## Pneumatic Parallel Grippers <br> OPL 2-Finger

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

- Compact housing made of hard coated aluminum alloy.
- Sturdy C-slot with hardened steel gibs for effective jaw guidance, precise handling, and easy maintenance.
- Wedge-hook design for high-force transmission and jaw synchronization.
- Mounting from two sides in two screw directions for versatile and flexible integration
- Air supply via fitting screw connections.



## 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 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OPL 12 | $\begin{array}{r} 5 \mathrm{~mm} \\ 0.20 \text { in } \end{array}$ | $\begin{aligned} 1.2 & \mathrm{~cm}^{3} \\ 0.07 & \mathrm{in}^{3} \end{aligned}$ | $\begin{array}{rl} 18 & \mathrm{~N} \\ 4.0 & \mathrm{lb} \end{array}$ | 24 N 5.4 lb | 36 N 8.1 lb | $\begin{array}{rl} 48 & \mathrm{~N} \\ 10.8 & \mathrm{lb} \end{array}$ | $\begin{array}{ll} 0.18 & \mathrm{~kg} \\ 0.40 \mathrm{lb} \end{array}$ | $\begin{array}{ll} 0.08 & \mathrm{~kg} \\ 0.18 \mathrm{lb} \end{array}$ | $\begin{array}{rl}  \pm 0.05 & \mathrm{~mm} \\ \pm 0.002 & \text { in } \end{array}$ |
| OPL 30 | $\begin{array}{rl} 2.5 \mathrm{~mm} \\ 0.10 & \mathrm{in} \end{array}$ | $\begin{aligned} 1.4 & \mathrm{~cm}^{3} \\ 0.09 & \mathrm{in}^{3} \end{aligned}$ | $\begin{aligned} & 42 \mathrm{~N} \\ & 9.4 \mathrm{lb} \end{aligned}$ | $\begin{array}{r} 54 \mathrm{~N} \\ 12.1 \mathrm{lb} \end{array}$ | $\begin{array}{r} 84 \mathrm{~N} \\ 18.9 \mathrm{lb} \end{array}$ | $\begin{array}{r} 108 \mathrm{~N} \\ 24.3 \mathrm{lb} \end{array}$ | $\begin{array}{ll} 0.42 \mathrm{~kg} \\ 0.90 \mathrm{lb} \end{array}$ | $\begin{array}{ll} 0.10 & \mathrm{~kg} \\ 0.22 \mathrm{lb} \end{array}$ | $\begin{array}{rl}  \pm 0.05 & \mathrm{~mm} \\ \pm 0.002 & \mathrm{in} \end{array}$ |
| OPL 35 | $\begin{array}{rl} 4 & \mathrm{~mm} \\ 0.16 & \text { in } \end{array}$ | $\begin{aligned} 1.7 & \mathrm{~cm}^{3} \\ 0.10 & \mathrm{in}^{3} \end{aligned}$ | $\begin{array}{rl} 30 & \mathrm{~N} \\ 6.7 & \mathrm{lb} \end{array}$ | 43 N <br> 9.7 lb | $\begin{array}{r} 60 \mathrm{~N} \\ 13.5 \mathrm{lb} \end{array}$ | $\begin{array}{rl} 86 & \mathrm{~N} \\ 19.3 & \mathrm{lb} \end{array}$ | $\begin{array}{ll} 0.30 & \mathrm{~kg} \\ 0.70 \mathrm{lb} \end{array}$ | $\begin{array}{ll} 0.13 \mathrm{~kg} \\ 0.28 \mathrm{lb} \end{array}$ | $\begin{array}{rl}  \pm 0.05 & \mathrm{~mm} \\ \pm 0.002 & \text { in } \end{array}$ |

* 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 ${ }^{\circ} \mathrm{C}\left(\mathbf{4 1 - 1 4 0}{ }^{\circ} \mathrm{F}\right)$
Noise Emission (Sound Pressure) $\leq 70 \mathbf{d B}(\mathbf{A})$ 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.




Dowel hole depth：Body $\geq 1.2 \mathrm{~d}$－Jaws $\geq 1 \mathrm{~d}$
C4＊Up to $6 \mathrm{~mm}=0 /+0.025 \mathrm{~mm}$－From 6 mm to $10 \mathrm{~mm}=0 /+0.030 \mathrm{~mm}-$ Over $10 \mathrm{~mm}=0 /+0.040 \mathrm{~mm}$
OPL12


OPL30－35


Options
－Mounting brackets for inductive proximity switches


Applied Robotics＂
Applied Robotics 648 Saratoga Road Glenville，NY 12302 USA
Tel．+15183841000 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．+39032296142 Fax +390322967453 info＠effectogroup．com www．effecto．com


05．2022＿Rev．04＿EU
$\square$

