

# Pneumatic Parallel Grippers

## OPE 3-Finger

OPE is a universal three-finger parallel gripper featuring high reliability and long service life, suitable for a wide range of industrial applications.

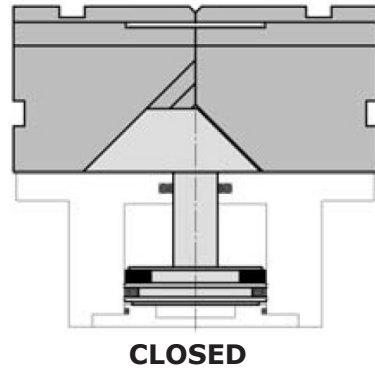
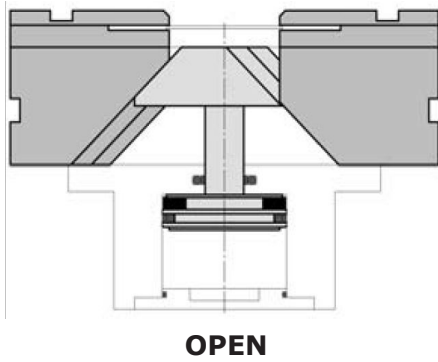
### Advantages

- Robust, lightweight housing made of hard-coated aluminum alloy.
- Sturdy C-slot with hardened steel gibs for effective jaw guidance, precise handling, and easy maintenance.
- Mounting from two sides in three screw directions for versatile and flexible integration.
- Side or top finger mounting.
- Integrated permanent magnets for direct monitoring of piston movement.
- Slots for mounting and positioning of magnetic-field sensors.
- Air supply via fitting screw connections or hose-free direct connections (optional version "X").

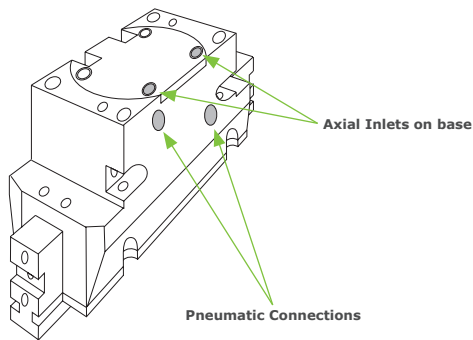


EFFECTO  
GROUP

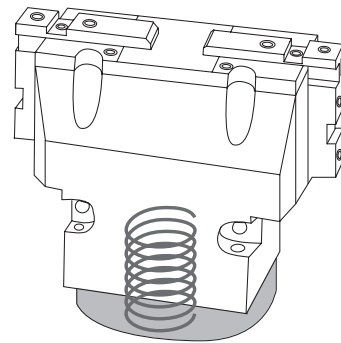
## Open/Close Diagram



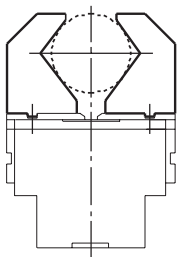
## Pneumatic Feed



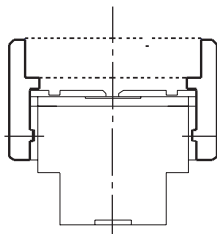
## Force Maintenance Spring



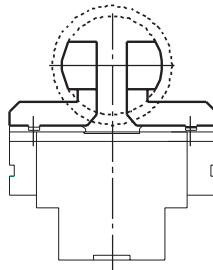
## Gripping Diagram



External Clamping  
Top fixing



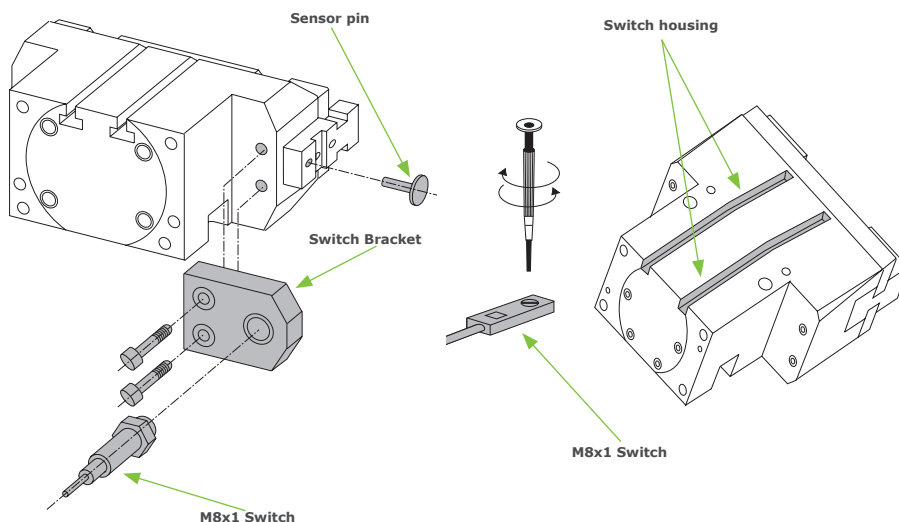
Internal Clamping  
Side fixing



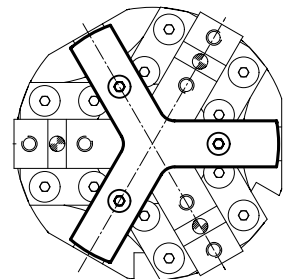
Internal Clamping  
Top fixing

**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.

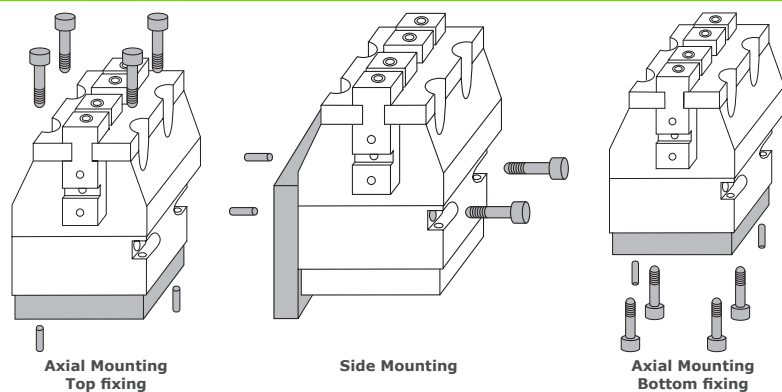
## Control Diagram



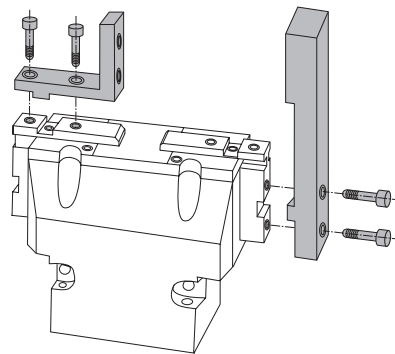
## Workpiece stabilizer



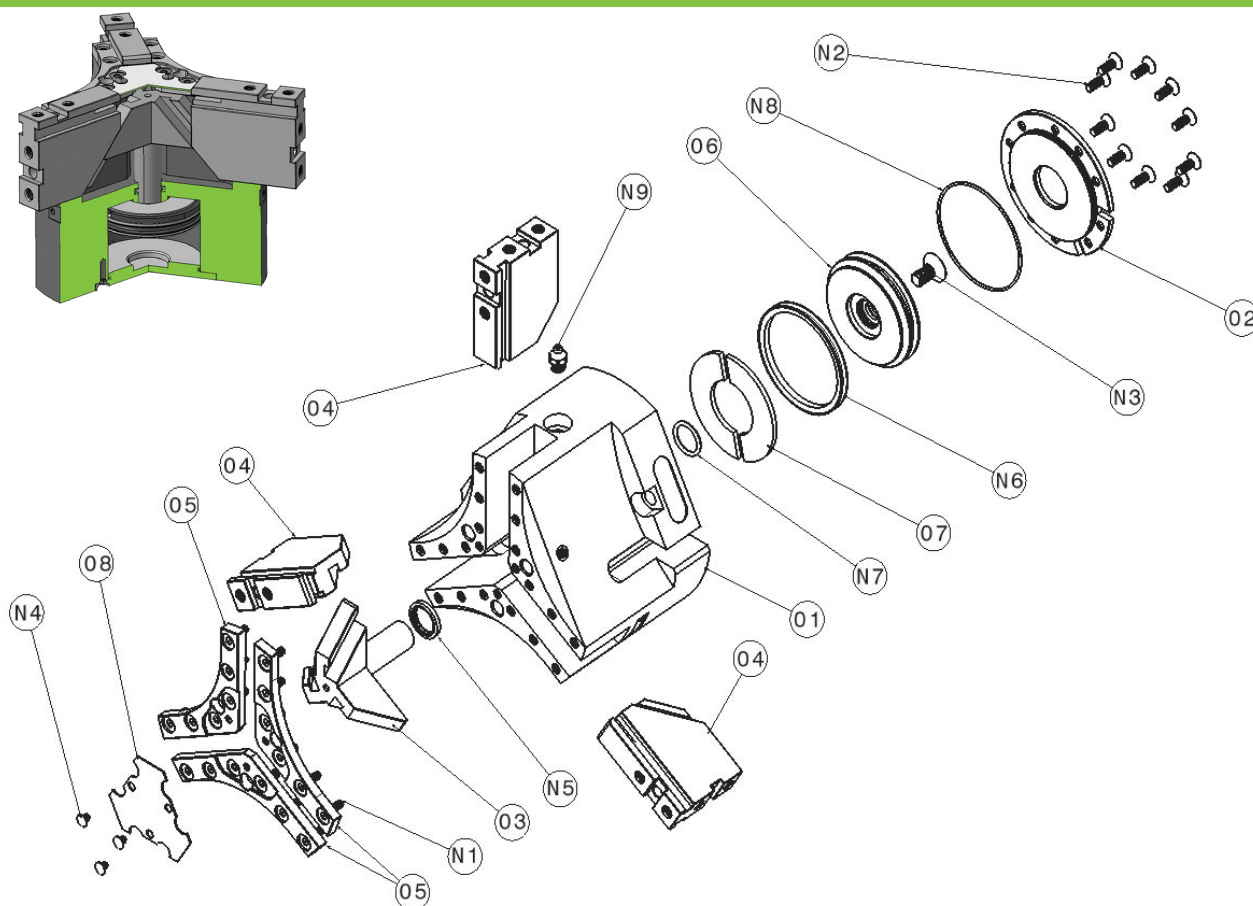
## Mounting



## Fingers Mounting



## Construction Diagram

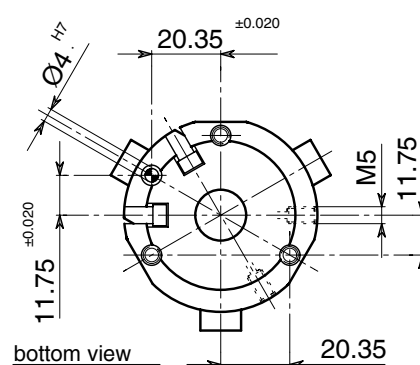
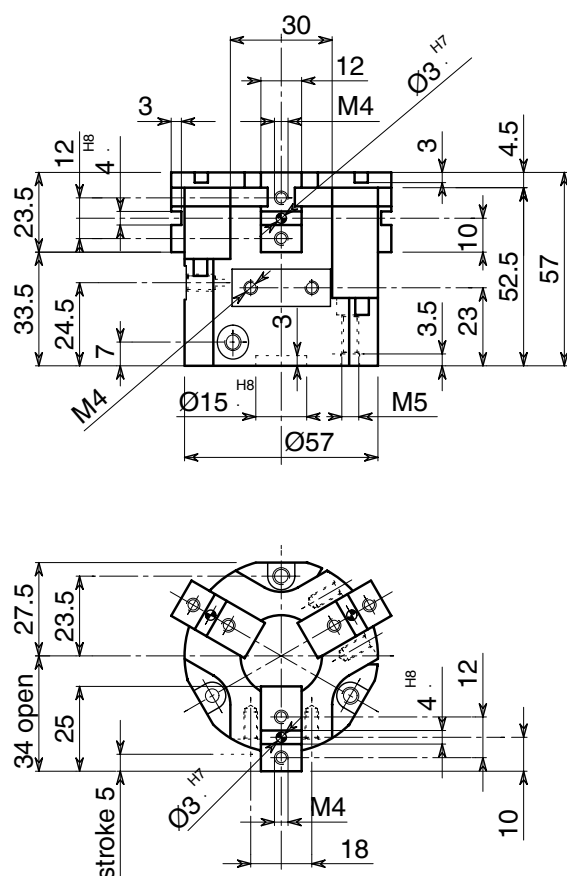


| Nr. | Description      | Material                |
|-----|------------------|-------------------------|
| 01  | BODY             | Aluminum Alloy          |
| 02  | CAP              | Aluminum Alloy          |
| 03  | WEDGE HOOK       | Chrome Molybdenum Steel |
| 04  | JAW              | Chrome Molybdenum Steel |
| 05  | GIB              | Chrome Molybdenum Steel |
| 06  | PISTON           | Aluminum Alloy          |
| 07  | MAGNET           | Rubber magnet           |
| 08  | PLATE            | Stainless Steel         |
| N1  | SCREW            | Steel                   |
| N2  | SCREW            | Steel                   |
| N3  | SCREW            | Steel                   |
| N4  | SCREW            | Steel                   |
| N5  | SHAFT SEAL       | NBR                     |
| N6  | EXT. PISTON SEAL | NBR                     |
| N7  | INT. PISTON SEAL | NBR                     |
| N8  | CAP SEAL         | NBR                     |
| N9  | LUBRICATOR       | Brass                   |

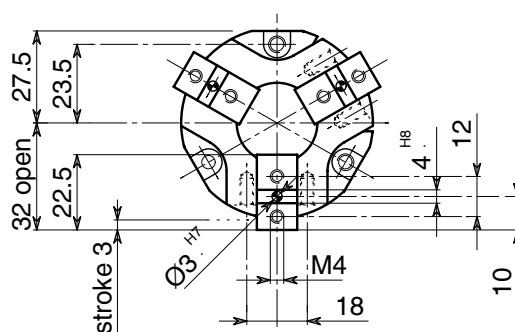
# Dimensional Drawing



## OPE 60-3



## OPE 60-3 S



## E-09330

|                                                 |                                    | OPE 60-3           | OPE 60-3 S         | OPE 60-3 CM        | OPE 60-3 SCM       | OPE 60-3 CMA       | OPE 60-3 SCMA      |
|-------------------------------------------------|------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Stroke per jaw                                  | mm<br>in                           | 5<br>0.2           | 3<br>0.1           | 5<br>0.2           | 3<br>0.1           | 5<br>0.2           | 3<br>0.1           |
| Fluid consumption<br>double stroke              | cm <sup>3</sup><br>in <sup>3</sup> | 8<br>0.5           | 8<br>0.5           | 8<br>0.5           | 8<br>0.5           | 8<br>0.5           | 8<br>0.5           |
| Closing force per jaw<br>@ 6 bar                | N<br>lb                            | 80<br>18           | 135<br>30          | 96<br>22           | 158<br>36          | -                  | -                  |
| Opening force per jaw<br>@ 6 bar                | N<br>lb                            | 90<br>20           | 152<br>34          | -                  | -                  | 105<br>24          | 177<br>40          |
| Total closing force<br>@ 6 bar                  | N<br>lb                            | 240<br>54          | 405<br>91          | 288<br>65          | 474<br>107         | -                  | -                  |
| Total opening force<br>@ 6 bar                  | N<br>lb                            | 270<br>61          | 456<br>103         | -                  | -                  | 315<br>71          | 531<br>119         |
| True clamping force per<br>jaw only with spring | N<br>lb                            | -                  | -                  | 15 - 19<br>3 - 4   | 25 - 31<br>6 - 45  |                    |                    |
| Recommended<br>workpiece weight                 | Kg<br>lb                           | 1.20<br>2.65       | 2.03<br>4.48       | 1.20<br>2.65       | 2.03<br>4.48       | 1.20<br>2.65       | 2.03<br>4.48       |
| Weight                                          | Kg<br>lb                           | 0.36<br>0.79       | 0.30<br>0.66       | 0.67<br>1.48       | 0.57<br>1.26       | 0.67<br>1.48       | 0.57<br>1.26       |
| Repeat accuracy                                 | mm<br>in                           | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 |

\* 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.

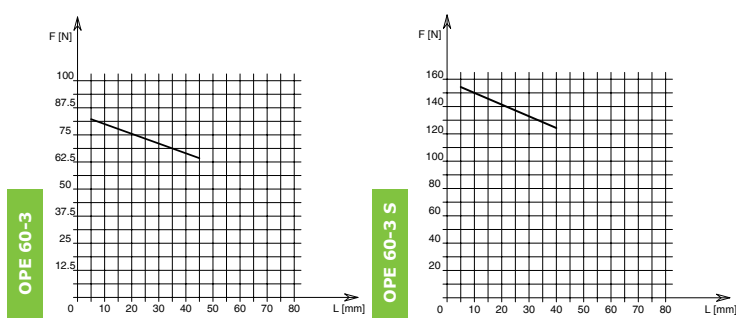
Opening Pressure **2 - 12 bar (29 - 174 psi)**

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

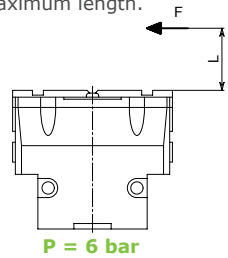
Noise Emission (Sound Pressure)  $\leq 70$  db(A) in any direction

## Clamping Force Diagram

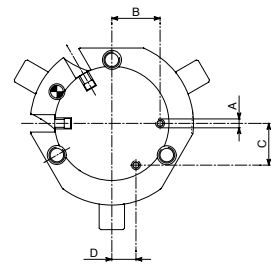
**Note:** "L" value, where the diagram's line ends, represents jaws' maximum length.



**F** = True clamping force per jaw - **L** = Reading distance  
Values read at a distance **L = 10 mm**



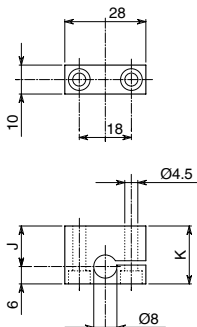
**P = 6 bar**



|    | A          | B            | C          | D |
|----|------------|--------------|------------|---|
| M3 | 20<br>0.79 | 17.3<br>0.68 | 10<br>0.39 |   |

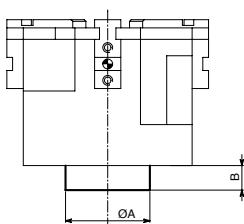
## Axial Feed

## Open-Closed Control Position with External Switches



|                  |          | Closed control |             | Open control |             |
|------------------|----------|----------------|-------------|--------------|-------------|
|                  |          | J              | K           | J            | K           |
| <b>OPE 60-3</b>  | mm<br>in | 10.5<br>0.4    | 16.5<br>0.7 | 21.5<br>0.9  | 27.5<br>1.1 |
| <b>OPE 60-3S</b> | mm<br>in | 10.5<br>0.4    | 16.5<br>0.7 | 19<br>0.8    | 25<br>1.0   |

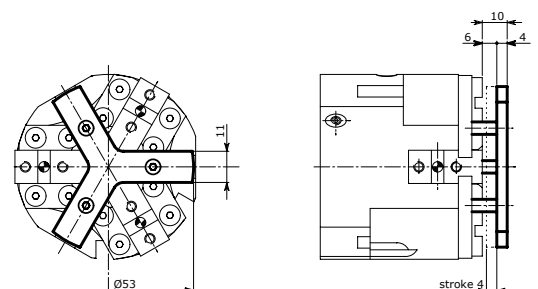
## Force Maintenance Spring



|                   |          |           |           |
|-------------------|----------|-----------|-----------|
| <b>OPE 60-3/S</b> | mm<br>in | <b>A</b>  | <b>B</b>  |
|                   |          | 30<br>1.2 | 14<br>0.6 |

Pressure **3 - 10 bar (43 - 145 psi)**

## Workpiece Stabilizer

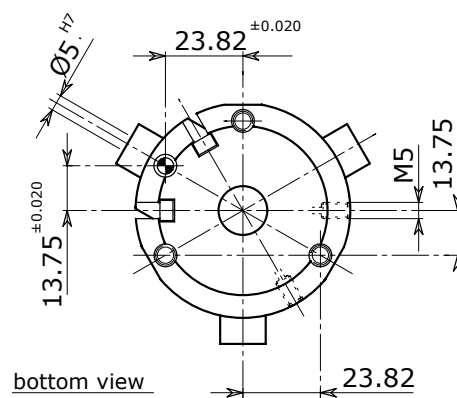
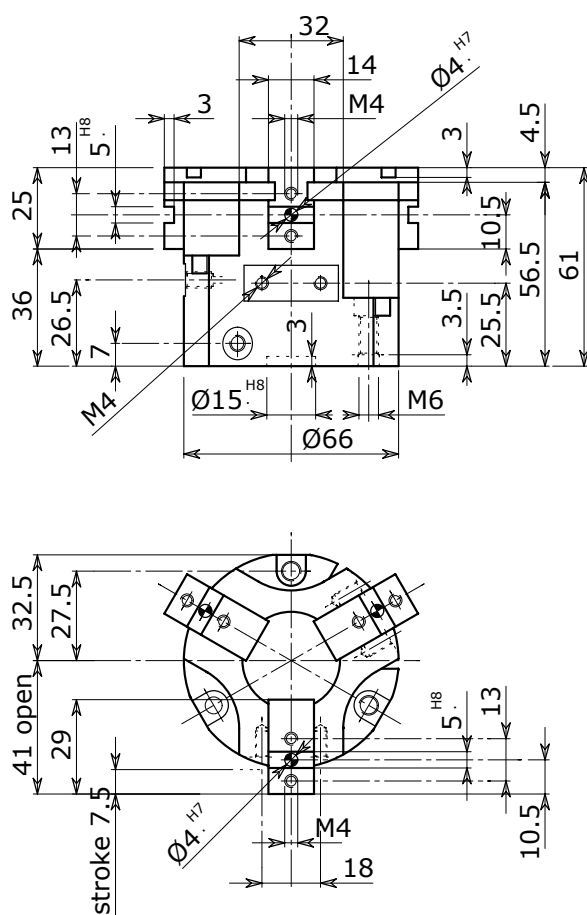


Force expressed by spring: **8.5 - 17 N (1.91 - 3.82 lb)**

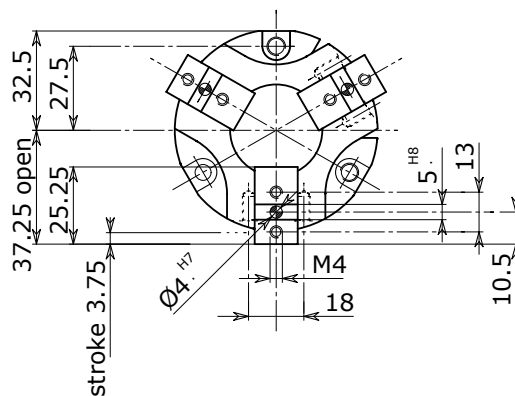
# Dimensional Drawing

OPE 65-3

## OPE 65-3



## OPE 65-3 S



# TECHNICAL DATA

OPE 65-3

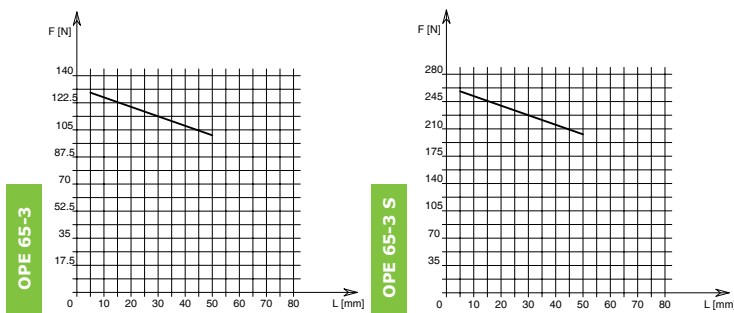
|                                                 |                                    | OPE 65-3           | OPE 65-3 S         | OPE 65-3 CM        | OPE 65-3 SCM       | OPE 65-3 CMA       | OPE 65-3 SCMA      |
|-------------------------------------------------|------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Stroke per jaw                                  | mm<br>in                           | 7.5<br>0.3         | 3.75<br>0.2        | 7.5<br>0.3         | 3.75<br>0.2        | 7.5<br>0.3         | 3.75<br>0.2        |
| Fluid consumption<br>double stroke              | cm <sup>3</sup><br>in <sup>3</sup> | 18<br>1.1          | 18<br>1.1          | 18<br>1.1          | 18<br>1.1          | 18<br>1.1          | 18<br>1.1          |
| Closing force per jaw<br>@ 6 bar                | N<br>lb                            | 126<br>28          | 247<br>56          | 147<br>33          | 290<br>65          | -                  | -                  |
| Opening force per jaw<br>@ 6 bar                | N<br>lb                            | 138<br>31          | 272<br>61          | -                  | -                  | 158<br>36          | 312<br>70          |
| Total closing force<br>@ 6 bar                  | N<br>lb                            | 378<br>85          | 741<br>167         | 441<br>99          | 870<br>196         | -                  | -                  |
| Total opening force<br>@ 6 bar                  | N<br>lb                            | 414<br>93          | 816<br>183         | -                  | -                  | 474<br>107         | 936<br>210         |
| True clamping force per<br>jaw only with spring | N<br>lb                            | -                  | -                  | 20 - 30<br>5 - 7   | 40 - 60<br>9 - 13  | 20 - 30<br>5 - 7   | 40 - 60<br>9 - 13  |
| Recommended<br>workpiece weight                 | Kg<br>lb                           | 1.89<br>4.17       | 3.71<br>8.18       | 1.89<br>4.17       | 3.71<br>8.18       | 1.89<br>4.17       | 3.71<br>8.18       |
| Weight                                          | Kg<br>lb                           | 0.57<br>1.25       | 0.50<br>1.10       | 0.78<br>1.72       | 0.68<br>1.50       | 0.78<br>1.72       | 0.68<br>1.50       |
| Repeat accuracy                                 | mm<br>in                           | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 |

\* 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 - 12 bar (29 - 174 psi)**  
Working Temperature **5 - 60 °C (41 - 140 °F)**  
Noise Emission (Sound Pressure) **≤ 70 db(A) in any direction**

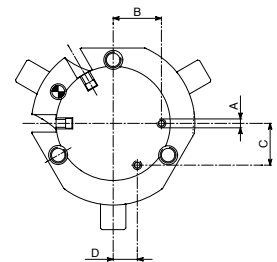
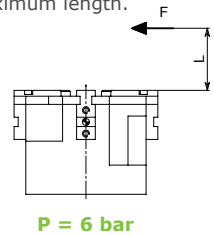
## Clamping Force Diagram

## Axial Feed

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

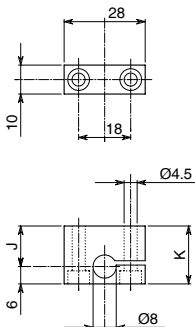


**F** = True clamping force per jaw - **L** = Reading distance  
Values read at a distance **L = 10 mm**



|    | A  | B    | C    | D    |
|----|----|------|------|------|
| mm | M3 | 24   | 20.8 | 12   |
| in |    | 0.94 | 0.82 | 0.47 |

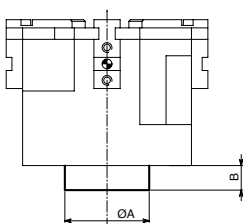
## Open-Closed Control Position with External Switches



|           |    | Closed control |     | Open control |      |
|-----------|----|----------------|-----|--------------|------|
|           |    | J              | K   | J            | K    |
| OPE 65-3  | mm | 10             | 16  | 23.5         | 29.5 |
|           | in | 0.4            | 0.6 | 0.9          | 1.2  |
| OPE 65-3S | mm | 10             | 16  | 19.8         | 25.8 |
|           | in | 0.4            | 0.6 | 0.8          | 1.0  |

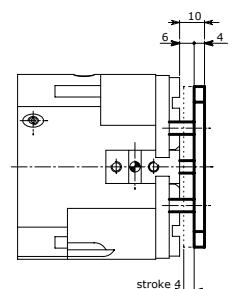
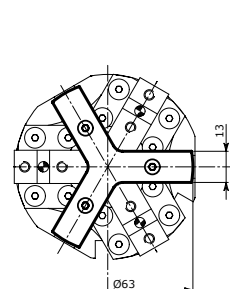
## Force Maintenance Spring

## Workpiece Stabilizer

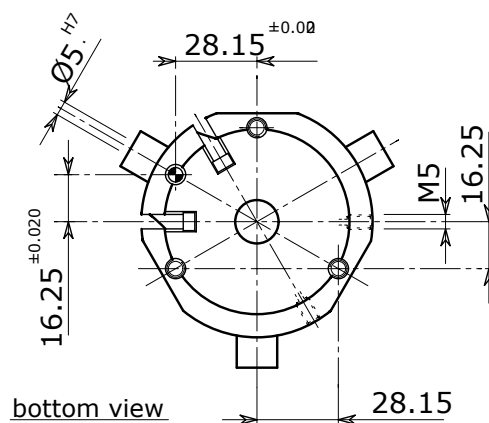


|            |    | A   | B    |
|------------|----|-----|------|
|            |    | mm  | mm   |
| OPE 65-3/S | mm | 35  | 16.5 |
|            | in | 1.4 | 0.7  |

Pressure **3 - 10 bar (43 - 145 psi)**

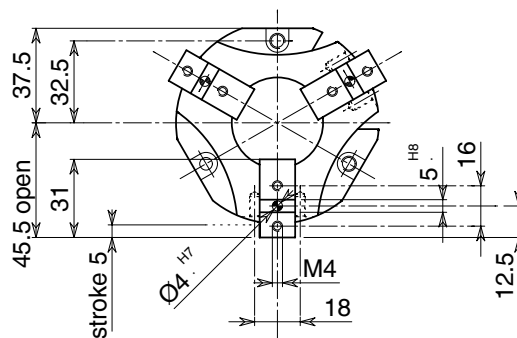


Force expressed by spring: **9 - 44 N (2.02 - 9.89 lb)**



bottom view

OPE 80-3 S



## 000000-3

\* 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 - 12 bar (29 - 174 psi)**  
Working Temperature **5 - 60 °C (41 - 140 °F)**  
Noise Emission (Sound Pressure) **≤ 70 db(A) in any direction**

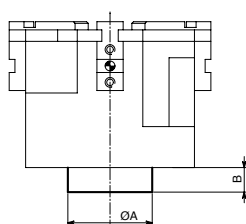
## Axial Feed

Technical drawing of a mechanical part, likely a flange or base plate, showing dimensions A, B, C, and D. The part has a circular central hole and four smaller holes arranged in a square pattern. Dimension A is the radius from the center to the center of one of the small holes. Dimension B is the distance between the centers of two opposite small holes. Dimension C is the thickness of the part. Dimension D is the outer diameter of the part.

|    |    |      |      |      |
|----|----|------|------|------|
| mm |    | 24   | 20.8 | 12   |
| in | M3 | 0.94 | 0.82 | 0.47 |

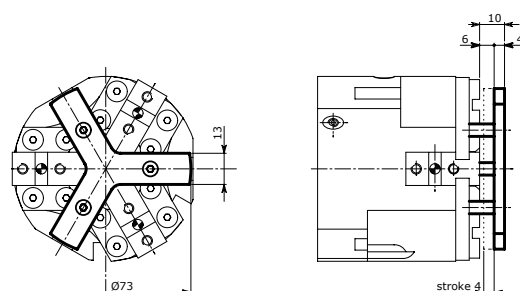
|                  |          | Closed control |             | Open control |             |
|------------------|----------|----------------|-------------|--------------|-------------|
|                  |          | J              | K           | J            | K           |
| <b>OPE 80-3</b>  | mm<br>in | 9.5<br>0.4     | 15.5<br>0.6 | 25.5<br>1.0  | 31.5<br>1.2 |
| <b>OPE 80-3S</b> | mm<br>in | 9.5<br>0.4     | 15.5<br>0.6 | 20.5<br>0.8  | 26.5<br>1.0 |

## Workpiece Stabilizer



| OPE 80-3/S | mm<br>in | A         | B           |
|------------|----------|-----------|-------------|
|            |          | 35<br>1.4 | 16.5<br>0.7 |

Pressure **3 - 10 bar (43 - 145 psi)**

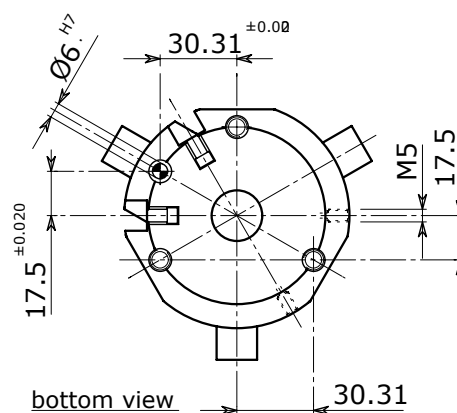
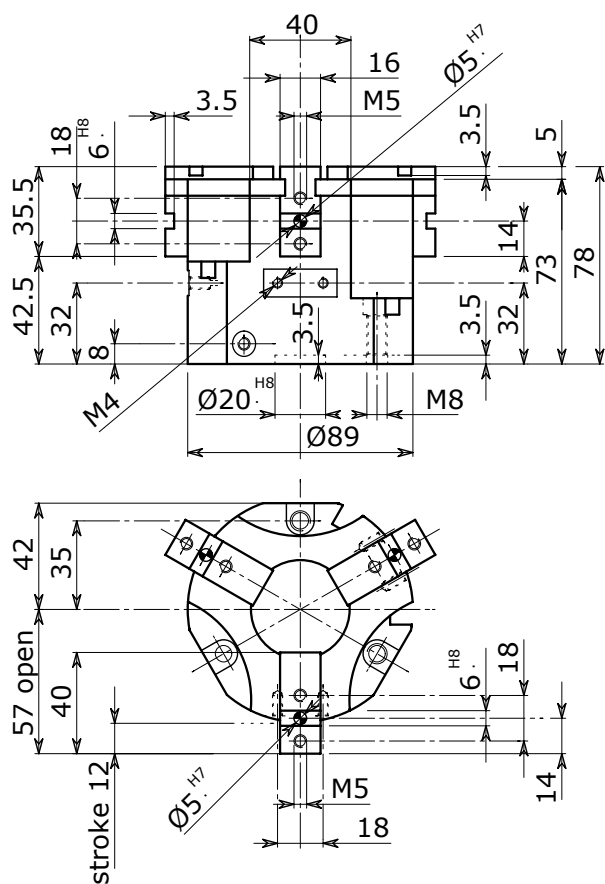


Force expressed by spring: **9 - 44 N (2.02 - 9.89 lb)**

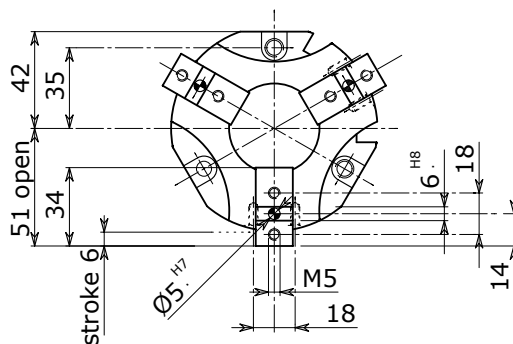
# Dimensional Drawing



OPE 90-3



OPE 90-3 S



# TECHNICAL DATA

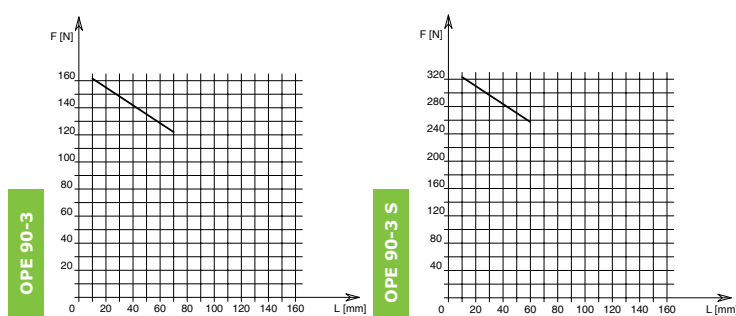
|                                                 |                                    | OPE 90-3           | OPE 90-3 S         | OPE 90-3 CM        | OPE 90-3 SCM        | OPE 90-3 CMA       | OPE 90-3 SCMA       |
|-------------------------------------------------|------------------------------------|--------------------|--------------------|--------------------|---------------------|--------------------|---------------------|
| Stroke per jaw                                  | mm<br>in                           | 12<br>0.5          | 6<br>0.2           | 12<br>0.5          | 6<br>0.2            | 12<br>0.5          | 6<br>0.2            |
| Fluid consumption<br>double stroke              | cm <sup>3</sup><br>in <sup>3</sup> | 36.5<br>2.2        | 36.5<br>2.2        | 36.5<br>2.2        | 36.5<br>2.2         | 36.5<br>2.2        | 36.5<br>2.2         |
| Closing force per jaw<br>@ 6 bar                | N<br>lb                            | 155<br>35          | 310<br>70          | 186<br>42          | 366<br>82           | -                  | -                   |
| Opening force per jaw<br>@ 6 bar                | N<br>lb                            | 172<br>39          | 344<br>77          | -                  | -                   | 203<br>46          | 406<br>91           |
| Total closing force<br>@ 6 bar                  | N<br>lb                            | 465<br>105         | 930<br>209         | 558<br>125         | 1098<br>247         | -                  | -                   |
| Total opening force<br>@ 6 bar                  | N<br>lb                            | 516<br>116         | 1032<br>232        | -                  | -                   | 609<br>137         | 1218<br>274         |
| True clamping force per<br>jaw only with spring | N<br>lb                            | -                  | -                  | 31 - 52<br>7 - 12  | 62 - 102<br>14 - 23 | 31 - 52<br>7 - 12  | 62 - 102<br>14 - 23 |
| Recommended<br>workpiece weight                 | Kg<br>lb                           | 2.33<br>5.14       | 4.65<br>10.25      | 2.33<br>5.14       | 4.65<br>10.25       | 2.33<br>5.14       | 4.65<br>10.25       |
| Weight                                          | Kg<br>lb                           | 1.30<br>2.86       | 1.20<br>2.64       | 1.35<br>2.98       | 1.25<br>2.76        | 1.35<br>2.98       | 1.25<br>2.76        |
| Repeat accuracy                                 | mm<br>in                           | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020  | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020  |

\* 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 - 12 bar (29 - 174 psi)**  
Working Temperature **5 - 60 °C (41 - 140 °F)**  
Noise Emission (Sound Pressure) **≤ 70 db(A) in any direction**

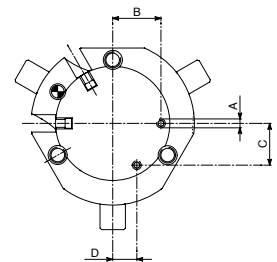
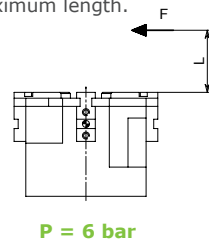
## Clamping Force Diagram

## Axial Feed

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

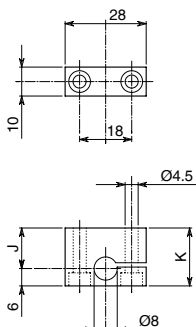


**F** = True clamping force per jaw - **L** = Reading distance  
Values read at a distance **L = 20 mm**



|    | A  | B   | C   | D   |
|----|----|-----|-----|-----|
| mm | M3 | 30  | 26  | 15  |
| in |    | 1.2 | 1.0 | 0.6 |

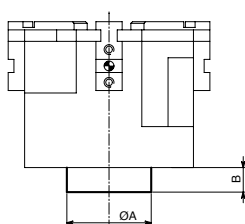
## Open-Closed Control Position with External Switches



|           |    | Closed control |     | Open control |     |
|-----------|----|----------------|-----|--------------|-----|
|           |    | J              | K   | J            | K   |
| OPE 90-3  | mm | 9              | 15  | 27           | 33  |
|           | in | 0.4            | 0.6 | 1.1          | 1.3 |
| OPE 90-3S | mm | 9              | 15  | 21           | 27  |
|           | in | 0.4            | 0.6 | 0.8          | 1.1 |

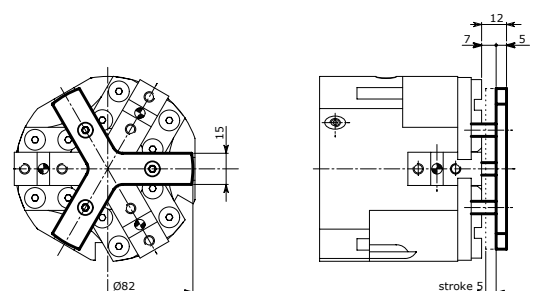
## Force Maintenance Spring

## Workpiece Stabilizer



|            |    | A   | B   |
|------------|----|-----|-----|
| OPE 90-3/S | mm | 40  | 21  |
|            | in | 1.6 | 0.8 |

Pressure **3 - 10 bar (43 - 145 psi)**

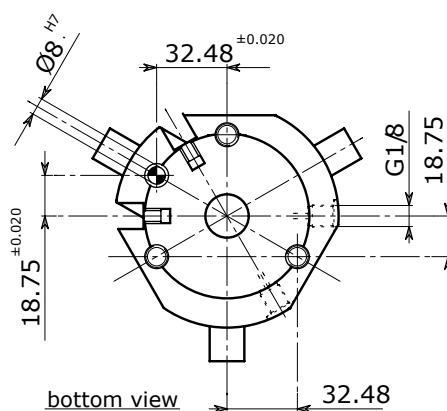
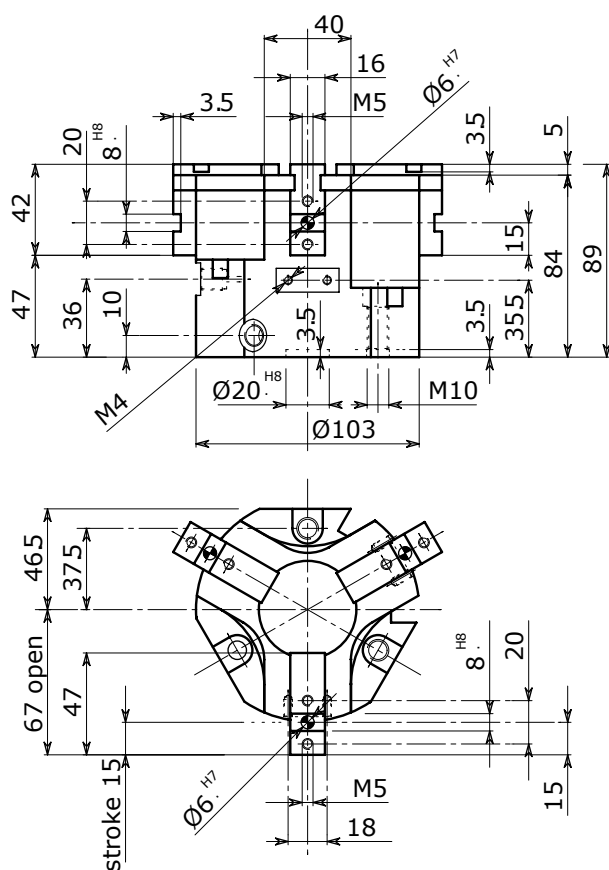


Force expressed by spring: **18 - 77 N (4.05 - 17.31 lb)**

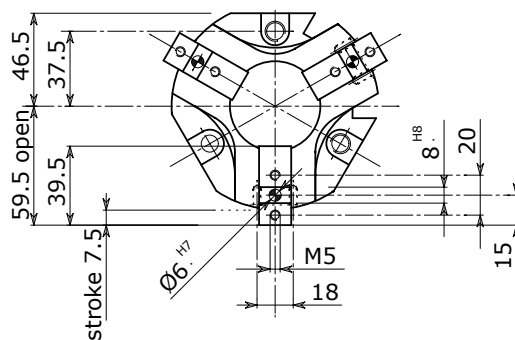
# Dimensional Drawing



OPE 105-3



OPE 105-3 S



## E-501340

\* 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 - 12 bar (29 - 174 psi)**  
Working Temperature **5 - 60 °C (41 - 140 °F)**  
Noise Emission (Sound Pressure) **≤ 70 db(A) in any direction**

## Axial Feed

**OPE 105-3**

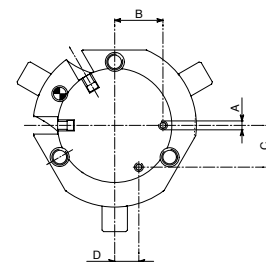
| L [mm] | F [N] |
|--------|-------|
| 10     | 200   |
| 20     | 190   |
| 30     | 180   |
| 40     | 170   |
| 50     | 160   |
| 60     | 150   |
| 70     | 145   |
| 80     | 140   |

**OPE 105-3 S**

| L [mm] | F [N] |
|--------|-------|
| 10     | 400   |
| 20     | 380   |
| 30     | 360   |
| 40     | 340   |
| 50     | 320   |
| 60     | 310   |
| 70     | 300   |

imum length.

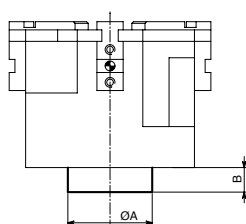
$P = 6 \text{ bar}$



|    | A  | B    | C    | D    |
|----|----|------|------|------|
| mm | M3 | 32.5 | 28.1 | 16.3 |
| in |    | 1.3  | 1.1  | 0.6  |

|                   |          | Closed control |             | Open control |              |
|-------------------|----------|----------------|-------------|--------------|--------------|
|                   |          | J              | K           | J            | K            |
| <b>OPE 105-3</b>  | mm<br>in | 8.5<br>0.3     | 14.5<br>0.6 | 29.5<br>1.2  | 35.5<br>14.0 |
| <b>OPE 105-3S</b> | mm<br>in | 8.5<br>0.3     | 14.5<br>0.6 | 22<br>0.9    | 28<br>1.1    |

## Workpiece Stabilizer



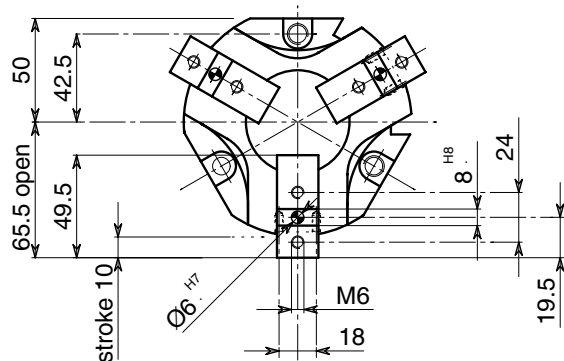
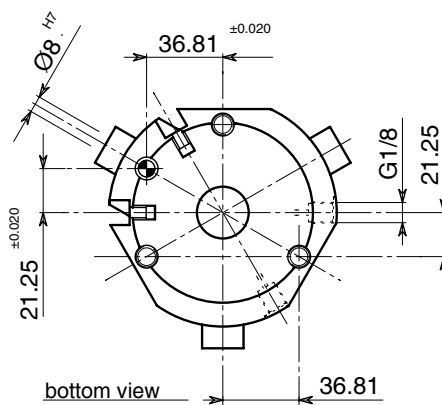
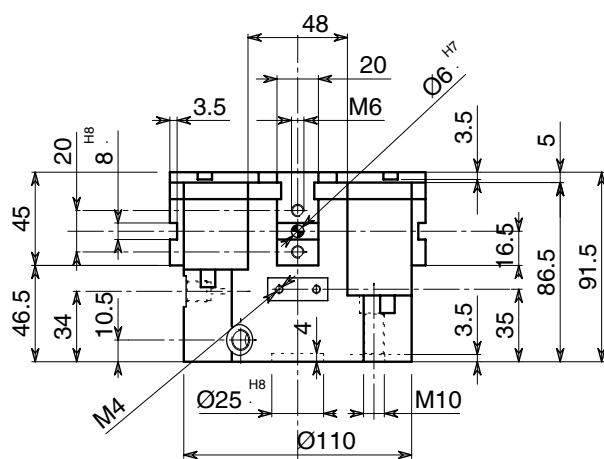
|                    |          | A         | B         |
|--------------------|----------|-----------|-----------|
| <b>OPE 105-3/S</b> | mm<br>in | 45<br>1.8 | 22<br>0.9 |

13

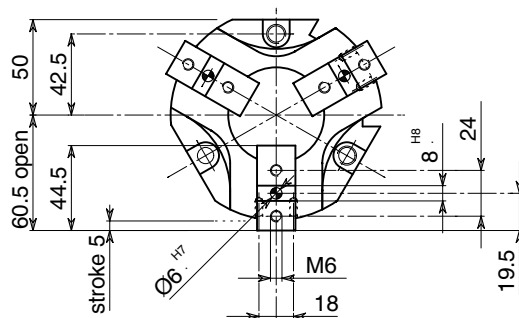
# Dimensional Drawing



OPE 110-3



OPE 110-3 S



## TECHNICAL DATA

[illegible]

Opening Pressure **2 - 12 bar (29 - 174 psi)**

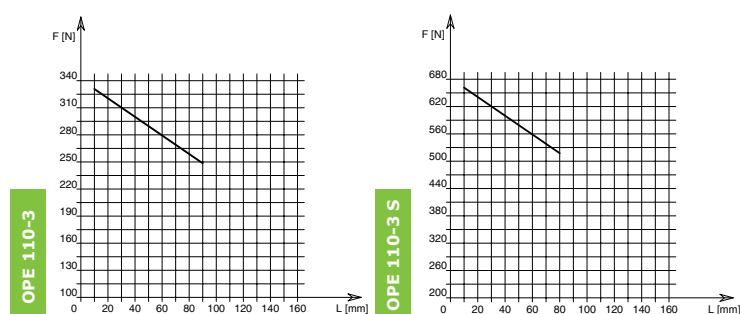
Working Temperature **5 - 60 °C (41 - 140 °F)**

Noise Emission (Sound Pressure)  $\leq 70$  db(A) in any direction

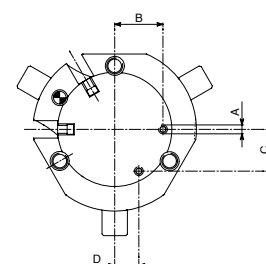
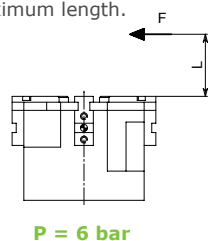
## Clamping Force Diagram

## Axial Feed

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

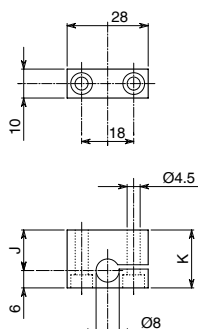


**F** = True clamping force per jaw - **L** = Reading distance  
Values read at a distance **L = 20 mm**



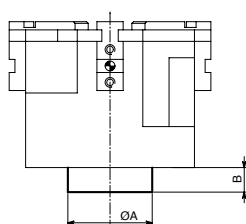
|    | A  | B   | C    | D   |
|----|----|-----|------|-----|
| mm | M4 | 38  | 32.9 | 19  |
| in |    | 1.5 | 1.3  | 0.7 |

## Open-Closed Control Position with External Switches



|                   |          | Closed control |             | Open control |             |
|-------------------|----------|----------------|-------------|--------------|-------------|
|                   |          | J              | K           | J            | K           |
| <b>OPE 110-3</b>  | mm<br>in | 8.5<br>0.3     | 14.5<br>0.6 | 24.5<br>1.0  | 30.5<br>1.2 |
| <b>OPE 110-3S</b> | mm<br>in | 8.5<br>0.3     | 14.5<br>0.6 | 19.5<br>0.8  | 25.5<br>1.0 |

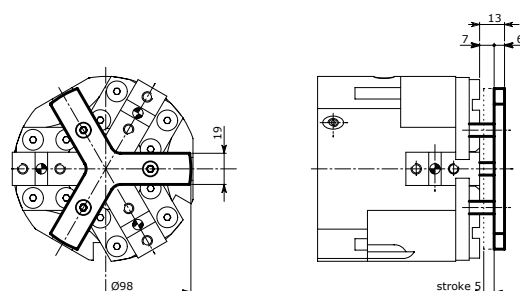
## Force Maintenance Spring



|                    |          | A         | B         |
|--------------------|----------|-----------|-----------|
| <b>OPE 110-3/S</b> | mm<br>in | 55<br>2.2 | 25<br>1.0 |

Pressure **3 - 10 bar (43 - 145 psi)**

## Workpiece Stabilizer

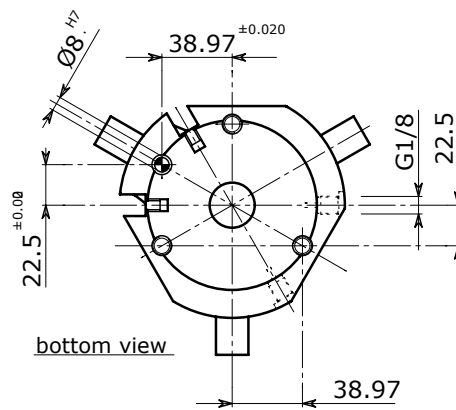
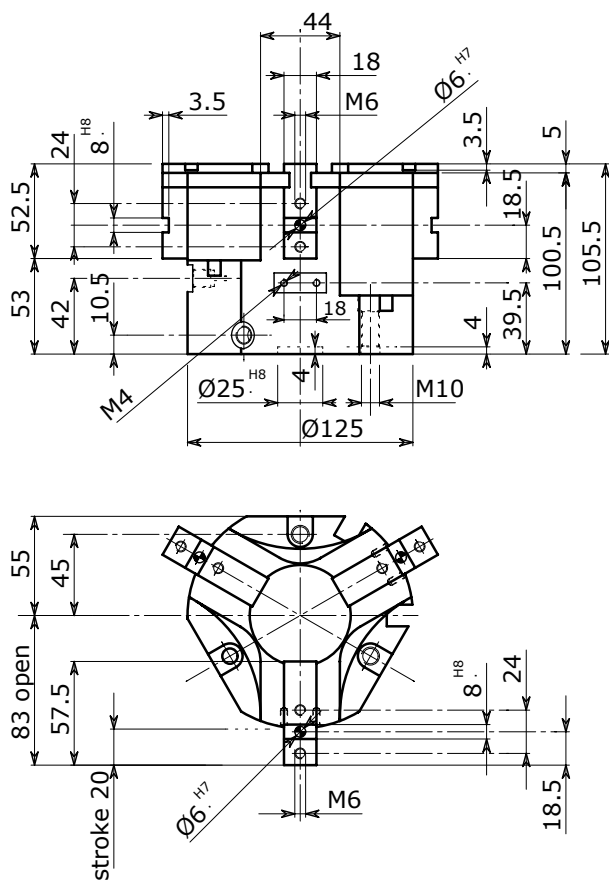


Force expressed by spring: **36 - 245 N (8.098 - 55.08 lb)**

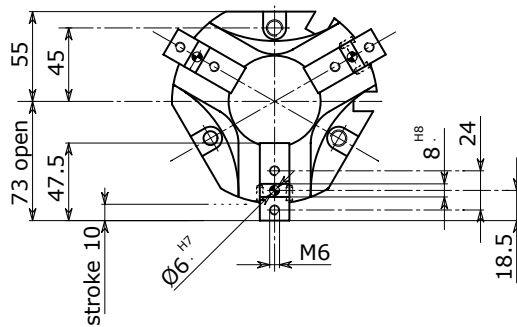
## Dimensional Drawing



OPE 125-3



OPE 125-3 S



## TECHNICAL DATA

[illegible]

Opening Pressure **2 - 12 bar (29 - 174 psi)**

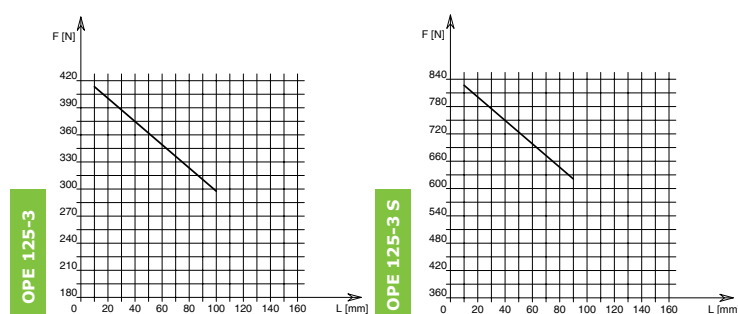
Working Temperature **5 - 60 °C (41 - 140 °F)**

Noise Emission (Sound Pressure)  $\leq 70$  db(A) in any direction

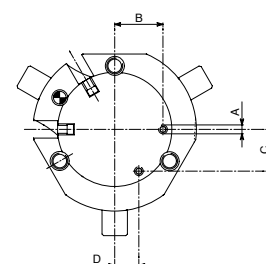
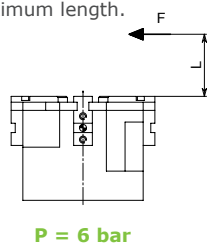
## Clamping Force Diagram

## Axial Feed

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

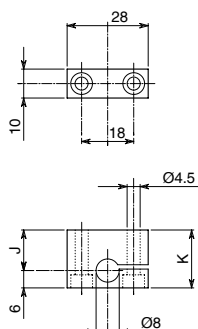


**F** = True clamping force per jaw - **L** = Reading distance  
Values read at a distance **L = 20 mm**



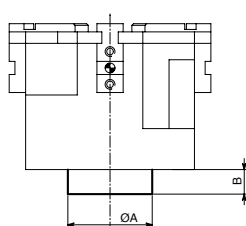
|    | A  | B    | C    | D    |
|----|----|------|------|------|
| mm | M4 | 41   | 35.5 | 20.5 |
| in |    | 1.61 | 1.40 | 0.81 |

## Open-Closed Control Position with External Switches



|                   |          | Closed control |           | Open control |            |
|-------------------|----------|----------------|-----------|--------------|------------|
|                   |          | J              | K         | J            | K          |
| <b>OPE 125-3</b>  | mm<br>in | 8<br>0.3       | 14<br>0.6 | 34<br>1.34   | 40<br>1.57 |
| <b>OPE 125-3S</b> | mm<br>in | 8<br>0.3       | 14<br>0.6 | 24<br>0.94   | 30<br>1.18 |

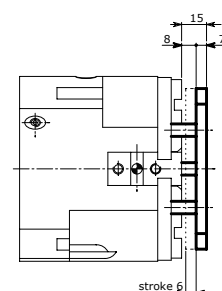
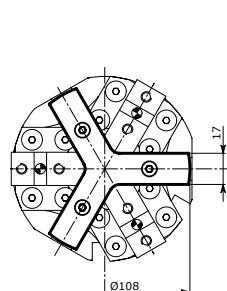
## Force Maintenance Spring



|                    |    | A    | B    |
|--------------------|----|------|------|
| <b>OPE 125-3/S</b> | mm | 65   | 29   |
|                    | in | 2.56 | 1.14 |

Pressure **4 - 10 bar (58 - 145 psi)**

## Workpiece Stabilizer

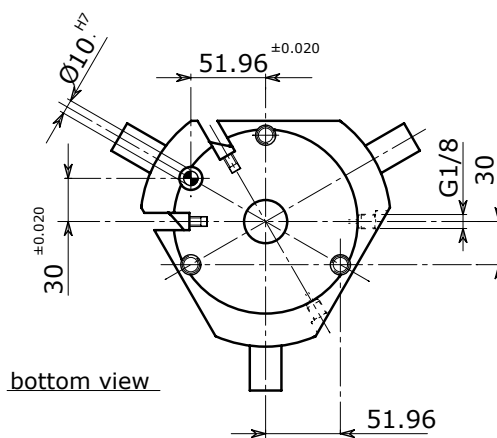
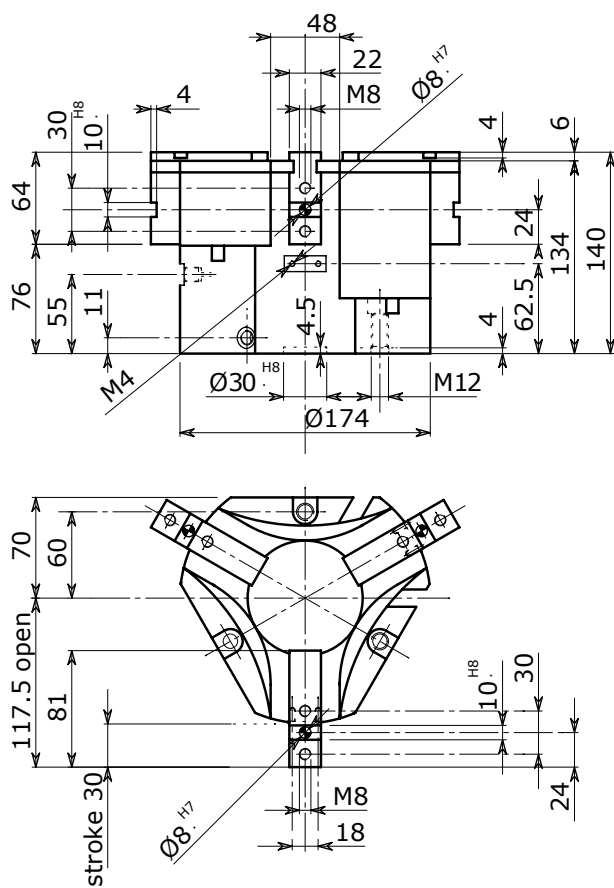


Force expressed by spring: **36 - 245 N (8.098 - 55.08 lb)**

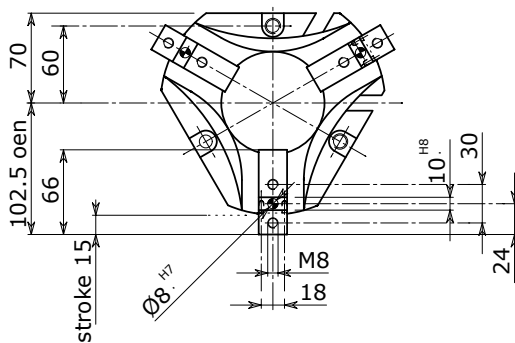
## Dimensional Drawing



OPE 175-3



OPE 175-3 S



# TECHNICAL DATA

|                                                 |                                    | OPE 175-3          | OPE 175-3 S        | OPE 175-3 CM        | OPE 175-3 SCM        | OPE 175-3 CMA       | OPE 175-3 SCMA       |
|-------------------------------------------------|------------------------------------|--------------------|--------------------|---------------------|----------------------|---------------------|----------------------|
| Stroke per jaw                                  | mm<br>in                           | 30<br>1.2          | 15<br>0.6          | 30<br>1.2           | 15<br>0.6            | 30<br>1.2           | 15<br>0.6            |
| Fluid consumption<br>double stroke              | cm <sup>3</sup><br>in <sup>3</sup> | 293<br>17.9        | 293<br>17.9        | 293<br>17.9         | 293<br>17.9          | 293<br>17.9         | 293<br>17.9          |
| Closing force per jaw<br>@ 6 bar                | N<br>lb                            | 520<br>117         | 1047<br>235        | 589<br>132          | 1156<br>260          | -                   | -                    |
| Opening force per jaw<br>@ 6 bar                | N<br>lb                            | 555<br>125         | 1089<br>245        | -                   | -                    | 636<br>143          | 1248<br>281          |
| Total closing force<br>@ 6 bar                  | N<br>lb                            | 1560<br>351        | 3141<br>706        | 1767<br>397         | 3468<br>780          | -                   | -                    |
| Total opening force<br>@ 6 bar                  | N<br>lb                            | 1665<br>374        | 3267<br>734        | -                   | -                    | 1908<br>429         | 3744<br>842          |
| True clamping force per<br>jaw only with spring | N<br>lb                            | -                  | -                  | 81 - 180<br>18 - 40 | 159 - 354<br>36 - 80 | 81 - 180<br>18 - 40 | 159 - 354<br>36 - 80 |
| Recommended<br>workpiece weight                 | Kg<br>lb                           | 7.80<br>17.20      | 15.71<br>34.63     | 7.80<br>17.20       | 15.71<br>34.63       | 7.80<br>17.20       | 15.71<br>34.63       |
| Weight                                          | Kg<br>lb                           | 6.50<br>14.30      | 6.00<br>13.20      | 6.90<br>15.21       | 6.40<br>14.11        | 6.90<br>15.21       | 6.40<br>14.11        |
| Repeat accuracy                                 | mm<br>in                           | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020 | ± 0.05<br>± 0.0020  | ± 0.05<br>± 0.0020   | ± 0.05<br>± 0.0020  | ± 0.05<br>± 0.0020   |

\* 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.

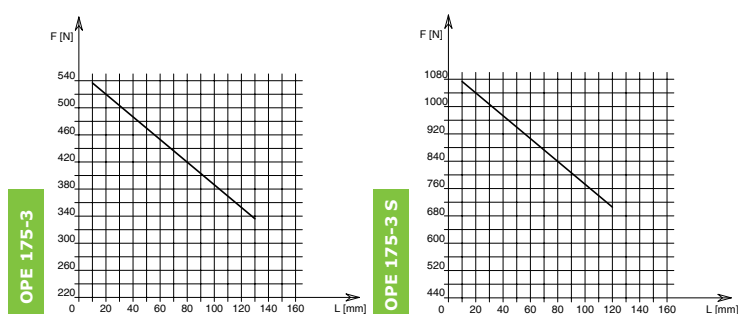
Opening Pressure **2 - 12 bar (29 - 174 psi)**

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

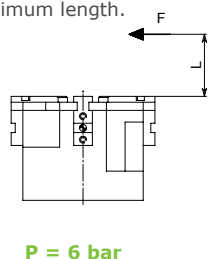
Noise Emission (Sound Pressure) **≤ 70 db(A) in any direction**

## Clamping Force Diagram

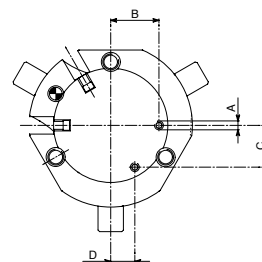
**Note:** "L" value, where the diagram's line ends, represents jaws' maximum length.



**F** = True clamping force per jaw - **L** = Reading distance  
Values read at a distance **L = 20 mm**

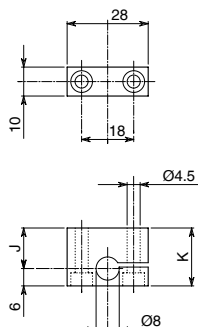


## Axial Feed



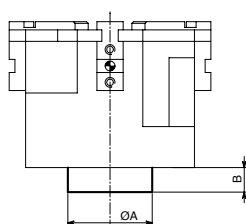
|    | A  | B    | C    | D    |
|----|----|------|------|------|
| mm | M4 | 46.5 | 40.3 | 23.3 |
| in |    | 1.83 | 1.59 | 0.92 |

## Open-Closed Control Position with External Switches



|            |    | Closed control |     | Open control |     |
|------------|----|----------------|-----|--------------|-----|
|            |    | J              | K   | J            | K   |
| OPE 175-3  | mm | 8              | 14  | 44           | 50  |
|            | in | 0.3            | 0.6 | 1.7          | 2.0 |
| OPE 175-3S | mm | 8              | 14  | 29           | 35  |
|            | in | 0.3            | 0.6 | 1.1          | 1.4 |

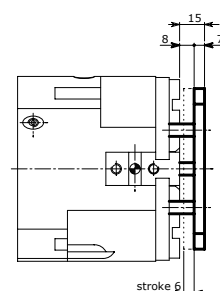
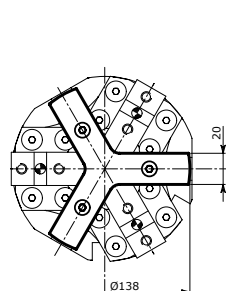
## Force Maintenance Spring



|             |    | A   | B   |
|-------------|----|-----|-----|
| OPE 175-3/S | mm | 75  | 37  |
|             | in | 3.0 | 1.5 |

Pressure **3 - 10 bar (44 - 145 psi)**

## Workpiece Stabilizer

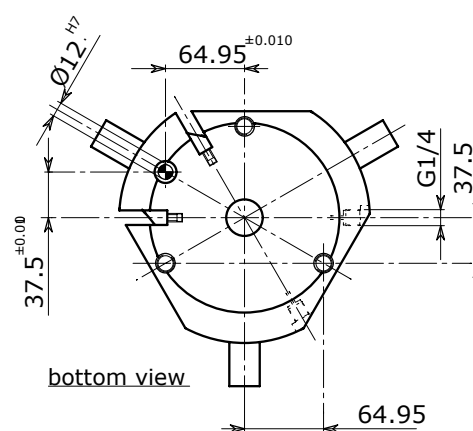
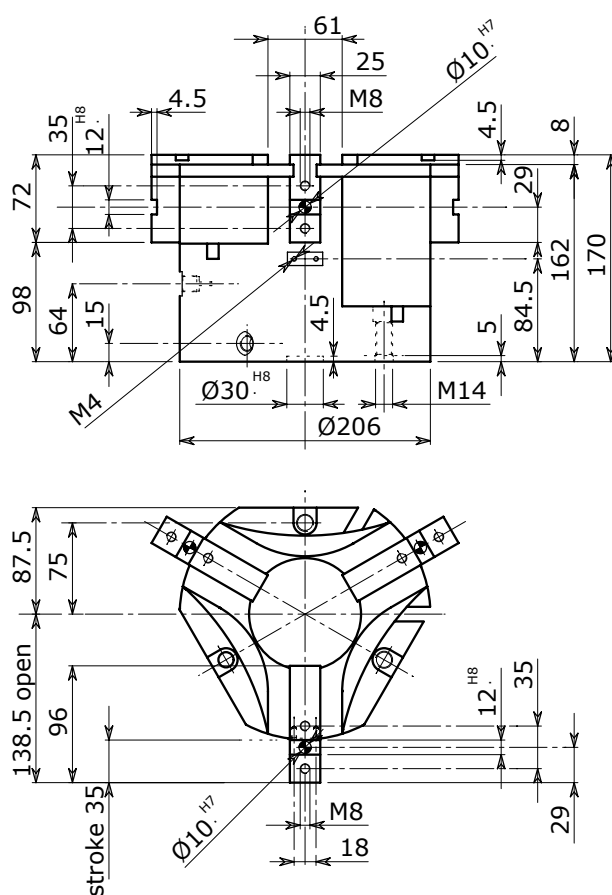


Force expressed by spring: **162 - 439 N (36 - 99 lb)**

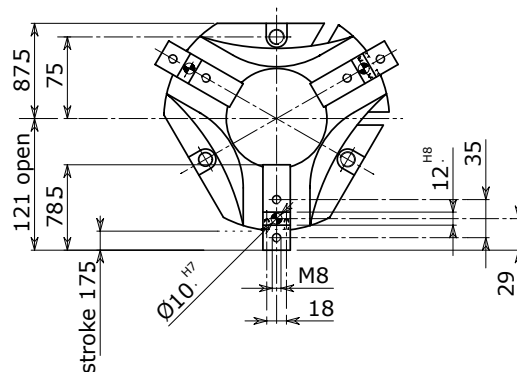
## Dimensional Drawing



OPE 205-3



OPE 205-3 S



## TECHNICAL DATA

[illegible]

Opening Pressure **2 - 12 bar (29 - 174 psi)**

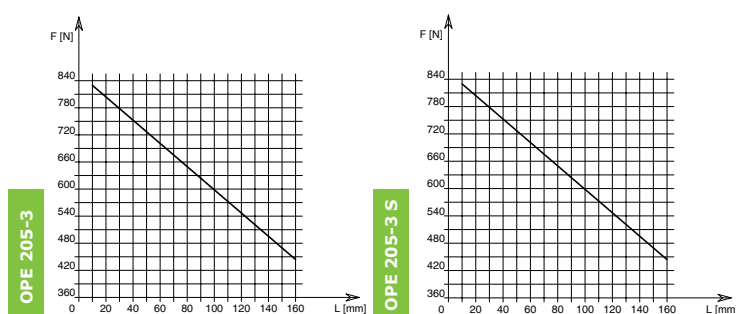
Working Temperature **5 - 60 °C (41 - 140 °F)**

Noise Emission (Sound Pressure)  $\leq 70$  db(A) in any direction

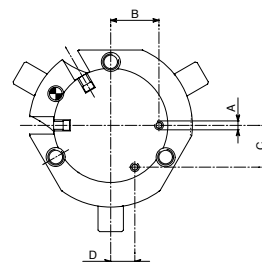
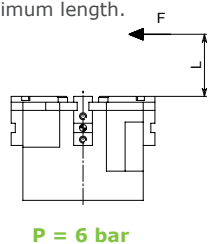
## Clamping Force Diagram

## Axial Feed

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

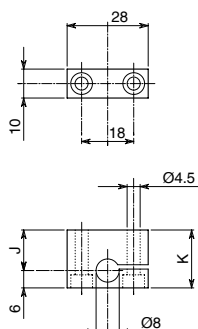


**F** = True clamping force per jaw - **L** = Reading distance  
Values read at a distance **L = 20 mm**



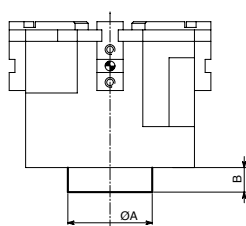
|    | A  | B    | C    | D    |
|----|----|------|------|------|
| mm | M5 | 57.5 | 49.8 | 28.8 |
| in |    | 2.26 | 1.96 | 1.13 |

## Open-Closed Control Position with External Switches



|                   |          | Closed control |             | Open control |             |
|-------------------|----------|----------------|-------------|--------------|-------------|
|                   |          | J              | K           | J            | K           |
| <b>OPE 205-3</b>  | mm<br>in | 7.5<br>0.3     | 13.5<br>0.5 | 48.5<br>1.9  | 54.5<br>2.1 |
| <b>OPE 205-3S</b> | mm<br>in | 7.5<br>0.3     | 13.5<br>0.5 | 31<br>1.2    | 37<br>1.5   |

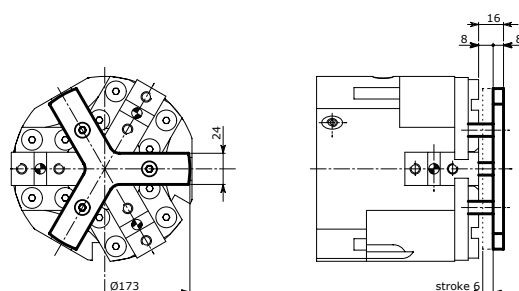
## Force Maintenance Spring



|                    |    | A   | B   |
|--------------------|----|-----|-----|
| <b>OPE 205-3/S</b> | mm | 80  | 40  |
|                    | in | 3.1 | 1.6 |

Pressure **3 - 10 bar (44 - 145 psi)**

## Workpiece Stabilizer



Force expressed by spring: **162 - 439 N (36 - 99 lb)**



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