

Pneumatic Parallel Grippers

LGE 2-Finger

LGE is a small two-finger parallel gripper featuring high reliability and a long service life, suitable for handling low weight components.

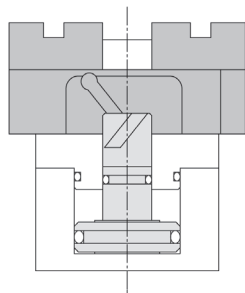
Advantages

- High energy density.
- High stroke per jaw.
- Sturdy T-slot with hardened steel gibs for effective jaw guidance, precise handling and easy maintenance.
- Compact dimensions for minimal impact in space sensitive applications.
- Oval piston maximizes gripping forces.
- Mounting in two screw directions for versatile and flexible integration.
- Air supply via hose-free direct connections or fitting screw connections.

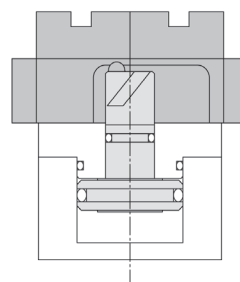


EFFECTO
GROUP

Open/Close Diagram

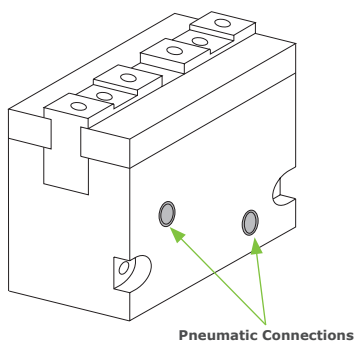


OPEN

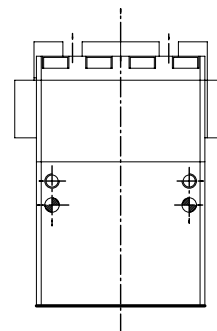
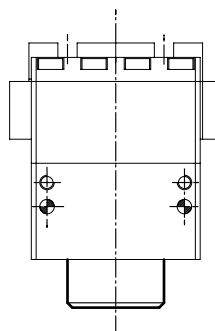


CLOSED

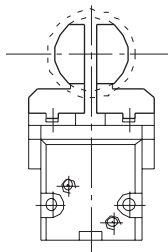
Pneumatic Feed



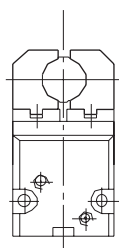
Locking Spring



Gripping Diagram



External Clamping



Internal Clamping

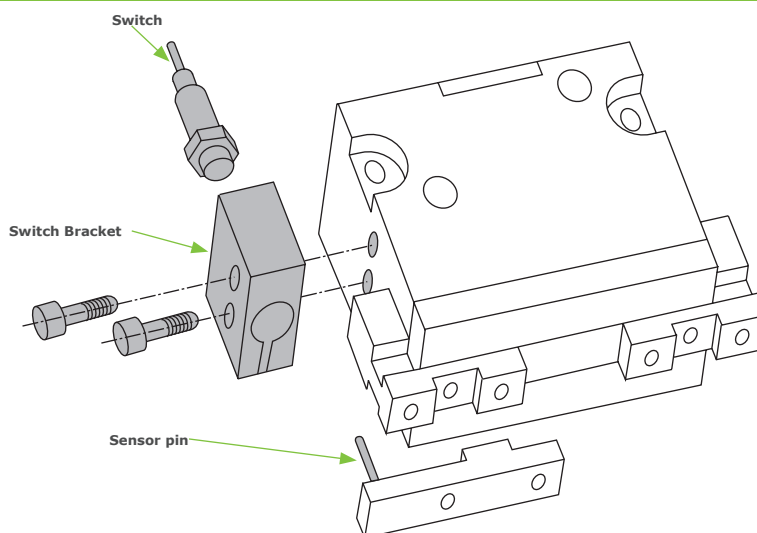
Guidelines for the selection of a gripper model

Selection of the correct gripper model depends on the workpiece's weight, the friction coefficient between the fingers and the workpiece and the required motion of the application.

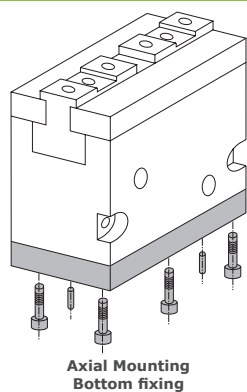
Due to inertial forces associated with motion, we recommend that the holding force of the gripper model should be from 10 to 20 times the workpiece's weight.

If the application presents high acceleration/deceleration or impacts during the motion, then a further safety margin should be considered.

Control Diagram

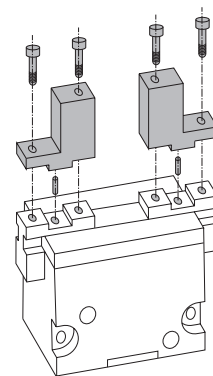


Mounting

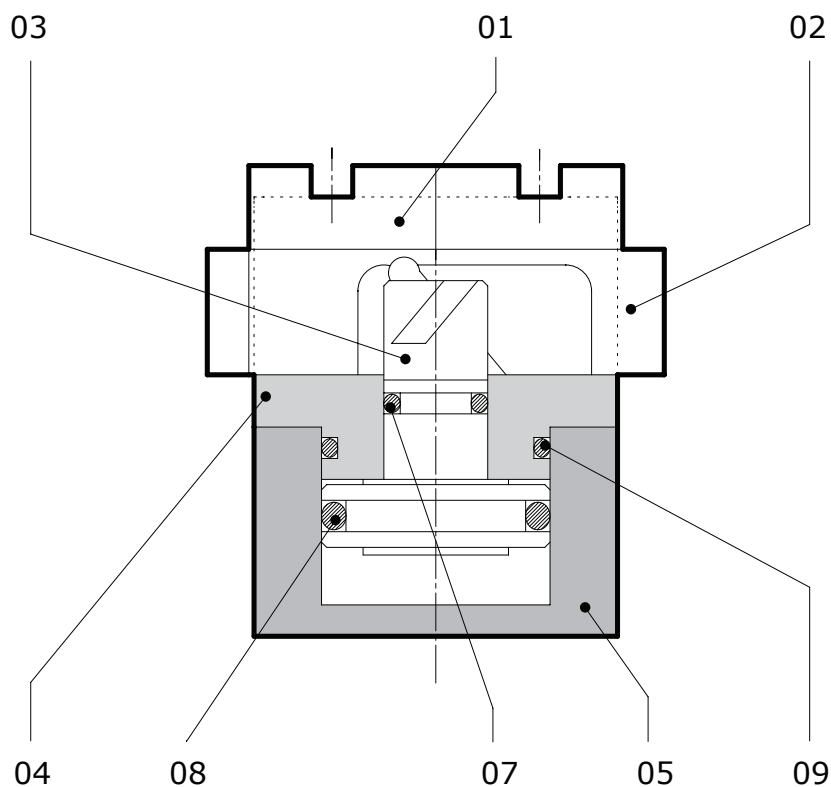
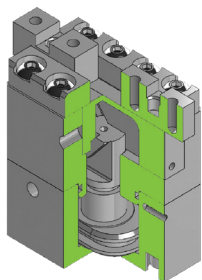


Axial Mounting
Bottom fixing

Fingers Mounting



Construction Diagram

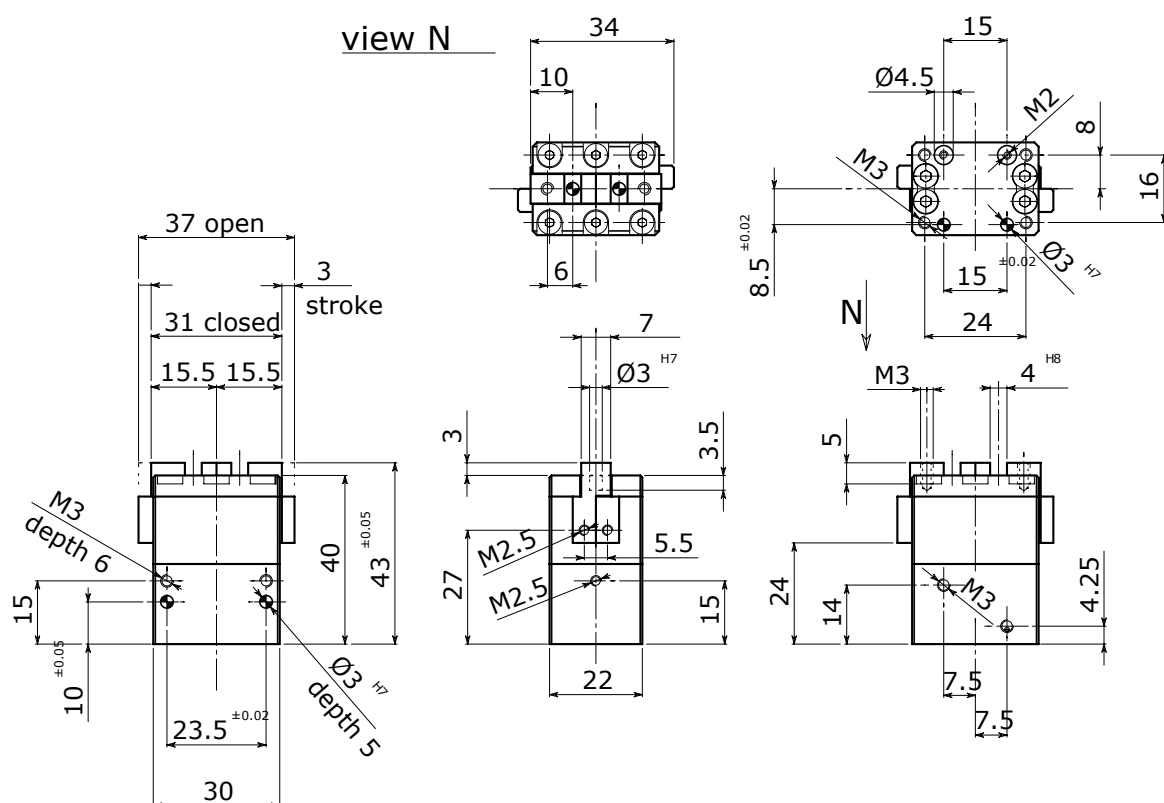


Nr.	Description	Material
01	GIB	Chrome Molybdenum Steel
02	JAW	Chrome Molybdenum Steel
03	DRIVE HUB	Chrome Molybdenum Steel
04	BODY	Aluminum Alloy
05	CYLINDER	Aluminum Alloy
07	SHAFT SEAL	NBR
08	PISTON SEAL	NBR
09	BODY SEAL	NBR

Dimensional Drawing



LGE 30



TECHNICAL DATA

		LGE 30	LGE 30 NM	LGE 30 NMA
Stroke per jaw	mm in	3 0.12	3 0.12	3 0.12
Fluid consumption double stroke	cm ³ in ³	1.2 0.07	1.2 0.07	1.2 0.07
Closing force per jaw @ 6 bar	N lb	38 9	44 10	-
Opening force per jaw @ 6 bar	N lb	22 5	-	28 6
Total closing force @ 6 bar	N lb	76 17	88 20	-
Total opening force @ 6 bar	N lb	44 10	-	56 12
True clamping force per jaw only with spring	N lb	-	6 - 9 1 - 2	6 - 8 1 - 2
Recommended workpiece weight	Kg lb	0.38 0.80	0.38 0.80	0.38 0.80
Weight	Kg lb	0.11 0.24	0.12 0.26	0.13 0.29
Repeat accuracy	mm in	± 0.05 ± 0.002	± 0.05 ± 0.002	± 0.05 ± 0.002

* Recommended workpiece weight is calculated for force-fit gripping with a coefficient of static friction of 0.15 and a safety factor of 3 against workpiece slippage.

Opening Pressure **3 - 6 bar (44 - 87 psi)**

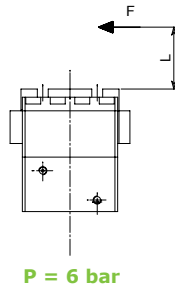
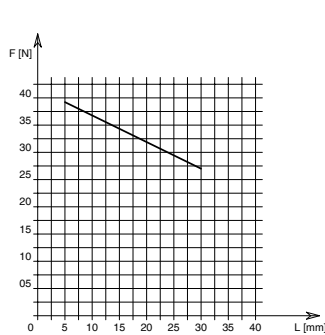
Working Temperature **5 - 60 °C (41 - 140 °F)**

Noise Emission (Sound Pressure) **≤ 70 db(A) in any direction**

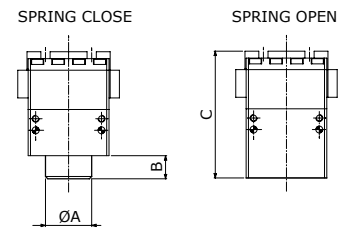
Clamping Force Diagram

Force Maintenance Spring

Note: "L" value, where the diagram's line ends, represents jaws' maximum length.



F = True clamping force per jaw - L = Reading distance
Values read at a distance L = 5 mm



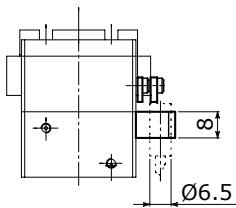
LGE 30

mm
in

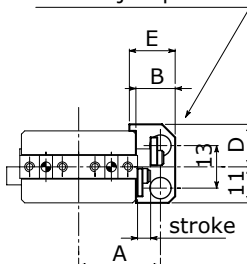
A	B	C
16 0.63	8 0.31	52 2.05

Pressure **4 - 6 bar (58 - 87 psi)**

Open-Closed Control Position with External Switches



closed jaw position



LGE 30

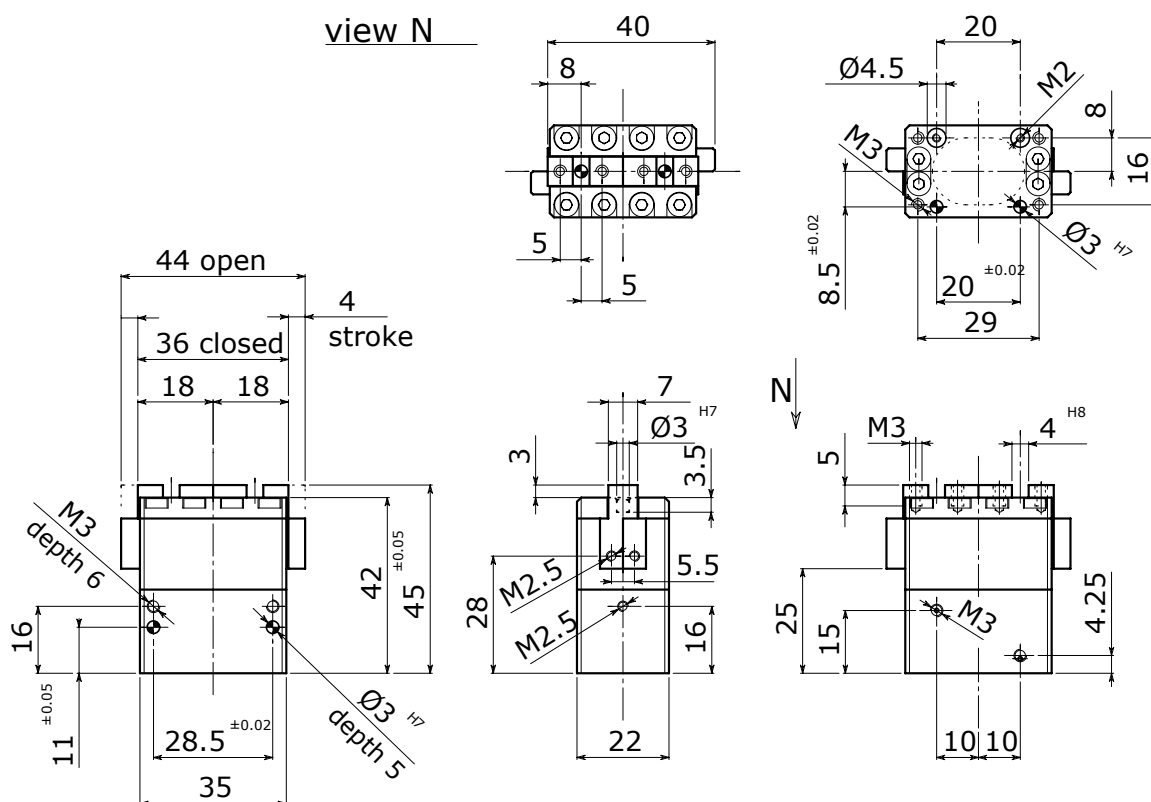
mm
in

A	B	D	E	STROKE
21.5 0.85	11 0.43	13 0.51	13 0.51	3 0.12

Dimensional Drawing



LGE 35



TECHNICAL DATA

		LGE 35	LGE 35 NM	LGE 35 NMA
Stroke per jaw	mm in	4 0.16	4 0.16	4 0.16
Fluid consumption double stroke	cm ³ in ³	2.5 0.15	2.5 0.15	2.5 0.15
Closing force per jaw @ 6 bar	N lb	57 13	72 16	-
Opening force per jaw @ 6 bar	N lb	42 9	-	57 13
Total closing force @ 6 bar	N lb	114 26	144 32	-
Total opening force @ 6 bar	N lb	84 19	-	114 26
True clamping force per jaw only with spring	N lb	-	15 - 20 3 - 4	15 - 20 3 - 4
Recommended workpiece weight	Kg lb	0.57 1.30	0.57 1.30	0.57 1.30
Weight	Kg lb	0.14 0.30	0.15 0.33	0.15 0.33
Repeat accuracy	mm in	± 0.05 ± 0.002	± 0.05 ± 0.002	± 0.05 ± 0.002

* Recommended workpiece weight is calculated for force-fit gripping with a coefficient of static friction of 0.15 and a safety factor of 3 against workpiece slippage.

Opening Pressure **3 - 6 bar (44 - 87 psi)**

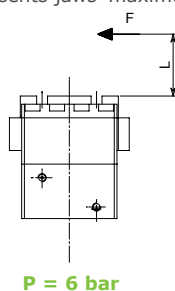
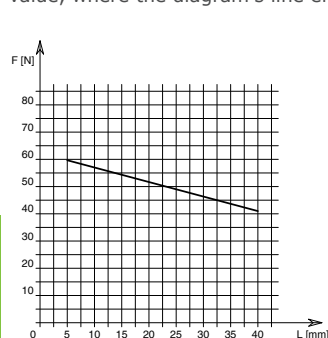
Working Temperature **5 - 60 °C (41 - 140 °F)**

Noise Emission (Sound Pressure) **≤ 70 db(A) in any direction**

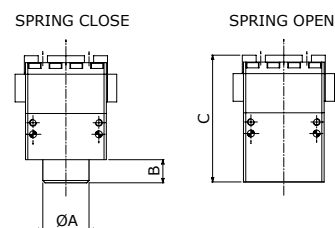
Clamping Force Diagram

Force Maintenance Spring

Note: "L" value, where the diagram's line ends, represents jaws' maximum length.



F = True clamping force per jaw - **L** = Reading distance
Values read at a distance **L = 5 mm**



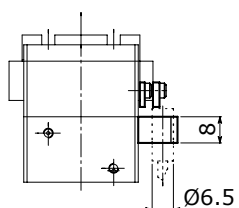
LGE 35

mm
in

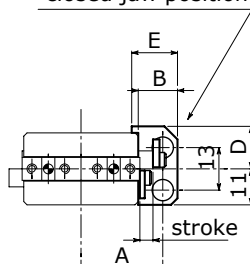
A	B	C
20 0.79	10 0.40	55 2.17

Pressure **4 - 6 bar (58 - 87 psi)**

Open-Closed Control Position with External Switches



closed jaw position



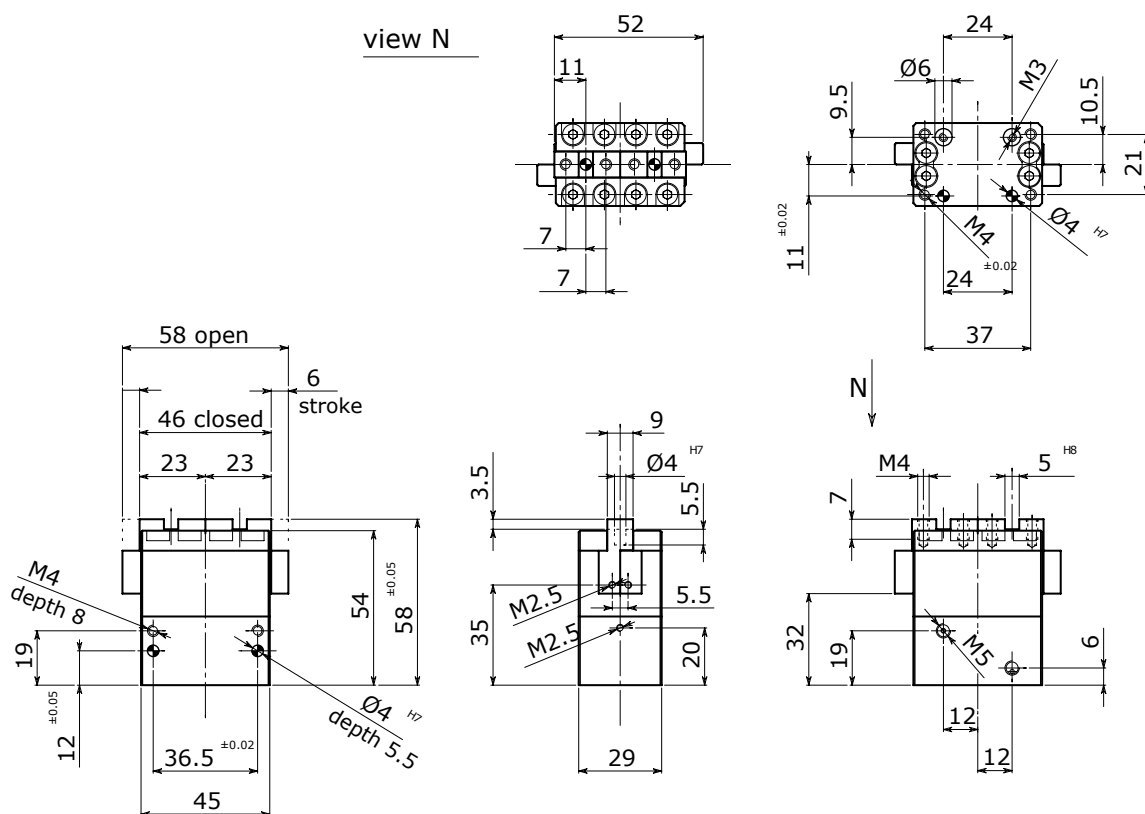
LGE 35

mm
in

A	B	D	E	STROKE
25 0.98	12 0.47	13 0.51	14 0.55	4 0.16



view N



TECHNICAL DATA

		LGE 45	LGE 45 NM	LGE 45 NMA
Stroke per jaw	mm in	6 0.24	6 0.24	6 0.24
Fluid consumption double stroke	cm ³ in ³	5 0.3	5 0.3	5 0.3
Closing force per jaw @ 6 bar	N lb	77 17	96 22	-
Opening force per jaw @ 6 bar	N lb	55 12	-	72 16
Total closing force @ 6 bar	N lb	154 35	192 44	-
Total opening force @ 6 bar	N lb	110 25	-	144 32
True clamping force per jaw only with spring	N lb	-	19 - 23 4 - 5	17 - 27 4 - 6
Recommended workpiece weight	Kg lb	0.77 1.70	0.77 1.70	0.77 1.70
Weight	Kg lb	0.24 0.53	0.26 0.57	0.28 0.62
Repeat accuracy	mm in	± 0.05 ± 0.002	± 0.05 ± 0.002	± 0.05 ± 0.002

* Recommended workpiece weight is calculated for force-fit gripping with a coefficient of static friction of 0.15 and a safety factor of 3 against workpiece slippage.

Opening Pressure **3 - 6 bar (44 - 87 psi)**

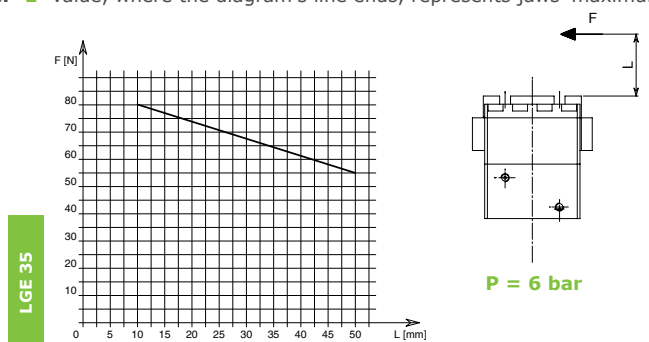
Working Temperature **5 - 60 °C (41 - 140 °F)**

Noise Emission (Sound Pressure) **≤ 70 db(A) in any direction**

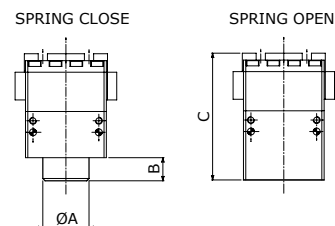
Clamping Force Diagram

Force Maintenance Spring

Note: "L" value, where the diagram's line ends, represents jaws' maximum length.



F = True clamping force per jaw - L = Reading distance
Values read at a distance L = 5 mm

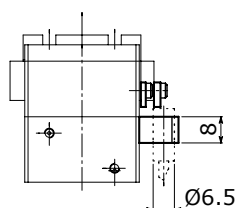


LGE 45

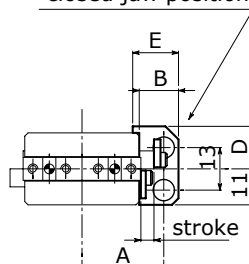
	A	B	C
mm	22	16	74
in	0.87	0.63	2.91

Pressure **4 - 6 bar (58 - 87 psi)**

Open-Closed Control Position with External Switches



closed jaw position



LGE 45

	A	B	D	E	STROKE
mm	32	14	17.5	17	6
in	1.26	0.55	0.69	0.67	0.24



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