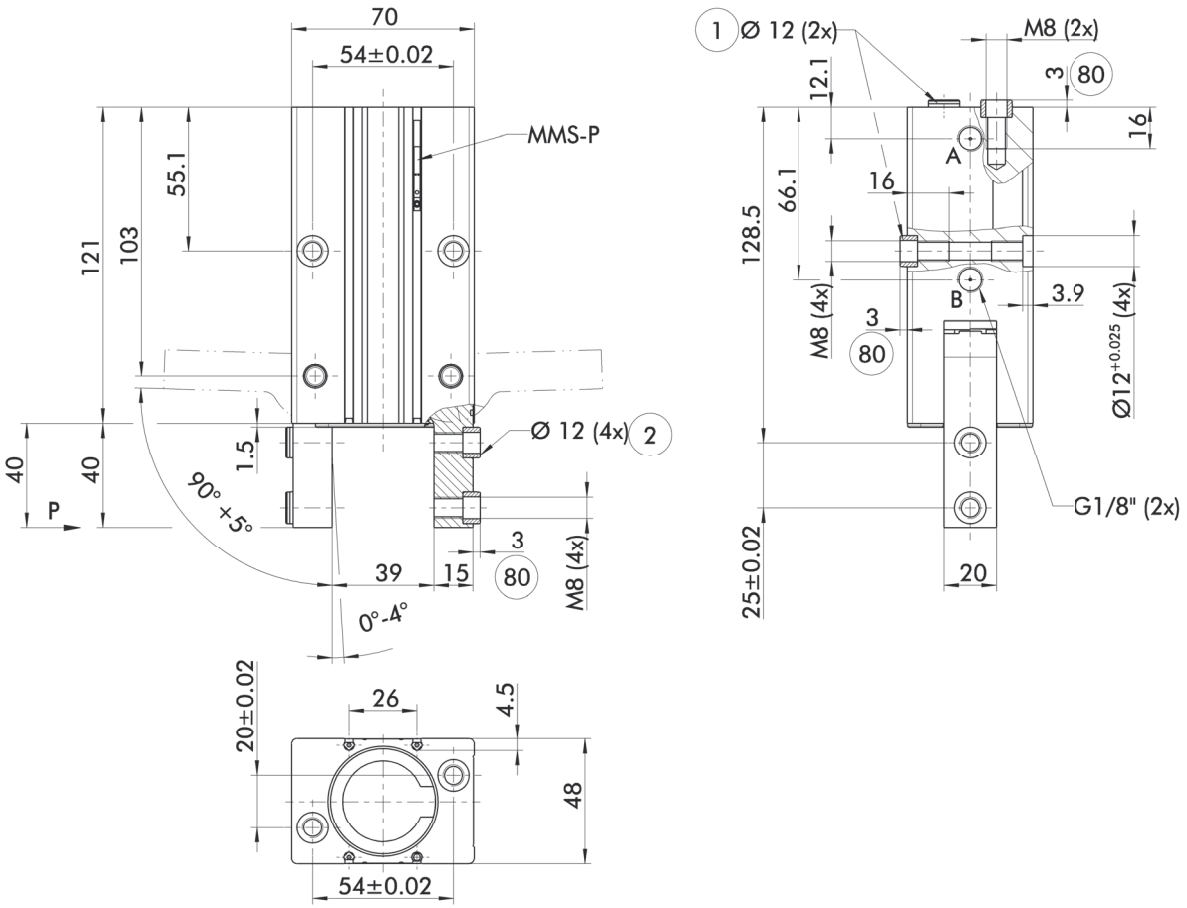


ⓘ The indicated moments and forces are statical values, apply for each base jaw and should not appear simultaneously. If the maximum admissible finger weight is exceeded, throttling is necessary in order to ensure a smooth jaw motion without jerks or bounces. The life-time may reduce.

Technical data

Description		LGR 40	LGR 40-AS
ID		0312978	0312979
Opening angle per jaw	[°]	90	90
Closed angle per jaw up to	[°]	4	4
Closing moment	[Nm]	12	15
Spring-actuated closing moment	[Nm]		3
Weight	[kg]	1.25	1.27
Recommended workpiece weight	[kg]	1.055	1.3
Air consumption per double stroke	[cm³]	42	24
Min./max. operating pressure	[bar]	2/8	4/6.5
Nominal operating pressure	[bar]	6	6
Closing/opening time	[s]	0.18/0.24	0.21/0.31
Max. permitted finger length	[mm]	80	80
Max. permitted weight per finger	[kg]	0.22	0.22
IP class		40	40
Min./max. ambient temperature	[°C]	-10/90	-10/90
Repeat accuracy	[mm]	0.02	0.02

Main view

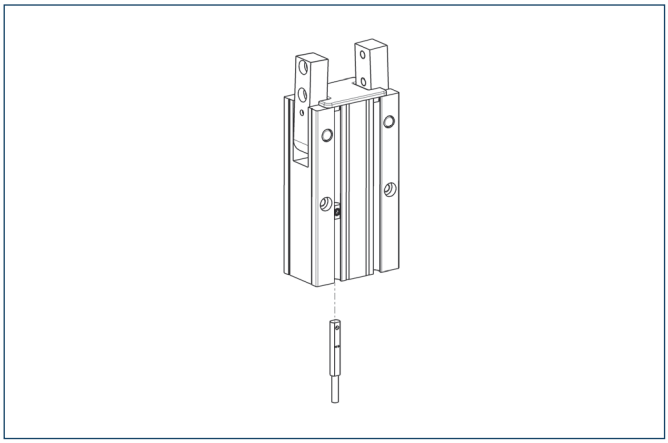


The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

ⓘ The SDV-P pressure maintenance valve can also be used for I.D. or O.D. gripping alternatively or in addition to the spring-loaded, mechanical gripping force maintenance device (see "Accessories" catalog section).

A, a Main/direct connection, gripper opening
B, b Main/direct connection, gripper closing
① Gripper connection
② Finger connection
(80) Depth of the centering sleeve hole in the matching part

Programmable magnetic switch



Position monitoring with two programmable positions per sensor. The end position monitoring is mounted in the C-slot.

Description	ID	Recommended product
Programmable magnetic switch		
MMS-P 22-S-M8-PNP	**0301370**	•
MMSK-P 22-S-PNP	**0301371**	
Connection cables		
KA BG08-L 4P-0500	**0307767**	
KA BG08-L 4P-1000	**0307768**	
KA BW08-L 4P-0500	**0307765**	
KA BW08-L 4P-1000	**0307766**	
Sensor Distributor		
V2-M8-4P-2XM8-3P	**0301380**	

ⓘ Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.
ⓘ Per gripper one sensor (closer/NO) is required, optionally a cable extension.

You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.