## Pneumatic Toggle Grippers

OG 3-Finger

OG3 is a three-finger toggle gripper with a high grip force and non-reversible mechanism, suitable for heavy industrial applications.
Advantages

- High energy density.
- Capability to grip parts in opening and closing mode.
- Driving mechanism guided along the entire stroke.
- Large surface for finger mounting to guarantee extremely safe clamping
of the workpiece.
- The toggle mechanism provides non-reversible gripping in the opening and closing positions -- even without air pressure
- Air supply via screw connection.



## SPECIFICATIONS

| Model | Stroke Per Jaw | Air Consumption Per Cycle (Dual Stroke) | Closing Moment <br> Per Jaw <br> @ 6 bar | Total Closing Moment Per Jaw @ 6 bar | Recommended Workpiece Weight* | Weight | Repeatability |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OG 530-3 | $7.5^{\circ}$ | $\begin{aligned} 8.5 & \mathrm{~cm}^{3} \\ 0.52 & \mathrm{in}^{3} \end{aligned}$ | 13 Nm <br> 115.1 in lb | $\begin{array}{rl} 39 & \mathrm{Nm} \\ 345.2 & \text { in } \mathrm{lb} \end{array}$ | $\begin{aligned} & 0.62 \mathrm{~kg} \\ & 1.40 \mathrm{lb} \end{aligned}$ | $\begin{array}{ll} 0.50 & \mathrm{~kg} \\ 1.10 \mathrm{lb} \end{array}$ | $\begin{array}{rl}  \pm 0.05 & \mathrm{~mm} \\ \pm 0.002 & \text { in } \end{array}$ |
| OG 550-3 | $7.5^{\circ}$ | $\begin{array}{r} 19 \mathrm{~cm}^{3} \\ 1.16 \mathrm{in}^{3} \end{array}$ | $\begin{array}{rl} 30 & \mathrm{Nm} \\ 265.5 & \text { in } \mathrm{lb} \end{array}$ | $\begin{array}{rl} 90 & \mathrm{Nm} \\ 796.6 & \text { in } \mathrm{lb} \end{array}$ | $\begin{array}{ll} 1.43 \mathrm{~kg} \\ 3.10 \mathrm{lb} \end{array}$ | $\begin{array}{ll} 0.90 & \mathrm{~kg} \\ 1.98 & \mathrm{lb} \end{array}$ | $\begin{array}{rl}  \pm 0.05 \mathrm{~mm} \\ \pm 0.002 & \mathrm{in} \end{array}$ |
| OG 570-3 | $8.5^{\circ}$ | $\begin{aligned} & 76.5 \mathrm{~cm}^{3} \\ & 4.67 \mathrm{in}^{3} \end{aligned}$ | $\begin{array}{r} 105 \text { Nm } \\ 929.3 \text { in lb } \end{array}$ | 315 Nm 2788.0 in lb | $\begin{array}{rl} 5.00 & \mathrm{~kg} \\ 11.00 & \mathrm{lb} \end{array}$ | $\begin{array}{ll} 3.80 & \mathrm{~kg} \\ 8.36 \mathrm{lb} \end{array}$ | $\begin{array}{rl}  \pm 0.05 & \mathrm{~mm} \\ \pm 0.002 & \mathrm{in} \end{array}$ |

* 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.


[^0]Dowel hole depth: Body $\geq 1 \mathrm{~d}-$ Jaws $\geq 0.5 \mathrm{~d}$ (from OG530-3) - $\geq 1 \mathrm{~d}$ (OG550-3-OG570-3)
C4* Up to $6 \mathrm{~mm}=0 /+0.025 \mathrm{~mm}$ - From 6 mm to $10 \mathrm{~mm}=0 /+0.030 \mathrm{~mm}-$ Over $10 \mathrm{~mm}=0 /+0.040 \mathrm{~mm}$


Options

- Mounting brackets for inductive proximity switches
- Magnetic switches

|  | Mounting - Option \# 2 |  |  |  |  |  |  | Finger Application |  |  |  |  |  |  |  | Informational Dimensions |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | B1 | B2 | B3 | B4 | B5 | B6 | 87 | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | D1 | D2 | D3 | D4 | D5 | D6 |
| OG 530-3 | $\begin{aligned} & 50.00 \\ & (1.97) \end{aligned}$ | $\begin{aligned} & 14.85 \\ & (0.58) \end{aligned}$ | $\begin{aligned} & 14.85 \\ & (0.58) \end{aligned}$ | $\begin{gathered} 5 \\ (0.20) \end{gathered}$ | $\begin{gathered} 27.13 \\ 1.07 \end{gathered}$ | $15^{\circ}$ | $\begin{gathered} 5.5 \\ (0.22) \end{gathered}$ | $\begin{gathered} 20 \\ (0.79) \end{gathered}$ | $\begin{gathered} 20 \\ (0.79) \end{gathered}$ | M4 | $\begin{gathered} 15 \\ (0.59) \end{gathered}$ | $\begin{gathered} 4 \\ (0.16) \end{gathered}$ |  | $\begin{aligned} & 25.55 \\ & (1.01) \end{aligned}$ |  | $\begin{gathered} 60 \\ (2.36) \end{gathered}$ | $\begin{gathered} 2 \\ (0.08) \end{gathered}$ | $\begin{gathered} 53.4 \\ (2.10) \end{gathered}$ | M5 | $\begin{gathered} 27 \\ (1.06) \end{gathered}$ | $7.5^{\circ}$ |
| OG 550-3 | $\begin{aligned} & 58.00 \\ & (2.28) \end{aligned}$ | $\begin{gathered} 15.1 \\ (0.59) \end{gathered}$ | $\begin{gathered} 18 \\ (0.71) \end{gathered}$ | $\begin{gathered} 6 \\ (0.24) \end{gathered}$ | $\begin{gathered} 30.95 \\ 1.22 \end{gathered}$ | $20^{\circ}$ | $\begin{gathered} 6.5 \\ (0.26) \end{gathered}$ | $\begin{gathered} 30 \\ (1.18) \end{gathered}$ | $\begin{gathered} 29 \\ (1.14) \end{gathered}$ | M6 | $\begin{gathered} 5 \\ (0.20) \end{gathered}$ | $\begin{gathered} 5 \\ (0.20) \end{gathered}$ | $\begin{gathered} 18 \\ (0.71) \end{gathered}$ | $\begin{gathered} 29.5 \\ (1.16) \end{gathered}$ |  | $\begin{gathered} 65 \\ (2.56) \end{gathered}$ | $\begin{gathered} 2.5 \\ (0.10) \end{gathered}$ | $\begin{gathered} 63 \\ (2.48) \end{gathered}$ | G1/8 | $\begin{gathered} 37 \\ (1.46) \end{gathered}$ | $7.5^{\circ}$ |
| OG 570-3 | $\begin{aligned} & 85.00 \\ & (3.35) \end{aligned}$ | $\begin{gathered} 22.5 \\ (0.89) \end{gathered}$ | $\begin{array}{\|l\|} \hline 26.81 \\ (1.06) \end{array}$ | $\begin{gathered} 8 \\ (0.31) \end{gathered}$ | $\begin{aligned} & 46.11 \\ & (1.82) \end{aligned}$ | $20^{\circ}$ | $\begin{gathered} 8.5 \\ (0.33) \end{gathered}$ | $\begin{gathered} 52 \\ (2.05) \end{gathered}$ | $\begin{gathered} 42 \\ (1.65) \end{gathered}$ | M8 |  | $\begin{gathered} 6 \\ (0.24) \end{gathered}$ | $\begin{gathered} 25 \\ (0.98) \end{gathered}$ | $\begin{gathered} 41 \\ (1.61) \end{gathered}$ | $\begin{gathered} 28 \\ (1.10) \end{gathered}$ | $\begin{gathered} 125 \\ (4.92) \end{gathered}$ | $\begin{gathered} 3.5 \\ (0.14) \end{gathered}$ | $\begin{gathered} 97 \\ (3.82) \end{gathered}$ | G1/8 | $\begin{gathered} 63 \\ (2.48) \end{gathered}$ | $8.5^{\circ}$ |

* 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

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