

# Pneumatic Needle Grippers

## OPT

OPT is a needle gripper suitable for handling non-rigid and highly porous material (primarily textiles).

### Advantages

- Extremely short cycle time for high speed applications.
- High needle inclination for safe part clamping.
- Sturdy and robust housing suitable for heavy applications.
- High repeatability.
- Long service life.



## SPECIFICATIONS

Model	Stroke Per Needle	Air Consumption per cycle (dual stroke)	Theoretical thrust for each needle @ 6 bar	Recommended workpiece weight*	Weight	Repeatability
<b>OPT 34-25</b>	14 mm 0.55 in	26 cm <sup>3</sup> 1.59 in <sup>3</sup>	147.5 N 33.2 lb	1.48 kg 3.20 lb	0.75 kg 1.65 lb	± 0.05 mm ± 0.002 in

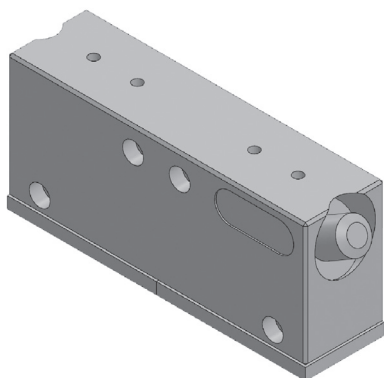
\* Recommended workpiece weight is calculated for force-fit gripping with a coefficient of static friction of 0.15 and a safety factor of 3 against workpiece slippage.

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

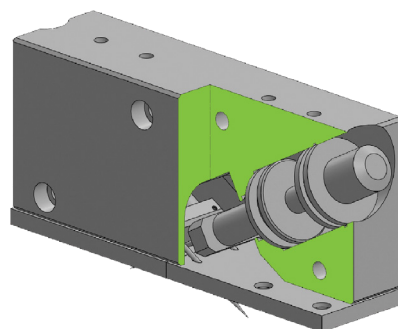
Working Temperature **5 - 60 °C (41 - 140 °F)**

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

## SECTIONAL DIAGRAM



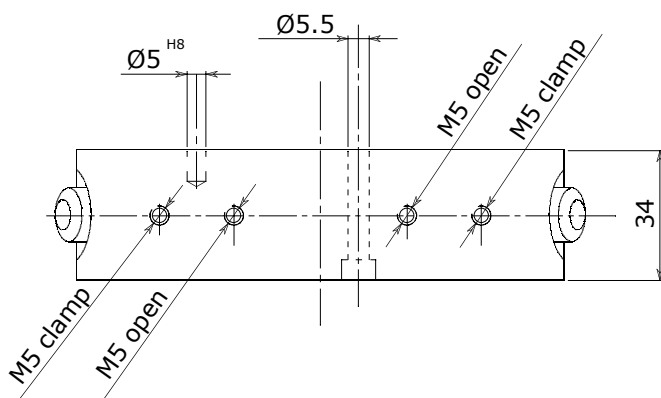
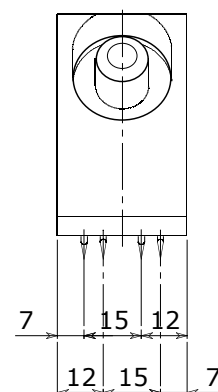
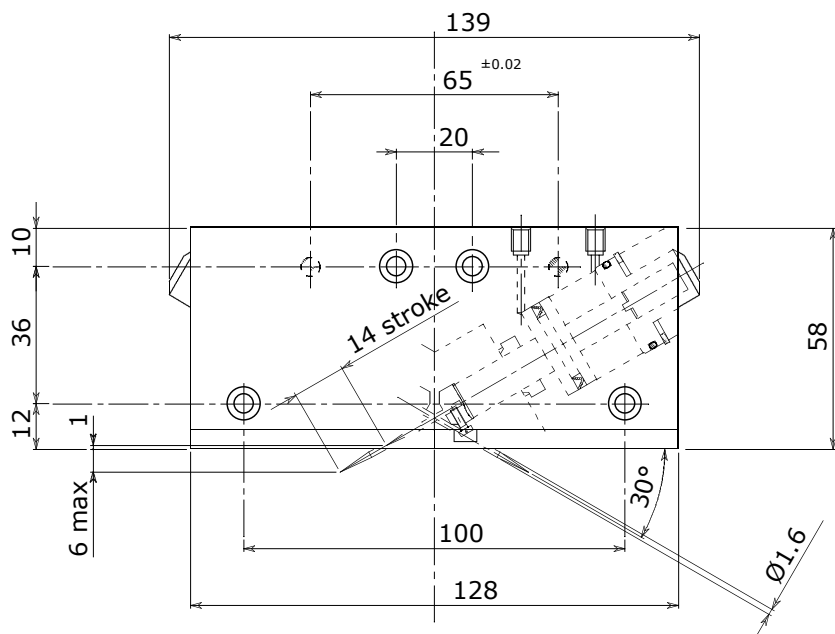
**Guidelines for the selection of a gripper model**  
Selection of the correct gripper model depends on the workpiece's weight, the friction coefficient between the fingers and the workpiece and the required motion of the application. Due to inertial forces associated with motion, we recommend that the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

OPT

Body dowel hole depth:  $\geq 1.5 d$



\* 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

**For other applications please contact us.**



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.effectogroup.com



02.2020\_Rev.02\_EU