

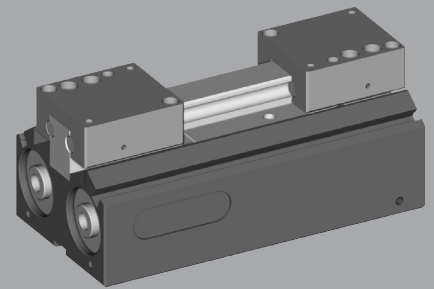
# Pneumatic Parallel Grippers

## LPG 2-Finger

LPG is a long stroke two-finger parallel gripper featuring high reliability and a long service life, suitable for many applications including dirty/harsh environments.

### Advantages

- Limited height and large jaw support to ensure rigidity and stability.
- Profiled guideways designed with polymer slide parts that have very low friction and high load capability.
- Double piston drive synchronized by a rack-and-pinion system hermetically sealed for dirty environment applications.
- All materials selected for long life in harsh environments.
- Standard central connection for gripper pressurization.
- Slots for mounting and positioning of magnetic-field sensors.
- Air supply via hose-free direct connection or screw connections for flexible pressure supply in all automated systems.



## SPECIFICATIONS

Model	Stroke Per Jaw	Air Consumption Per Cycle (Dual Stroke)	Closing Force Per Jaw @ 6 bar	Opening Force Per Jaw @ 6 bar	Total Closing Force @ 6 bar	Total Opening Force @ 6 bar	Recommended Workpiece Weight*	Weight	Repeatability
<b>LPG 18-40</b>	20 mm	20.3 cm <sup>3</sup>	105 N	105 N	210 N	210 N	1.05 kg	0.75 kg	± 0.05 mm
	0.79 in	1.24 in <sup>3</sup>	23.6 lb	23.6 lb	47.2 lb	47.2 lb	2.30 lb	1.65 lb	± 0.002 in
<b>LPG 22-50</b>	25 mm	38 cm <sup>3</sup>	155 N	155 N	310 N	310 N	1.55 kg	1.10 kg	± 0.05 mm
	0.98 in	2.32 in <sup>3</sup>	34.8 lb	34.8 lb	69.7 lb	69.7 lb	3.40 lb	2.42 lb	± 0.002 in
<b>LPG 30-65</b>	32.5 mm	92 cm <sup>3</sup>	290 N	290 N	580 N	580 N	2.90 kg	2.20 kg	± 0.05 mm
	1.28 in	5.61 in <sup>3</sup>	65.2 lb	65.2 lb	130.4 lb	130.4 lb	6.40 lb	4.84 lb	± 0.002 in
<b>LPG 35-80</b>	40 mm	154 cm <sup>3</sup>	400 N	400 N	800 N	800 N	4.00 kg	3.50 kg	± 0.05 mm
	1.57 in	9.39 in <sup>3</sup>	89.9 lb	89.9 lb	179.8 lb	179.8 lb	8.80 lb	7.70 lb	± 0.002 in
<b>LPG 40-100</b>	50 mm	251 cm <sup>3</sup>	515 N	515 N	1030 N	1030 N	5.15 kg	5.60 kg	± 0.05 mm
	1.97 in	15.31 in <sup>3</sup>	115.8 lb	115.8 lb	231.5 lb	231.5 lb	11.30 lb	12.32 lb	± 0.002 in
<b>LPG 45-115</b>	57.5 mm	366 cm <sup>3</sup>	655 N	655 N	1310 N	1310 N	6.55 kg	8.00 kg	± 0.05 mm
	2.26 in	22.33 in <sup>3</sup>	147.2 lb	147.2 lb	294.5 lb	294.5 lb	14.40 lb	17.60 lb	± 0.002 in
<b>LPG 50-130</b>	65 mm	510 cm <sup>3</sup>	810 N	810 N	1620 N	1620 N	8.10 kg	11.00 kg	± 0.05 mm
	2.56 in	31.11 in <sup>3</sup>	182.1 lb	182.1 lb	364.2 lb	364.2 lb	17.80 lb	24.20 lb	± 0.002 in
<b>LPG 63-150</b>	75 mm	935 cm <sup>3</sup>	1300 N	1300 N	2600 N	2600 N	13.00 kg	18.00 kg	± 0.05 mm
	2.95 in	57.04 in <sup>3</sup>	292 lb	292.2 lb	584.5 lb	584.5 lb	28.60 lb	39.60 lb	± 0.002 in

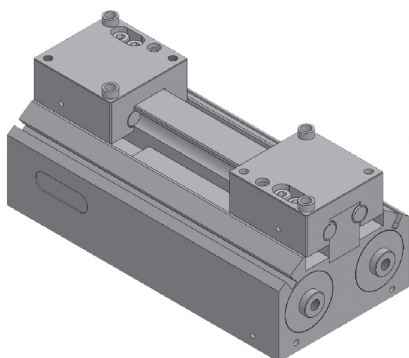
\* Recommended workpiece weight is calculated for force-fit gripping with a coefficient of static friction of 0.15 and a safety factor of 3 against workpiece slippage.

Operating Pressure **2 - 8 bar (29 - 116 psi)**

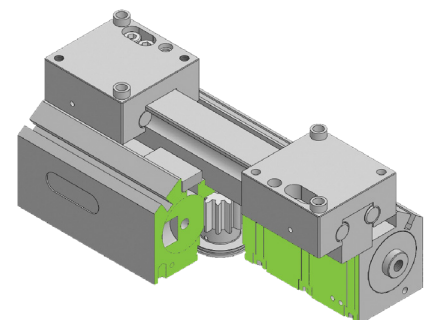
Working Temperature: **5 - 60 °C (41 - 140 °F)**

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

## SECTIONAL DIAGRAM



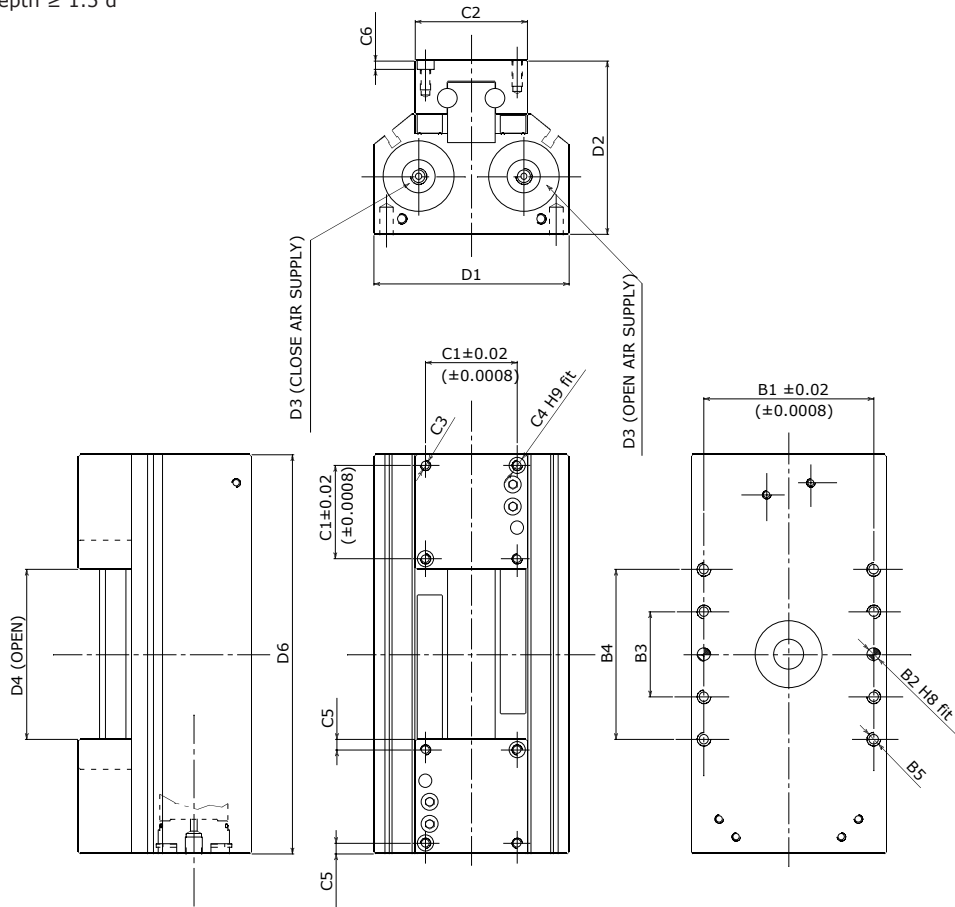
**Guidelines for the selection of a gripper model**  
 Selection of the correct gripper model depends on the workpiece's weight, the friction coefficient between the fingers and the workpiece and the required motion of the application. Due to inertial forces associated with motion, we recommend that 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.



# PRODUCT INFORMATION

# LPG 2-Finger

Body dowel hole depth  $\geq 1.5 d$



- Options**
- Magnetic switches
  - Safety pressure valve

	Mounting - Option # 2					Finger Application						Informational Dimensions			
	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	D1	D2	D3	D4
<b>LPG 18-40</b>	50.00 (1.97)	5 (0.20)	25 (0.98)	50 (1.97)	M5	25 (0.98)	33 (1.30)	M4	6 (0.24)	4 (0.16)	2 (0.08)	59 (2.32)	50 (1.97)	M5	40 (1.57)
<b>LPG 22-50</b>	56.00 (2.20)	5 (0.20)	28 (1.10)	56 (2.20)	M5	30 (1.18)	38 (1.50)	M4	6 (0.24)	4.25 (0.17)	3 (0.12)	65 (2.56)	55 (2.17)	M5	50 (1.97)
<b>LPG 30-65</b>	74.00 (2.91)	6 (0.24)	37 (1.46)	74 (2.91)	M6	38 (1.50)	48 (1.89)	M5	8 (0.31)	4.75 (0.19)	4 (0.16)	85 (3.35)	75 (2.95)	G1/8	65 (2.56)
<b>LPG 35-80</b>	88.00 (3.46)	6 (0.24)	44 (1.73)	88 (3.46)	M6	48 (1.89)	60 (2.36)	M6	10 (0.39)	6 (0.24)	5 (0.20)	100 (3.94)	88 (3.46)	G1/8	80 (3.15)
<b>LPG 40-100</b>	100.00 (3.94)	8 (0.31)	50 (1.97)	100 (3.94)	M8	54 (2.13)	66 (2.60)	M6	10 (0.39)	6.25 (0.25)	5 (0.20)	115 (4.53)	102 (4.02)	G1/8	100 (3.94)
<b>LPG 45-115</b>	115.00 (4.53)	8 (0.31)	57.5 (2.26)	115 (4.53)	M8	62 (2.44)	77 (3.03)	M8	12 (0.47)	7.75 (0.31)	6 (0.24)	130 (5.12)	113 (4.45)	G1/8	115 (4.53)
<b>LPG 50-130</b>	130.00 (5.12)	8 (0.31)	65 (2.56)	130 (5.12)	M8	70 (2.76)	85 (3.35)	M8	12 (0.47)	7.75 (0.31)	6 (0.24)	145 (5.71)	127 (5.00)	G1/4	130 (5.12)
<b>LPG 63-150</b>	156.00 (6.14)	10 (0.39)	78 (3.07)	156 (6.14)	M10	82 (3.23)	100 (3.94)	M10	14 (0.55)	9.25 (0.36)	7 (0.28)	175 (6.89)	154 (6.06)	G1/4	150 (5.91)

\* Dimensions are in millimeters (inches).

\*\* All dimensions are descriptive and subject to variation for technical upgrading. We reserve the right to make variations without prior notification



Applied Robotics  
648 Saratoga Road  
Glenville, NY 12302 USA  
Tel. +1 518 384 1000 Fax +1.5183841200  
info@appliedrobotics.com  
www.appliedrobotics.com



EFFECTO GROUP S.p.A.  
Via Roma, 141/143  
28017 San Maurizio d'Opaglio (NO) - Italy  
Tel. +39 0322 96142 Fax +39 0322 967453  
info@effectogroup.com  
www.effecto.com

