

# Lightweight Modular

01/28/2025



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## Table of Contents

Lightweight Modular

PC-PPC-13

## Table of Contents (continued)

# 82L-3E

Enclosed Pneumatic Power Clamps | Lightweight Modular | Ordering Information

82L-3E

23

H0

40

B7

Clamp Arm Shaft

23

Description for Arms

See below for further details

Hand Lever

00

H0

HG

Description

No Hand lever

Red Hand lever

Green Hand lever

See below for further details

Cylinder (Standard)

25

2N

32

3N

40

4N

25 mm Cylinder (G1/8 Port)

25 mm Cylinder (1/8-18 NPT Port)

32 mm Cylinder (G1/8 Port)

32 mm Cylinder (1/8-18 NPT Port)

40 mm Cylinder (G1/4 Port)

40 mm Cylinder (1/4-18 NPT Port)

Clamp Arm Shaft

L

23

Size

25

32

40

Shaft Length (L)

8,5 mm [0.33 in]

12,5 mm [0.49 in]

16 mm [0.63 in]

Hand Lever

H0

HG

Hand Lever

00

H0

HG

Description

No Hand Lever

Red Hand Lever

Green Hand Lever

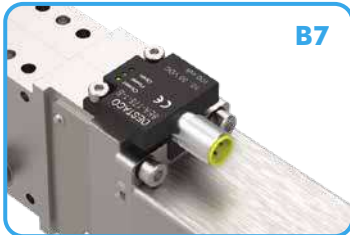
Shown with U-Arm

8JG-067-2-01

(order separately)

## Enclosed Pneumatic Power Clamps | Lightweight Modular | Ordering Information

| Sensor | Description                                                                                              |
|--------|----------------------------------------------------------------------------------------------------------|
| 00     | Without Sensing System                                                                                   |
| C8     | Inductive Sensing System with In-Line M8x1 Connector (Size 25: 8EA-174-1-B, Size 32/40: 8EA-177-1-B)     |
| B7     | Inductive Sensing System with In-Line M12x1 Connector (Size 25: 8EA-175-1-B, Size 32/40: 8EA-178-1-B)    |
| B8     | Inductive Sensing System with M12x1 Connector with Cable (Size 25: 8EA-176-1-B, Size 32/40: 8EA-179-1-B) |



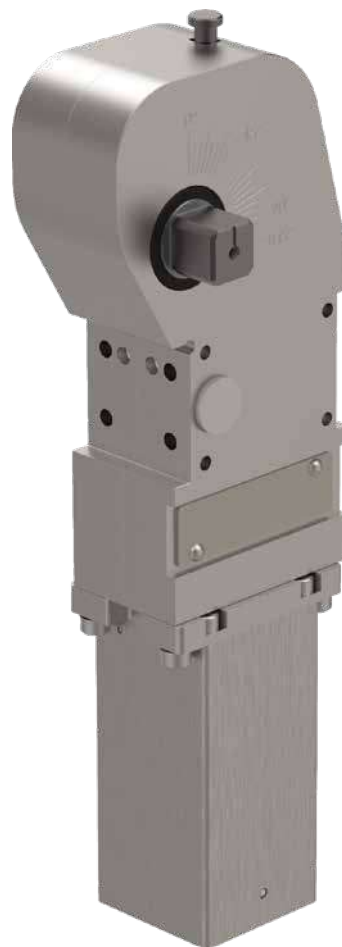
**25/N**

Max Holding Torque  
75 Nm [55 ft-lb]  
Max Clamping Torque  
25 Nm [18 ft-lb]  
at 5 bar [72 psi]



**32/N**

Max Holding Torque  
180 Nm [133 ft-lb]  
Max Clamping Torque  
55 Nm [41 ft-lb]  
at 5 bar [72 psi]

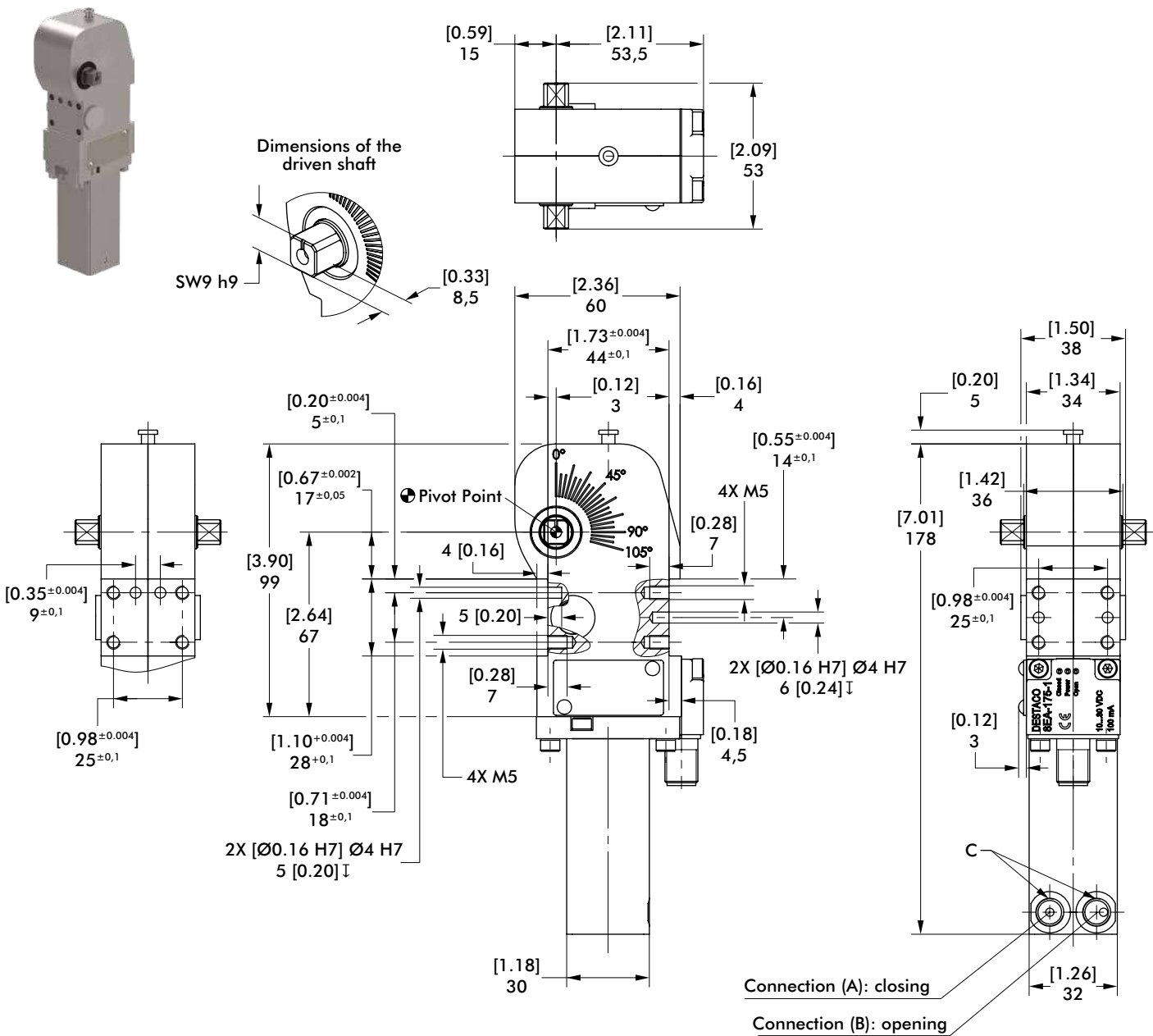


**40/N**

Max Holding Torque  
380 Nm [280 ft-lb]  
Max Clamping Torque  
120 Nm [89 ft-lb]  
at 5 bar [72 psi]

# 82L-3E

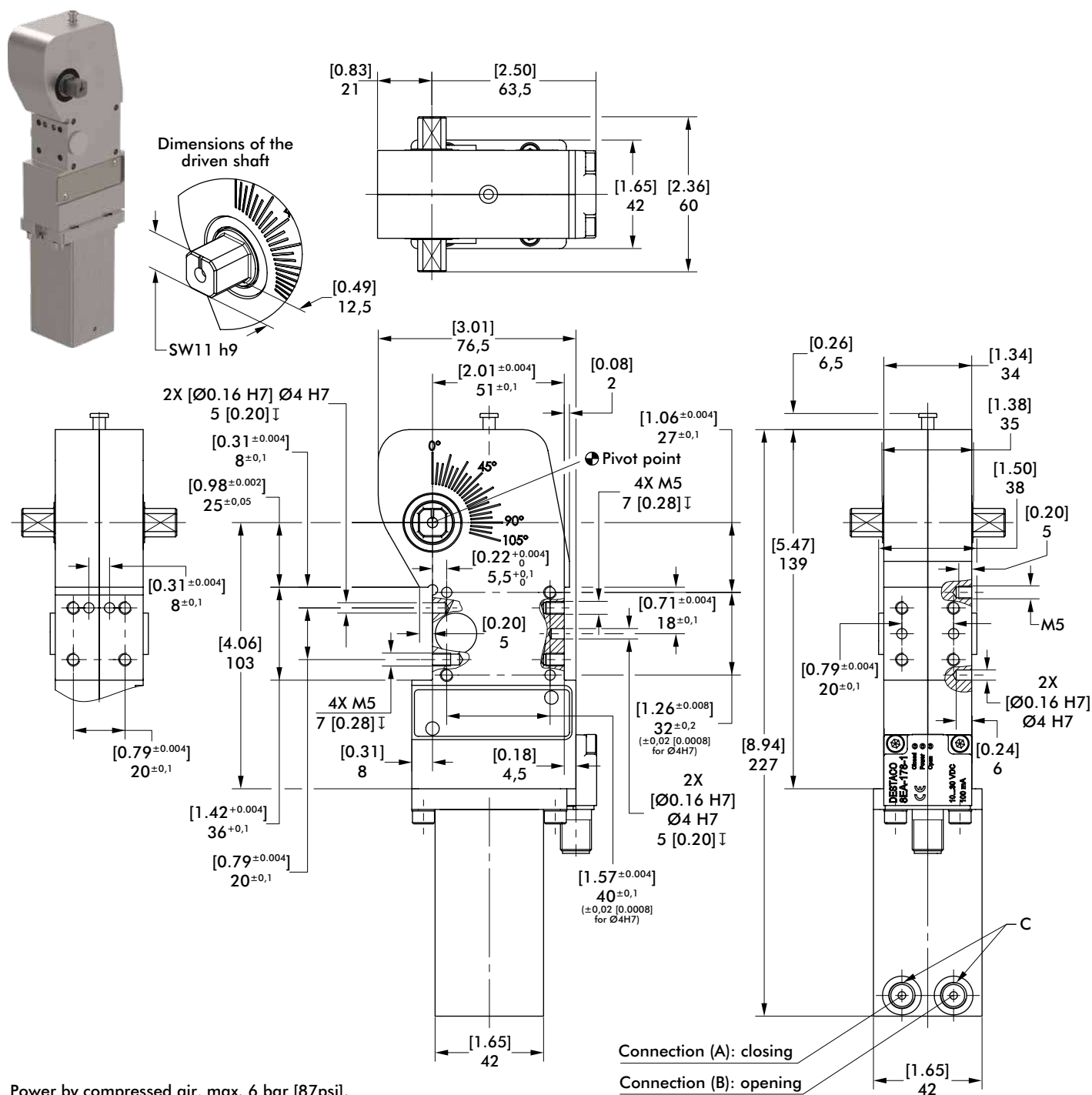
## Enclosed Pneumatic Power Clamps | Lightweight Modular | Dimensions and Technical Specifications



Power by compressed air, max. 6 bar [87psi].  
Operation with oil-free air is permissible.  
The connector socket and the cable are not supplied with the unit.  
Clamping arms sold separately.

| Model          | Max. Holding Torque<br>Nm [ft-lb] | Clamping Torque at 5 bar [72 psi]<br>Nm [ft-lb] | Piston Ø<br>mm | Weight<br>kg [lbs] | Air consumption per double stroke at 5 bar [72 psi]<br>dm³ [ft³] | Connection C |
|----------------|-----------------------------------|-------------------------------------------------|----------------|--------------------|------------------------------------------------------------------|--------------|
| 82L-3E230025.. | [55]<br>75                        | [18]<br>25                                      | 25             | [1.32]<br>0,6      | [0.01]<br>0,4                                                    | G1/8         |
| 82L-3E23002N.. |                                   |                                                 |                |                    |                                                                  | 1/8-18 NPT   |

## Enclosed Pneumatic Power Clamps | Lightweight Modular | Dimensions and Technical Specifications



Power by compressed air, max. 6 bar [87psi].

Operation with oil-free air is permissible.

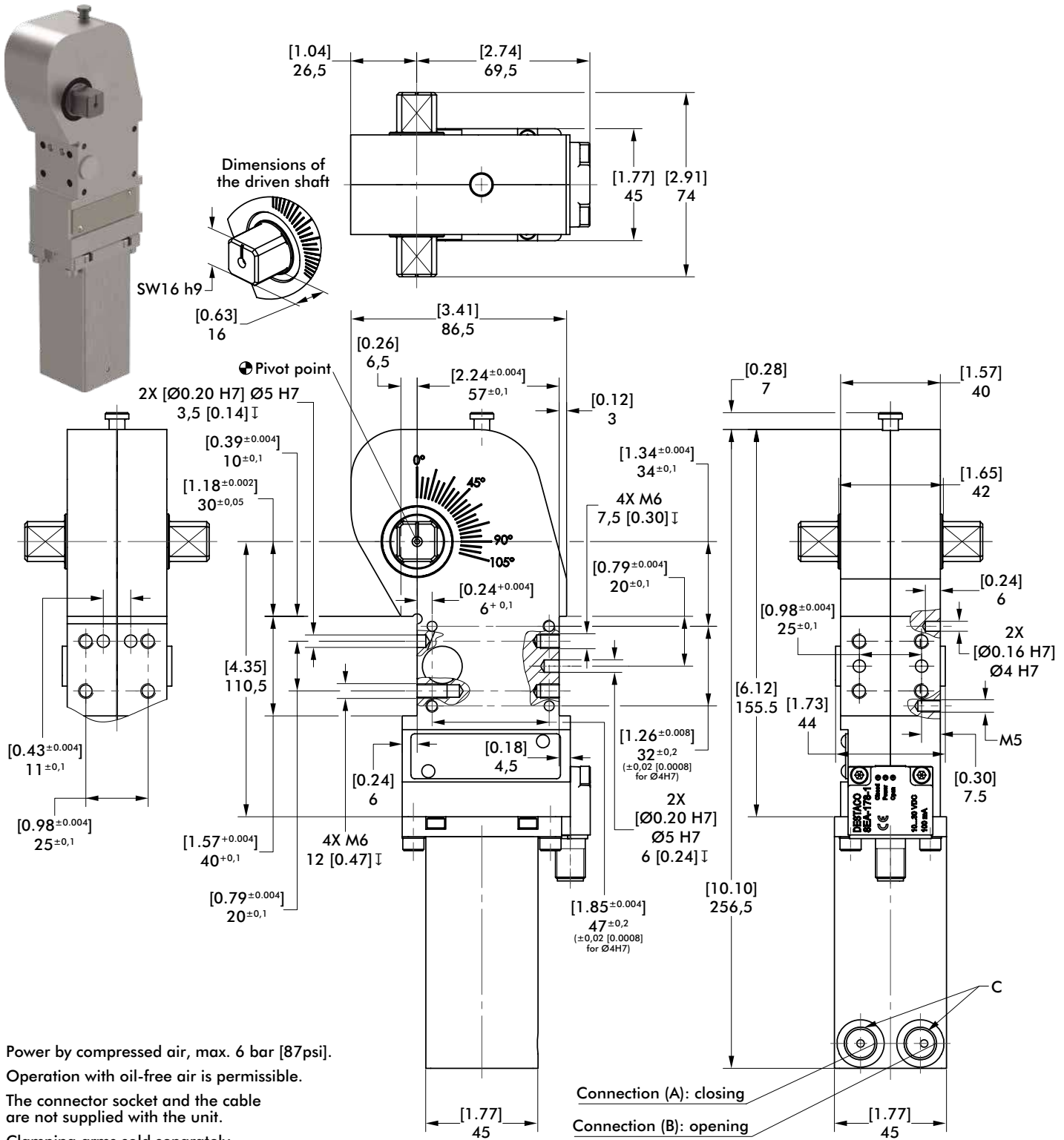
The connector socket and the cable are not supplied with the unit.

Clamping arms sold separately.

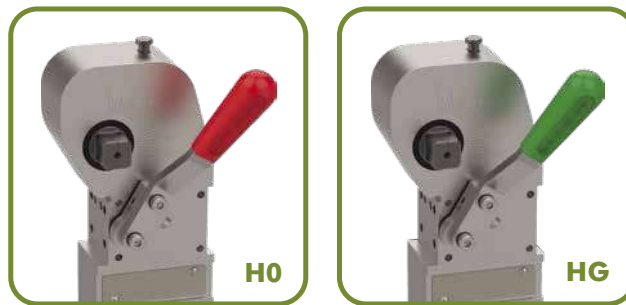
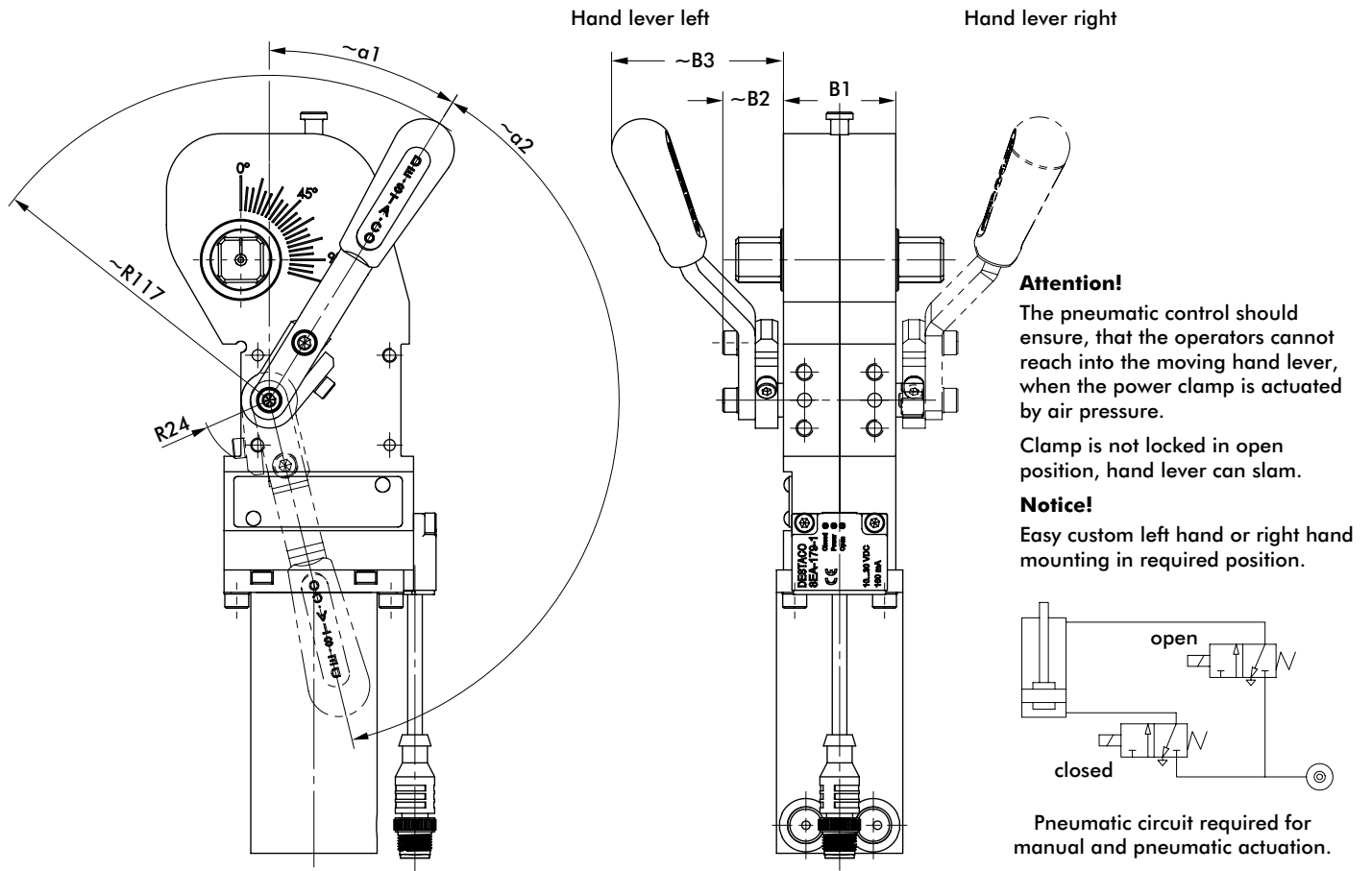
| Model          | Max. Holding Torque<br>Nm [ft-lb] | Clamping Torque<br>at 5 bar [72 psi]<br>Nm [ft-lb] | Piston<br>Ø<br>mm | Weight<br>kg [lbs] | Air consumption per double<br>stroke at 5 bar [72 psi]<br>dm³ [ft³] | Connection<br>C |
|----------------|-----------------------------------|----------------------------------------------------|-------------------|--------------------|---------------------------------------------------------------------|-----------------|
| 82L-3E230032.. | [133]<br>180                      | [41]<br>55                                         | 32                | [2.43]<br>1,1      | [0.03]<br>0,8                                                       | G1/8            |
| 82L-3E23003N.. |                                   |                                                    |                   |                    |                                                                     | 1/8-18 NPT      |

# 82L-3E

## Enclosed Pneumatic Power Clamps | Lightweight Modular | Dimensions and Technical Specifications



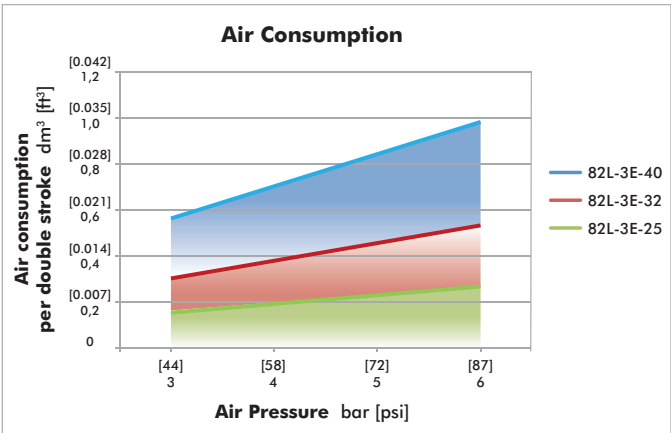
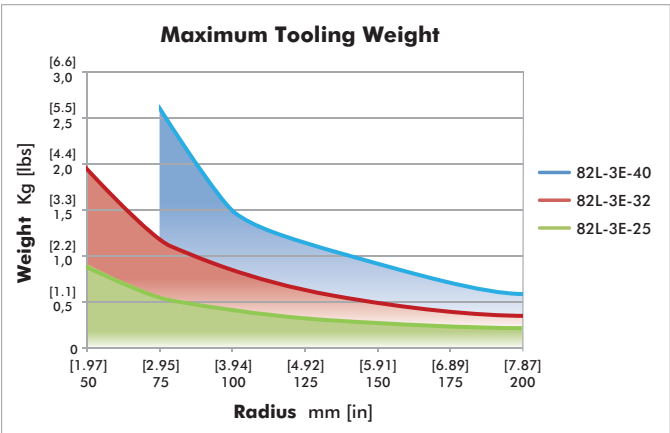
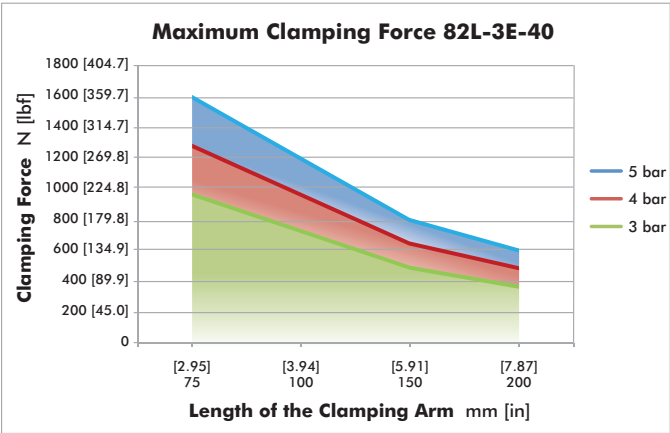
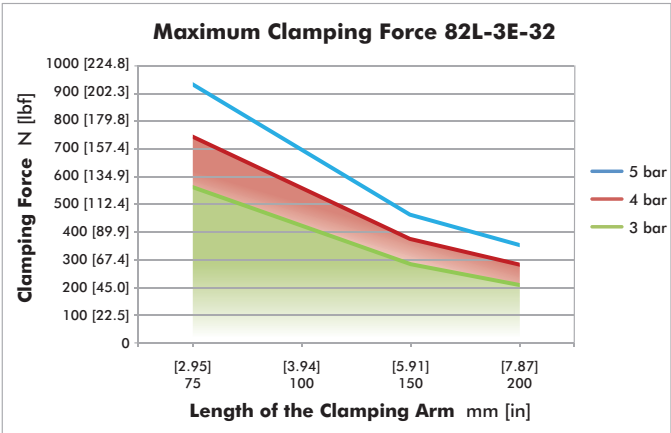
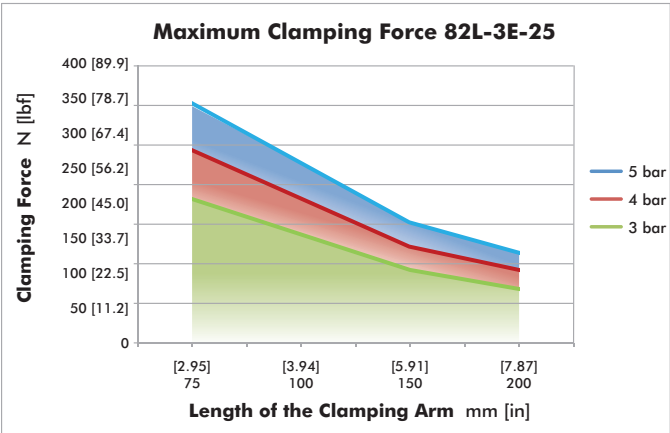
| Model          | Max. Holding Torque<br>Nm [ft-lb] | Clamping Torque at 5 bar [72 psi]<br>Nm [ft-lb] | Piston Ø<br>mm | Weight<br>kg [lbs] | Air consumption per double stroke at 5 bar [72 psi]<br>dm³ [ft³] | Connection C |
|----------------|-----------------------------------|-------------------------------------------------|----------------|--------------------|------------------------------------------------------------------|--------------|
| 82L-3E230040.. | [280]<br>380                      | [89]<br>120                                     | 40             | [3.53]<br>1,6      | [0.04]<br>1,2                                                    | G1/4         |
| 82L-3E23004N.. |                                   |                                                 |                |                    |                                                                  | 1/4-18 NPT   |



| Model No.      | Weight<br>Kg [lbs] | Swivel Angle ~a2<br>(with reference to opening angle of clamp arm) |                |              |     |     |     |     |     |     |      |      |
|----------------|--------------------|--------------------------------------------------------------------|----------------|--------------|-----|-----|-----|-----|-----|-----|------|------|
|                |                    | B1                                                                 | ~B2            | ~B3          | ~a1 | 15° | 30° | 45° | 60° | 75° | 90°  | 105° |
| 82L-3E23H.2... | 0,8 [1.76]         | [1.34]<br>34                                                       | [0.85]<br>21,5 | [2.40]<br>61 | 32° | 39° | 52° | 64° | 76° | 90° | 109° | 130° |
| 82L-3E23H.3... | 1,3 [2.87]         |                                                                    | [0.87]<br>22   | [2.44]<br>62 | 31° |     |     | 62° | 74° | 87° | 103° | 124° |
| 82L-3E23H.4... | 1,8 [3.97]         | [1.57]<br>40                                                       |                |              | 32° | 47° | 60° | 71° | 83° | 97° | 114° | 135° |

# 82L-3E

## Enclosed Pneumatic Power Clamps | Lightweight Modular | Technical Specifications

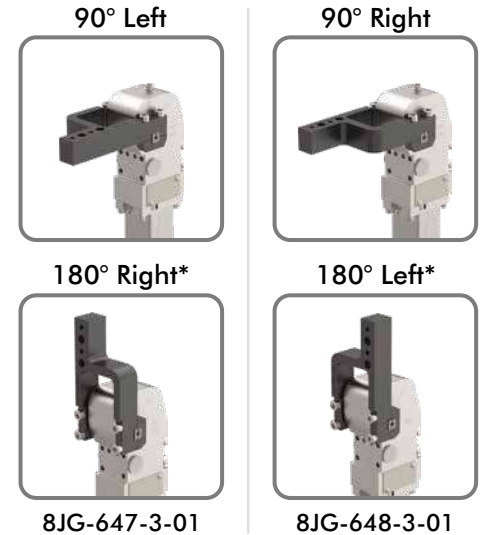
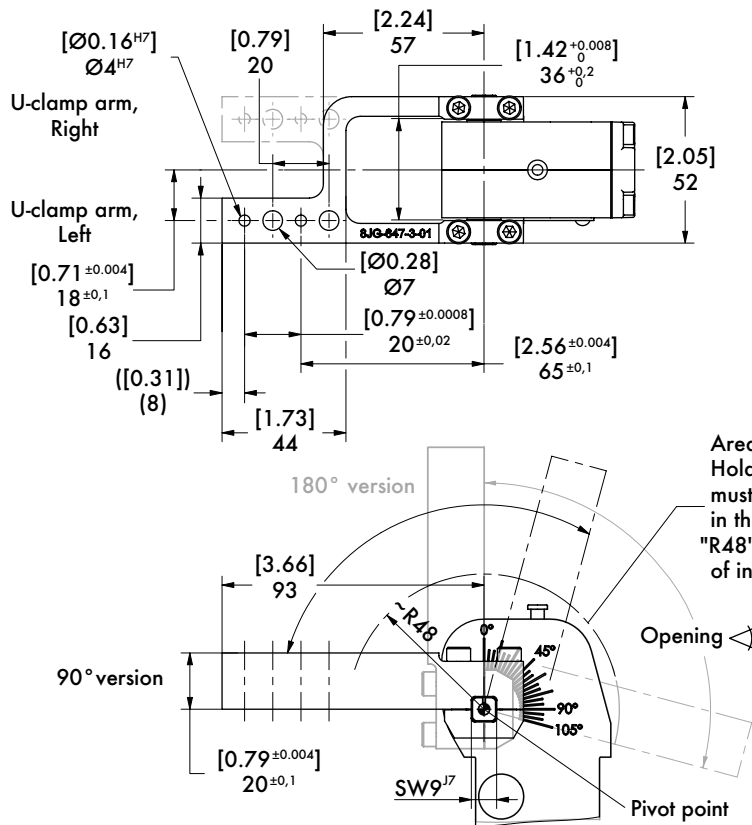


All data refers to a pneumatic pressure of 6 bar [87 psi] and to an opening or closing time of 1 second, as well as to the center of gravity of the complete construction directly attached to the clamp arm related to the fixed fulcrum.

# 82L-3E U-ARMS OFFSET, U-ARMS CENTER (STEEL)

Enclosed Pneumatic Power Clamps | Lightweight Modular | Dimensions and Technical Specifications

For Size 25mm



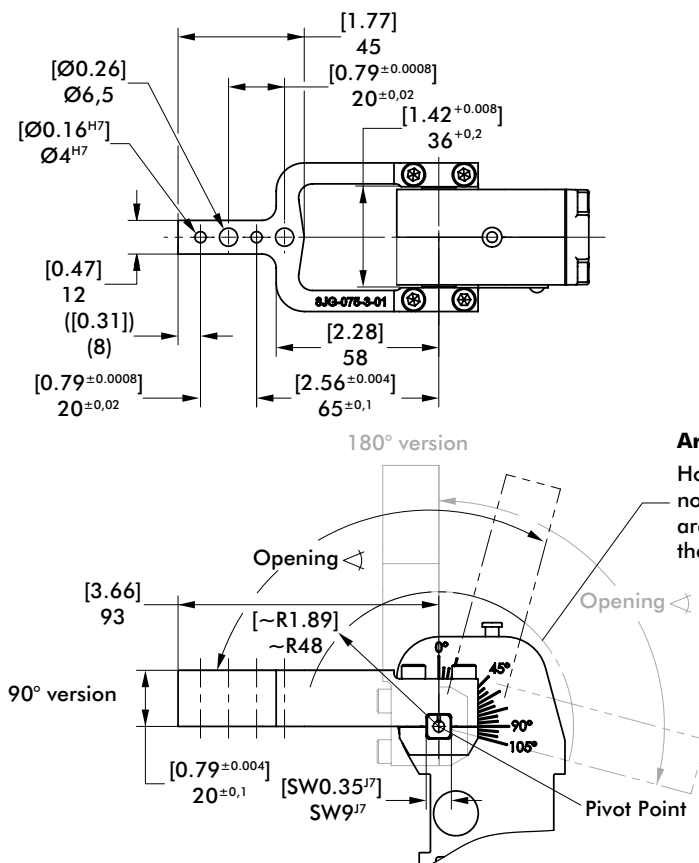
8JG-647-3-01

8JG-648-3-01

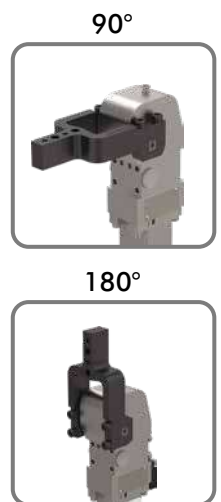
\*90° left/180° right uses same clamp arm.  
90° right/180° left uses same clamp arm.

Clamp arm sets consists of clamp arm, links and screws.

| Arm Model No. | Max. Opening 90° Version | Max. Opening 180° Version | Weight kg [lbs] |
|---------------|--------------------------|---------------------------|-----------------|
| 8JG-647-3-01  | 105°                     | 105°                      | [0.66]          |
| 8JG-648-3-01  |                          |                           | 0,3             |



For Size 25mm



8JG-075-3-01

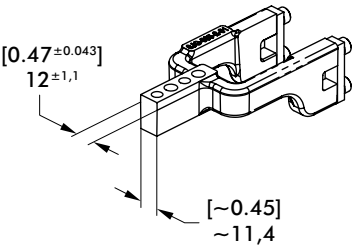
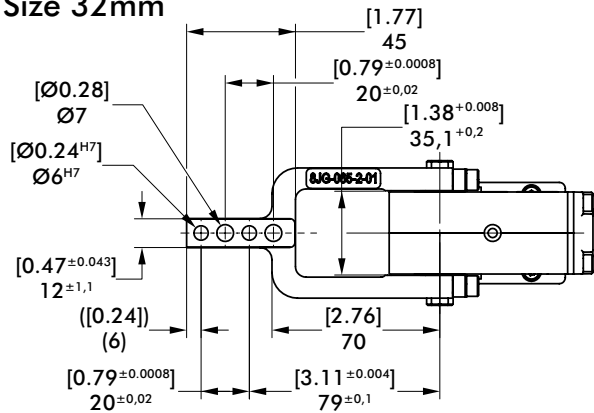
Clamp arm sets consists of clamp arm, links and screws.

| Arm Model No. | Max. Opening 90° Version | Max. Opening 180° Version | Weight kg [lbs] |
|---------------|--------------------------|---------------------------|-----------------|
| 8JG-075-3-01  | 105°                     | 105°                      | [0.66]          |
|               |                          |                           | 0,3             |

# 82L-3E U-ARMS CENTER (STEEL)

Enclosed Pneumatic Power Clamps | Lightweight Modular | Dimensions and Technical Specifications

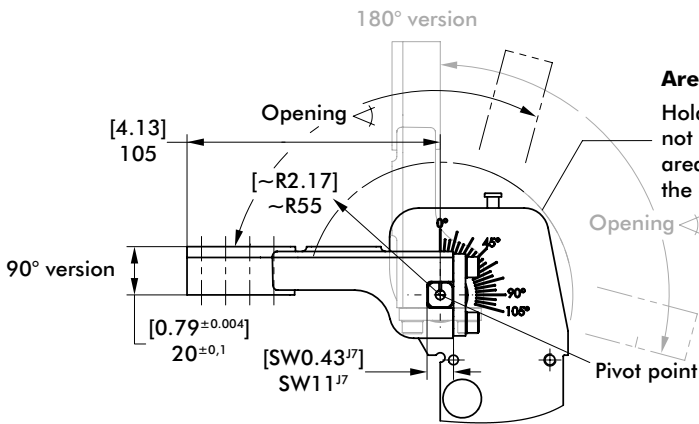
For Size 32mm



180°



8JG-065-2-01

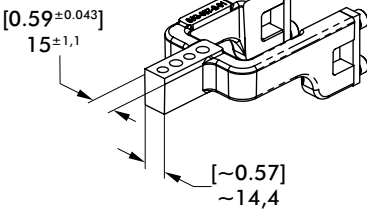
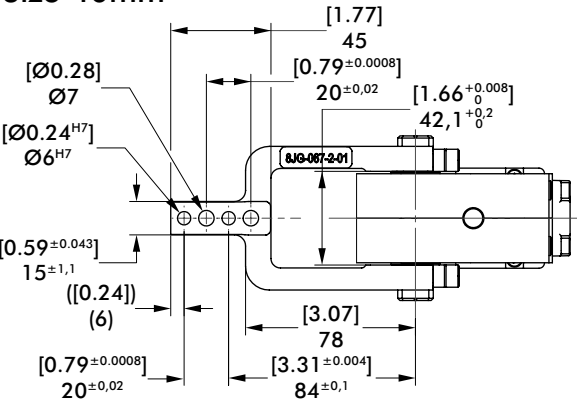


**Area of interference**  
Hold-down piece must not protrude in the interior area "R55 [R2.17]" due to the area of interference.

Clamp arm sets consists of clamp arm, links and screws.

| Arm Model No. | Max. Opening 90° Version | Max. Opening 180° Version | Weight kg [lbs] |
|---------------|--------------------------|---------------------------|-----------------|
| 8JG-065-2-01  | 105°                     | 105°                      | [0.82] 0,37     |

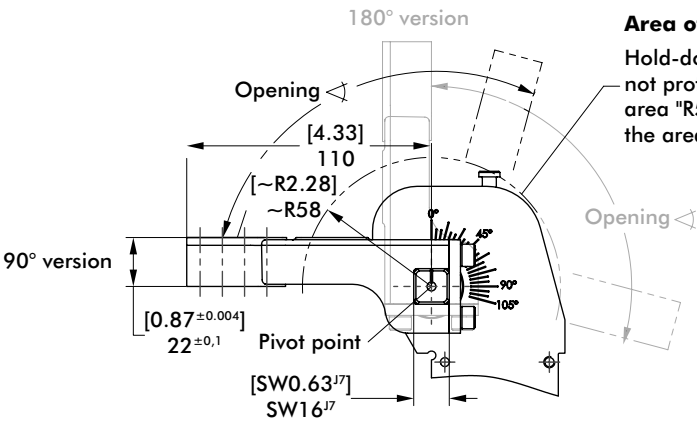
For Size 40mm



180°



8JG-067-2-01



**Area of interference**  
Hold-down piece must not protrude in the interior area "R58 [R2.28]" due to the area of interference.

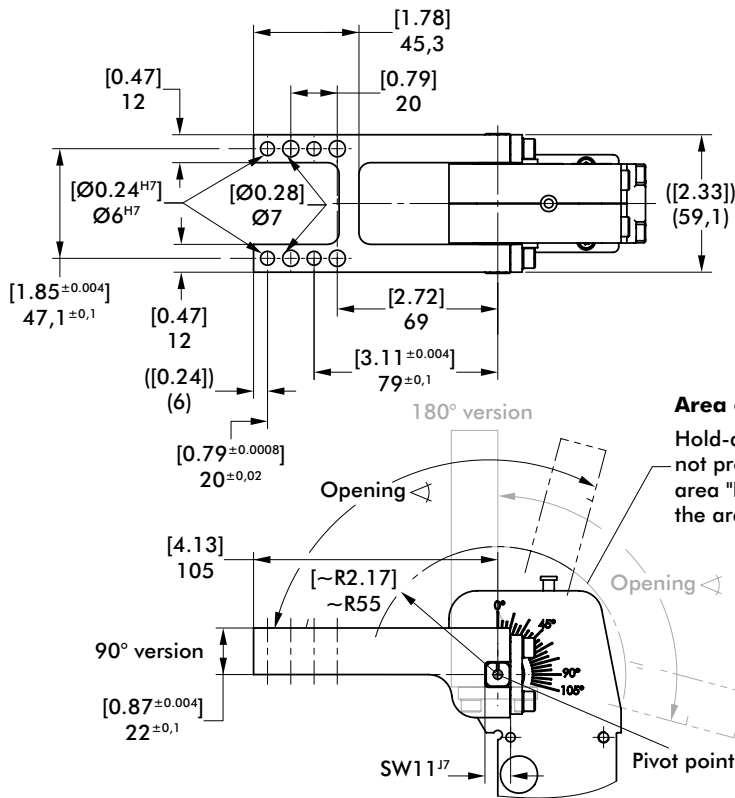
Clamp arm sets consists of clamp arm, links and screws.

| Arm Model No. | Max. Opening 90° Version | Max. Opening 180° Version | Weight kg [lbs] |
|---------------|--------------------------|---------------------------|-----------------|
| 8JG-067-2-01  | 105°                     | 105°                      | [1.10] 0,5      |

# 82L-3E H-ARMS (STEEL)

Enclosed Pneumatic Power Clamps | Lightweight Modular | Dimensions and Technical Specifications

For Size 32mm



## Area of interference

Hold-down piece must not protrude in the interior area "R55 [R2.17]" due to the area of interference.

90°



180°

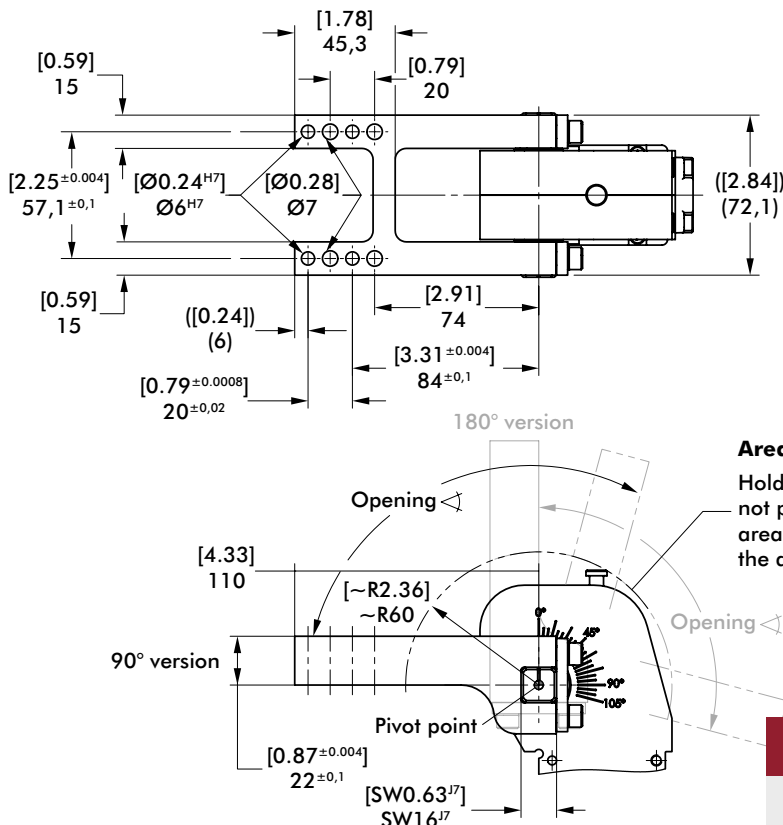


8JG-363-1-01

Clamp arm sets consists of clamp arm, links and screws.

| Arm Model No. | Max. Opening 90° Version | Max. Opening 180° Version | Weight kg [lbs] |
|---------------|--------------------------|---------------------------|-----------------|
| 8JG-363-1-01  | 105°                     | 105°                      | [1.15] 0,52     |

For Size 40mm



## Area of interference

Hold-down piece must not protrude in the interior area "R60 [R2.36]" due to the area of interference.

90°



180°



8JG-364-1-01

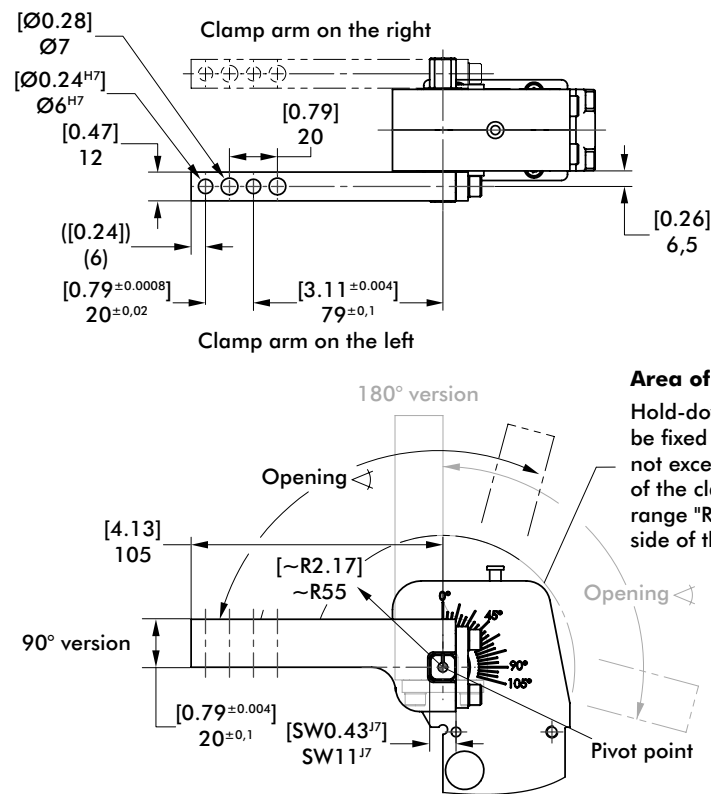
Clamp arm sets consists of clamp arm, links and screws.

| Arm Model No. | Max. Opening 90° Version | Max. Opening 180° Version | Weight kg [lbs] |
|---------------|--------------------------|---------------------------|-----------------|
| 8JG-364-1-01  | 105°                     | 105°                      | [1.70] 0,77     |

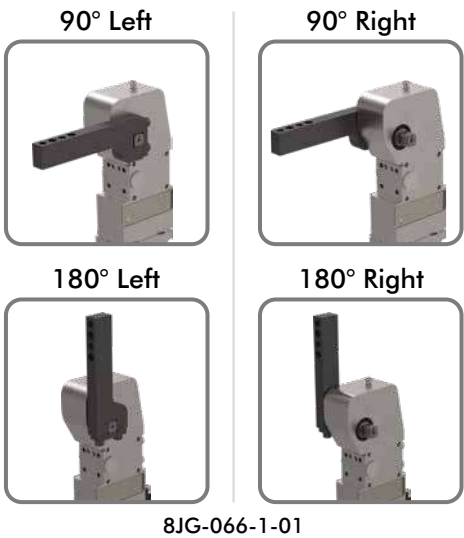
# 82L-3E LATERAL ARMS (STEEL)

Enclosed Pneumatic Power Clamps | Lightweight Modular | Dimensions and Technical Specifications

## For Size 32mm



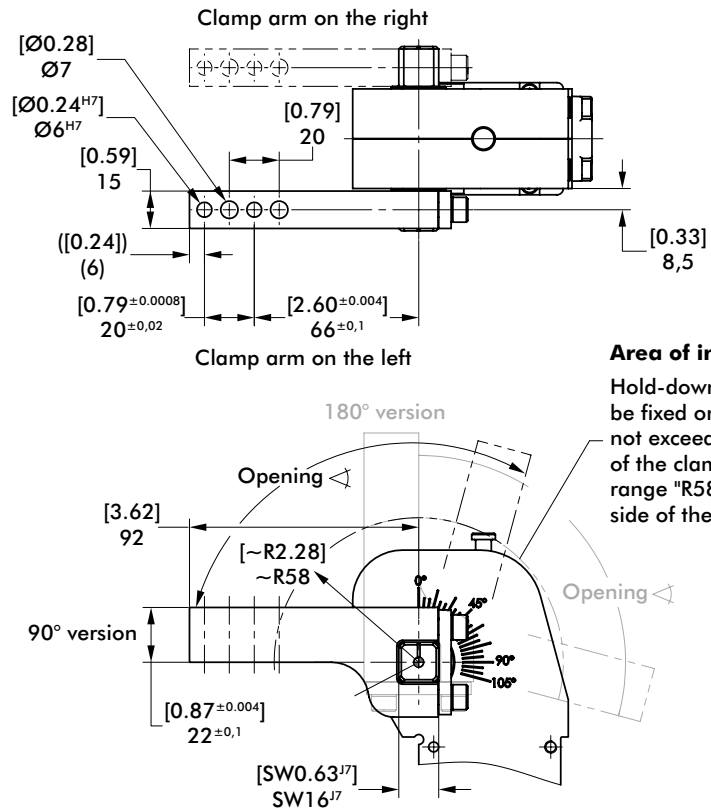
**Area of interference**  
Hold-down pieces which must be fixed on the clamp arm must not exceed the width "12 [0.47]" of the clamp arm in the swivelling range "R55 [R2.17]" on the inner side of the clamp arm.



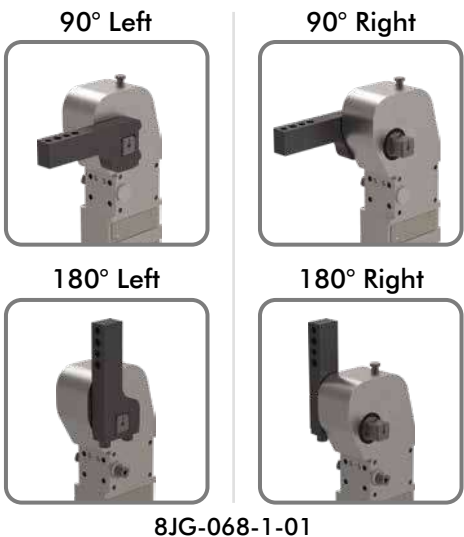
Clamp arm sets consists of clamp arm, links and screws.

| Arm Model No. | Max. Opening 90° Version | Max. Opening 180° Version | Weight kg [lbs] |
|---------------|--------------------------|---------------------------|-----------------|
| 8JG-066-1-01  | 105°                     | 105°                      | [0.55] 0,25     |

## For Size 40mm



**Area of interference**  
Hold-down pieces which must be fixed on the clamp arm must not exceed the width "15 [0.59]" of the clamp arm in the swivelling range "R58 [R2.28]" on the inner side of the clamp arm.



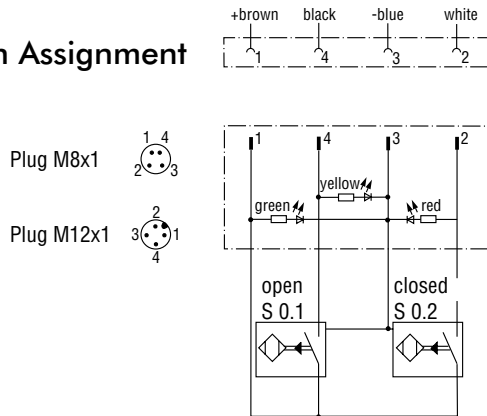
Clamp arm sets consists of clamp arm, links and screws.

| Arm Model No. | Max. Opening 90° Version | Max. Opening 180° Version | Weight kg [lbs] |
|---------------|--------------------------|---------------------------|-----------------|
| 8JG-068-1-01  | 105°                     | 105°                      | [0.66] 0,3      |

# 82L-3E ACCESSORIES

Enclosed Pneumatic Power Clamps | Lightweight Modular | Dimensions and Technical Specifications

## Pin Assignment



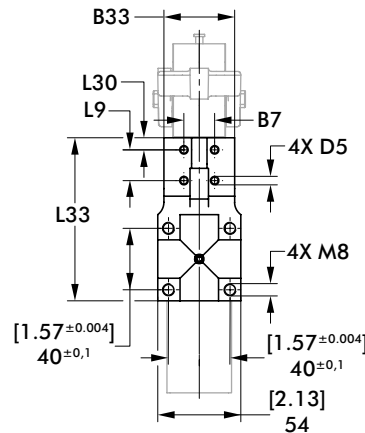
## Wiring diagram of electrical sensing system

Sensing system immune to interference from d.c. arc welding and a.c. arc welding

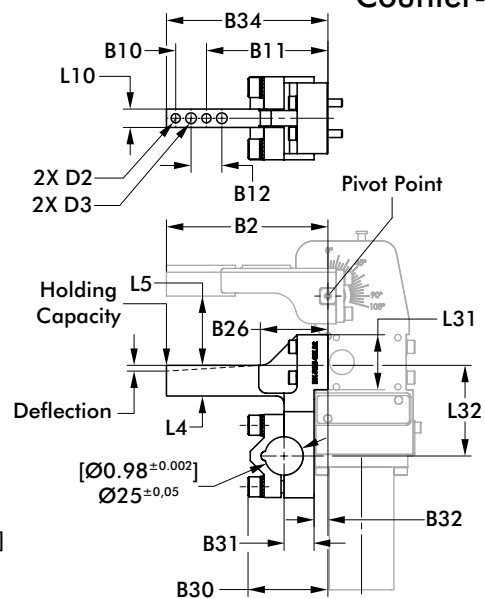
Inductive version: B8, B7, C8



View Counter-support without bracket and screws



## Counter-Support



\* = Tolerance for distance to dowel holes  $\pm 0,02$  [ $\pm 00.001$  in]

\*\* = distance from pivot point

| Model          | Fit for Model  | Max. Holding Capacity | Deflection      | Weight         | B2            | B7*                   | B10                     | B11          | B12          | B26**        | B30**        | B31**          | B32**         |
|----------------|----------------|-----------------------|-----------------|----------------|---------------|-----------------------|-------------------------|--------------|--------------|--------------|--------------|----------------|---------------|
|                |                | N [lbf]               | mm [in]         | kg [lbs]       |               | $[\pm 0.004] \pm 0,1$ | $[\pm 0.0008] \pm 0,02$ |              |              |              |              |                |               |
| BK-R25-82L25-1 | 82L-3E23..2... | [206]<br>914          | [0.008]<br>0,2  | [0.88]<br>0,4  | [3.66]<br>93  | [0.98]<br>25          |                         | [2.44]<br>62 |              | [1.65]<br>42 | [2.17]<br>55 | [1.24]<br>31,5 | [0.43]<br>11  |
| BK-R25-82L32-1 | 82L-3E23..3... | [148]<br>660          | [0.006]<br>0,16 | [1.1]<br>0,5   | [4.13]<br>105 | [0.79]<br>20          | [0.79]<br>20            | [3.11]<br>79 | [0.79]<br>20 | [1.73]<br>44 | [2.05]<br>52 | [1.12]<br>28,5 | [0.35]<br>9   |
| BK-R25-82L40-1 | 82L-3E23..4... | [450]<br>2000         | [0.015]<br>0,37 | [1.23]<br>0,56 | [4.33]<br>110 | [0.98]<br>25          |                         | [3.31]<br>84 |              | [1.61]<br>41 |              |                | [0.30]<br>7,5 |

| Model          | B33          | B34           | D2               | D3            | D5            | L4                    | L5 | L9                    | L10          | L30            | L31             | L32            | L33           |
|----------------|--------------|---------------|------------------|---------------|---------------|-----------------------|----|-----------------------|--------------|----------------|-----------------|----------------|---------------|
|                |              |               | $\varnothing$ H7 | $\varnothing$ | $\varnothing$ | $[\pm 0.004] \pm 0,1$ |    | $[\pm 0.004] \pm 0,1$ |              |                | $[-0.004] -0,1$ |                |               |
| BK-R25-82L25-1 | [1.38]<br>35 | [3.54]<br>90  | [0.16]<br>4      | [0.26]<br>6,5 | [0.22]<br>5,5 | [0.79]<br>20          |    | [0.71]<br>18          | [0.47]<br>12 | [0.19]<br>4,95 | [1.10]<br>27,9  | [2.00]<br>50,9 | [4.17]<br>106 |
| BK-R25-82L32-1 | [1.81]<br>46 | [4.13]<br>105 | [0.24]<br>6      | [0.28]<br>7   | [0.26]<br>6,6 | [0.87]<br>22          |    | [0.79]<br>20          | [0.59]<br>15 | [0.31]<br>7,85 | [1.41]<br>35,7  | [2.32]<br>59   |               |
| BK-R25-82L40-1 | [1.57]<br>40 | [4.33]<br>110 |                  |               |               |                       |    |                       |              | [0.39]<br>9,85 | [1.56]<br>39,7  | [2.60]<br>66   | [4.25]<br>108 |

# 82L-3E ACCESSORIES

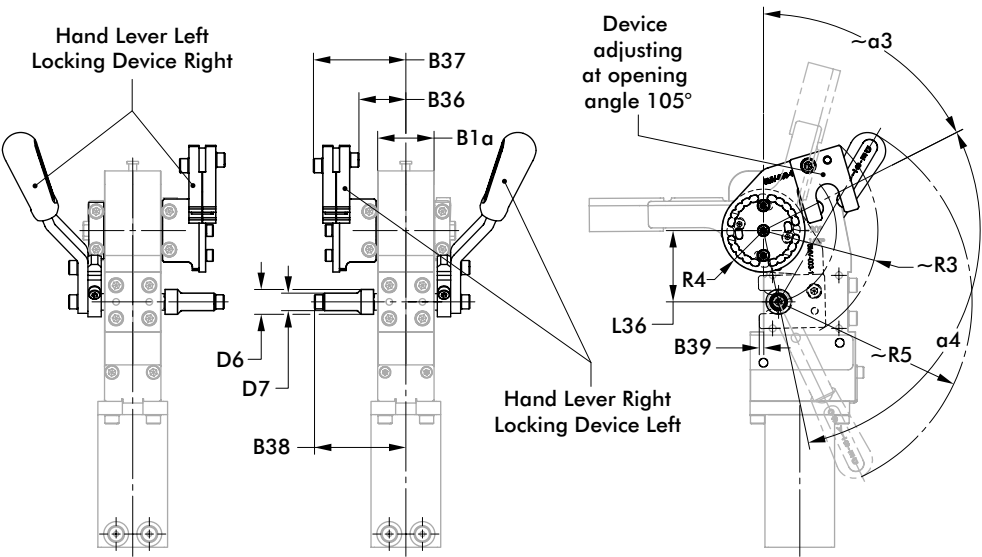
Enclosed Pneumatic Power Clamps | Lightweight Modular | Dimensions and Technical Specifications

## Hold Open Device



Clamping position

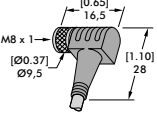
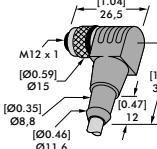
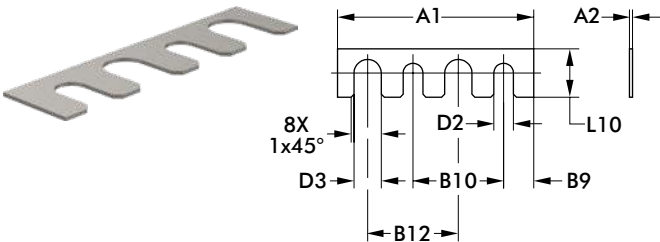
Open position locked

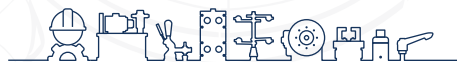


| Model      | Fit for Model  | B1α          | B36          | B37          | B38            | B39         | D6           | D7             | L36          | ~R3          | R4             | ~R5           | ~α3 | α4   |
|------------|----------------|--------------|--------------|--------------|----------------|-------------|--------------|----------------|--------------|--------------|----------------|---------------|-----|------|
| 82ZB-036-1 | 82L-3E23H.2... | [1.34]<br>34 | [0.98]<br>25 | [1.85]<br>47 | [1.85]<br>47   | [0.12]<br>3 | [0.59]<br>15 | [0.39]<br>10   | [1.22]<br>31 | [2.09]<br>53 | [0.73]<br>18,5 | [4.61]<br>117 | 64° | 105° |
| 82ZB-037-1 | 82L-3E23H.3... |              | [1.10]<br>28 | [2.20]<br>56 | [2.19]<br>55,5 |             |              | [0.41]<br>10,5 | [1.69]<br>43 | [2.72]<br>69 | [0.98]<br>25   |               | 63° |      |
| 82ZB-038-1 | 82L-3E23H.4... |              | [1.57]<br>40 | [1.18]<br>30 | [2.28]<br>58   |             |              | [2.24]<br>57   | [1.97]<br>50 | [2.99]<br>76 | [1.06]<br>27   |               |     |      |

# 82L-3E ACCESSORIES

Enclosed Pneumatic Power Clamps | Lightweight Modular | Dimensions and Technical Specifications

| Clamping Arms                                                                       |                                                                                   | Order No. for Set<br>82L-3E23..2... | Order No. for Set<br>82L-3E23..3... | Order No. for Set<br>82L-3E23..4... |                |                   |                |              |              |                |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|----------------|-------------------|----------------|--------------|--------------|----------------|
| U-Offset 90° Left/180° Right                                                        |                                                                                   | 8JG-647-3-01                        | --                                  | --                                  |                |                   |                |              |              |                |
| U-Offset 180° Left/90° Right                                                        |                                                                                   | 8JG-648-3-01                        | --                                  | --                                  |                |                   |                |              |              |                |
| U-central                                                                           |                                                                                   | 8JG-075-3-01                        | 8JG-065-2-01                        | 8JG-067-2-01                        |                |                   |                |              |              |                |
| Lateral                                                                             |                                                                                   | --                                  | 8JG-066-1-01                        | 8JG-068-1-01                        |                |                   |                |              |              |                |
| H-Shape                                                                             |                                                                                   | --                                  | 8JG-363-1-01                        | 8JG-364-1-01                        |                |                   |                |              |              |                |
| Sensor Cables (1 Connector Socket & 5 m [16.4 ft] cable)                            |                                                                                   |                                     |                                     |                                     |                |                   |                |              |              |                |
| Connector Socket M8x1<br>Straight 4-pin                                             |  | 8EL-009-1                           | 8EL-009-1                           | 8EL-009-1                           |                |                   |                |              |              |                |
| Connector Socket M8x1<br>Angular 4-pin                                              |  | 8EL-007-1                           | 8EL-007-1                           | 8EL-007-1                           |                |                   |                |              |              |                |
| Connector Socket M12x1<br>Straight 5-pin                                            |  | 8EL-002-1                           | 8EL-002-1                           | 8EL-002-1                           |                |                   |                |              |              |                |
| Connector Socket M12x1<br>Angular 4-pin                                             |  | 8EL-003-1                           | 8EL-003-1                           | 8EL-003-1                           |                |                   |                |              |              |                |
| Shim for Clamping Arm                                                               |                                                                                   | Order No.                           | A1                                  | A2                                  | D2             | D3                | B9             | B10          | B12          | L10            |
|  |                                                                                   | 82ZB-SH4001                         | [1.65]<br>42                        | [0.004]<br>0,1                      |                |                   |                |              |              |                |
|                                                                                     |                                                                                   | 82ZB-SH4002                         |                                     | [0.008]<br>0,2                      |                |                   |                |              |              |                |
|                                                                                     |                                                                                   | 82ZB-SH4005                         |                                     | [0.02]<br>0,5                       | [0.26]<br>6,5  | [0.28]<br>7       | [0.24]<br>6    | [0.79]<br>20 | [0.79]<br>20 | [0.46]<br>11,8 |
|                                                                                     |                                                                                   | 82ZB-SH4010                         |                                     | [0.04]<br>1,0                       |                |                   |                |              |              |                |
|                                                                                     |                                                                                   | 82ZB-SH4020                         |                                     | [0.08]<br>2,0                       |                |                   |                |              |              |                |
|                                                                                     |                                                                                   | 82ZB-SH4050                         |                                     | [0.20]<br>5,0                       |                |                   |                |              |              |                |
| Spare Parts                                                                         |                                                                                   | Order No. for Set                   |                                     | Order No. for Set                   |                | Order No. for Set |                |              |              |                |
|                                                                                     |                                                                                   | 82L-3E23..25..                      | 82L-3E23..2N..                      | 82L-3E23..32..                      | 82L-3E23..3N.. | 82L-3E23..40..    | 82L-3E23..4N.. |              |              |                |
| Cylinder                                                                            |                                                                                   | 82L-3E000025                        | 82L-3E00002N                        | 82L-3E000032                        | 82L-3E00003N   | 82L-3E000040      | 82L-3E00004N   |              |              |                |
| Sensor Kit                                                                          |                                                                                   |                                     |                                     |                                     |                |                   |                |              |              |                |
| C8 Connector Plug,<br>with In-Line M8x1                                             |                                                                                   | 8EA-174-1-B                         |                                     | 8EA-177-1-B                         |                |                   |                |              |              |                |
| B7 Connector Plug,<br>with In-Line M12x1                                            |                                                                                   | 8EA-175-1-B                         |                                     | 8EA-178-1-B                         |                |                   |                |              |              |                |
| B8 Connector Plug,<br>M12x1 with Cable                                              |                                                                                   | 8EA-176-1-B                         |                                     | 8EA-179-1-B                         |                |                   |                |              |              |                |
| Spare Parts                                                                         |                                                                                   | Order No. for Set                   |                                     | Order No. for Set                   |                | Order No. for Set |                |              |              |                |
|                                                                                     |                                                                                   | 82L-3E23H02...                      | 82L-3E23HG2...                      | 82L-3E23H03...                      | 82L-3E23HG3... | 82L-3E23H04...    | 82L-3E23HG4... |              |              |                |
| Hand Lever                                                                          |                                                                                   | 8KB-031-1                           | 8KB-091-1                           | 8KB-031-1                           | 8KB-091-1      | 8KB-032-1         | 8KB-092-1      |              |              |                |



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