

Sheet Metal gripper

10/11/2024



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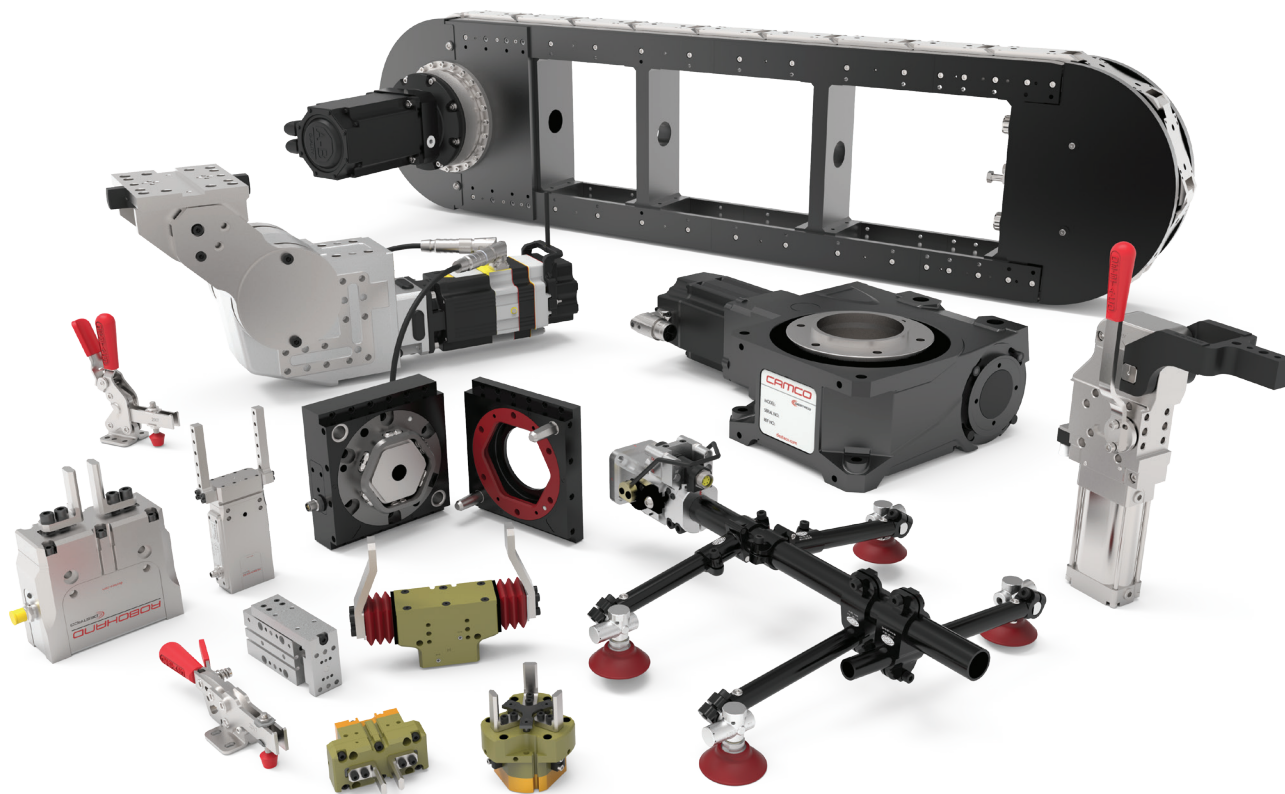
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Sheet Metal gripper

10/11/2024

This catalog is a custom document and the products included is based on your unique selection from portions of complete catalogs that already exist. Please refer to our full catalogs for more information on products not included in this customized document.

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Sheet Metal gripper

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84N1 SERIES

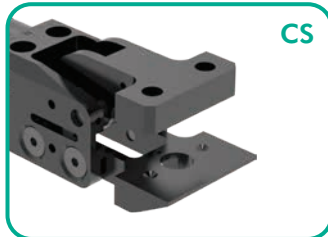
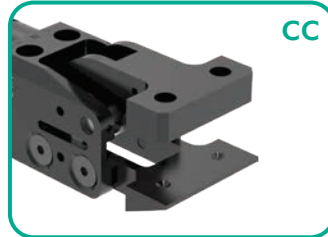
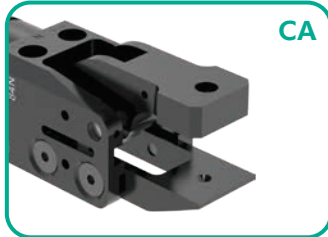
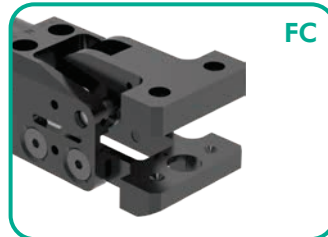
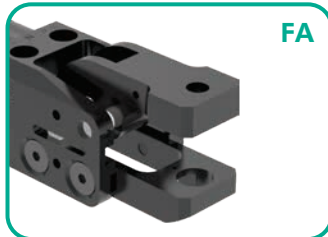
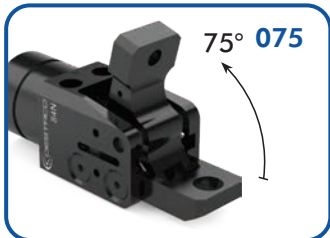
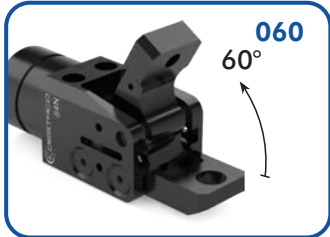
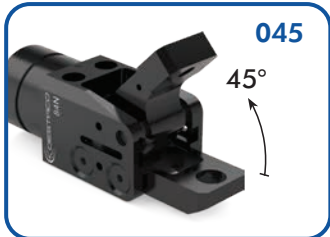
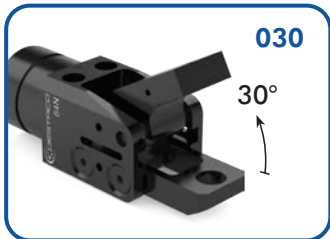
Accelerate® Press Shop Sheet Metal Grippers | Ordering Information



Ports	Description
N	1/8 NPT
G	1/8 BSPP

Opening Angle	Description
030	30° Opening Angle
045	45° Opening Angle
060	60° Opening Angle
075	75° Opening Angle

Jaw Style/ Tip Mount	Description
FA	Fixed Lower 0° Jaw, Single Tip Mount
FC	Fixed Lower 0° Jaw, Double Tip Mount
CA	Fixed Lower Chisel Jaw, Single Tip Mount
CC	Fixed Lower Chisel Jaw, Double Tip Mount
CS	Fixed Lower Chisel Jaw, Double Tip w/Sensor Mount
PC	Fixed Lower 90° Jaw, Double Tip Mount



Specifications: SG-PRG-4
 Mounts (sold separately): SG-PRG-19 thru 20
 Accessories: SG-PRG-23 thru 28.

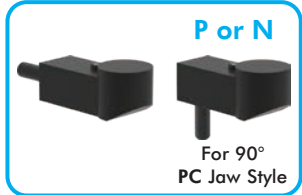
84N1 SERIES

Accelerate® Press Shop Sheet Metal Grippers | Ordering Information

Part Presence Detection

0
P
N

Description
None
PNP
NPN



4mm Material Sensing Range

Sheet Stop Description

0
1

None (for PC option only)
Required (all jaw options except PC)



Left Sensor Side Mount

0
1
2
3

Description
None
Dual Magnetoresistive PNP Sensors Left Side
Dual Magnetoresistive NPN Sensors Left Side
Infrared PNP Sensing (not available for PC jaw style)

Right Sensor Side Mount

0
1
2
3

Description
None
Dual Magnetoresistive PNP Sensors Right Side
Dual Magnetoresistive NPN Sensors Right Side
Infrared PNP Sensing (not available for PC jaw style)

*Use of a Sheet Stop is highly recommended when using 2-Point Sensing.

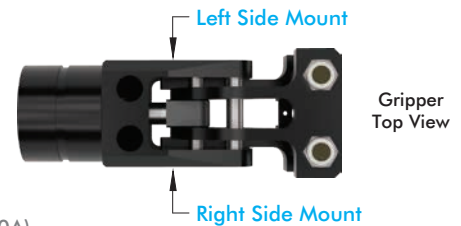


0.5 mm blank minimum sheet thickness. Side mount option 1 & 2 sensing detects gripper jaw position can be adjusted to sense blank, double, full open, and full closed based on jaw position.

Adjustable Jaw Tip Options Upper Jaw Only

00 None
01 Serrated Tip
02* Serrated Notch Tip
03 Point Tip
04 Peen Tip
05 Polyurethane Tip (Durometer 70A)

*02 serrated notch tip (for use with part presence sensing FA jaw style only).



Description	Part #	Single Tip Jaw	Double Tip Jaw
Polyurethane Tip	8JD-1005-1	Yes*	Yes
Point Tip	8JD-1001-1	Yes*	Yes
Serrated Tip	8JD-1002-1	Yes*	Yes
Peen Tip	8JD-1003-1	Yes*	Yes
Serrated Notched Tip (for Jaw Style FA only)	8JD-1004-1	Yes	No

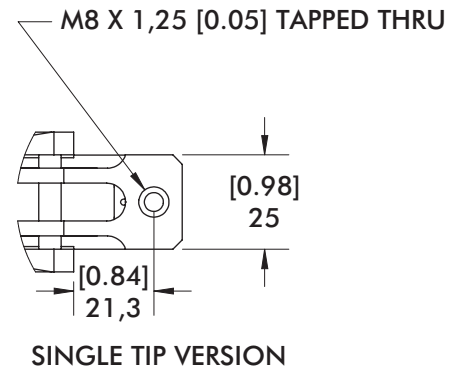
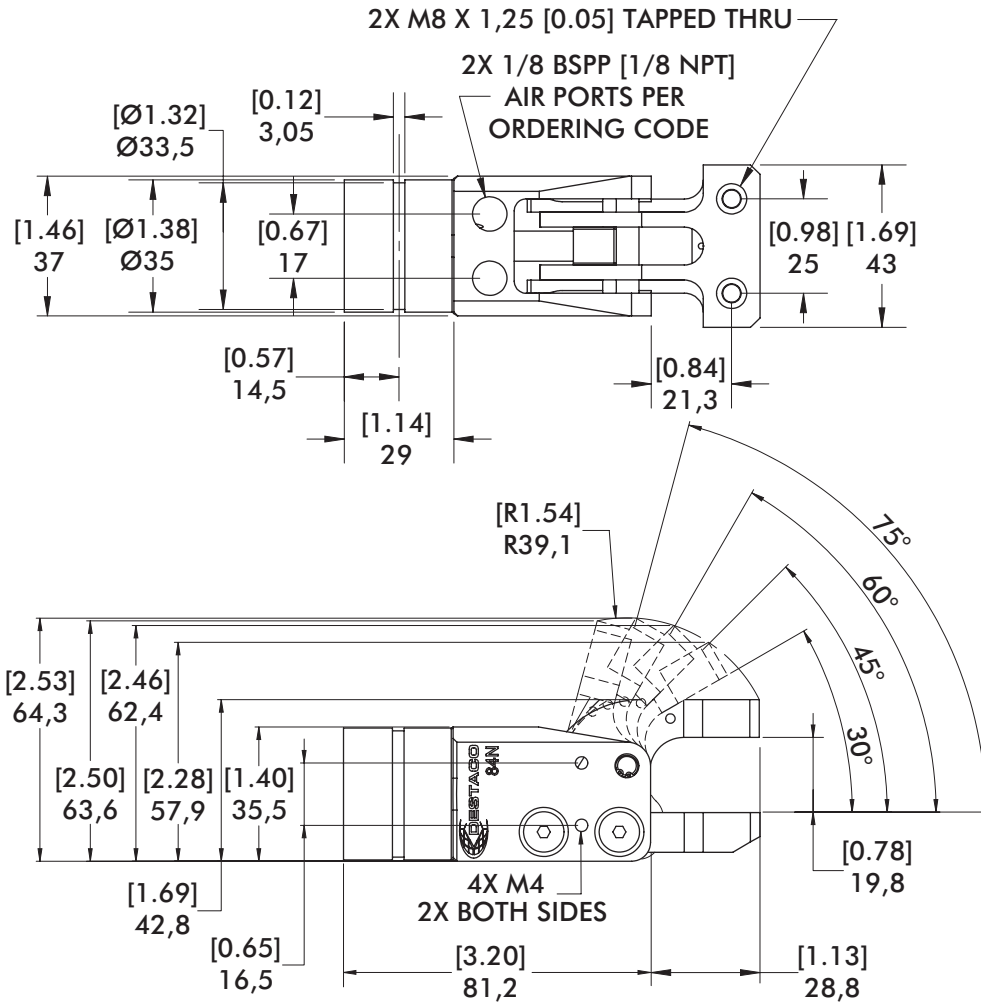
*These tips work with the FA jaw type but will cause a false positive signal if the part present sensor is installed.

Customer is responsible for final adjustments and tightening of all accessory mounting screws.

84N1 SERIES

Accelerate® Press Shop Sheet Metal Grippers | Dimensions

FA/FC Options: Standard Jaws

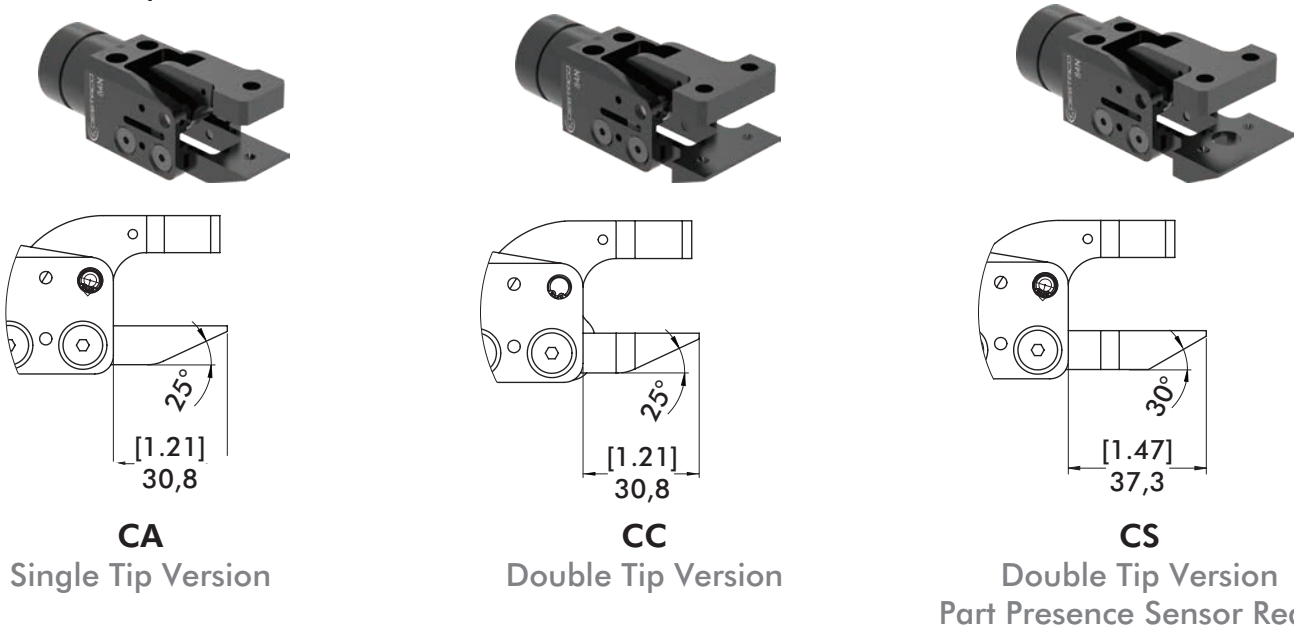


FA Single Tip



FC Double Tip

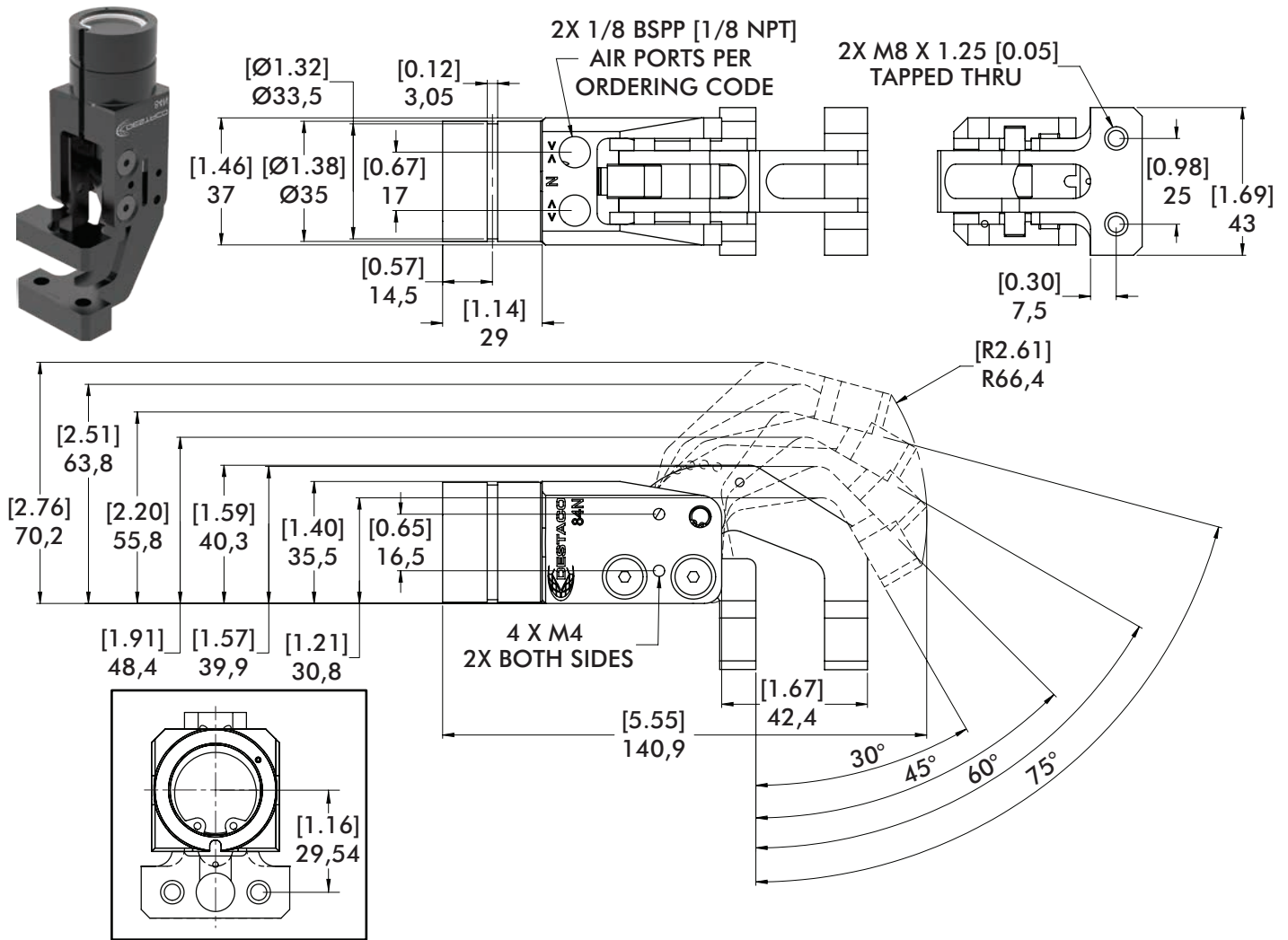
CA/CC/CS Options: Chisel Jaws



84N1 SERIES

Accelerate® Press Shop Sheet Metal Grippers | Dimensions and Ordering Information

PC Option: 90° Jaws



Specifications

Specification	Unit	84N1
Grip Force at 5 bar	N [lbf]	Up to 1000 [225]
Weight (FA jaws - no tips)	Kg [lb]	0.27 [0.6]
Size L x W x H (open)	mm [in]	110 x 43 x 64 [4.33] x [1.69] x [2.52]
Actuation Time	ms	33
Minimum Operating Pressure	bar [psi]	4 [58]
Opening Angles:		
Upper Jaws		30°, 45°, 60°, 75°
Lower Jaws		Fixed
Piston Ø	mm [in]	25 [0.98]
Air Consumption/Cycle	L [in ³]	0,015 [0.92]
Temperature Range	C° [F°]	-35° to 80° [-31° to 176°]

84N2 SERIES

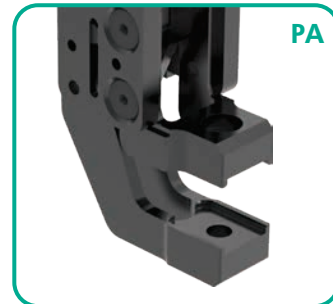
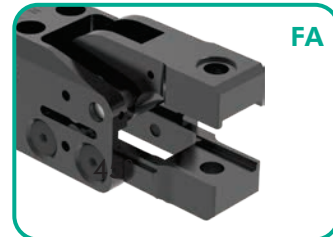
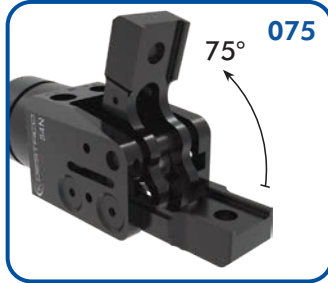
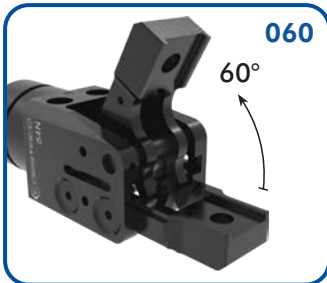
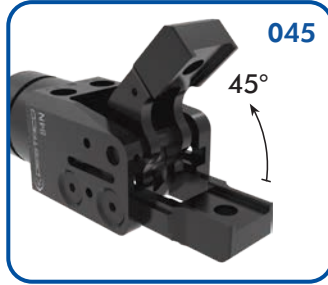
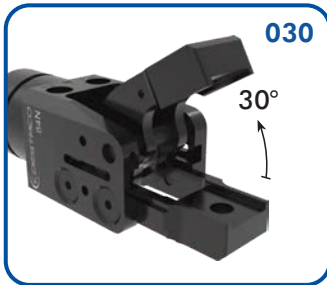
Accelerate® Press Shop Sheet Metal Grippers | Ordering Information



Ports	Description
N	1/8 NPT
G	1/8 BSPP

Opening Angle	Description
030	30° Opening Angle
045	45° Opening Angle
060	60° Opening Angle
075	75° Opening Angle

Jaw Type and Style	Description
FA	Straight Fixed Lower Jaw
PA	90° Jaw Configuration



Specifications: SG-PRG-8

Mounts (sold separately): SG-PRG-19 thru 20

Accessories: SG-PRG-24 thru 28.

In-Jaw Blank Sensing*

Description	0	P	N
None	PNP	NPN	

*In-jaw blank sensing not available with Single Cone Style Tip.



Sheet Stop

Description	0	1
None (for PC option only)	Required (for FA option only)	



Non-Adjustable Jaw Tip Insert Options

0000 None

- or -

Step 1 - Tip Type

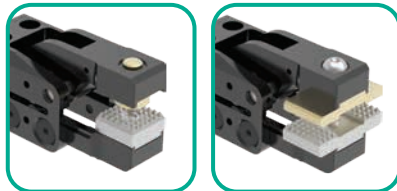
Choose One

2 **C** **S** **3**

1 Single Tip

2 Double Tip*

*Double polyurethane tip style not available.



Step 2 - Upper Jaw Tip Insert

Choose One (see images below)

2 **C** **S** **3**

C Cone Style Tip*

S Serrated Style Tip

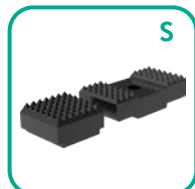
F Flat Style Tip

P Polyurethane

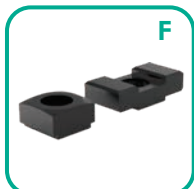
*Single Cone [1Cxx] not compatible with In-Jaw Sensor.



Single or Double Cone Tips (not available for lower jaw)



Single or Double Serrated Tips



Single or Double Flat Tips



Single Polyurethane Tip

Step 3 - Lower Jaw Tip Insert

Choose One (see images below)

2 **C** **S** **3**

S Serrated Style Tip

F Flat Style Tip

S Serrated Style Tip

F Flat Style Tip

S Serrated Style Tip

F Flat Style Tip

P Polyurethane Style Tip (Single Only)

F Flat Style Tip

P Polyurethane Style Tip (Single Only)

Step 4 - Part Thickness Range

Choose One

2 **C** **S** **4**

1 0.5 to 1.1 mm

2 1.1 to 1.7 mm

3 1.7 to 2.3 mm

4 2.3 to 2.9 mm

5 2.9 to 3.5 mm

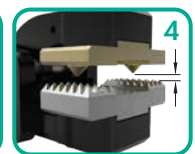
Black-Black

Silver-Black

Silver-Silver

Gold-Silver

Gold-Gold



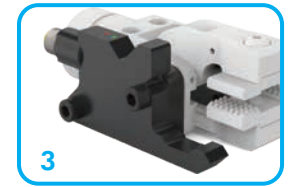
Left Sensor Side Mount*

Description	0	1	2	3
None	Dual Magneto-resistive PNP Sensors Left Side	Dual Magneto-resistive NPN Sensors Left Side	Infrared PNP Sensing (not available for PA jaw style)	

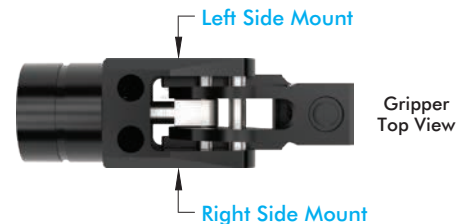
Right Sensor Side Mount*

Description	0	1	2	3
None	Dual Magneto-resistive PNP Sensors Right Side	Dual Magneto-resistive NPN Sensors Right Side	Infrared PNP Sensing (not available for PA jaw style)	

*Use of a Sheet Stop is highly recommended when using 2-Point Sensing.



0.5 mm blank minimum sheet thickness. Side mount option 1 & 2 sensing detects gripper jaw position can be adjusted to sense blank, double, full open, and full closed based on jaw position.

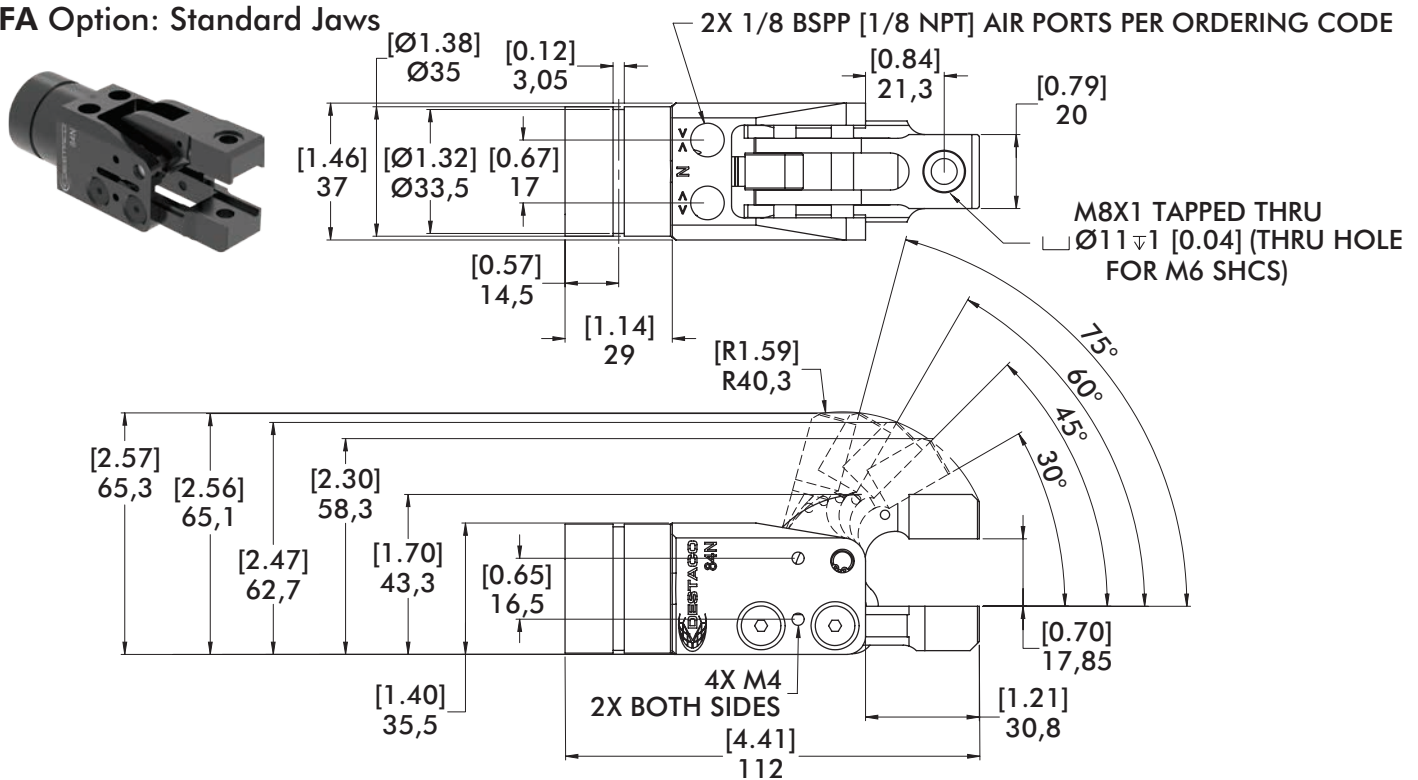


Customer is responsible for final adjustments and tightening of all accessory mounting screws.

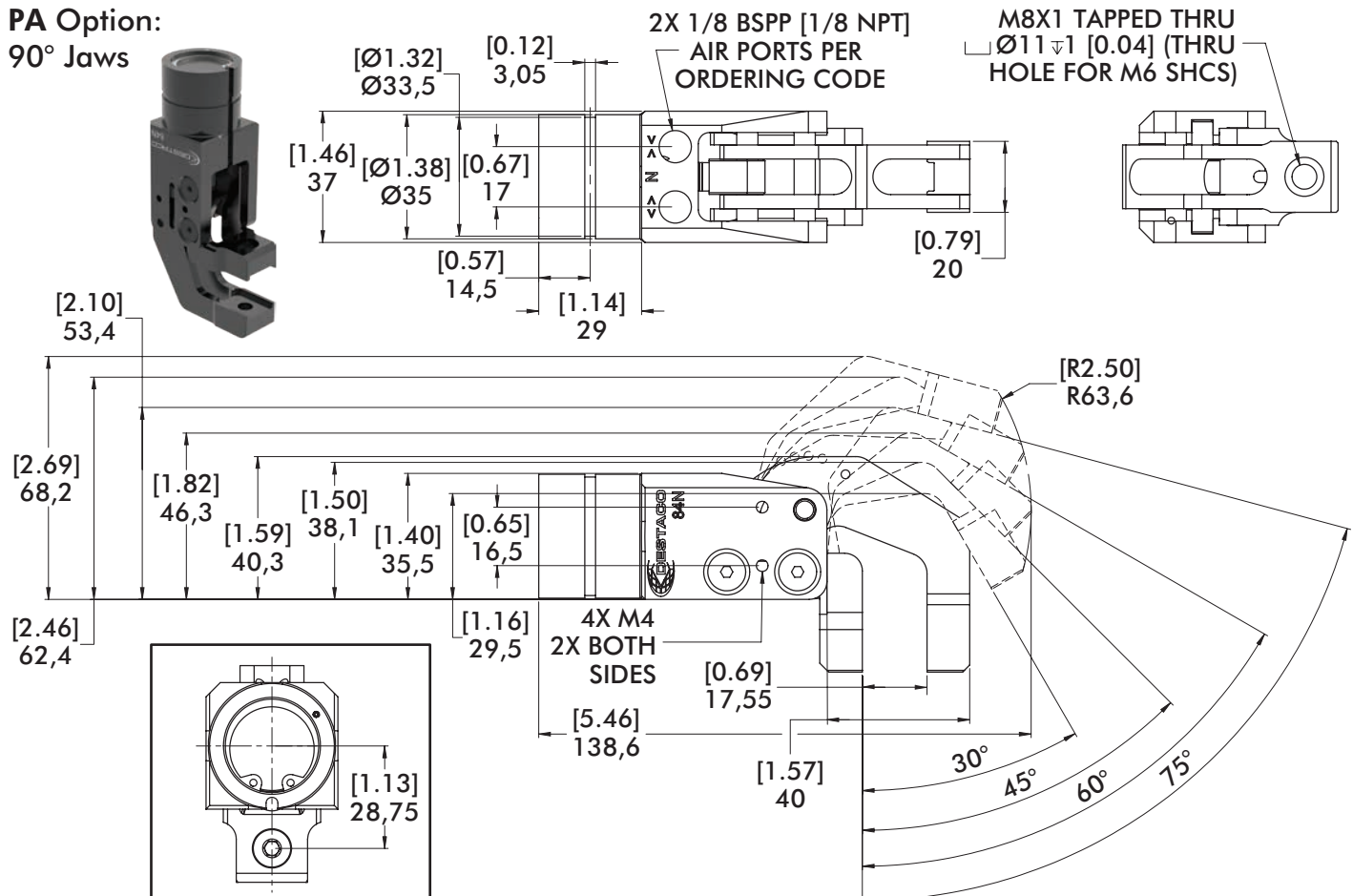
84N2 SERIES

Accelerate® Press Shop Sheet Metal Grippers | Dimensions

FA Option: Standard Jaws



PA Option: 90° Jaws



84N2 SERIES

Accelerate® Press Shop Sheet Metal Grippers | Specifications

Specification	Unit	84N2
Grip Force at 5 bar	N [lbf]	Up to 1000 [225]
Weight (FA jaws - no tips)	Kg [lb]	0.27 [0.6]
Size L x W x H (open)	mm [in]	110 x 43 x 64 [4.33] x [1.69] x [2.52]
Actuation Time	ms	33
Minimum Operating Pressure	bar [psi]	4 [58]
Opening Angles:		
Upper Jaws		30°, 45°, 60°, 75°
Lower Jaws		Fixed
Piston Ø	mm [in]	25 [0.98]
Air Consumption/Cycle	L [in ³]	0,015 [0.92]
Temperature Range	C° [F°]	-35° to 80° [-31° to 176°]

84N5 SERIES (FIXED LOWER JAW)

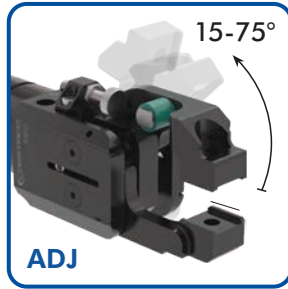
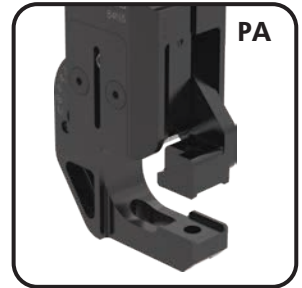
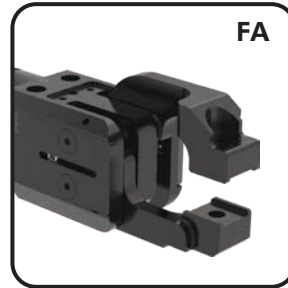
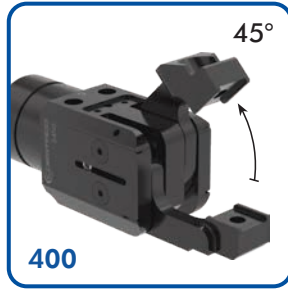
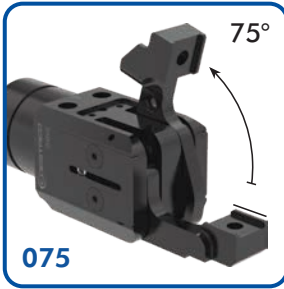
Accelerate® Press Shop Sheet Metal Grippers | Ordering Information

84N5 - G - 400 - FA - 1PF4 - 1 - P - 0 - 1

Ports	Description
N	1/8 NPT
G	1/8 BSPP

Opening Angle	Description
300	30° Opening Angle (FA option only)
400	45° Opening Angle (FA option only)
075	75° Opening Angle
ADJ	15° to 75° Adjustable Opening Angle

Jaw Type and Style	Description
FA	Straight Fixed Lower Jaw
PA	90° Straight Fixed Lower Jaw



Specifications: SG-PRG-16

Mounts (sold separately): SG-PRG-21 thru 22

Accessories: SG-PRG-24 thru 28.



84N5-G-400-FA-1PF4-1-P-01
shown with GT-84N1-32B-A mount.

Covered under one or more U.S./International Patents

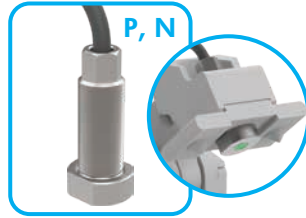
84N5 SERIES (FIXED LOWER JAW)

Accelerate® Press Shop Sheet Metal Grippers | Ordering Information

In-Jaw Blank Sensing*

Description
0 None
P PNP
N NPN

*In-jaw blank sensing not available with Single Cone Style Tip.



Sheet Stop

Description
0 None (PA option only)
1 Required (FA option only)



Non-Adjustable Jaw Tip Insert Options

0000 None

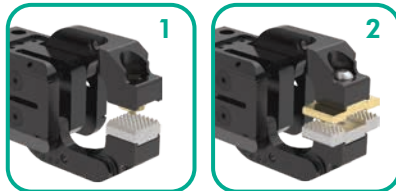
- or -

Step 1 - Tip Type Choose One

2 C S 3

- 1 Single Tip
- 2 Double Tip*

*Double polyurethane tip style not available.



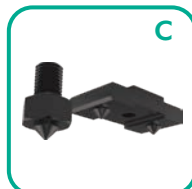
Step 2 - Upper Jaw Tip Insert

Choose One (see images below)

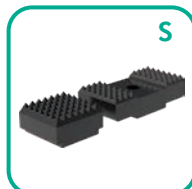
2 C S 3

- C Cone Style Tip*
- S Serrated Style Tip
- F Flat Style Tip
- P Polyurethane

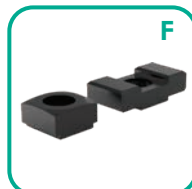
*Single Cone [1Cxx] not compatible with In-Jaw Sensor.



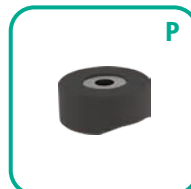
Single or Double Cone Tips (not available for lower jaw)



Single or Double Serrated Tips



Single or Double Flat Tips



Single Polyurethane Tip

Step 3 - Lower Jaw Tip Insert†

Choose One (see images below)

2 C S 3

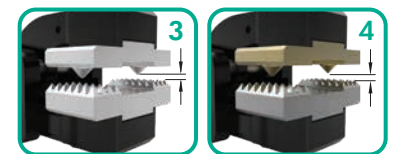
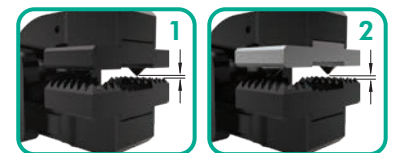
- S Serrated Style Tip
- F Flat Style Tip
- S Serrated Style Tip
- F Flat Style Tip
- S Serrated Style Tip
- F Flat Style Tip
- P Polyurethane Style Tip (Single Only)
- F Flat Style Tip
- P Polyurethane Style Tip (Single Only)

†For Chisel Jaw types SC and DC enter 0 for Lower Jaw Tip Insert.

Step 4 - Part Thickness Range Choose One

2 C S 4

- 1 0.5 to 1.1 mm Black-Black
- 2 1.1 to 1.7 mm Silver-Black
- 3 1.7 to 2.3 mm Silver-Silver
- 4 2.3 to 2.9 mm Gold-Silver
- 5 2.9 to 3.5 mm Gold-Gold



Left Side 2-Point Sensing

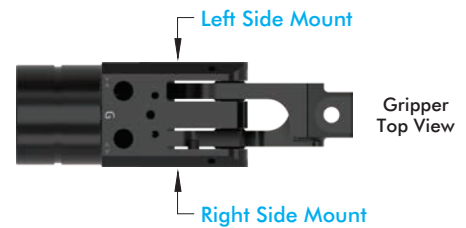
Description
0 None
1 Dual Magneto-Resistive PNP Sensors Left Side
2 Dual Magneto-Resistive NPN Sensors Left Side

Right Side 2-Point Sensing

Description
0 None
1 Dual Magneto-Resistive PNP Sensors Right Side
2 Dual Magneto-Resistive NPN Sensors Right Side



0.5 mm blank minimum sheet thickness. Side mount option 1 & 2 sensing detects gripper jaw position can be adjusted to sense blank, double, full open, and full closed based on jaw position.



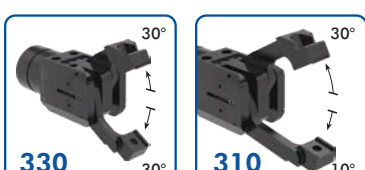
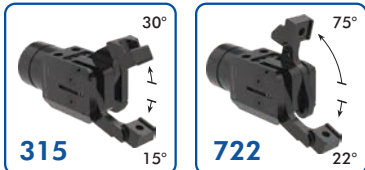
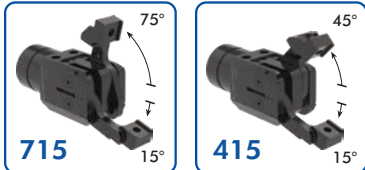
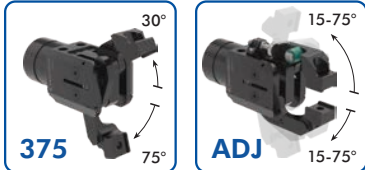
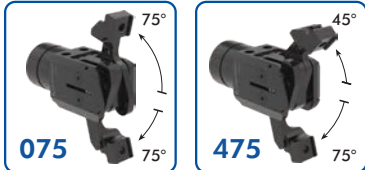
Customer is responsible for final adjustments and tightening of all accessory mounting screws.

84N5 SERIES (MOVEABLE LOWER JAWS)

Accelerate® Press Shop Sheet Metal Grippers | Ordering Information

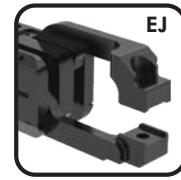
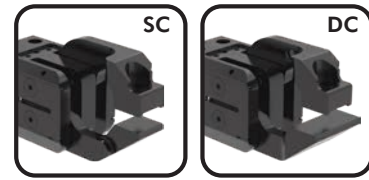
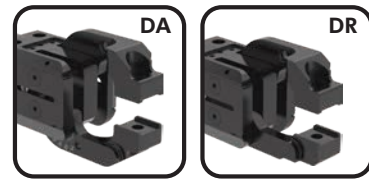
84N5 - G - ADJ - DA - 2CS4 - 1 - P - 0 1

Ports	Description
N	1/8 NPT
G	1/8 BSPP



Opening Angle	Upper Jaw	Lower Jaw	For Jaw Type
375	30°	75°	DA
475	45°	75°	DA
075	75°	75°	DA
ADJ	15-75°	15-75°	DA
315	30°	15°	DR, SC, DC
415	45°	15°	DR, SC, DC
715	75°	15°	DR, SC, DC
322	30°	22°	DR, SC, DC
422	45°	22°	DR, SC, DC
722	75°	22°	DR, SC, DC
330	30°	30°	DR, SC, DC
430	45°	30°	DR, SC, DC
730	75°	30°	DR, SC, DC
310	30°	10°	EJ

Jaw Type and Style	Description
DA	Double Open Jaws
DR	Drop Jaw
SC	Single Chisel Jaw
DC	Double Chisel Jaw
EJ	Extended Jaw



Specifications: SG-PRG-16

Mounts (sold separately): SG-PRG-21 thru 22

Accessories: SG-PRG-24 thru 28.

84N5-G-ADJ-DA-2CS4-1-P-01 shown with GT-84N-GPC-25MS-A mount.



Covered under one or more U.S./International Patents

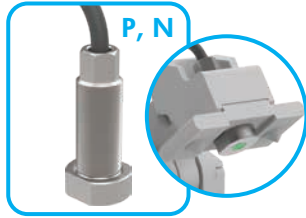
84N5 SERIES (MOVEABLE LOWER JAWS)

Accelerate® Press Shop Sheet Metal Grippers | Ordering Information

In-Jaw Blank Sensing*

Description
0 None
P PNP
N NPN

*In-jaw blank sensing not available with Single Cone Style Tip.



Sheet Stop

Description
1 Required



Non-Adjustable Jaw Tip Insert Options

0000 None

- or -

Step 1 - Tip Type*

- Choose One
- 2** **C** **S** **3**
- 1 Single Tip
 - 2 Double Tip



*Single Tip not compatible with Double Chisel Jaw type option DC.
Double polyurethane tip style not available.

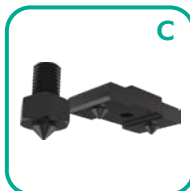
Step 2 - Upper Jaw Tip Insert

Choose One (see images below)

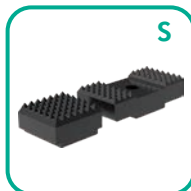
- 2** **C** **S** **3**

- C** Cone Style Tip*
- S** Serrated Style Tip
- F** Flat Style Tip
- P** Polyurethane

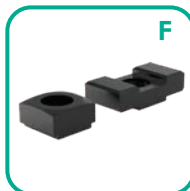
*Single Cone [1Cxx] not compatible with In-Jaw Sensor.



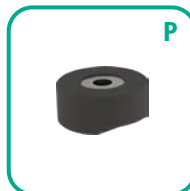
Single or Double Cone Tips (not available for lower jaw)



Single or Double Serrated Tips



Single or Double Flat Tips



Single Polyurethane Tip

Step 3 - Lower Jaw Tip Insert†

Choose One (see images below)

- 2** **C** **S** **3**

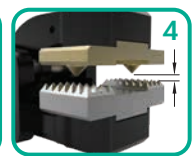
- S** Serrated Style Tip
- F** Flat Style Tip
- S** Serrated Style Tip
- F** Flat Style Tip
- S** Serrated Style Tip
- F** Flat Style Tip
- P** Polyurethane Style Tip (Single Only)
- F** Flat Style Tip
- P** Polyurethane Style Tip (Single Only)

†For Chisel Jaw types SC and DC enter 0 for Lower Jaw Tip Insert.

Step 4 - Part Thickness Range Choose One

- 2** **C** **S** **4**

- 1 0.5 to 1.1 mm Black-Black
- 2 1.1 to 1.7 mm Silver-Black
- 3 1.7 to 2.3 mm Silver-Silver
- 4 2.3 to 2.9 mm Gold-Silver
- 5 2.9 to 3.5 mm Gold-Gold



Left Side 2-Point Sensing

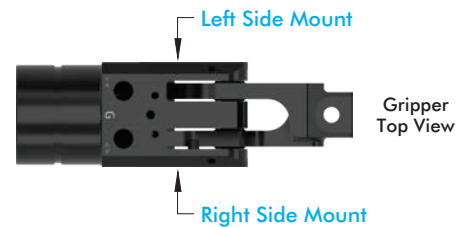
Description
0 None
1 Dual Magneto-Resistive PNP Sensors Left Side
2 Dual Magneto-Resistive NPN Sensors Left Side

Right Side 2-Point Sensing

Description
0 None
1 Dual Magneto-Resistive PNP Sensors Right Side
2 Dual Magneto-Resistive NPN Sensors Right Side



0.5 mm blank minimum sheet thickness. Side mount option 1 & 2 sensing detects gripper jaw position can be adjusted to sense blank, double, full open, and full closed based on jaw position.

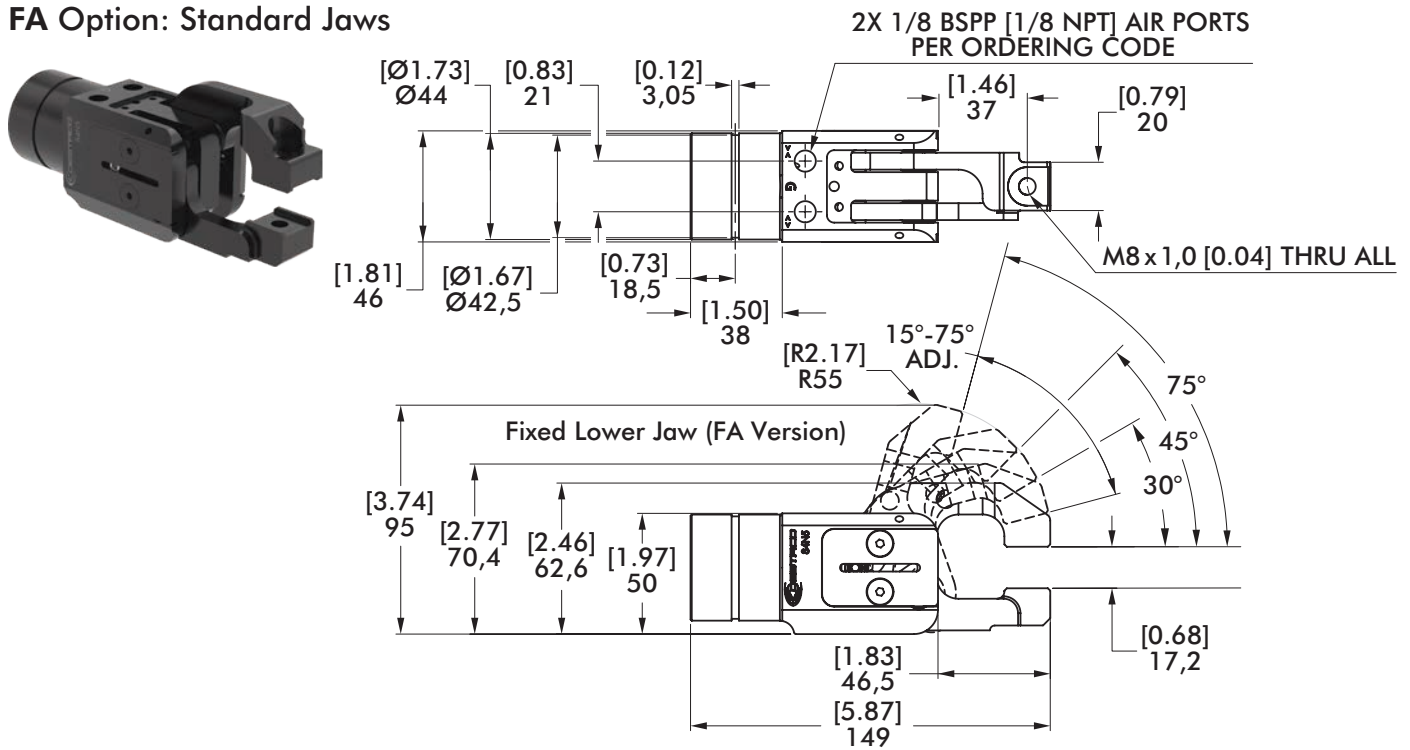


Customer is responsible for final adjustments and tightening of all accessory mounting screws.

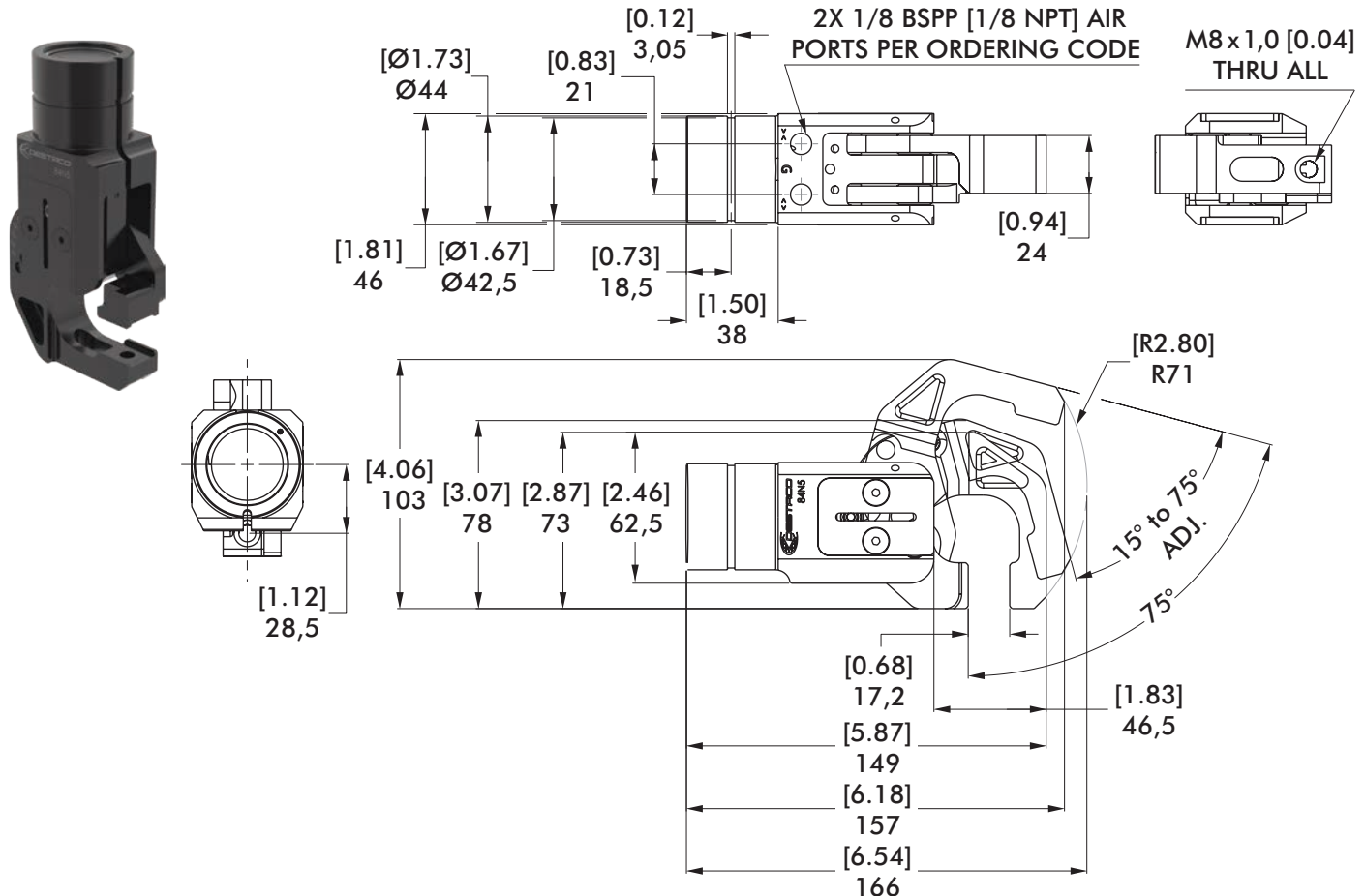
84N5 SERIES (FIXED LOWER JAW)

Accelerate® Press Shop Sheet Metal Grippers | Dimensions

FA Option: Standard Jaws



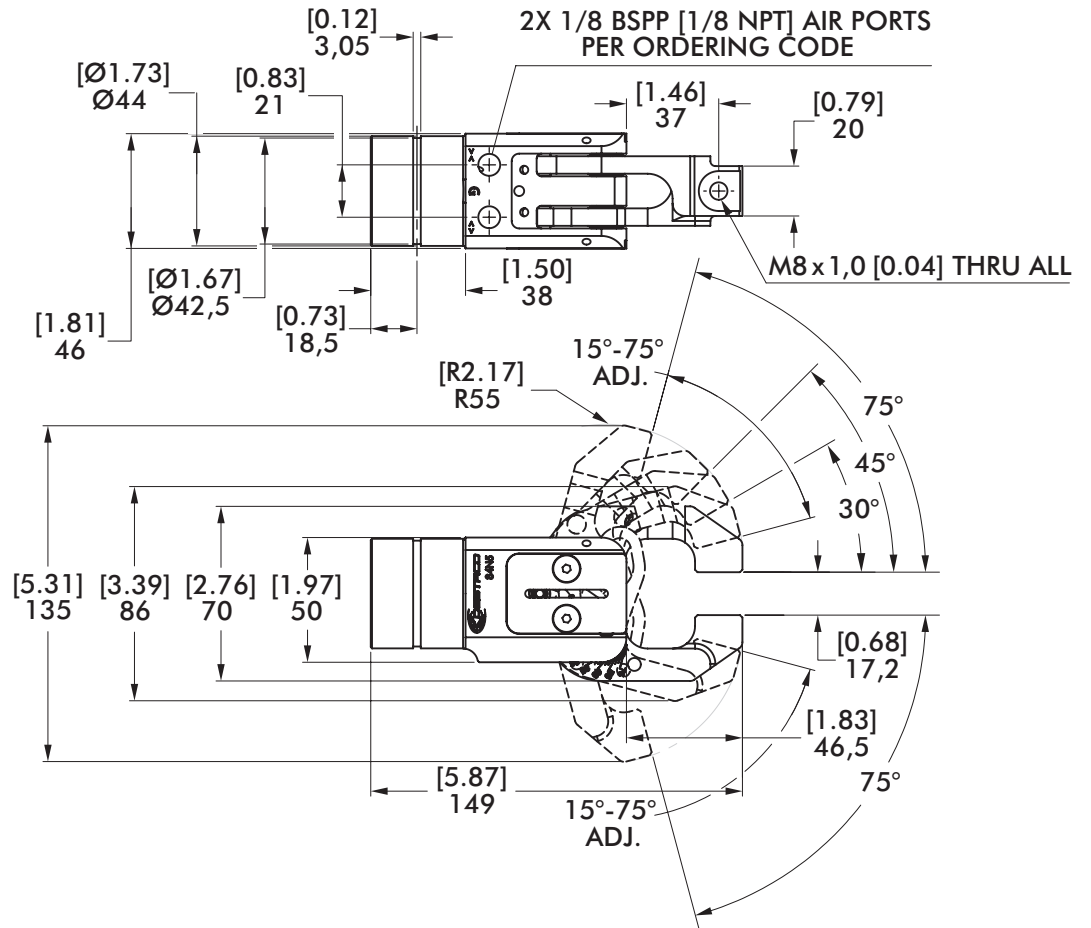
PA Option: 90° Straight Fixed Lower Jaw



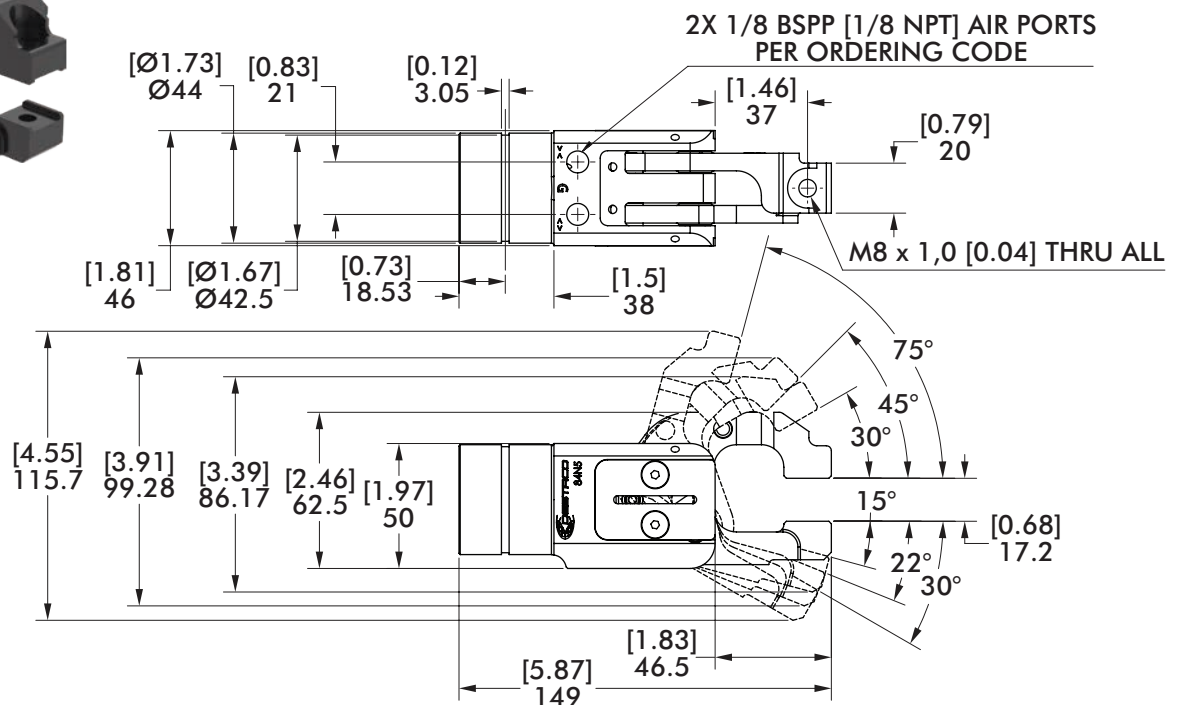
84N5 SERIES (MOVEABLE LOWER JAWS)

Accelerate® Press Shop Sheet Metal Grippers | Dimensions

DA Option: Moveable Double Open Jaws



DR Option: Moveable Lower Drop Jaw



84N5 SERIES (MOVEABLE LOWER JAWS)

Accelerate® Press Shop Sheet Metal Grippers | Dimensions

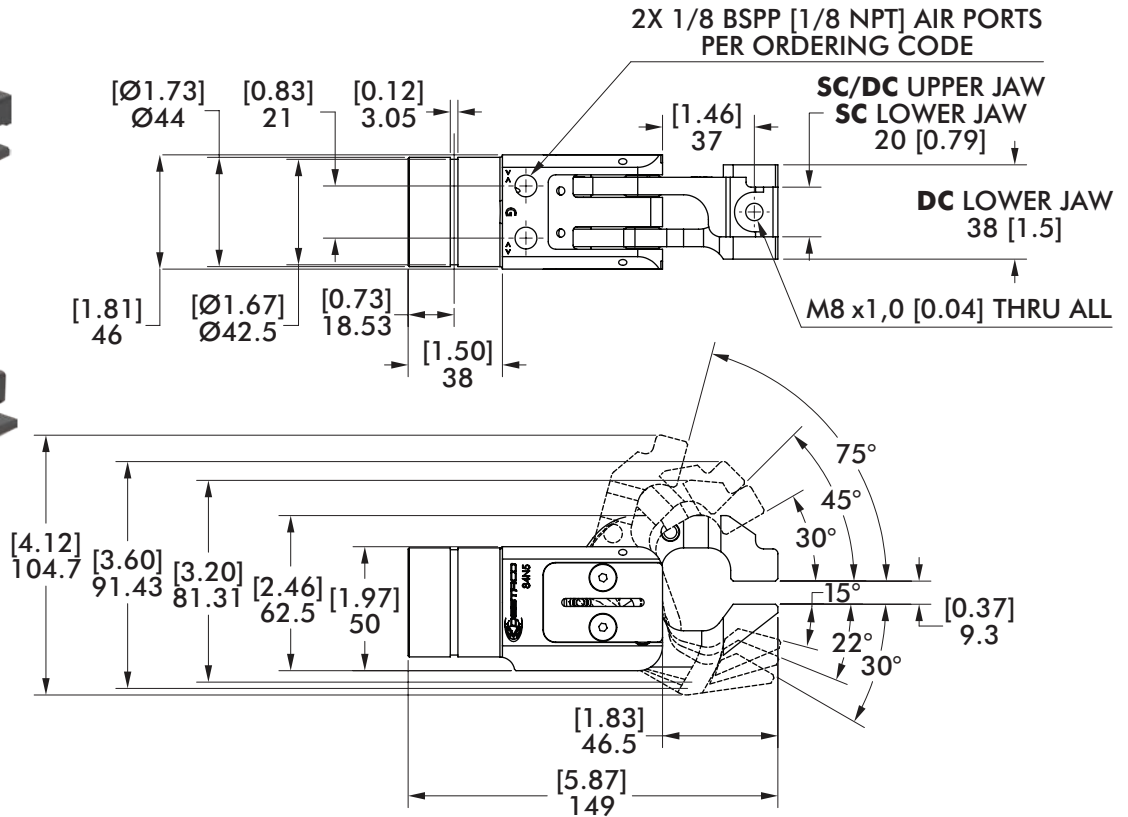
SC/DC Option: Moveable Single/Double Chisel Lower Jaw



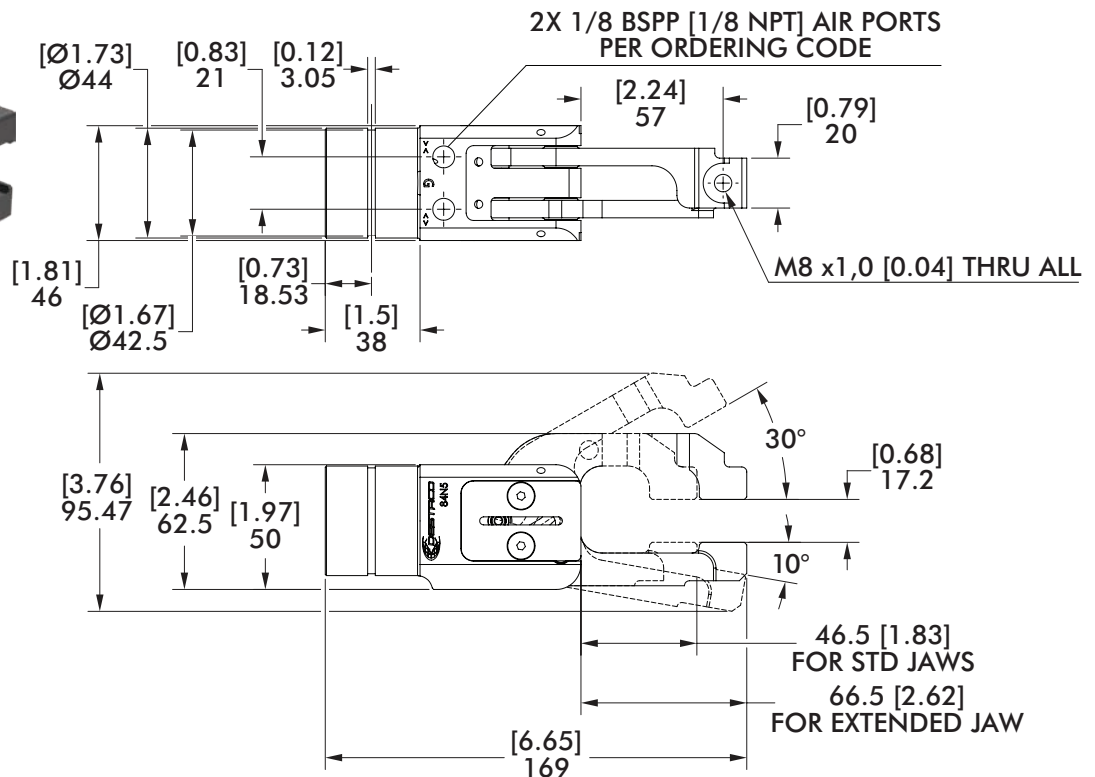
SC Single Chisel



DC Double Chisel



EJ Option: Moveable Extended Lower Jaw



84N5 SPECIFICATIONS/FIXED LOWER JAWS KITS

Accelerate® Press Shop Sheet Metal Grippers | Specifications and Ordering Information

Specifications

Specification	Unit	84N5
Grip Force at 5 bar	N [lbf]	up to 1200 [270]
Weight (FA jaws - no tips)	Kg [lb]	0,68 [1.50]
Size L x W x H (Open)	mm [in]	149 x 46 x 95 [5.87] x [1.81] x [3.74]
Actuation Time	ms	70
Minimum Operating Pressure	bar [psi]	4 [58]
Opening Angles:		
Upper Jaws		30°, 45°, 75°, ADJ (15°-75°)
Lower Jaws		10°, 15°, 22°, 30°, 75°, ADJ (15°-75°)
Piston Ø	mm [in]	32 [1.26]
Air Consumption/Cycle	L [in3]	0,036 [2.20]
Temperature Range	C° [F°]	-35° to 80° [-31° to 176]

Fixed Lower Jaw Replacement Kits

All kits include 2 jaws, 2 pivot pins, 2 cam follower bushings, 1 cam follower and 4 flat head cap screws.



Straight Fixed Lower Jaw		Part #
Upper Jaw	Lower Jaw	
30°	0°	84N5-300-FA-KIT
45°	0°	84N5-400-FA-KIT
75°	0°	84N5-FA-KIT

90° Straight Fixed Lower Jaw		Part #
Upper Jaw	Lower Jaw	
75°	0°	84N5-PA-KIT

84N5 MOVEABLE LOWER JAWS KITS

Accelerate® Press Shop Sheet Metal Grippers | Ordering Information

Moveable Lower Jaw Replacement Kits

All kits include 2 jaws, 2 pivot pins, 2 cam follower bushings, 1 cam follower and 4 flat head cap screws.



Double Open Jaw Part

Upper Jaw	Lower Jaw	Part #
30°	75°	84N5-375-DA-KIT
45°	75°	84N5-475-DA-KIT
75°	75°	84N5-DA-KIT



Extended Drop Jaw Part

Upper Jaw	Lower Jaw	Part #
30°	10°	84N5-310-EJ-KIT



Single Chisel Jaw Part

Upper Jaw	Lower Jaw	Part #
30°	15°	84N5-315-SC-KIT
30°	22°	84N5-322-SC-KIT
30°	30°	84N5-330-SC-KIT
45°	15°	84N5-415-SC-KIT
45°	22°	84N5-422-SC-KIT
45°	30°	84N5-430-SC-KIT
75°	15°	84N5-715-SC-KIT
75°	22°	84N5-722-SC-KIT
75°	30°	84N5-730-SC-KIT



Double Chisel Jaw Part

Upper Jaw	Lower Jaw	Part #
30°	15°	84N5-315-DC-KIT
30°	22°	84N5-322-DC-KIT
30°	30°	84N5-330-DC-KIT
45°	15°	84N5-415-DC-KIT
45°	22°	84N5-422-DC-KIT
45°	30°	84N5-430-DC-KIT
75°	15°	84N5-715-DC-KIT
75°	22°	84N5-722-DC-KIT
75°	30°	84N5-730-DC-KIT

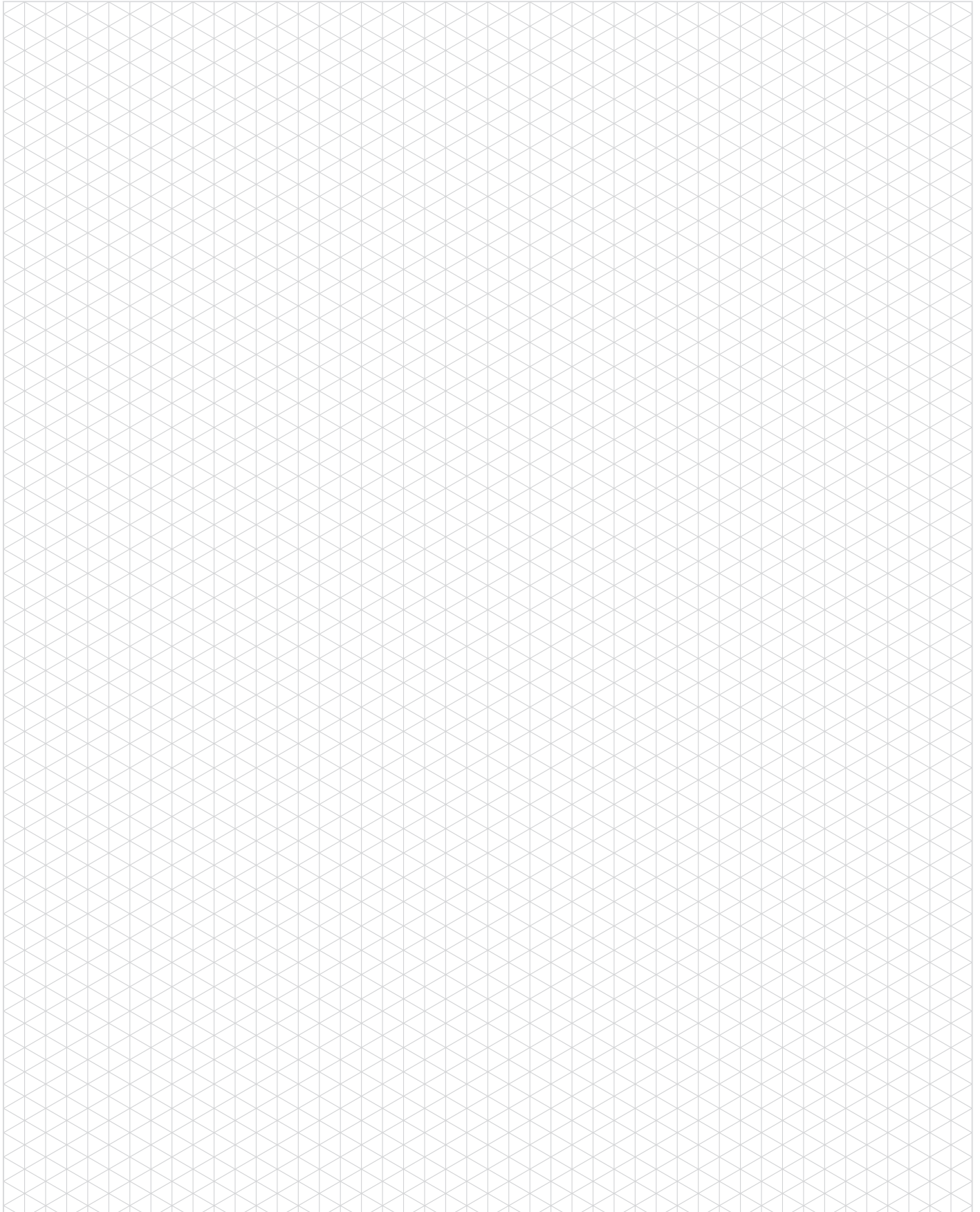


Drop Jaw Part

Upper Jaw	Lower Jaw	Part #
30°	15°	84N5-315-DR-KIT
30°	22°	84N5-322-DR-KIT
30°	30°	84N5-330-DR-KIT
45°	15°	84N5-415-DR-KIT
45°	22°	84N5-422-DR-KIT
45°	30°	84N5-430-DR-KIT
75°	15°	84N5-715-DR-KIT
75°	22°	84N5-722-DR-KIT
75°	30°	84N5-730-DR-KIT

84N5 SHEET METAL GRIPPER

Notes



84N1, 84N2 MOUNTS

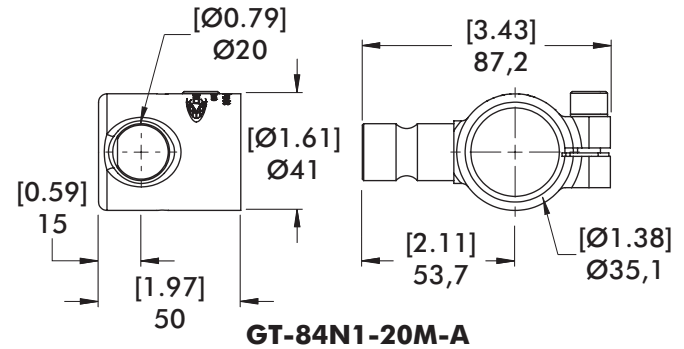
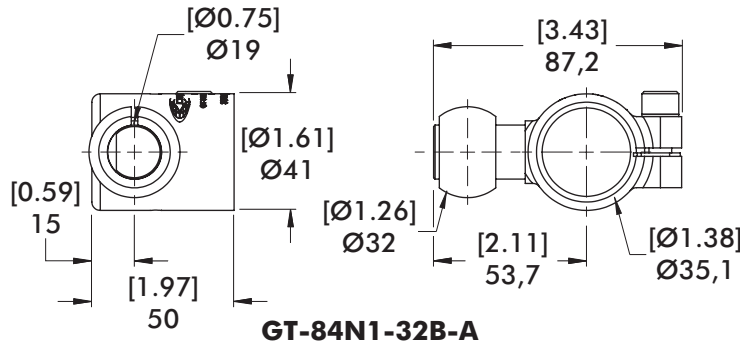
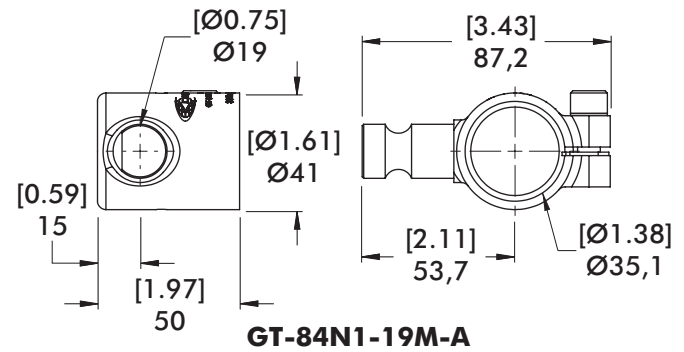
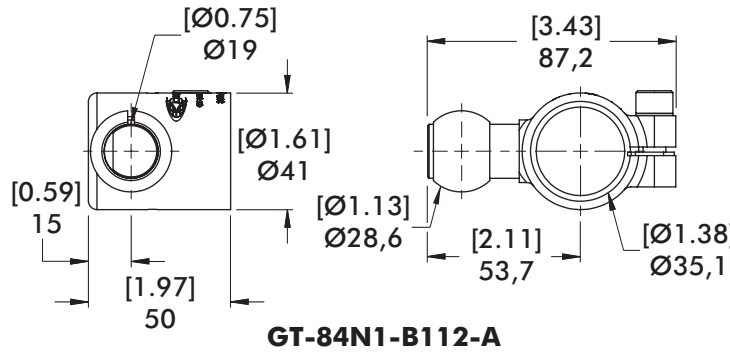
Accelerate® Press Shop Sheet Metal Grippers | Dimensions and Ordering Information

Side Ball and Apple Core Mounts

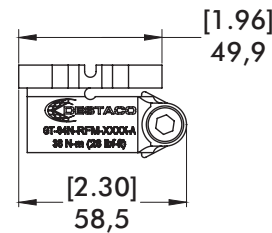
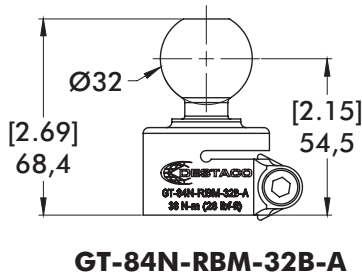
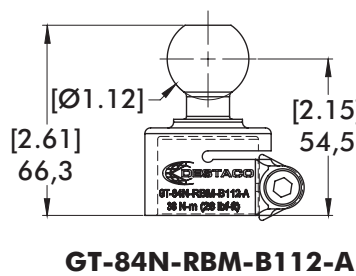
Side Ball



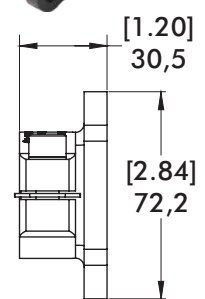
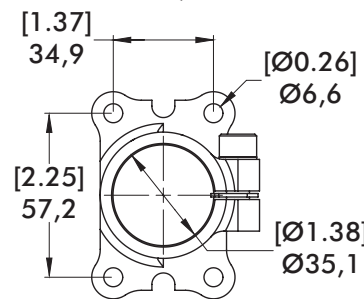
Apple Core



Rear Ball and Flange Mounts



Rear Flange



Rear Ball

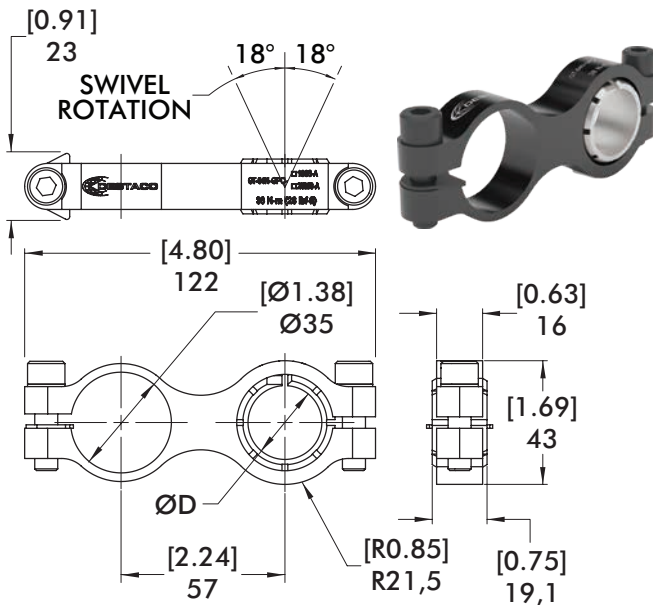


Side Ball and Apple Core	Part #	Rear Ball and Flange	Part #
1.125 in. (28.5mm) Side Ball	GT-84N1-B112-A	1.125 in. (28.5mm) Rear Ball	GT-84N-RBM-B112-A
32mm Side Ball	GT-84N1-32B-A	32mm Rear Ball	GT-84N-RBM-32B-A
19mm Applecore	GT-84N1-19M-A	Rear Flange	GT-84N-RFM-2213-A
20mm Applecore	GT-84N1-20M-A		

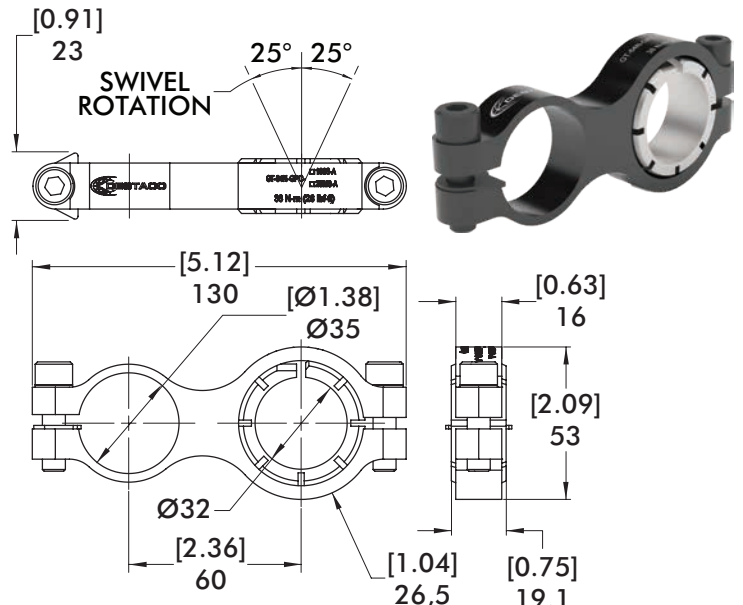
84N1, 84N2 MOUNTS

Accelerate® Press Shop Sheet Metal Grippers | Dimensions and Ordering Information

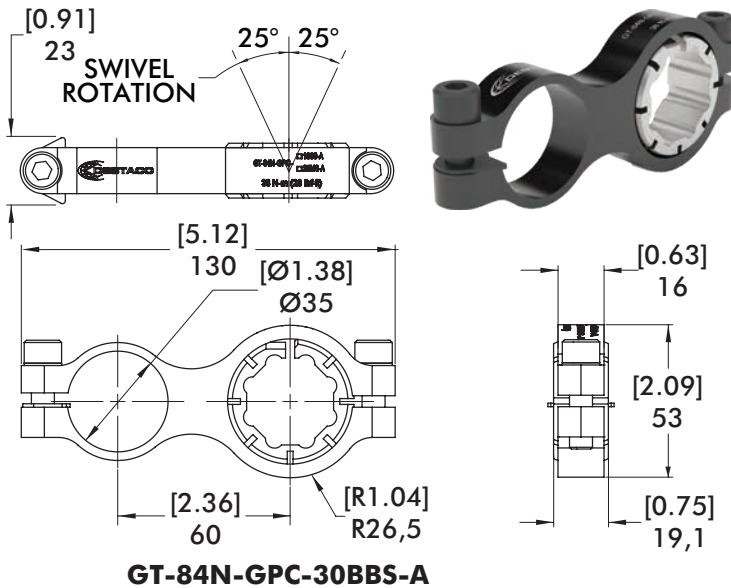
Parallel Swivel Mounts



ØD=1.00 in. **GT-84N-GPC-100S-A**
 ØD=25mm **GT-84N-GPC-25MS-A**



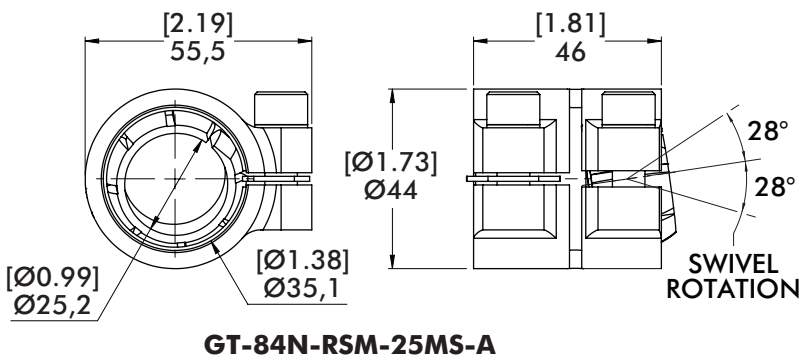
GT-84N-GPC-125S-A



GT-84N-GPC-30BBS-A

Parallel Swivel Mount	Part #
1 in. Swivel Mount	GT-84N-GPC-100S-A
1-1/4 in. Swivel Mount	GT-84N-GPC-125S-A
25mm Swivel Mount	GT-84N-GPC-25MS-A
30mm Body Builder Swivel Mount	GT-84N-GPC-30BBS-A

Rear Swivel Mount



GT-84N-RSM-25MS-A



Rear Swivel Mount	Part #
25mm Swivel Mount	GT-84N-RSM-25MS-A

84N5 MOUNTS

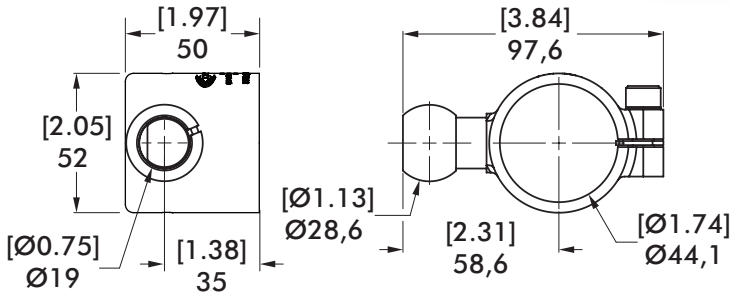
Accelerate® Press Shop Sheet Metal Grippers | Dimensions and Ordering Information

Side Ball and Apple Core Gripper Mounts

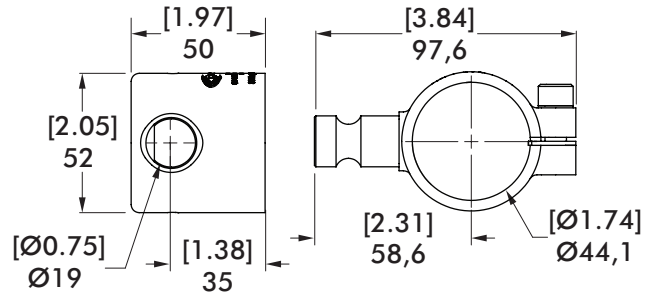
Side Ball



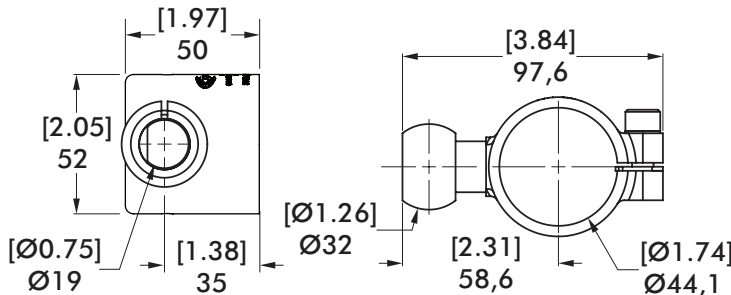
Apple Core



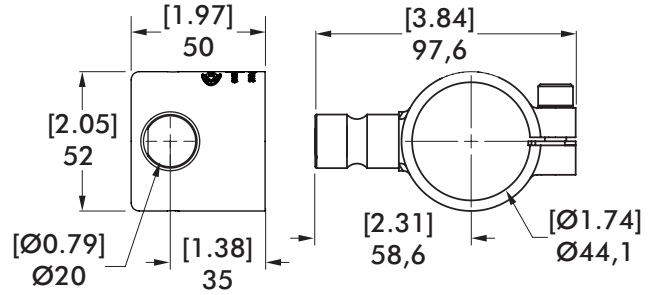
GT-84N5-B112-A



GT-84N5-19M-A

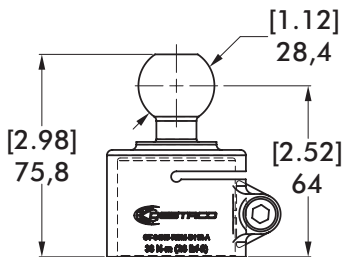


GT-84N5-32B-A

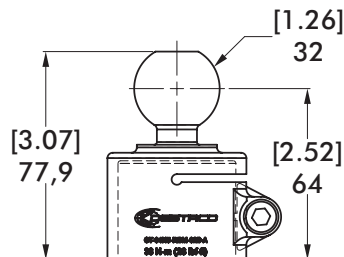


GT-84N5-20M-A

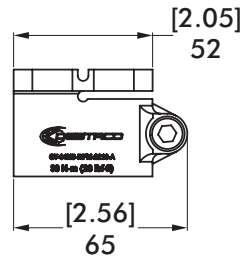
Rear Ball and Flange Gripper Mounts



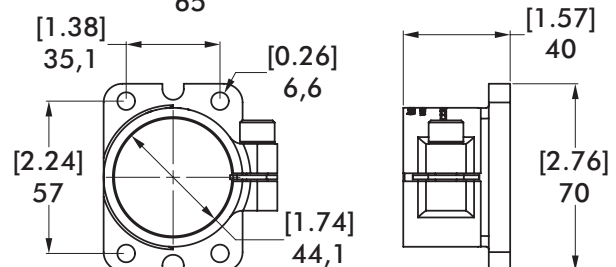
GT-84N5-RBM-B112-A



GT-84N5-RBM-32B-A

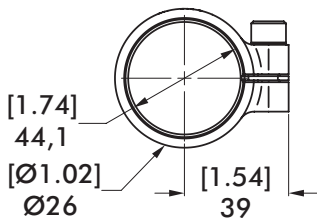


Rear Flange



GT-84N5-RFM-2213-A

Rear Ball



Side Ball and Apple Core

Part

- 1.125 in. (28.5mm) Side Ball
- 32mm Side Ball
- 19mm Applecore
- 20mm Applecore

- GT-84N5-B112-A
- GT-84N5-32B-A
- GT-84N5-19M-A
- GT-84N5-20M-A

Rear Ball and Flange

Part

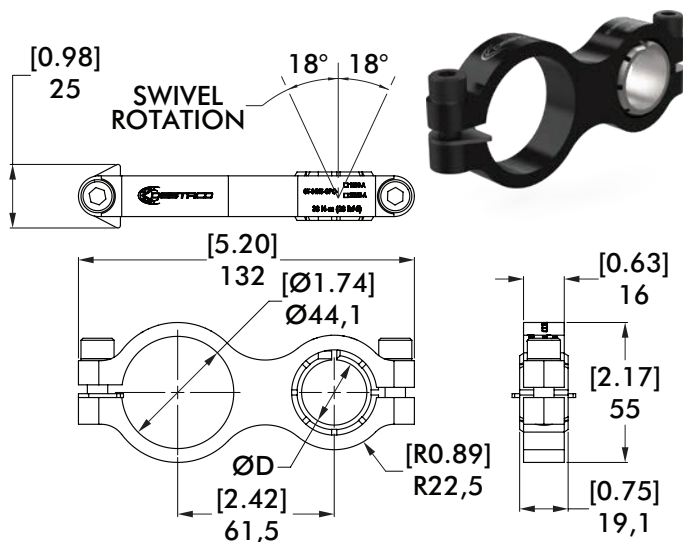
- 1.125 in. (28.5mm) Rear Ball
- 32mm Rear Ball
- Rear Flange

- GT-84N5-RBM-B112-A
- GT-84N5-RBM-32B-A
- GT-84N5-RFM-2213-A

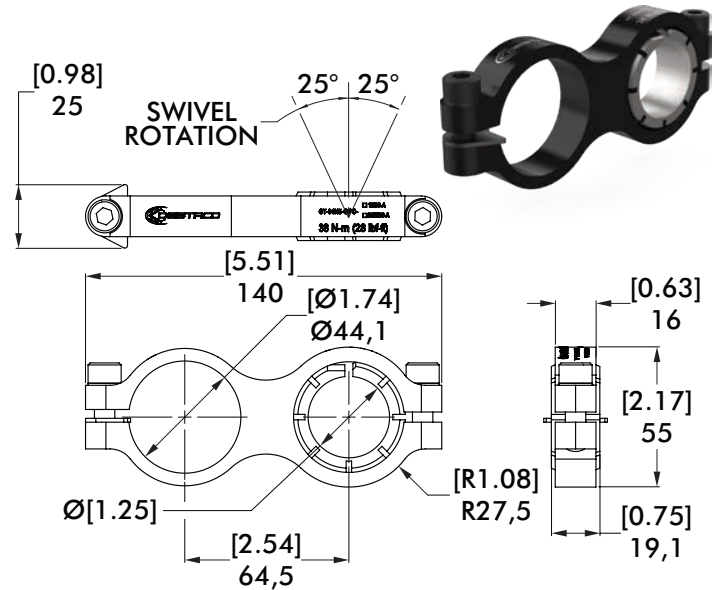
84N5 MOUNTS

Accelerate® Press Shop Sheet Metal Grippers | Dimensions and Ordering Information

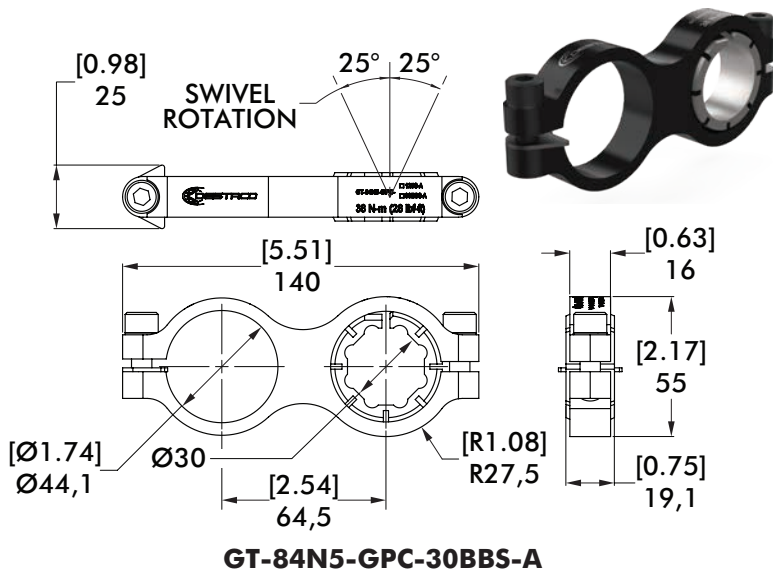
Parallel Swivel Gripper Mount



ØD= 1.00 in. **GT-84N5-GPC-100S-A**
 ØD= 25mm. **GT-84N5-GPC-25MS-A**



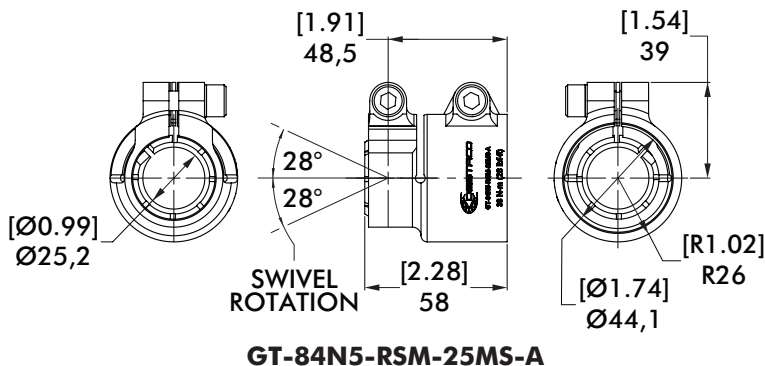
GT-84N5-GPC-125S-A



GT-84N5-GPC-30BBS-A

Parallel Swivel Mounts	Part #
1" Swivel Mount	GT-84N5-GPC-100S-A
1-1/4" Swivel Mount	GT-84N5-GPC-125S-A
25mm Swivel Mount	GT-84N5-GPC-25MS-A
30mm Body Builder Swivel Mount	GT-84N5-GPC-30BBS-A

Rear Clamp Swivel Mount



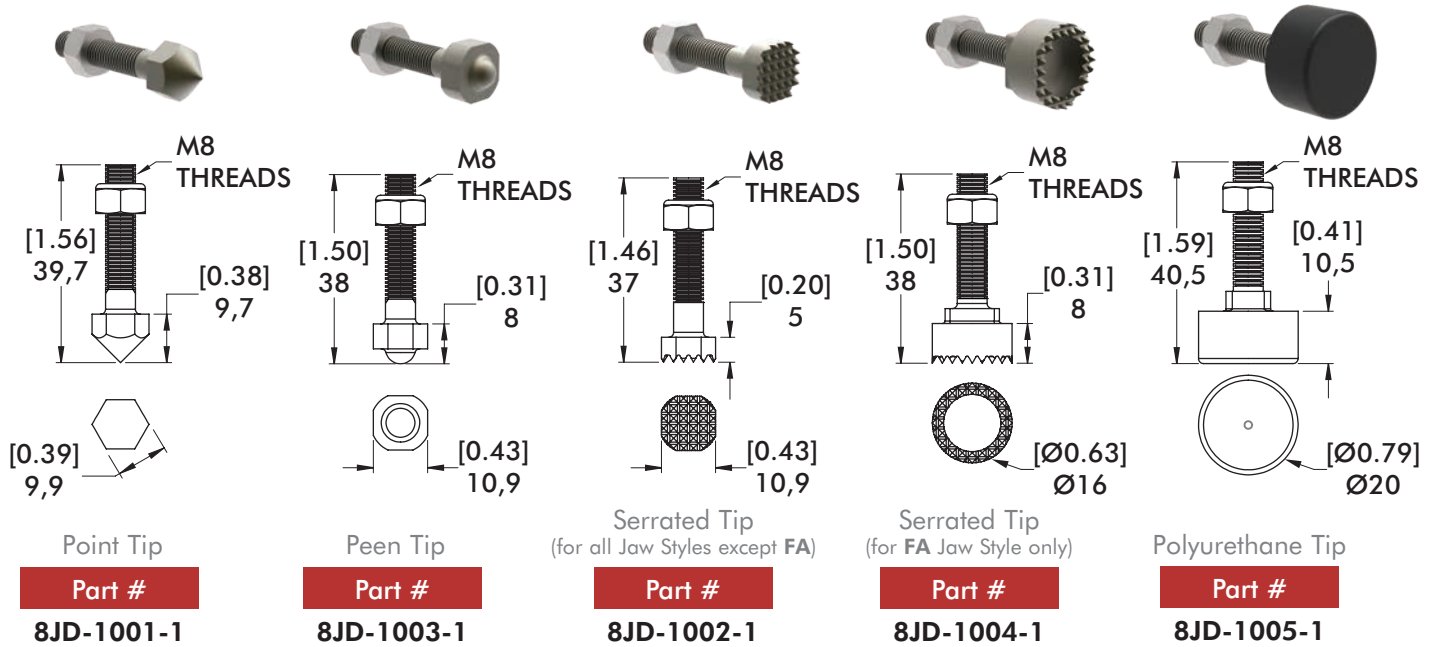
GT-84N5-RSM-25MS-A



Rear Swivel Mount	Part #
25mm Swivel Mount	GT-84N5-RSM-25MS-A

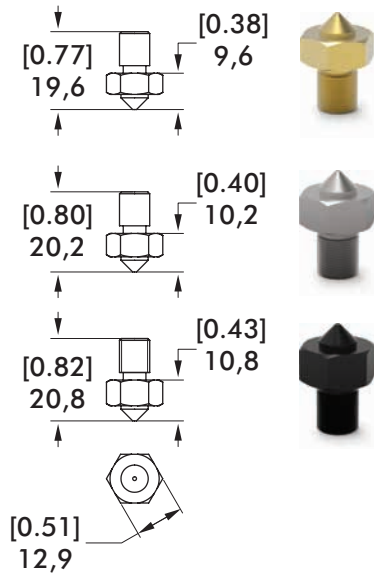
84N1 SINGLE TIPS

Accelerate® Press Shop Sheet Metal Grippers | Dimensions and Ordering Information

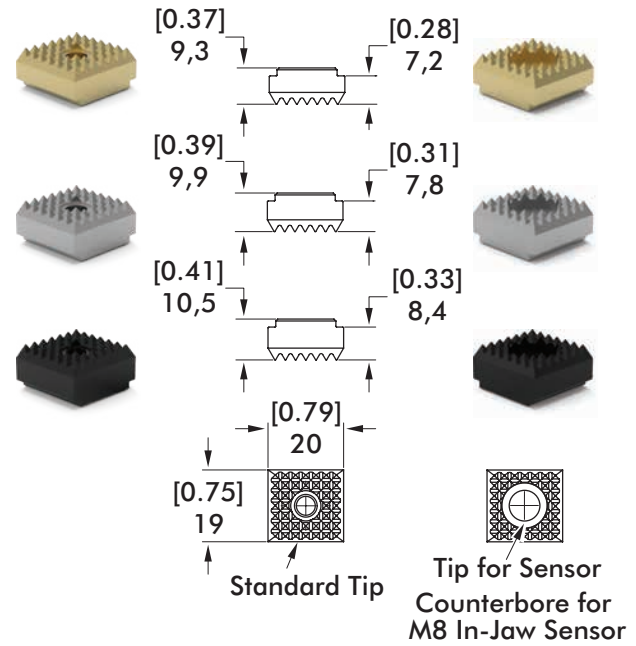


84N2, 84N5 SINGLE TIPS

Accelerate® Press Shop Sheet Metal Grippers | Dimensions and Ordering Information

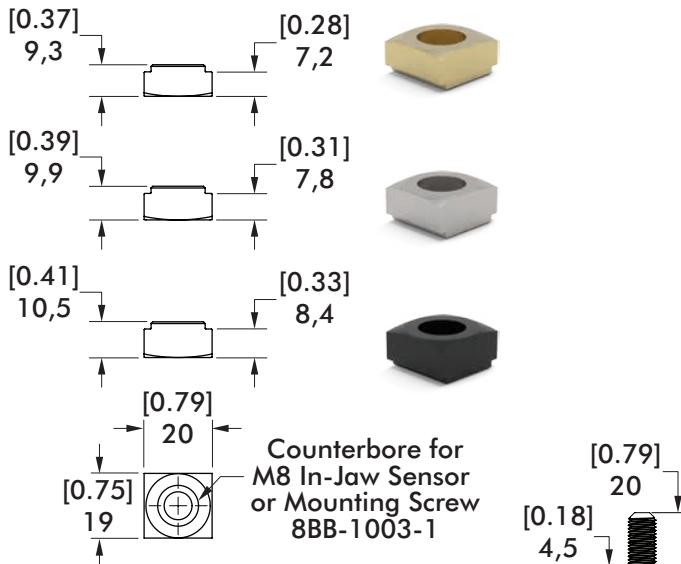


Single Cone	Part #
Gold	8JD-1013-1
Silver	8JD-1012-1
Black	8JD-1011-1

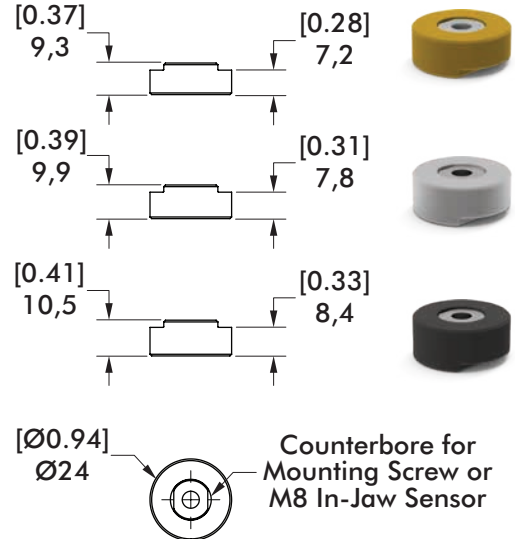
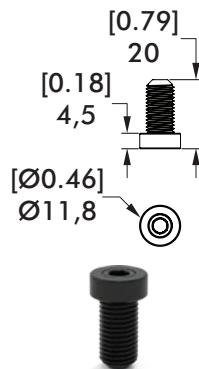


Single Serrated	Standard Tip	Tip for Sensor
Gold	8JD-1019-1	8JD-1028-1
Silver*	8JD-1018-1	8JD-1027-1
Black*	8JD-1017-1	8JD-1026-1

*Includes optional shims for use with SC and DC chisel jaw options.



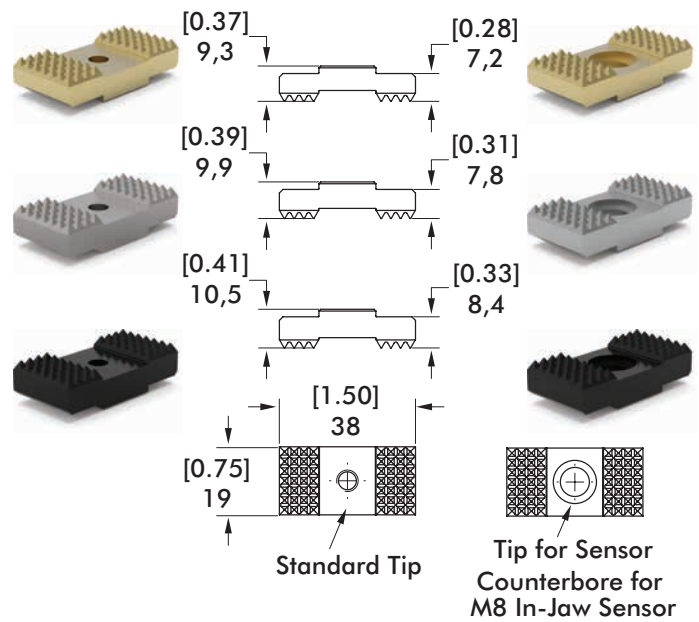
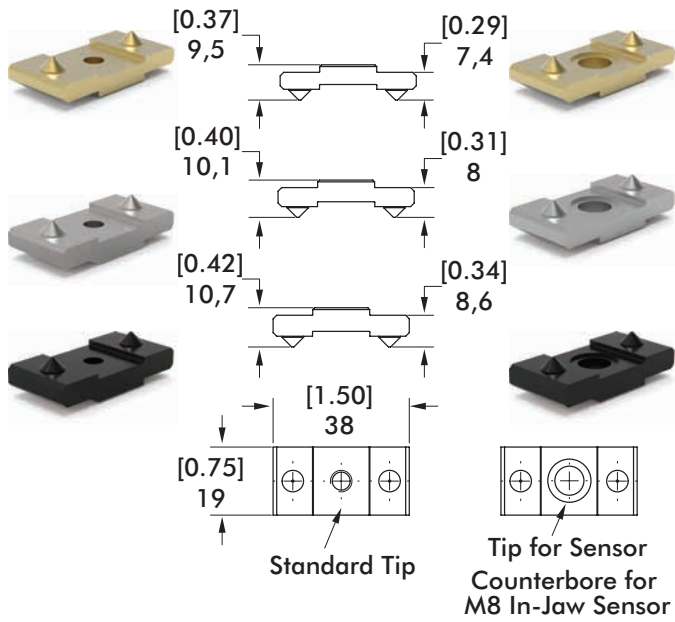
Single Flat	Part #
Gold	8JD-1039-1
Silver	8JD-1038-1
Black	8JD-1037-1
Mounting Screw	8BB-1003-1



Single Polyurethane	Part #
Gold	8JD-1042-1
Silver	8JD-1041-1
Black	8JD-1040-1

84N2, 84N5 DOUBLE TIPS

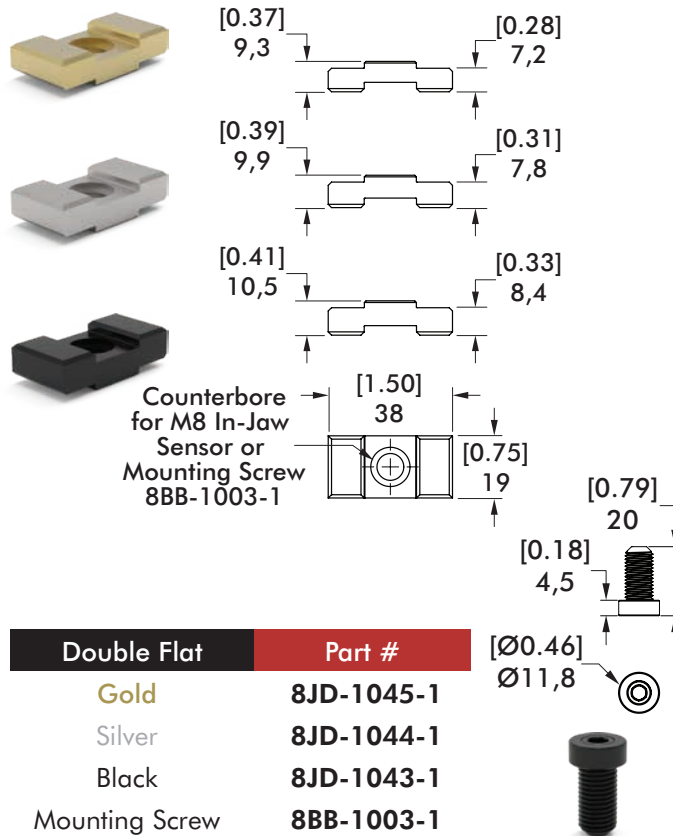
Accelerate® Press Shop Sheet Metal Grippers | Dimensions and Ordering Information



Double Cone	Standard Tip	Tip for Sensor
Gold	8JD-1016-1	8JD-1025-1
Silver	8JD-1015-1	8JD-1024-1
Black	8JD-1014-1	8JD-1023-1

Double Serrated	Standard Tip	Tip for Sensor
Gold	8JD-1022-1	8JD-1036-1
Silver*	8JD-1021-1	8JD-1035-1
Black*	8JD-1020-1	8JD-1034-1

*Includes optional shims for use with SC and DC chisel jaw options.

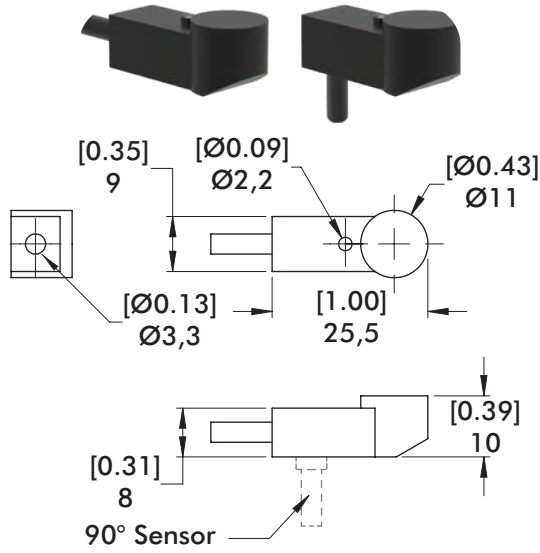


Double Flat	Part #
Gold	8JD-1045-1
Silver	8JD-1044-1
Black	8JD-1043-1
Mounting Screw	8BB-1003-1

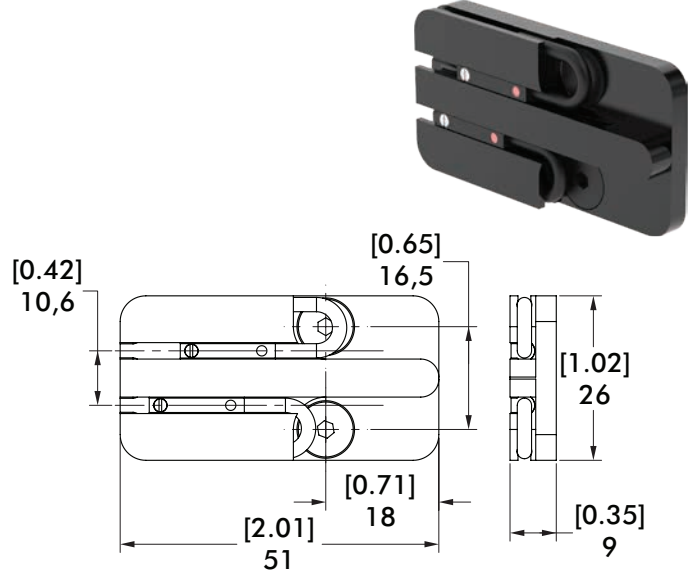
84N1, 84N2 SENSING OPTIONS

Accelerate® Press Shop Sheet Metal Grippers | Dimensions and Ordering Information

Jaw Part Present Sensor (84N1 only)



2-Point Side Mount Sensing (84N1, 84N2 only)



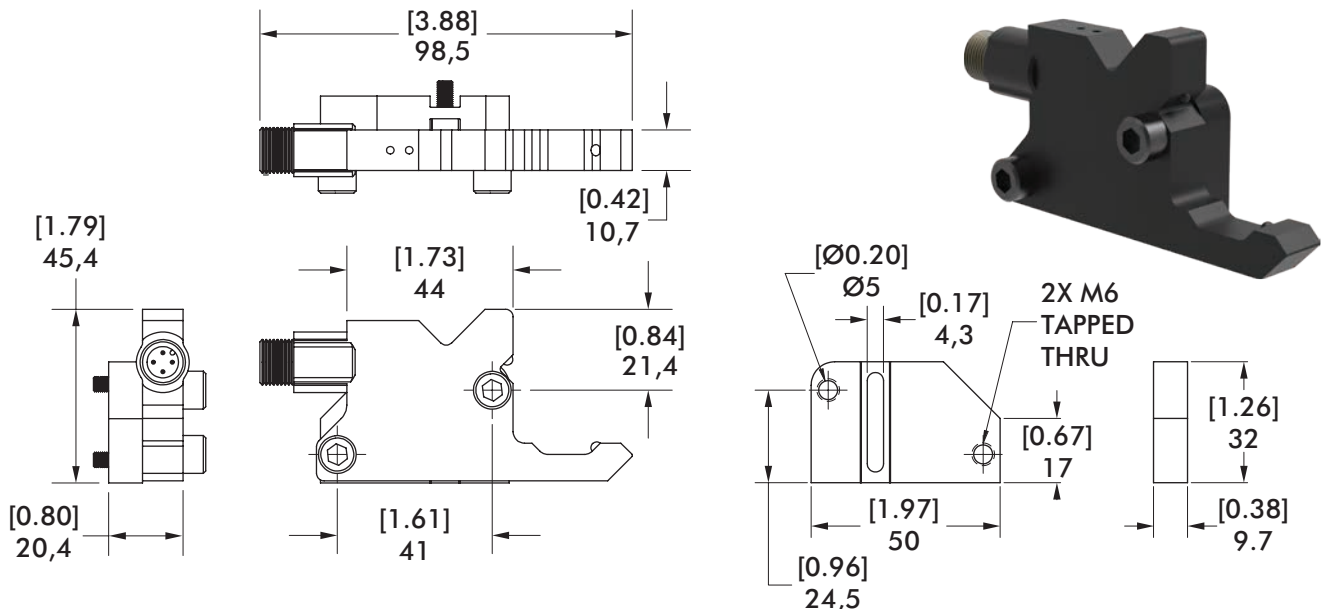
Description	Part #
PNP Inductive Part Present Sensor Kit	8EA-1024-1
NPN Inductive Part Present Sensor Kit	8EA-1025-1
90° PNP Inductive Part Present Sensor Kit**	8EA-1027-1
90° NPN Inductive Part Present Sensor Kit**	8EA-1028-1
Quick Disconnect 2 Meter Cable Length*	CABL-010
Quick Disconnect 5 Meter Cable Length*	CABL-013

*Sensor and cable sold separately. **for 84N1 PC Jaw Style only.

Description	Part #
PNP Magneto-Resistive Sensor Kit (Inc. 2 Sensors)	8EA-1035-1
NPN Magneto-Resistive Sensor Kit (Inc. 2 Sensors)	8EA-1036-1
4mm PNP Magneto-Resistive Sensor Only (Qty. 1)	OHSP-017
4mm NPN Magneto-Resistive Sensor Only (Qty. 1)	OHSN-017
Quick Disconnect 2 Meter Cable Length*	CABL-010
Quick Disconnect 5 Meter Cable Length*	CABL-013

*Sensor and cable sold separately.

Infrared Part Present Sensor and Mounting Adapter (84N1, 84N2 only)

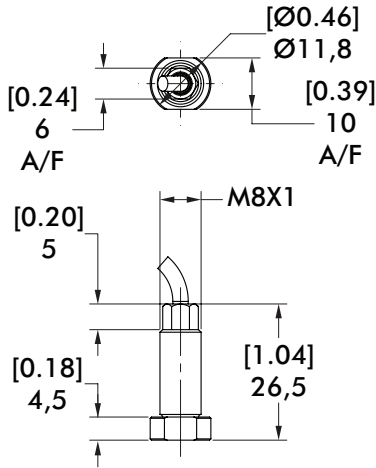


Description	Part #
84N1/84N2 Infrared Part Present Sensor Kit	8EA-1023-1

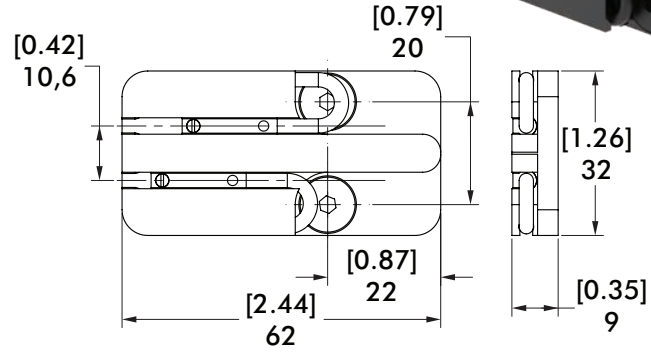
84N2, 84N5 SENSING OPTIONS

Accelerate® Press Shop Sheet Metal Grippers | Dimensions and Ordering Information

In-Jaw Part Sensor (84N2, 84N5 only)



2-Point Side Mount Sensing (84N5 only)



Description	Part #
PNP Inductive In-Jaw Sensor	8EA-1033-1
NPN Inductive In-Jaw Sensor	8EA-1034-1
Quick Disconnect 2M Cable Length*	CABL-010
Quick Disconnect 5M Cable Length*	CABL-013

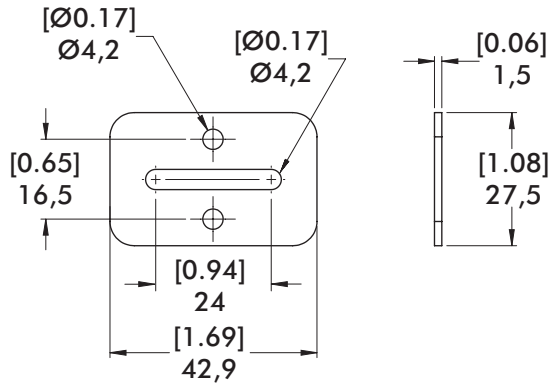
*Sensor and cable sold separately.

Description	Part #
PNP Magneto-Resistive Sensor Kit (Inc. 2 Sensors)	8EA-1052-1
NPN Magneto-Resistive Sensor Kit (Inc. 2 Sensors)	8EA-1053-1
4mm PNP Magneto-Resistive Sensor Only (Qty. 1)	OHSP-017
4mm NPN Magneto-Resistive Sensor Only (Qty. 1)	OHSN-017
Quick Disconnect 2M Cable Length*	CABL-010
Quick Disconnect 5M Cable Length*	CABL-013

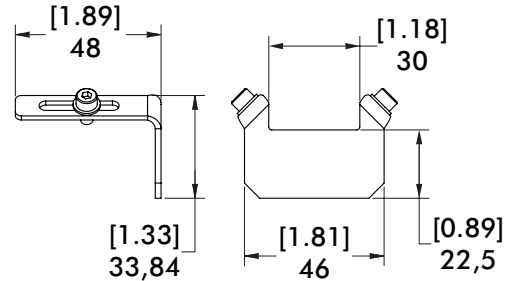
*Sensor and cable sold separately.

84N ACCESSORIES

Accelerate® Press Shop Sheet Metal Grippers | Dimensions and Ordering Information



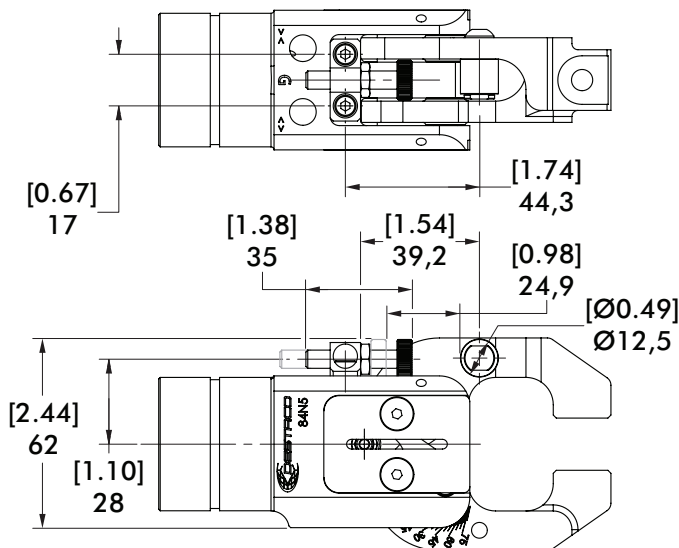
Sheet Stop Options



Description	Part #
84N1/84N2 Sheet Stop Kit Includes socket head cap mounting screws.	8MH-1003-1

Description	Part #
84N5 Sheet Stop Kit Includes socket head cap mounting screws.	8MH-1053-1

Opening Angle Adjustment Kit (84N5 only*)



Description	Part #
84N5 Opening Angle Adjustment Kit Includes mounting screws. *For FA, PA and DA models -075 and -ADJ only.	8MH-1052-1

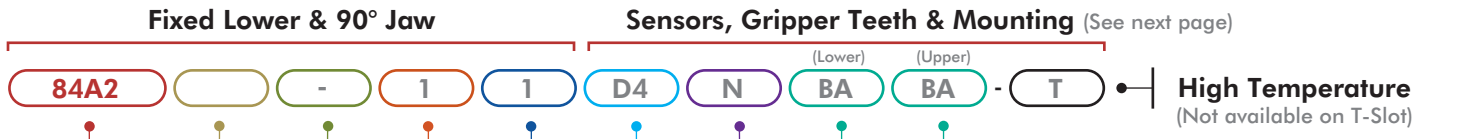
Seal Kits



Description	Part #
84N1/84N2 Seal Kit	SLKT-478
84N5 Seal Kit Includes shock pad, rod u-cup seal, o-ring cap, piston seal and retainer ring.	SLKT-479

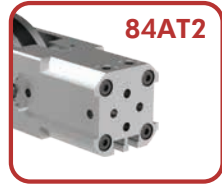
84A2 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Ordering Information



Body Style Options

- Description
- 84A2 Standard
 - 84AT2 Sensor T-Slot



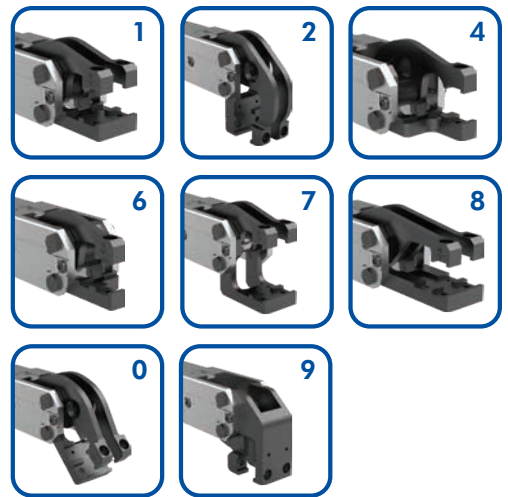
Porting Options

- Description
- 1 (2) M5
 - V (2) G1/8



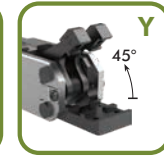
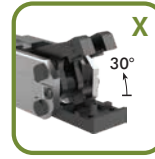
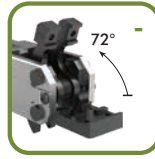
Jaw Arrangement Options

- Description
- 1 Double Upper, Straight Design
 - 2 Double Upper, 90° Design
 - 4 Single Upper, Left, Straight Design
 - 6 Single Upper, Right, Straight Design
 - 7 Double Upper, Straight Design, Drop Jaw
 - 8 Double/Single Upper Extended Jaw
 - 0 Double Upper, 45° Offset Design
 - 9 Fixed Upper, Double Lower Jaws, 90° Design:
 - [84A2/84AT2 (-)1/V 9] 45° Jaw Opening Angle Std.
 - [84A2/84AT2 (X)1/V 9] 30° Jaw Opening Angle Std.



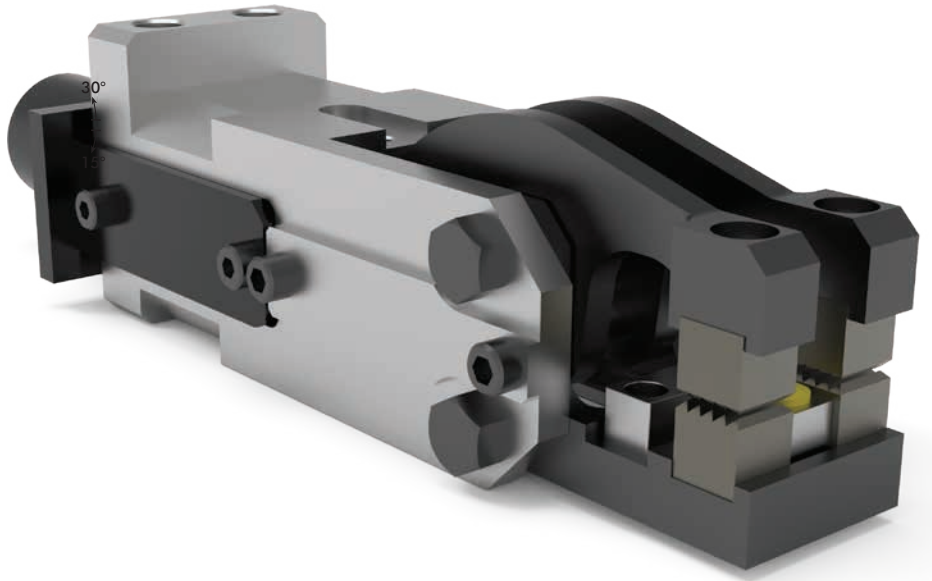
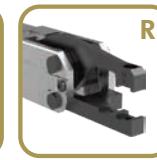
Jaw Opening Options

- Description
- 72° Jaw Opening (Std.)
 - X 30° Jaw Opening
 - Y 45° Jaw Opening



Jaw Orientation Options (Option 8 Only)

- Description
- "Blank" Double Jaw
 - L Single Left Jaw
 - R Single Right Jaw



Specifications	Unit	
Piston	mm	25
Actuation Time (open/close)	sec	<0,1
Air Consumption per Double Stroke at 6 bar	L	0,32

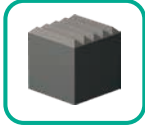
84A2 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Ordering Information

Gripper Teeth, Points and Crown Options (Upper and Lower)

Steel Teeth

- 00** None
- BA** Hardened - 8JZ-027-1
- BD** Hardened (Upper) - 8JZ-049-1



- BB** Soft Steel - 8JZ-028-1



High Temperature (84A2 Only)

- FF** Soft Steel - 8JZ-085-1



- EE** Soft Steel - 8JZ-092-1



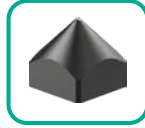
Plastic Teeth*

- 00** None
 - KF** 90 Shore - 8JZ-045-2
- *Not suitable for High Temperature applications



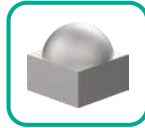
Steel Points

- 00** None
- PH** Hardened - 8JZ-029-1

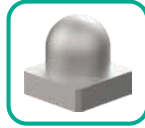


High Temperature (84A2 Only)

- PI** Soft Steel - 8JZ-074-1



- RR** Soft Steel - 8JZ-088-1



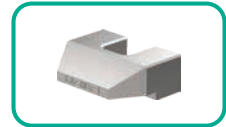
Crown Teeth

- 00** None
- SK** Hardened (Lower) - 8JZ-036-2
- SQ** Hardened (Lower) - 8JZ-051-1
- SL** Hardened (Upper) - 8JZ-037-1
- SM** Hardened (Upper) - 8JZ-038-1
- SN** Hardened (Upper) - 8JZ-039-1
- SP** Hardened (Upper) - 8JZ-040-1

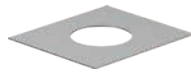


High Temperature (84A2 Only)

- DD** Soft Steel - 8JZ-087-1 (Lower)



- LL** Soft Steel - 8JZ-086-1 (Lower)



Shims for gripper teeth available
Order Separately **8SB-039-1**
Dimensions: 10 x 10 x 0,1 mm

Sensor Options (not suitable for High Temperature applications)

Description

- 00** None
- D4*** Part Present Sensor 3mm Sensing Distance, 2m Cable - 8EA-164-1
- D5** Double Sheet Control Sensor, M12x1 Plug - 8EA-087-1
- D7*** Part Present Sensor, 3mm Sensing Distance, M12x1 Plug - 8EA-165-1
- D8** 2X Position Sensor - 8EA-109-1 (84AT2 Models Only)
- GP*** 1X D4 + 1X D5
- GQ*** 1X D5 + 1X D7
- GK** 2X D5 (not for 84AT2 Models)

*For Jaw Arrangements Options 1, 2, 7, 8, 9, 0 only.



Cable support for D4 Sensor. Order Separately **8MA-149-1**
Mounted on lower side of gripper (for 84A2-11, 84A2-V1,
84A2-18, 84A2-V8 only) (not for 84AT2 Models)

Cover for Sensing Systems **D5, GP, GQ, GK**
Order Separately **82ZB-185-1**

T-Coupler M12x1 for Sensing Systems **GP, GQ, GK**
Order Separately **7000-41161-000000**

Mounting Options

Description

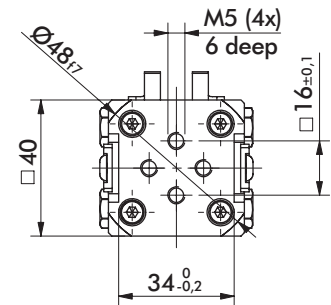
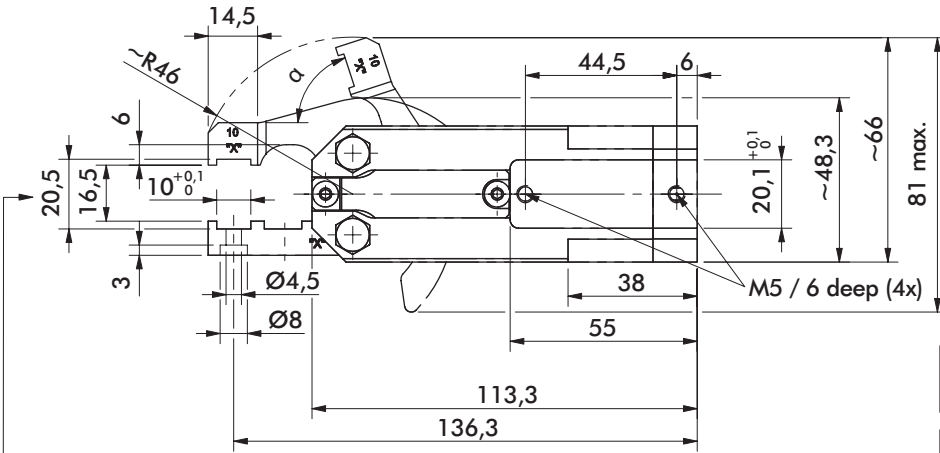
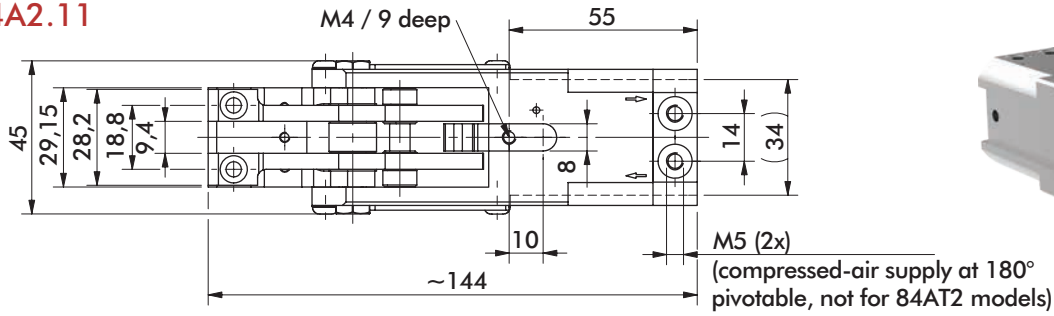
- 0** None
- I** Ø20mm Rear Rod 8MA-165-1
- J** Ø25mm Rear Rod 8MA-166-1
- Z** Ø1.00" Rear Rod 8MA-168-1
- L** Ø20mm Apple Core GT-20M-84A2-L-R
- M** Ø32mm Rear Ball GT-32B-84A2- L-R
- N** Ø32mm Flanged Ball GT-32B-84A2- B
- Q** Guards 8MH-054-1 (For Jaw Arrangements Options 1, 4, 6 only)
- V** Rear Flange 8MA-147-1
- W** On-Body Swivel Ball 82ZB-025-2



84A2..1 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

84A2.11

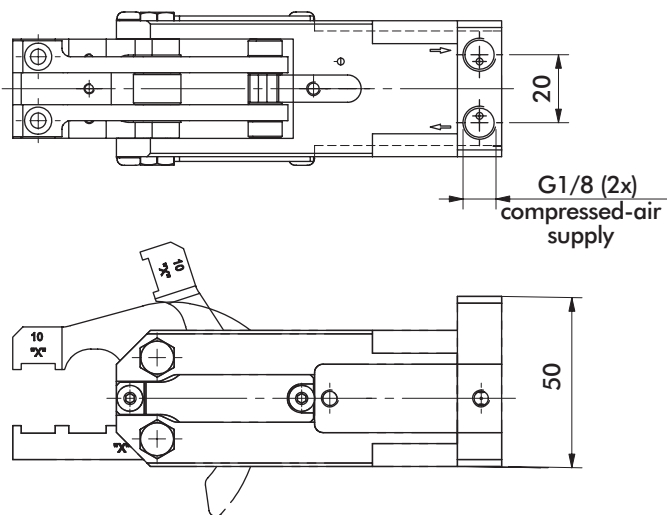


Medium air, min. 3 bar, max. 6 bar.
Operation with oil-free air is permissible.

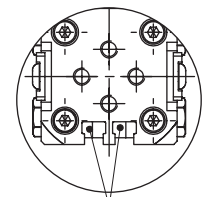
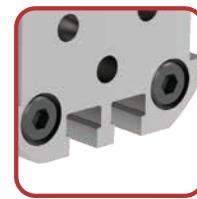
NOTE! Any extension of the
moveable or fixed gripper jaws as
well as the additional attachment
of weights will void warranty.

Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm.
It might be necessary to use shim plates or to grind off the gripper teeth.

84A2.V1



84AT2..1

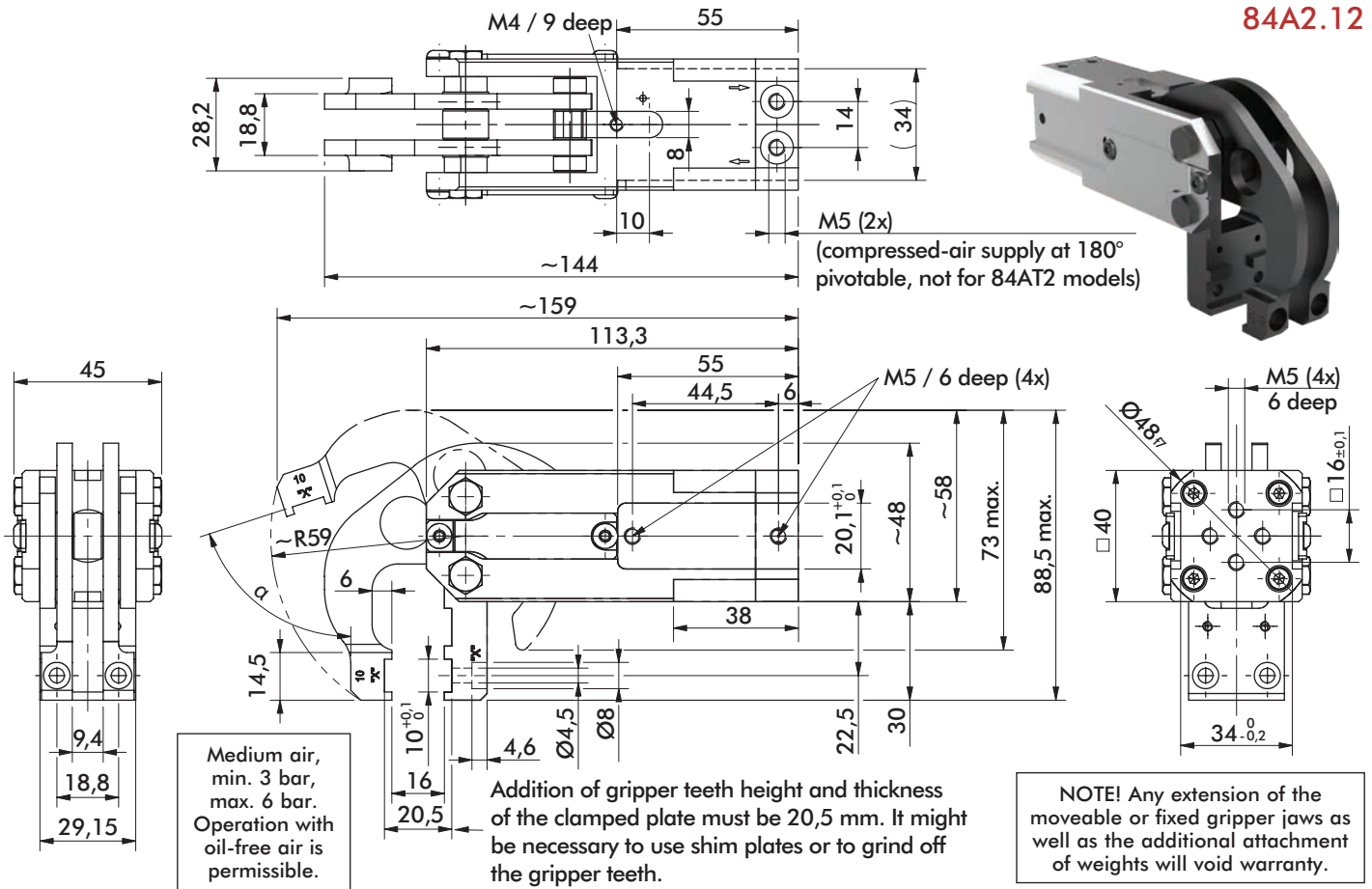


Model 84A2..1/84AT2..1	Opening Angle α	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
-	72°		
X	30°	920 [207]	0,6 [1.32]
Y	45°		

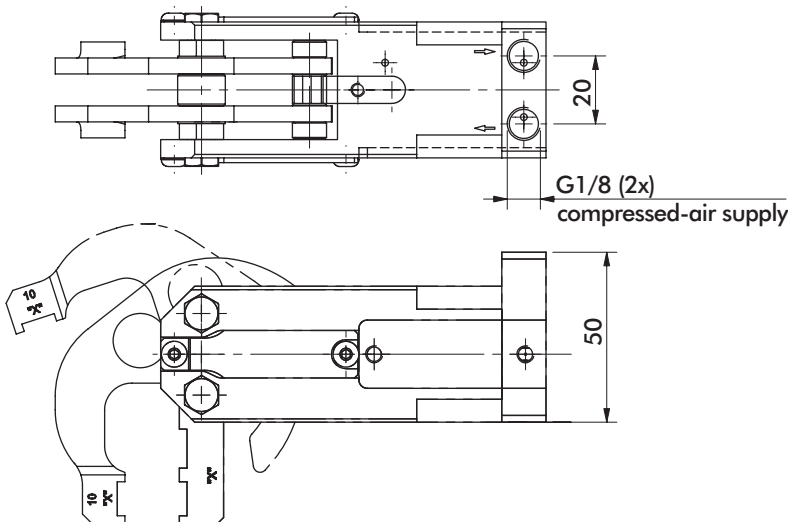
84A2..2 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

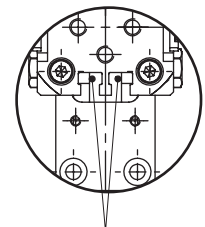
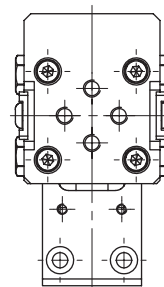
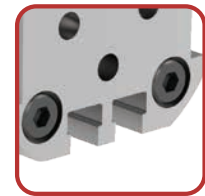
84A2.12



84A2.V2



84AT2..2



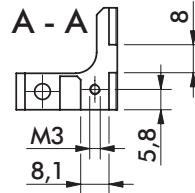
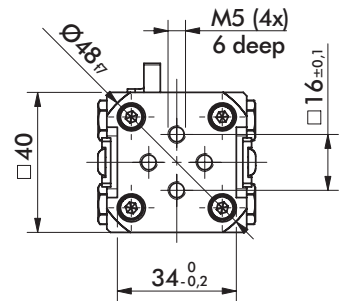
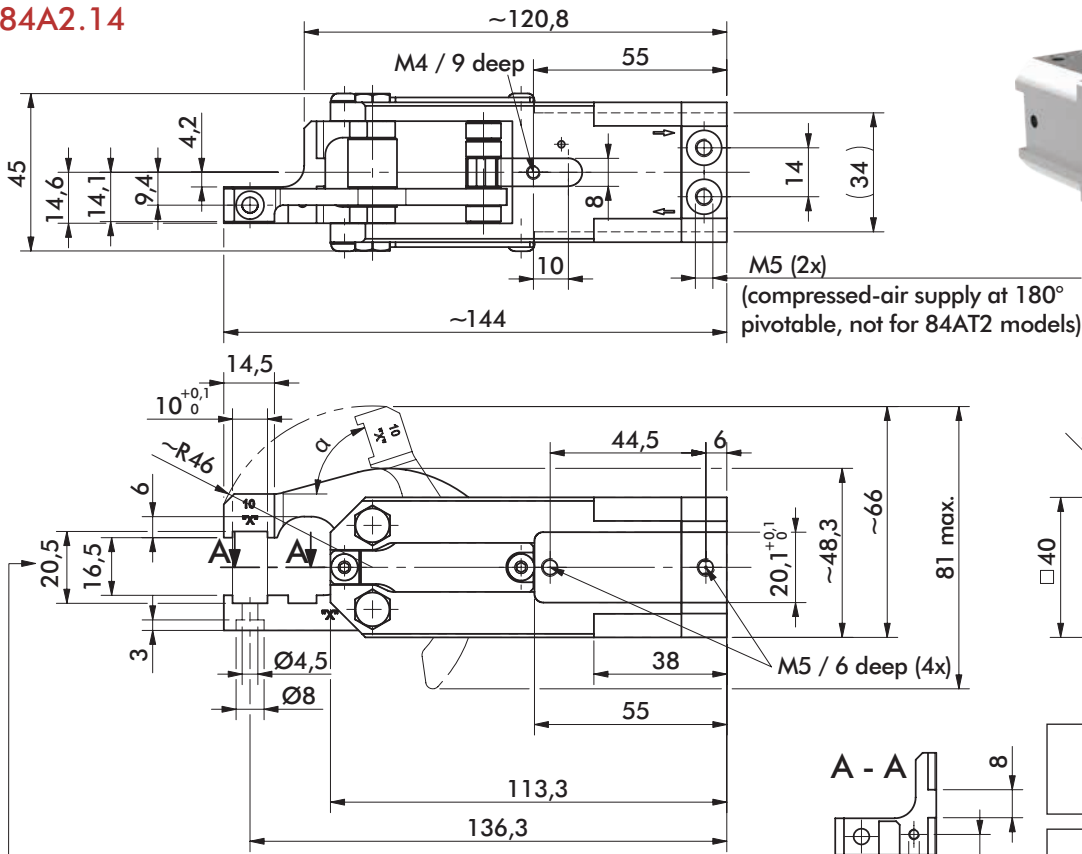
T-groove for sensor

Model 84A2..2/84AT2..2	Opening Angle α	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
-	72°		
X	30°	575 [129]	0,65 [1.43]
Y	45°		

84A2..4 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

84A2.14

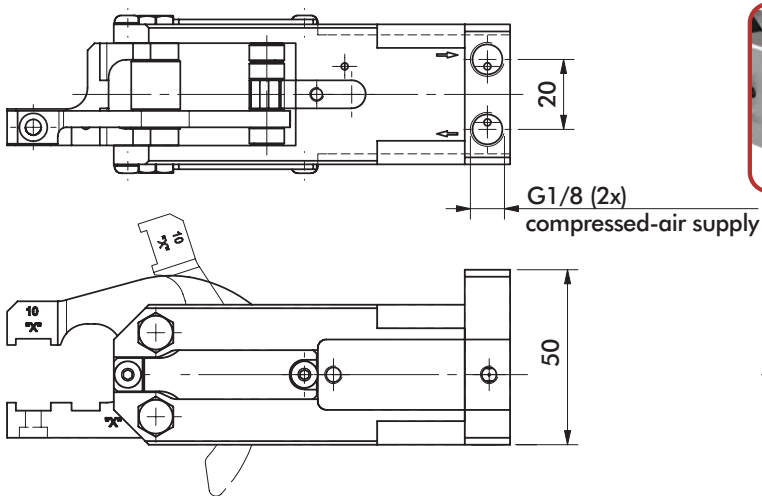


Medium air, min. 3 bar, max. 6 bar. Operation with oil-free air is permissible.

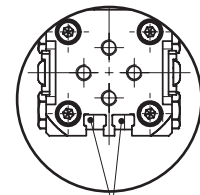
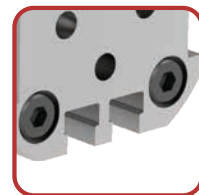
NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

84A2.V4



84AT2..4



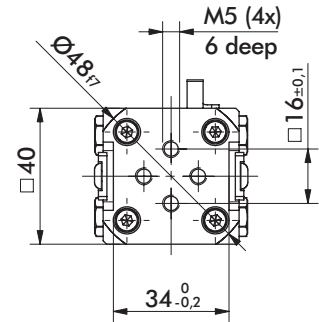
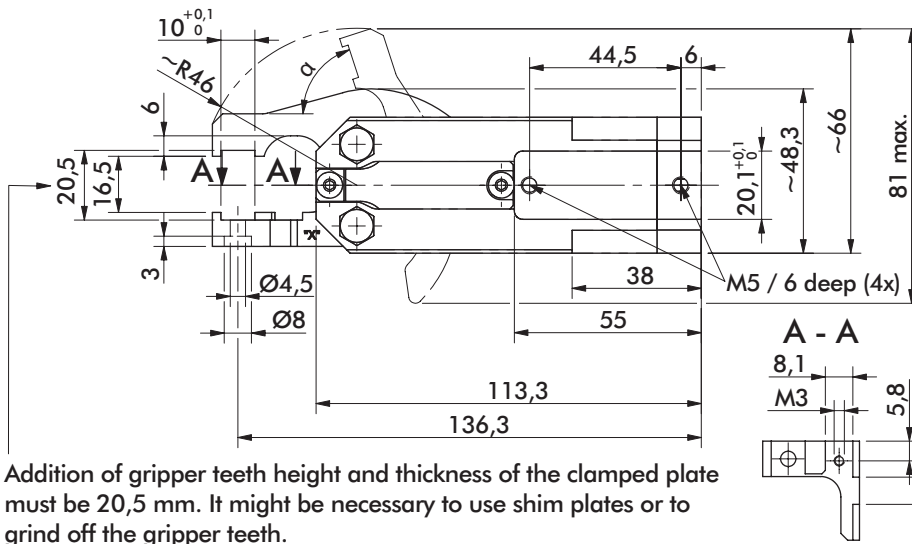
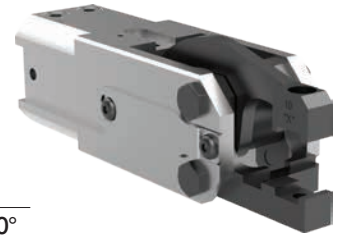
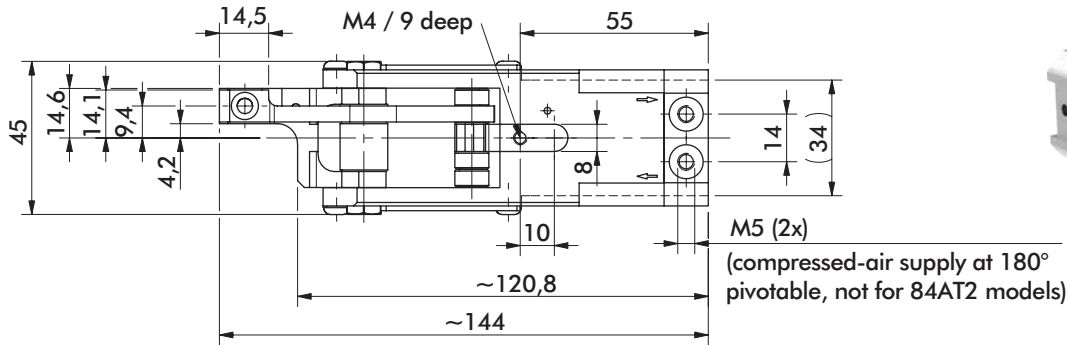
T-groove for sensor

Model 84A2..4/84AT2..4	Opening Angle α	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
-	72°	920 [207]	0,5 [1.1]
X	30°		
Y	45°		

84A2..6 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

84A2.16

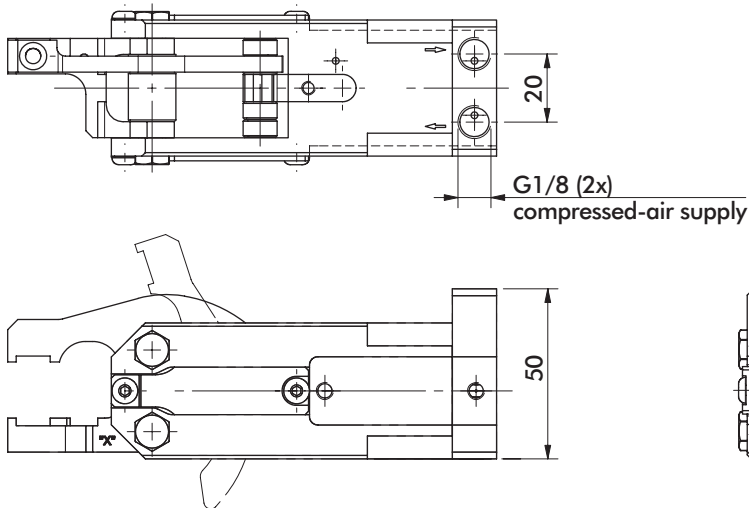


Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

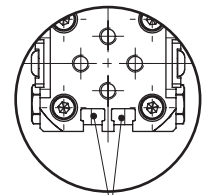
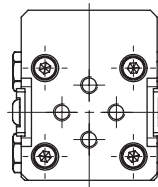
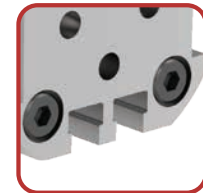
Medium air, min. 3 bar, max. 6 bar. Operation with oil-free air is permissible.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

84A2.V6



84AT2..6



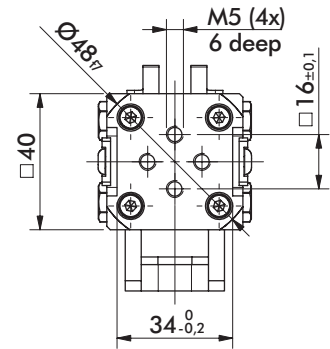
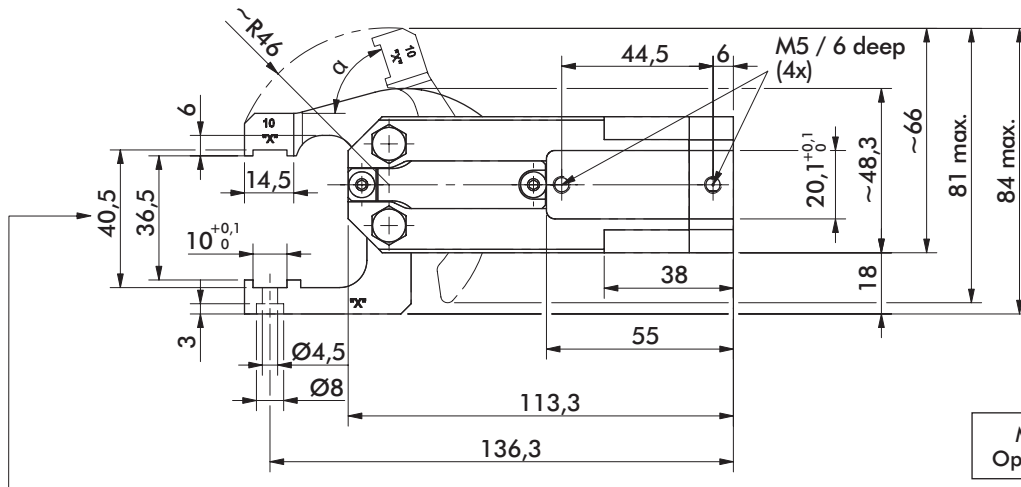
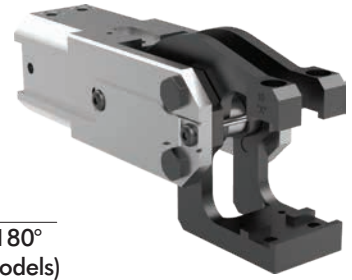
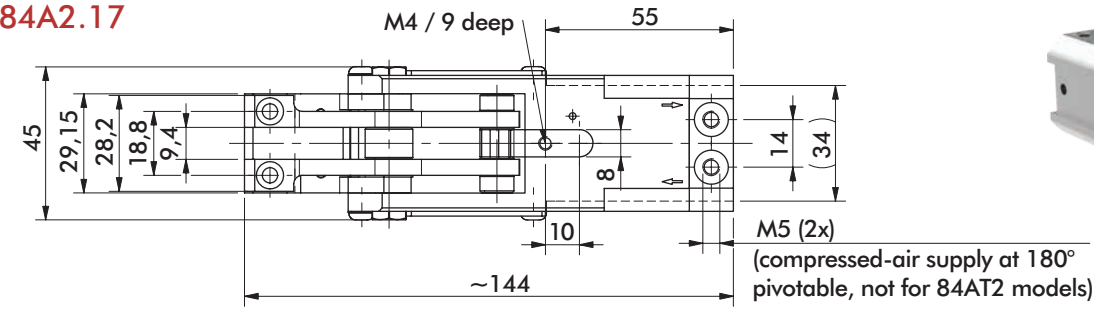
T-groove for sensor

Model 84A2..6/84AT2..6	Opening Angle α	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
-	72°	920 [207]	0,5 [1.1]
X	30°		
Y	45°		

84A2..7 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

84A2.17

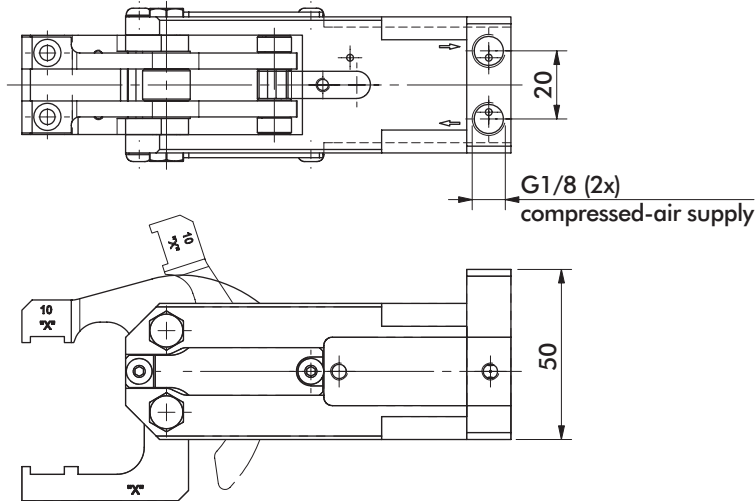


Medium air, min. 3 bar, max. 6 bar.
Operation with oil-free air is permissible.

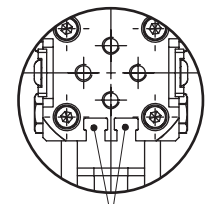
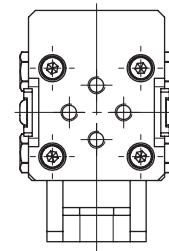
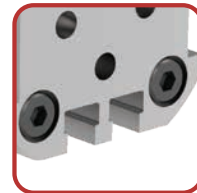
Addition of gripper teeth height and thickness of the clamped plate must be 40,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

84A2.V7



84AT2..7



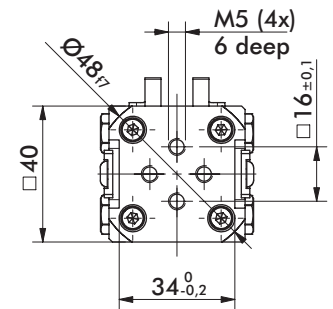
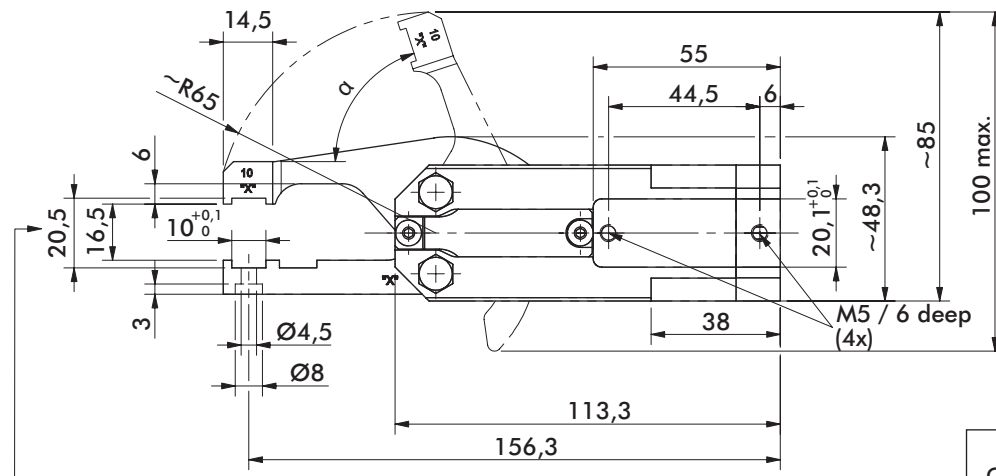
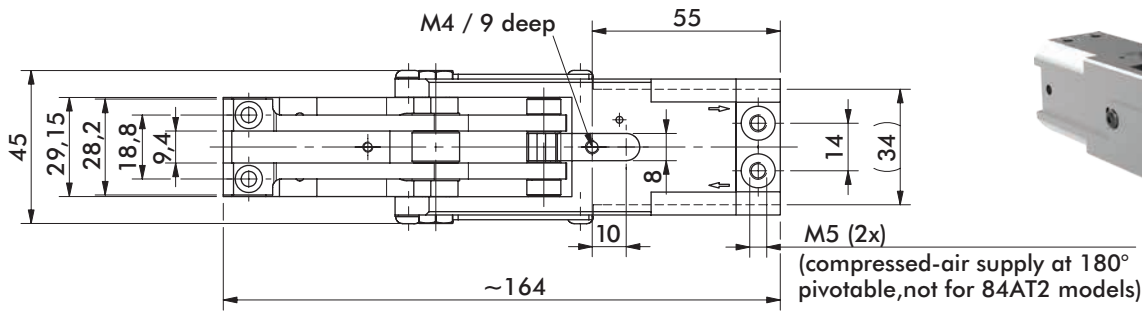
T-groove for sensor

Model 84A2..7/84AT2..7	Opening Angle α	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
-	72°	920 [207]	0,6 [1.32]
X	30°		
Y	45°		

84A2..8 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

84A2.18

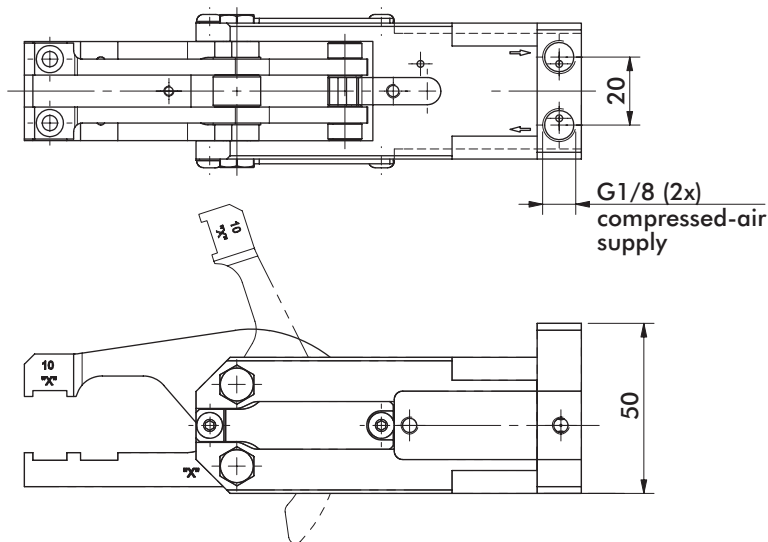


Medium air, min. 3 bar, max. 6 bar.
Operation with oil-free air is permissible.

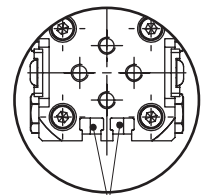
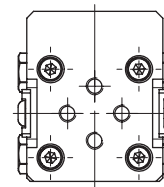
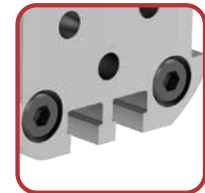
Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

84A2.V8



84AT2..8



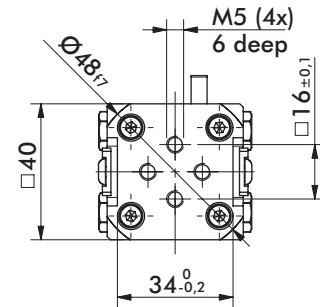
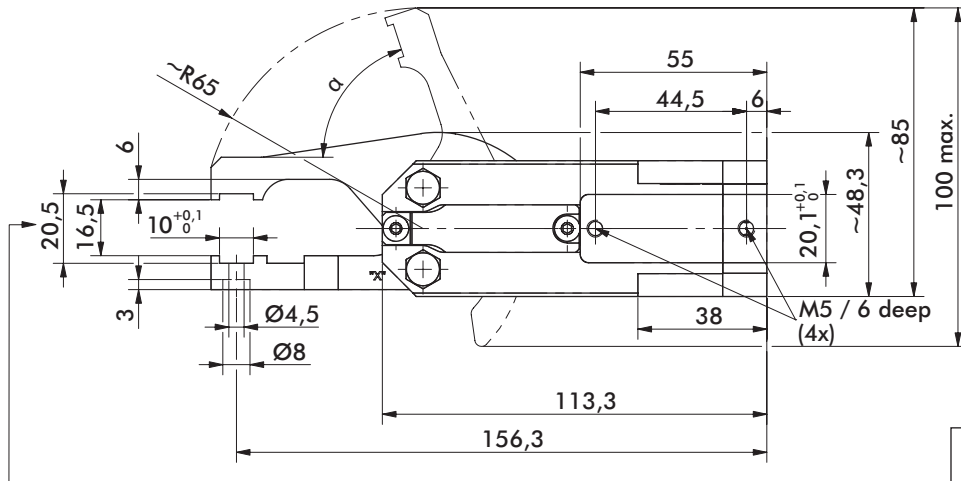
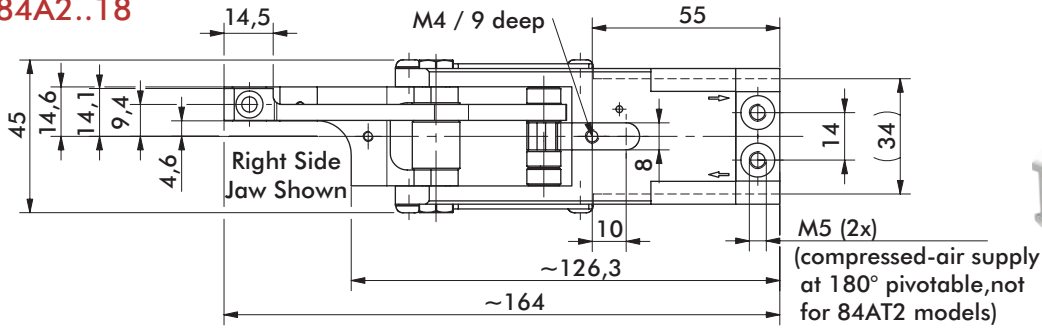
T-groove for sensor

Model 84A2..8/84AT2..8	Opening Angle α	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
-	72°		
X	30°	560 [126]	0,65 [1.43]
Y	45°		

84A2...8 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

84A2..18

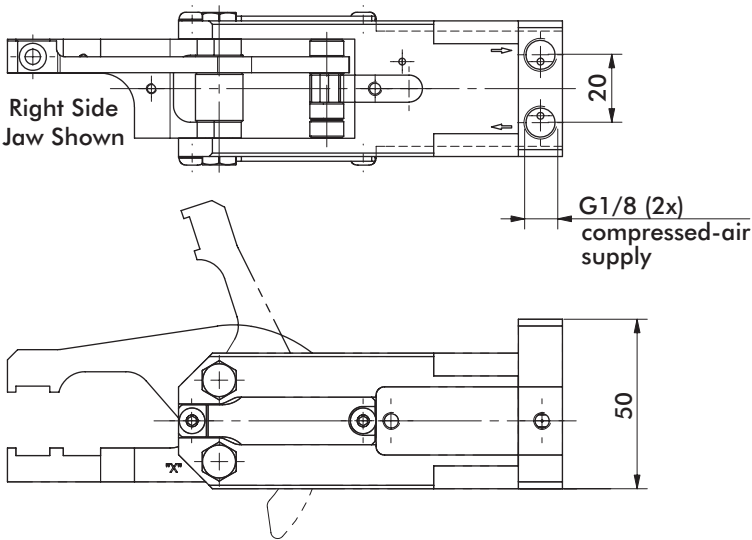


Medium air, min. 3 bar, max. 6 bar.
Operation with oil-free air is permissible.

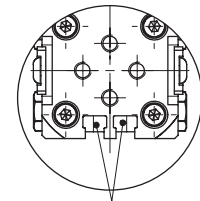
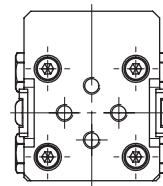
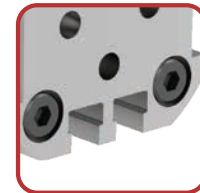
Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

84A2..V8

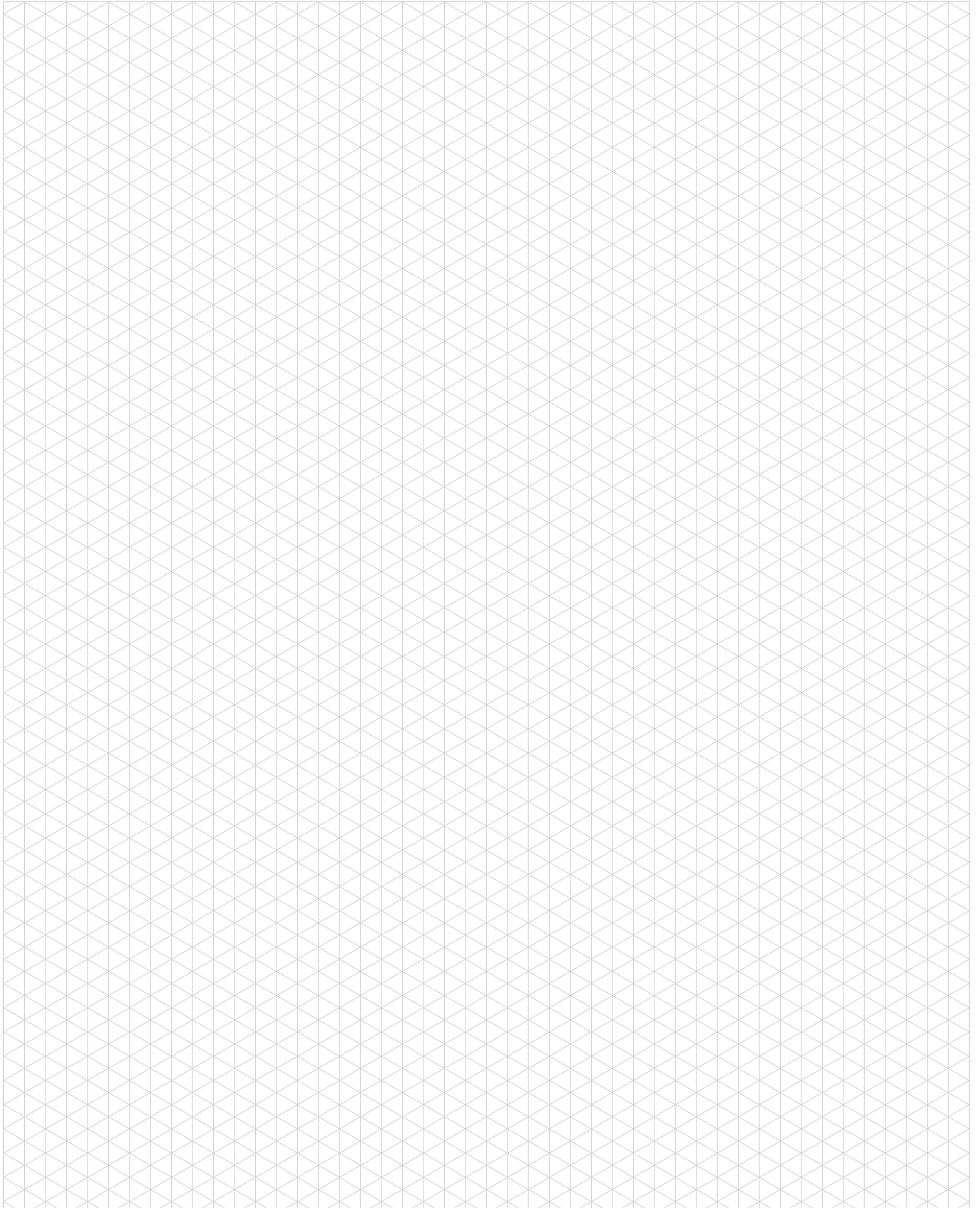


84AT2...8



T-groove for sensor

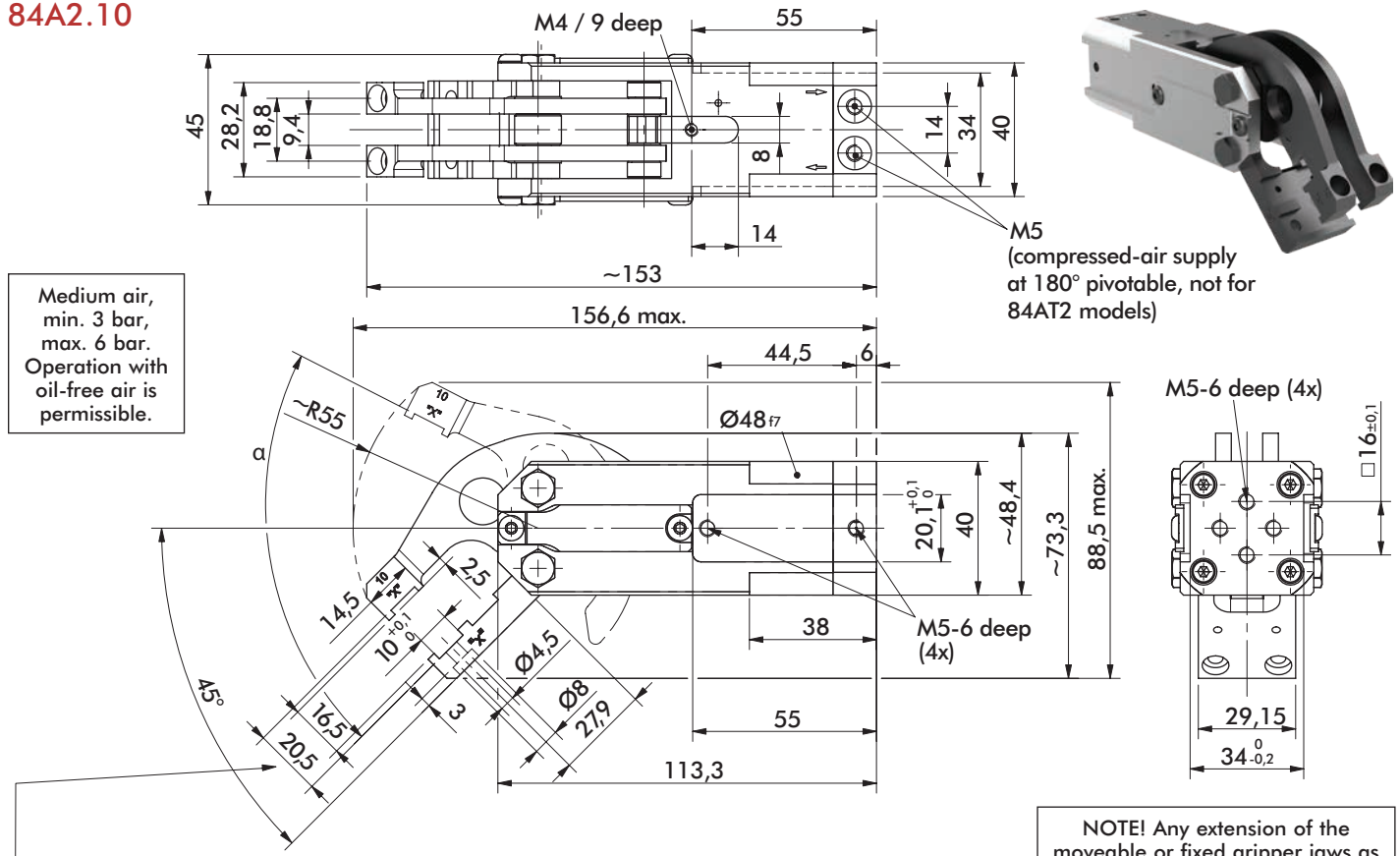
Model 84A2...8/84AT2...8	Opening Angle α	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
-	72°	560 [126]	0,65 [1.43]
Y	30°		
X	45°		



84A2..0 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

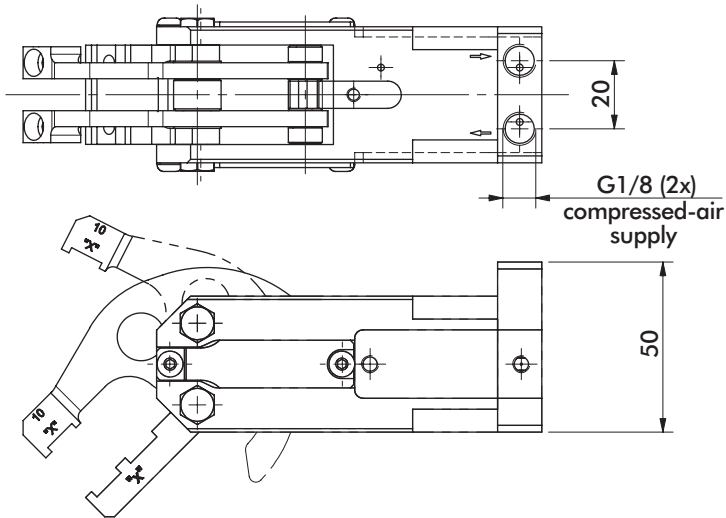
84A2.10



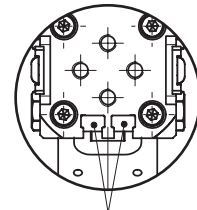
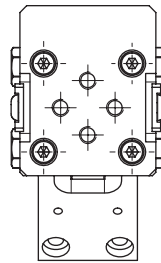
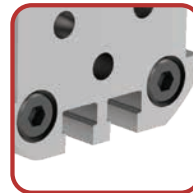
Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

84A2.V0



84AT2..0



T-groove for sensor

Model 84A2..0/84AT2..0	Opening Angle α	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
-	72°		
X	30°	600 [135]	0,65 [1.43]
Y	45°		

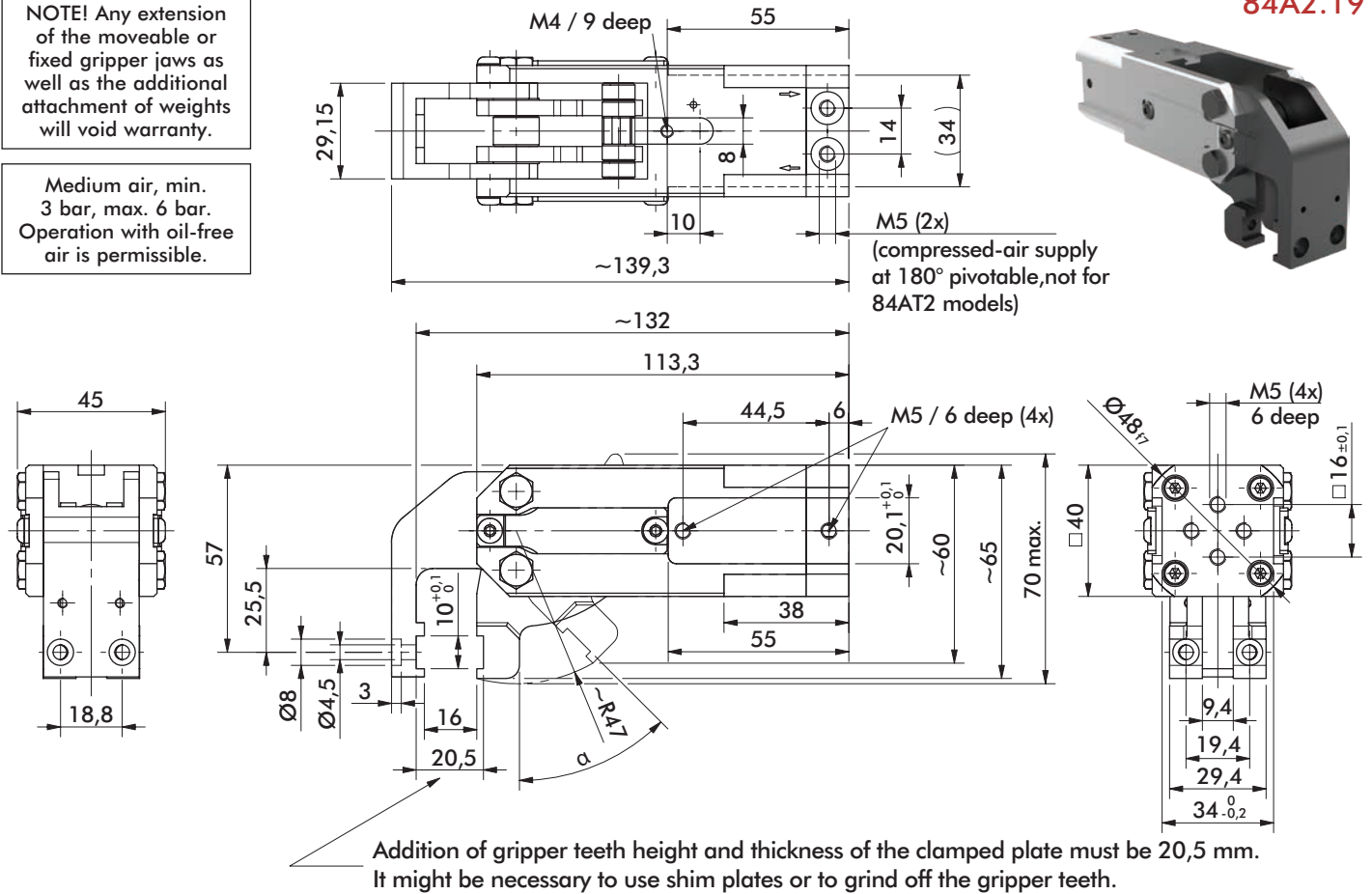
84A2..9 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

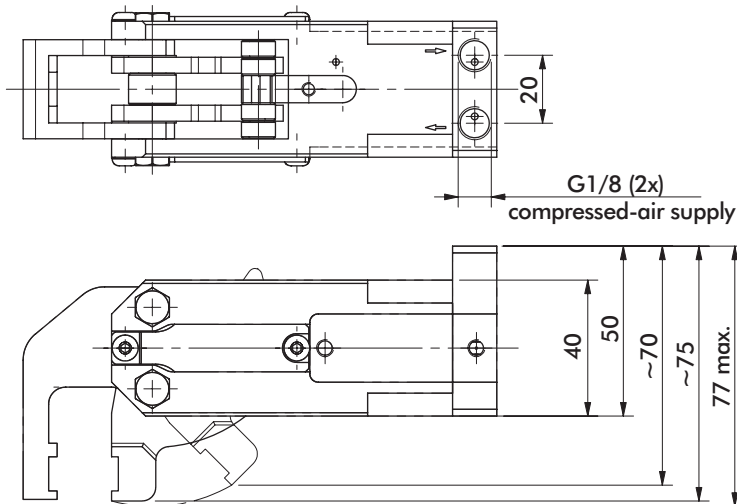
84A2.19

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

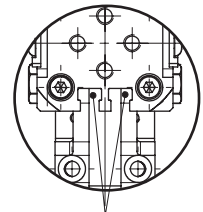
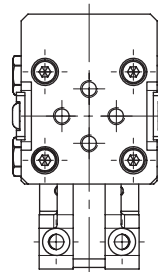
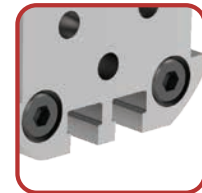
Medium air, min. 3 bar, max. 6 bar. Operation with oil-free air is permissible.



84A2.V9



84AT2..9

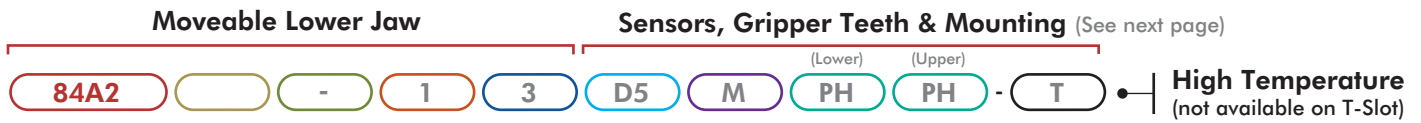


T-groove for sensor

Model	Opening Angle α	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
84A2..9/84AT2..9	45°	860 [193]	0,6 [1.32]
-	30°		
X			

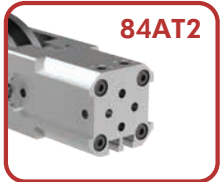
84A2 SERIES (MOVEABLE LOWER JAWS)

Cam Type Sheet Metal Grippers | Ordering Information



Body Style Options

- Description
- 84A2** Standard
 - 84AT2** Sensor T-Slot



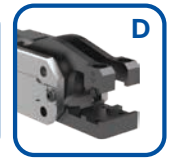
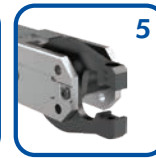
Porting Options

- Description
- 1** (2) M5
 - V** (2) G1/8



Jaw Arrangement Options

- Description
- 3** Double - 2 Upper/2 Lower Jaws
 - 5** Single - 1 Upper/1 Lower Jaw
 - D*** Double - 2 Upper/ 1 Lower Jaw
- *Excludes 84AT2 with Sensor T-Slot



Jaw Orientation Options

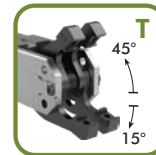
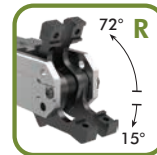
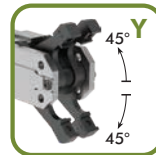
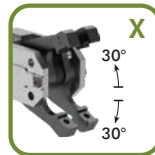
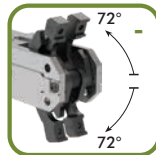
- Description
- "Blank"** Double (Jaw Arrangement 3 only)
 - L** Single Left (Jaw Arrangement 5 only)
 - R** Single Right (Jaw Arrangement 5 only)



Jaw Opening Options

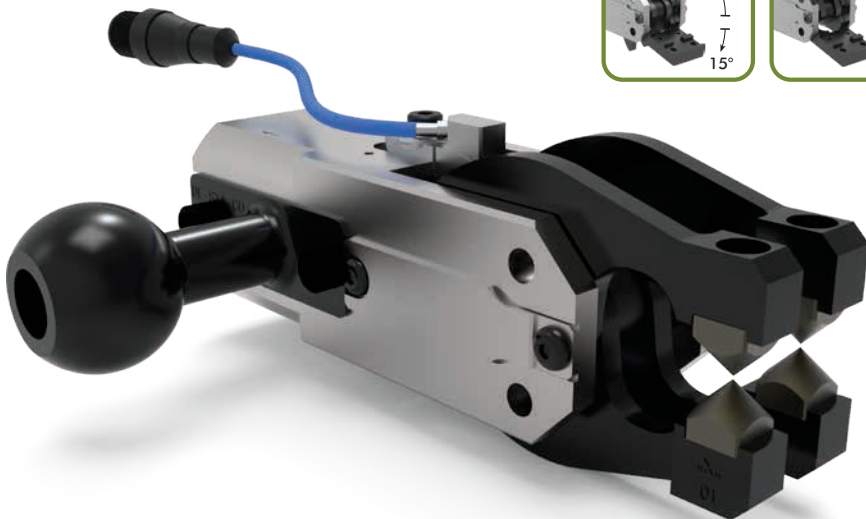
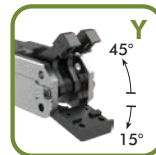
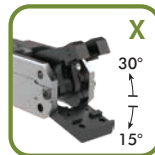
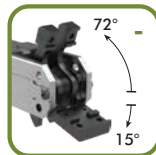
3 and 5 Jaw Arrangement Only

- 72° Jaw Opening (Symmetrical)
- X** 30° Jaw Opening (Symmetrical)
- Y** 45° Jaw Opening (Symmetrical)
- R** 72° Upper/15° Lower Jaw
- T** 45° Upper/15° Lower Jaw



D Jaw Arrangement Only

- 72° Upper/15° Lower Jaw
- X** 30° Upper/15° Lower Jaw
- Y** 45° Upper/15° Lower Jaw



Specifications	Unit	
Piston	mm	25
Actuation Time (open/close)	sec	<0,1
Air Consumption per Double Stroke at 6 bar	L	0,32

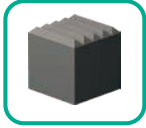
84A2 SERIES (MOVEABLE LOWER JAWS)

Cam Type Sheet Metal Grippers | Ordering Information

Gripper Teeth, Points and Crown Options (Upper and Lower)

Steel Teeth

- 00** None
- BA** Hardened - 8JZ-027-1
- BD** Hardened (Upper) - 8JZ-049-1



- BB** Soft Steel - 8JZ-028-1



High Temperature (84A2 Only)

- FF** Soft Steel - 8JZ-085-1



- EE** Soft Steel - 8JZ-092-1



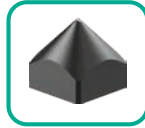
Plastic Teeth*

- 00** None
- KF** 90 Shore - 8JZ-045-2
*Not suitable for High Temperature applications



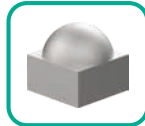
Steel Points

- 00** None
- PH** Hardened - 8JZ-029-1

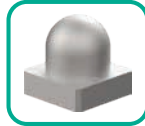


High Temperature (84A2 Only)

- PI** Soft Steel - 8JZ-074-1



- RR** Soft Steel - 8JZ-088-1



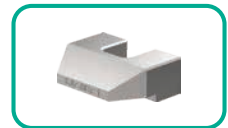
Crown Teeth

- 00** None
- SK** Hardened (Lower) - 8JZ-036-2
- SQ** Hardened (Lower) - 8JZ-051-1
- SL** Hardened (Upper) - 8JZ-037-1
- SM** Hardened (Upper) - 8JZ-038-1
- SN** Hardened (Upper) - 8JZ-039-1
- SP** Hardened (Upper) - 8JZ-040-1



High Temperature (84A2 Only)

- DD** Soft Steel - 8JZ-087-1 (Lower)



- LL** Soft Steel - 8JZ-086-1 (Lower)



Shims for gripper teeth available
Order Separately - **8SB-039-1**
Dimensions: 10 x 10 x 0,1 mm



Sensor Options (not suitable for High Temperature applications)

Description

- 00** None
- D4*** Part Present Sensor 3mm Sensing Distance, 2m Cable - 8EA-164-1
- D5** Double Sheet Control Sensor, M12x1 Plug - 8EA-087-1
- D7*** Part Present Sensor, 3mm Sensing Distance, M12x1 Plug - 8EA-165-1
- D8** 2X Position Sensor - 8EA-109-1 (84AT2 Models Only)
- GP*** 1X D4 + 1X D5
- GQ*** 1X D5 + 1X D7
- GK** 2X D5

*For Jaw Arrangement Option D only



Cover for Sensing Systems **D5, GP, GQ, GK**
Order Separately **82ZB-185-1**

T-Coupler M12x1 for Sensing Systems **GP, GQ, GK**
Order Separately **7000-41161-000000**

Mounting Options

Description

- 0** None
- I** Ø20mm Rear Rod 8MA-165-1
- J** Ø25mm Rear Rod 8MA-166-1
- Z** Ø1.00" Rear Rod 8MA-168-1
- L** Ø20mm Apple Core GT-20M-84A2-L-R
- M** Ø32mm Rear Ball GT-32B-84A2-L-R
- N** Ø32mm Flanged Ball GT-32B-84A2-B
- V** Rear Flange 8MA-147-1
- W** On-Body Swivel Ball 82ZB-025-2

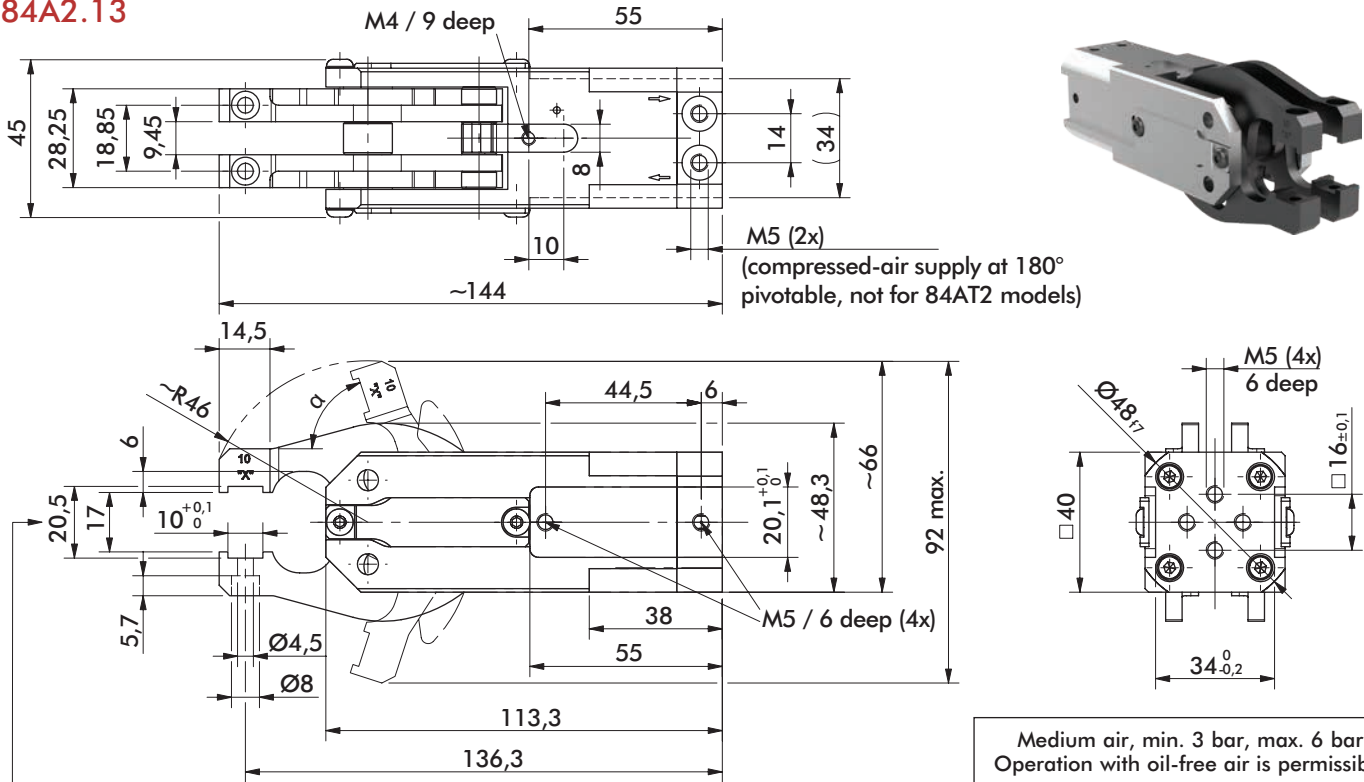


Ø25mm
Ø30mm
Both Included

84A2..3 SERIES (DOUBLE SYMMETRICAL MOVEABLE JAWS)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

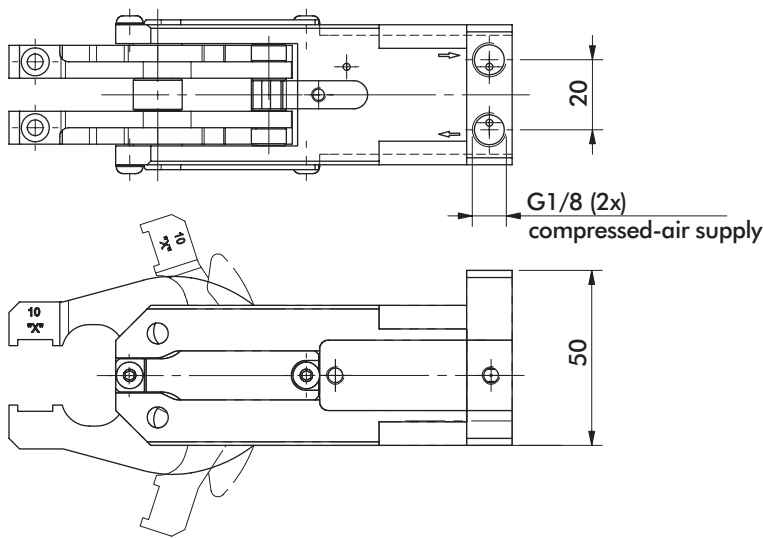
84A2.13



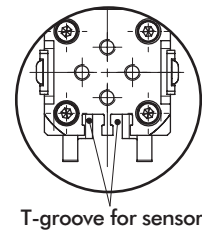
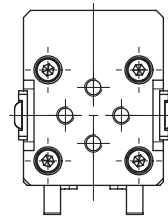
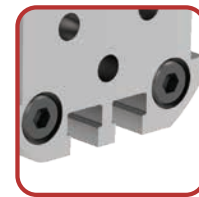
Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

84A2.V3



84AT2..3

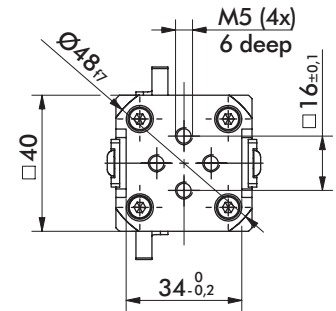
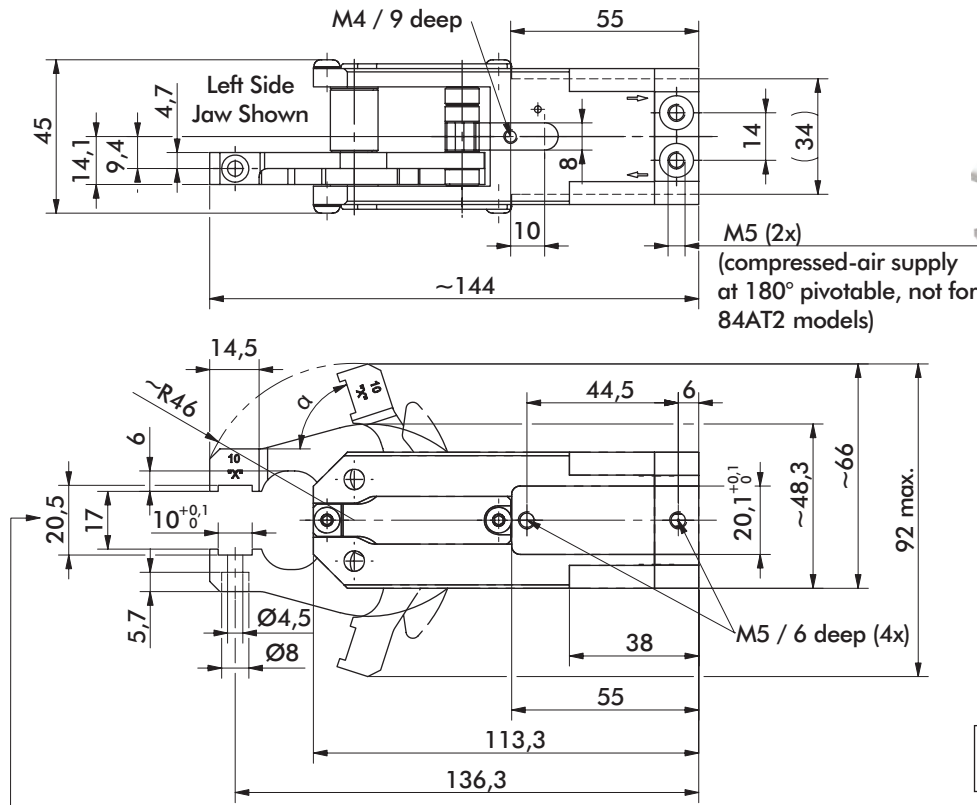


Model 84A2..3/84AT2..3	Opening Angle α Symmetrical	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
-	72°	475 [107]	0,6 [1.32]
X	30°		
Y	45°		

84A2...5 SERIES (SINGLE SYMMETRICAL MOVEABLE JAWS)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

84A2..15



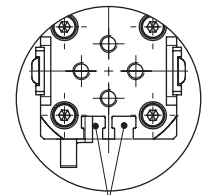
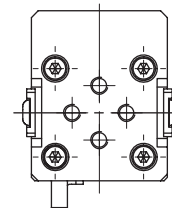
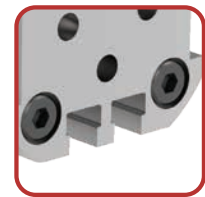
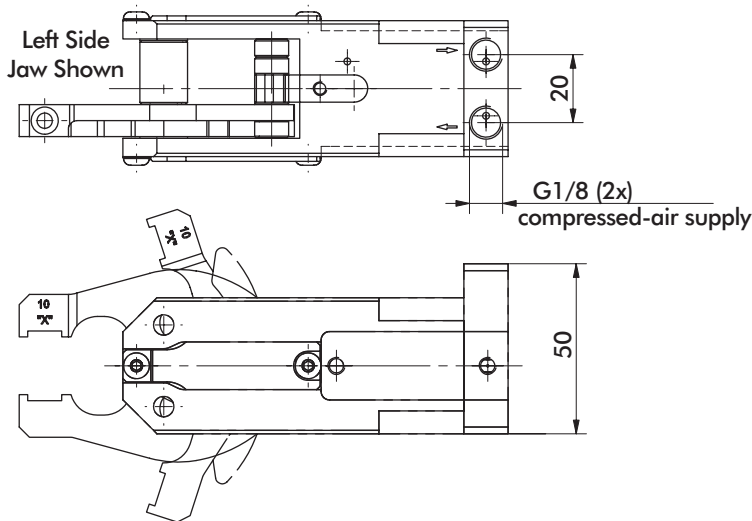
Medium air, min. 3 bar, max. 6 bar.
Operation with oil-free air is permissible.

Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

84A2..V5

84AT2...5



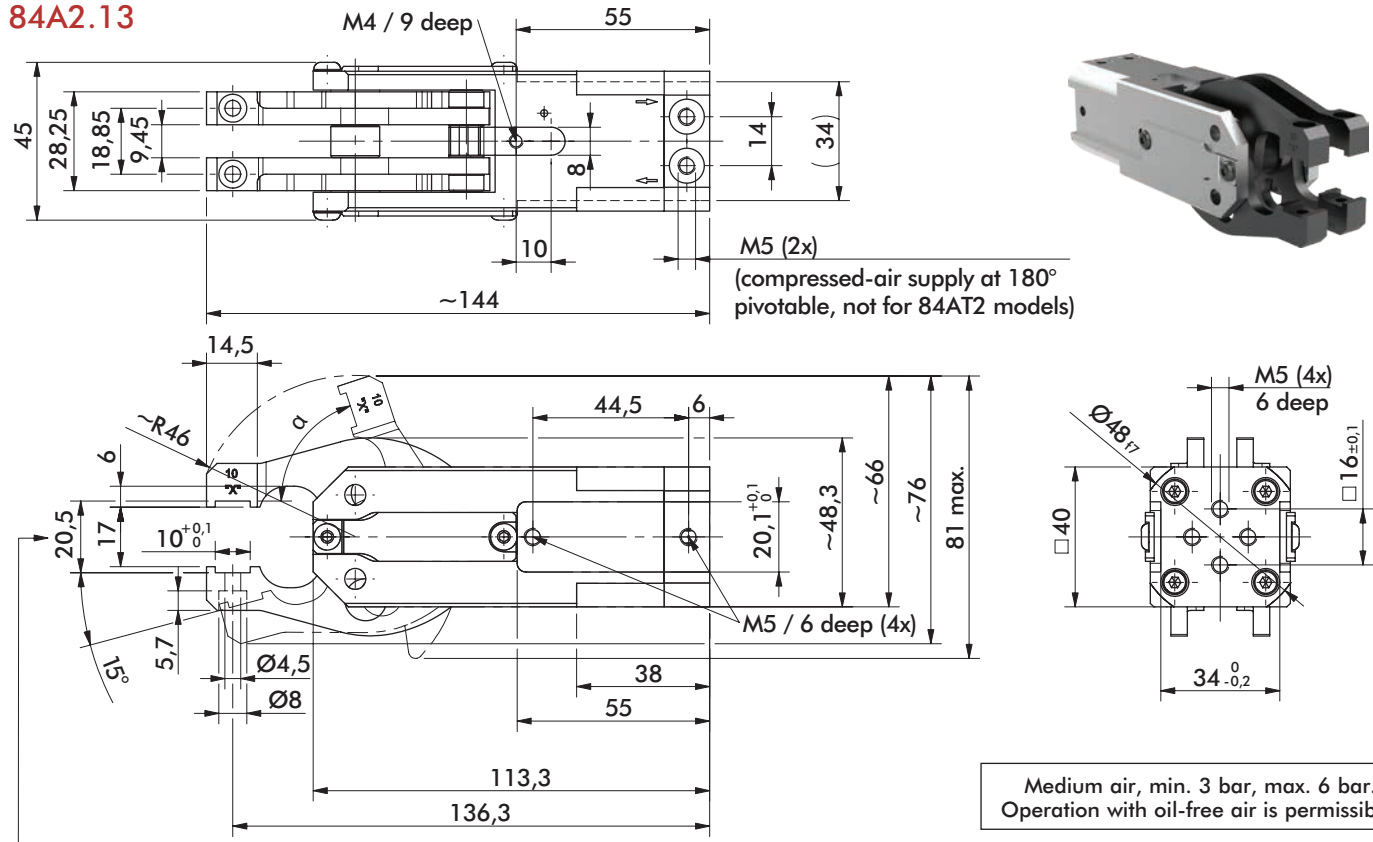
T-groove for sensor

Model	Opening Angle α Symmetrical	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
84A2...5/84AT2...5			
-	72°		
X	30°	475 [107]	0,47 [1.04]
Y	45°		

84A2..3 SERIES (DOUBLE 15° MOVEABLE LOWER JAWS)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

84A2.13



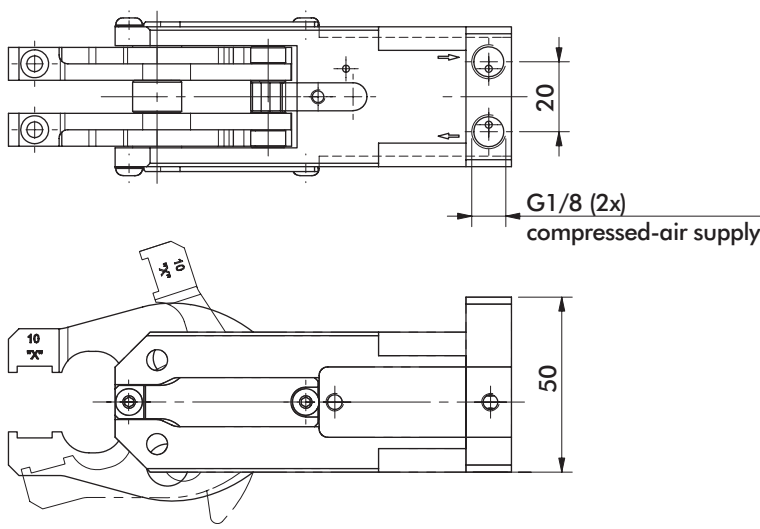
M5 (2x)
(compressed-air supply at 180°
pivotable, not for 84AT2 models)

Medium air, min. 3 bar, max. 6 bar.
Operation with oil-free air is permissible.

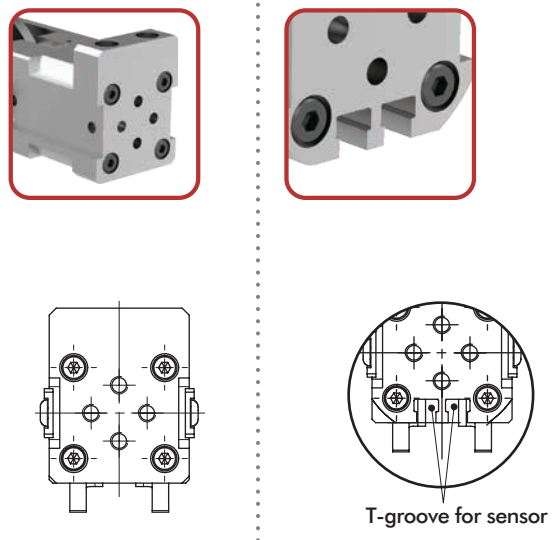
Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

84A2.V3



84AT2..3

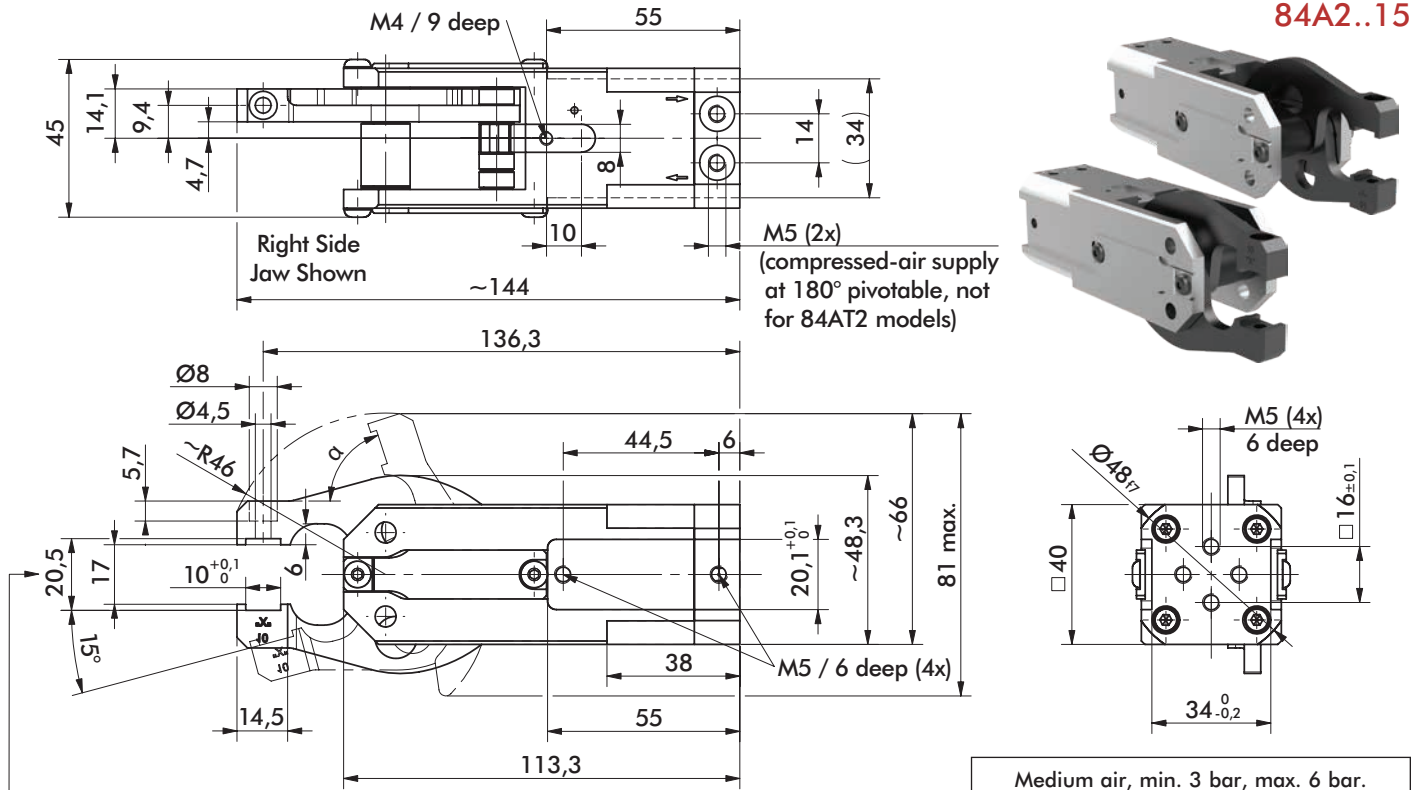


Model	Opening Angle α Upper/Lower	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
84A2..3/84AT2..3			
R	72°/15°	475 [107]	0,6 [1.32]
T	45°/15°		

84A2...5 SERIES (SINGLE 15° MOVEABLE LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

84A2..15

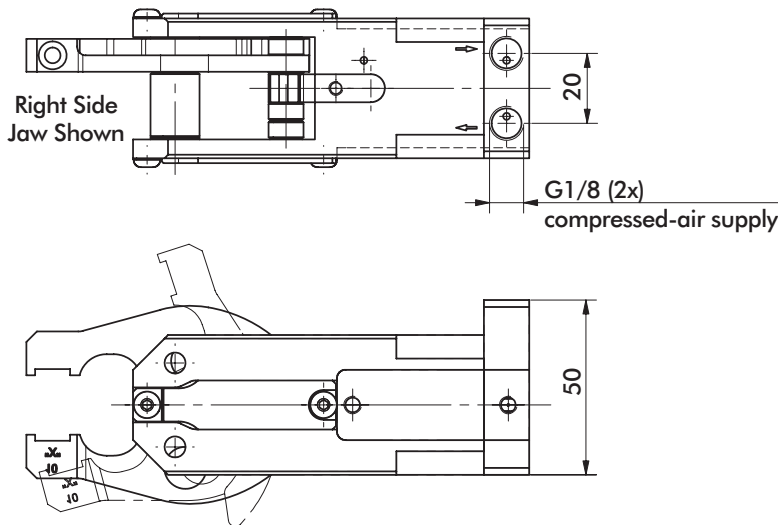


Medium air, min. 3 bar, max. 6 bar.
Operation with oil-free air is permissible.

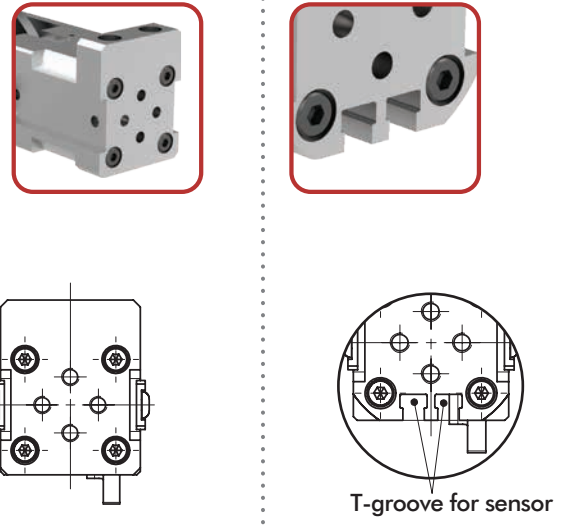
NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

84A2..V5



84AT2...5

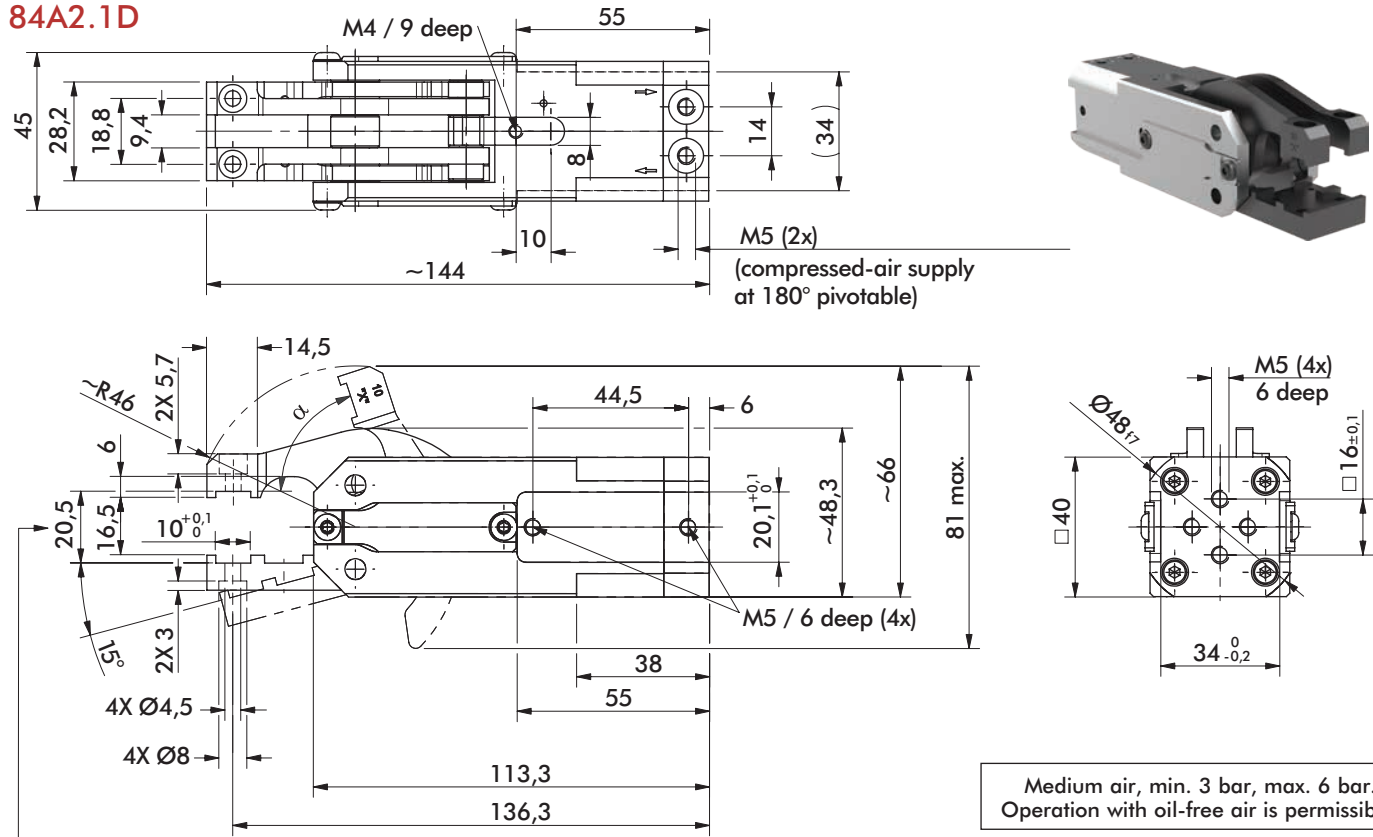


Model 84A2...5/84AT2...5	Opening Angle α Upper/Lower	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
R	72°/15°	475 [107]	0,47 [1.04]
T	45°/15°		

84A2..D SERIES (DOUBLE UPPER, 15° SINGLE MOVEABLE LOWER)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

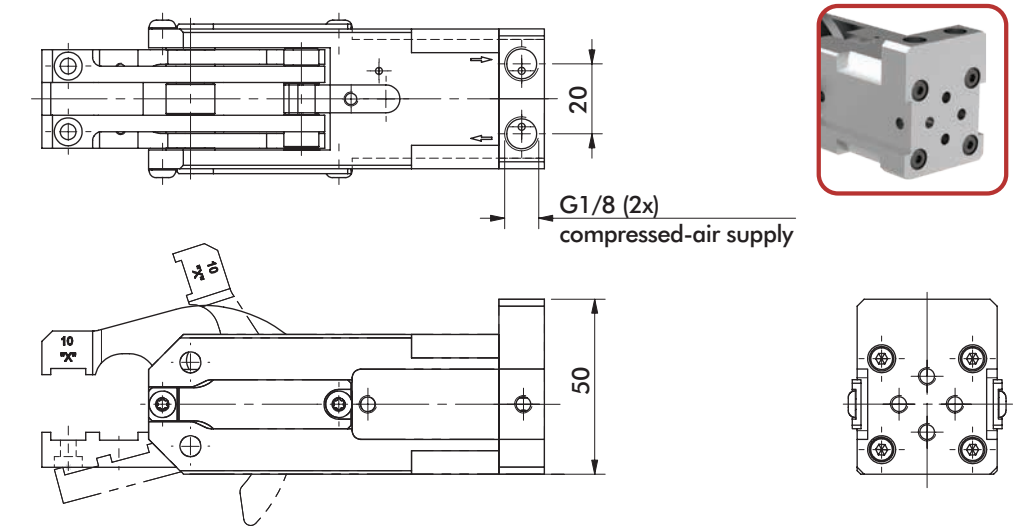
84A2.1D



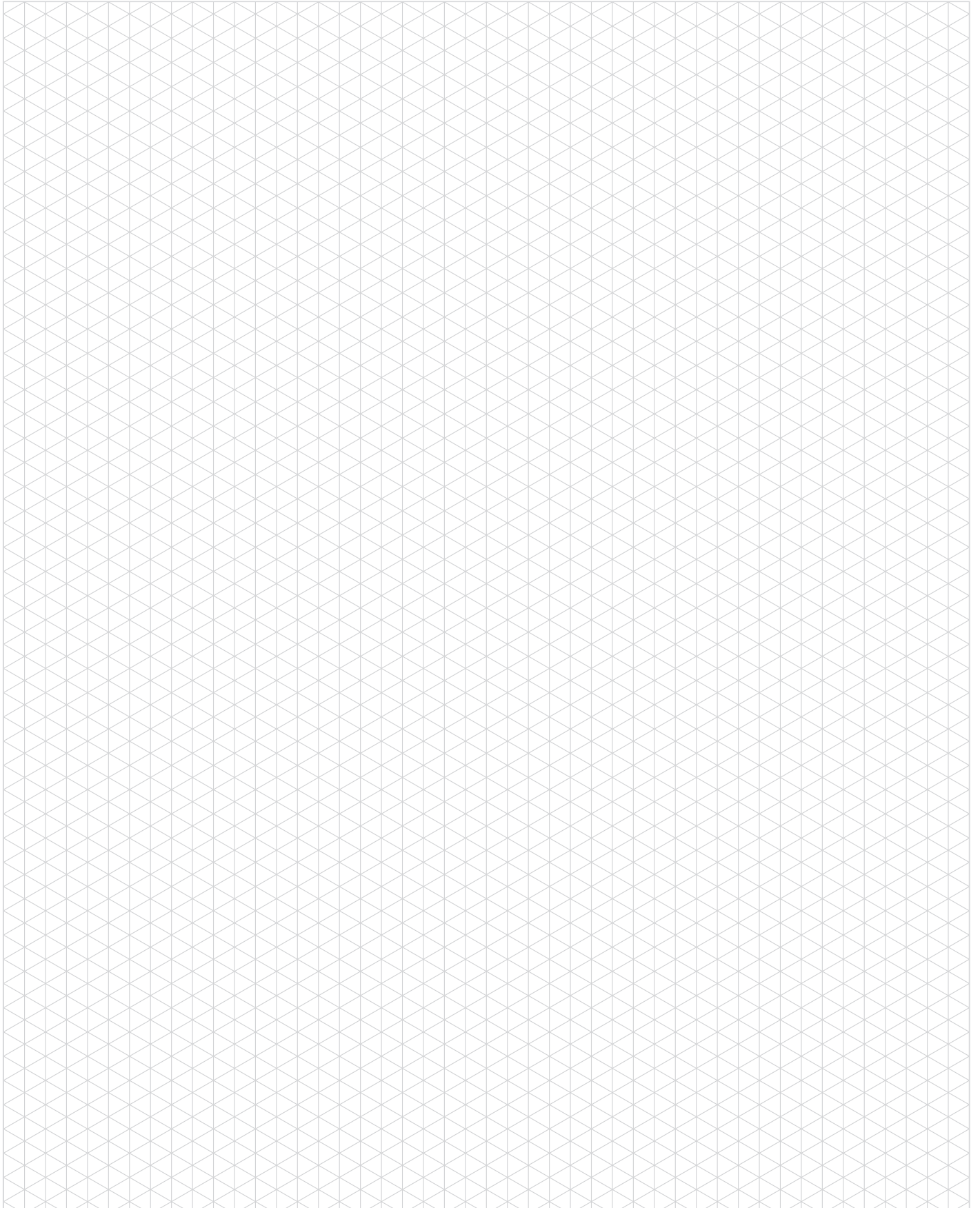
Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

84A2.VD



Model 84A2..D	Opening Angle α Upper/Lower	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
-	72°/15°	475 [107]	0,6 [1.32]
X	30°/15°		
Y	45°/15°		

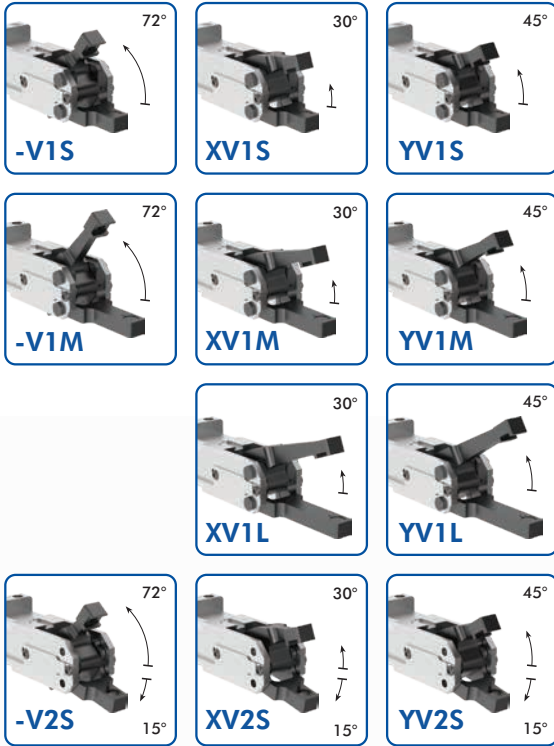


84AF2 SERIES (FIXED/MOVEABLE LOWER JAW)

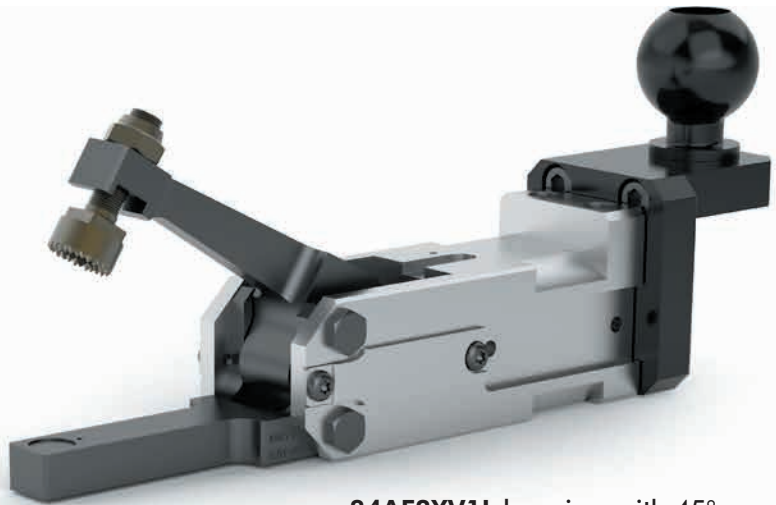
Cam Type Sheet Metal Grippers | Ordering Information



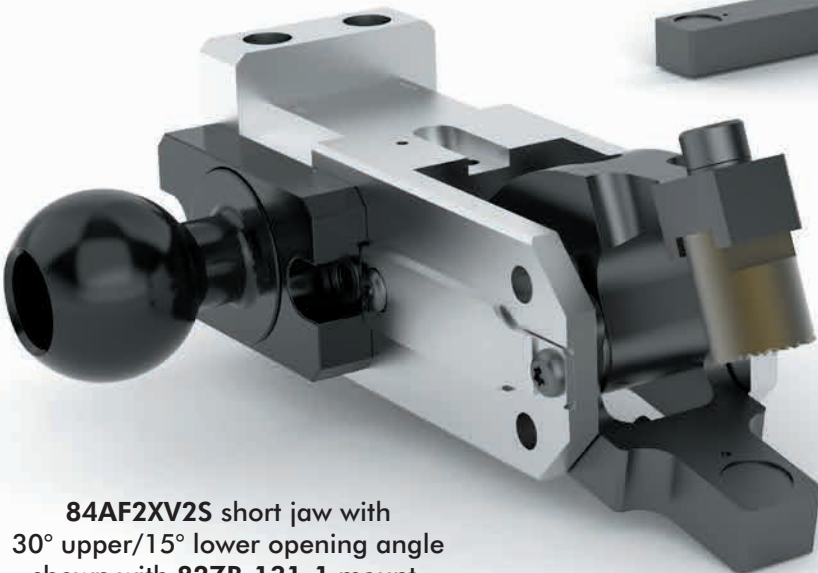
Jaw Type/Opening Angle Options



	Upper Jaw	Lower Jaw	Jaw Type
-V1S	72°		Short
XV1S	30°	0°	
YV1S	45°		
-V1M	72°		Medium
XV1M	30°	0°	
YV1M	45°		
XV1L	30°	0°	Long
YV1L	45°		
-V2S	72°		Short
XV2S	30°	15°	
YV2S	45°		



84AF2YV1L long jaw with 45° opening angle/fixed lower jaw shown with **GT-BGA-A** mount.



84AF2XV2S short jaw with 30° upper/15° lower opening angle shown with **82ZB-131-1** mount.

Specifications	Unit	
Piston	mm	25
Actuation Time (open/close)	sec	<0,1
Air Consumption per Double Stroke at 6 bar	L	0,32

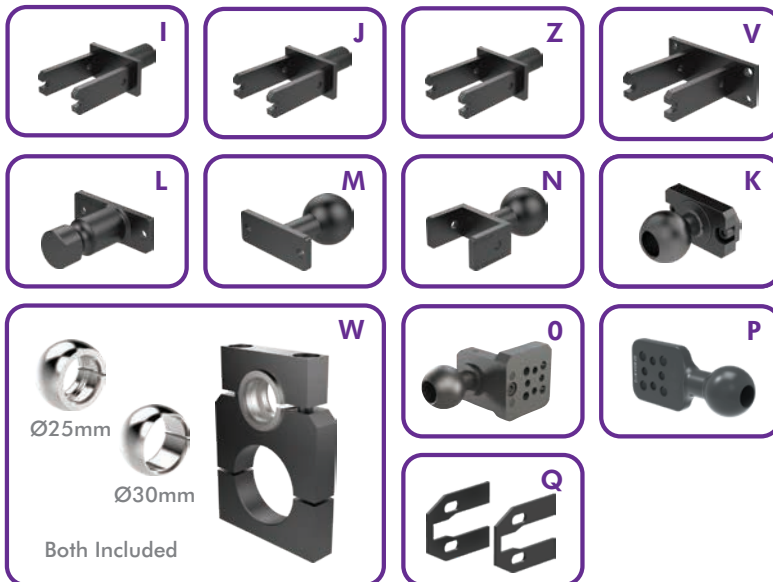
84AF2 SERIES (FIXED/MOVEABLE LOWER JAW)

Cam Type Sheet Metal Grippers | Ordering Information

Mounting Options

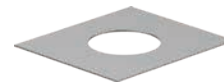
Description	
0	None
I	Ø20mm Rear Rod 8MA-165-1
J	Ø25mm Rear Rod 8MA-166-1
Z	Ø1.00" Rear Rod 8MA-168-1
V	Rear Flange 8MA-147-1
L	Ø20mm Apple Core* GT-20M-84A2-L-R
M	Ø32mm Flange Ball* GT-32B-84A2-L-R
N	Ø32mm Rear Ball GT-32B-84A2-B
K	Ø32mm Ball Adapter Mount* 82ZB-131-1
W	On-Body Swivel Ball 82ZB-025-2
O	Ø32mm Ball Gripper Mount* GT-BGA-A
P	Ø32mm Paddle Gripper Mount* GT-BGA-32B
Q	Guards 8MH-054-1 (For Jaw Arrangement Options V1S , V1M , V1L only)

*Mounted on left as standard.



Gripper Tips, Teeth (for Upper Jaw only)

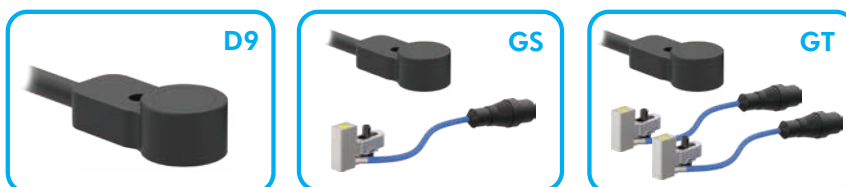
Description	
00	None
02	Gripper Tip 8JD-1004-1
18	18mm Gripper Teeth 8JZ-125-1
20	20mm Gripper Teeth 8JZ-124-1



Shims for gripper teeth available
Order Separately **8SB-091-1**
Dimensions: 15 x 10 x 0,1 mm

Sensor Options (not suitable for High Temperature applications)

Description	
D9	PNP Part Presence Sensor, M12X1 Plug - 8EA-1024-1 (Standard on all models)
GS	1X D9 Part Presence Sensor, M12X1 Plug - 8EA-1024-1 1X D5 Double Sheet Control, M12x1 Plug - 8EA-087-1
GT	1X D9 Part Presence Sensor, M12X1 Plug - 8EA-1024-1 2X D5 Double Sheet Control, M12x1 Plug - 8EA-087-1



Cover for Sensing Systems **GS**, **GT**
Order Separately **82ZB-185-1**

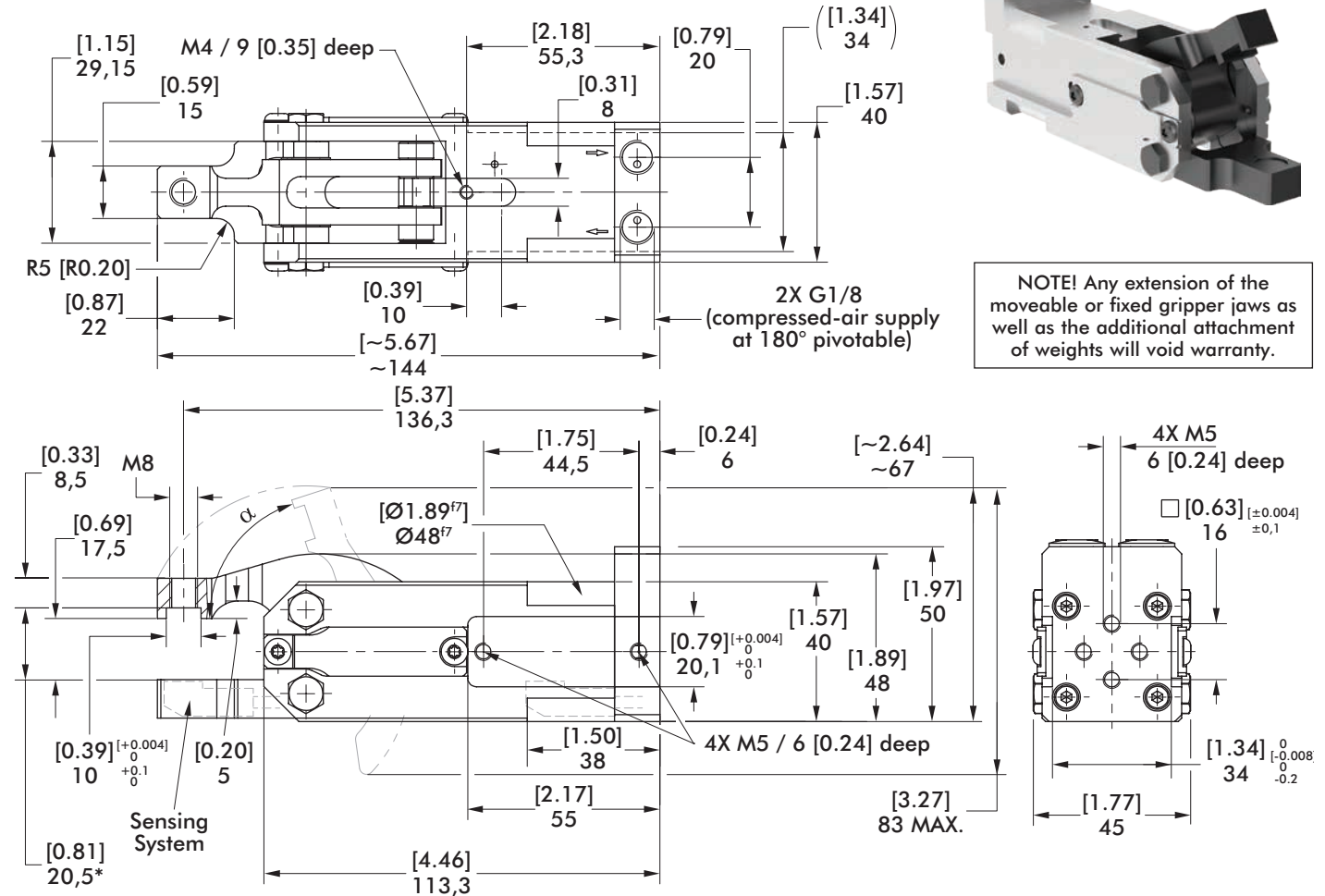


T-Coupler M12x1 for Sensing System **GS**
Order Separately **7000-41161-0000000**

84AF2.V.S SHORT LENGTH FIXED/MOVEABLE LOWER JAW

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

84AF2.V1S Short Length, Fixed Lower Jaw

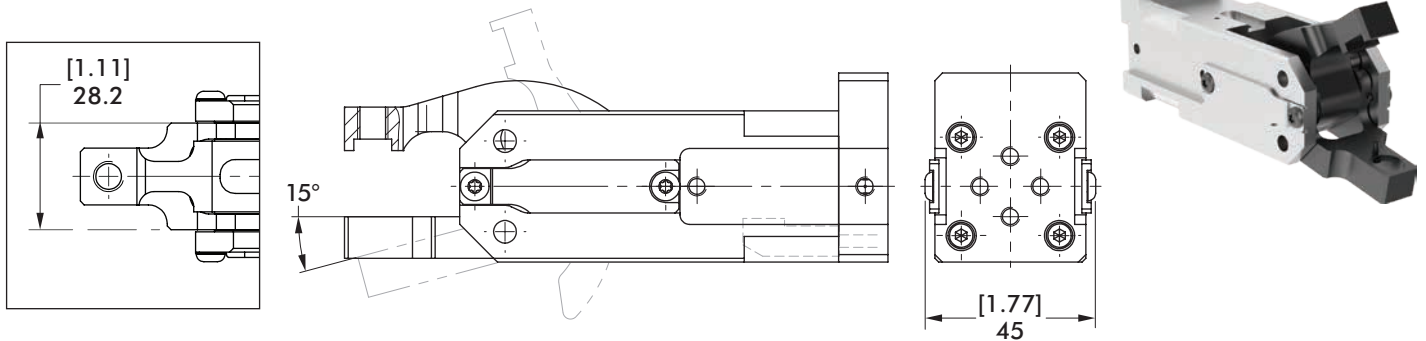


2X G1/8 (compressed-air supply at 180° pivotable)

Medium air, min. 3 bar, max. 6 bar. Operation with oil-free air is permissible.

* Note! Addition of gripper teeth height and thickness of the clamped plate must be 20,5 [0.81]. It might be necessary to use shim plates or to grind off the gripper teeth.

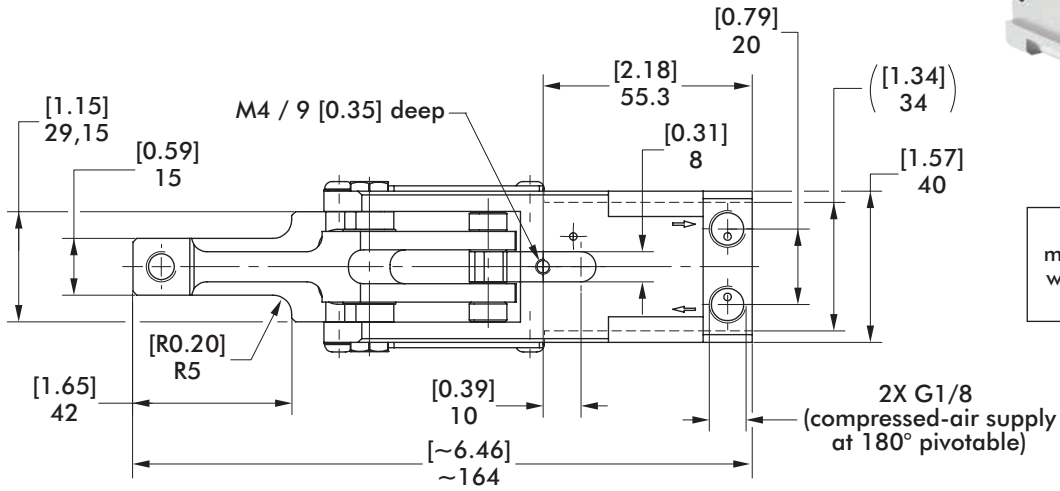
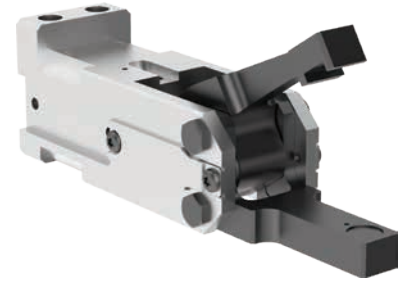
84AF2.V2S Short Length, Moveable Lower Jaw



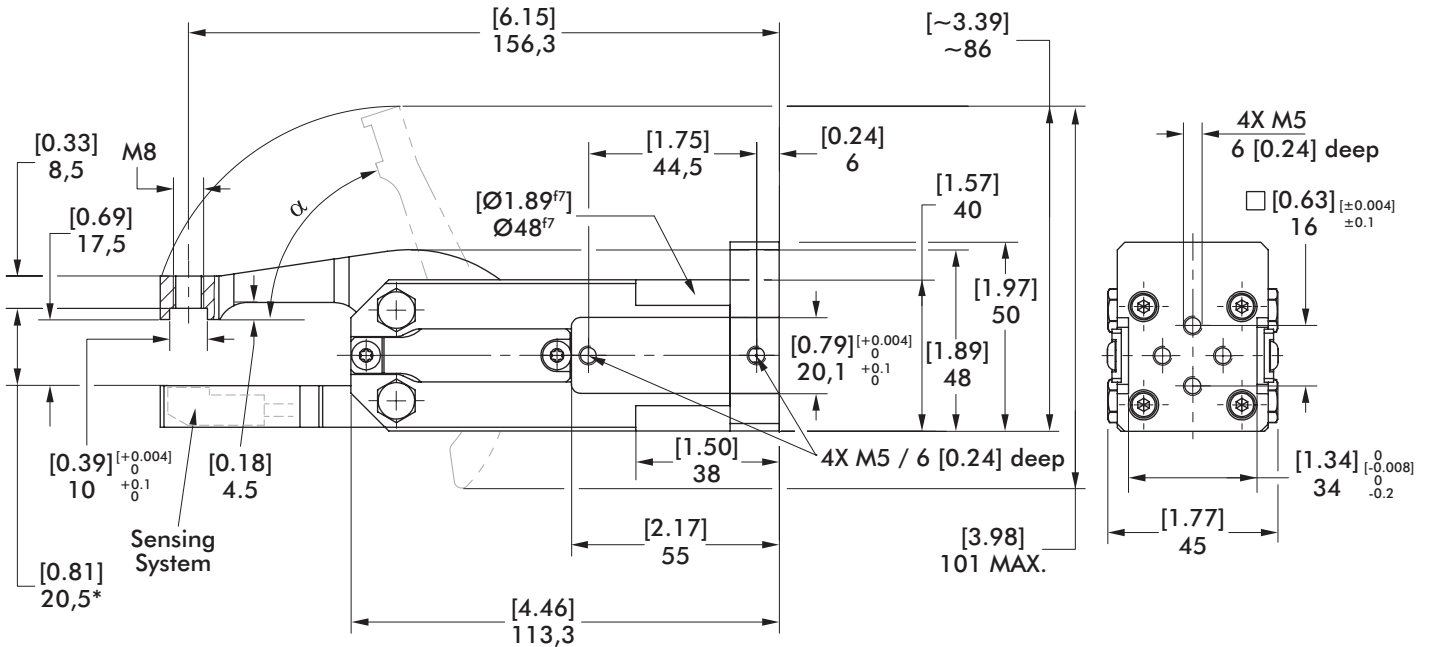
Model 84AF2.V1S / 84AF2.V2S	Opening Angle α		Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
	Upper	Upper/Lower		
-	72°	72°/15°	V1S: 820 [184] V2S: 475 [107]	0,6 [1.32]
X	30°	30°/15°		
Y	45°	45°/15°		

84AF2.V1M MEDIUM LENGTH, FIXED LOWER JAW

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.



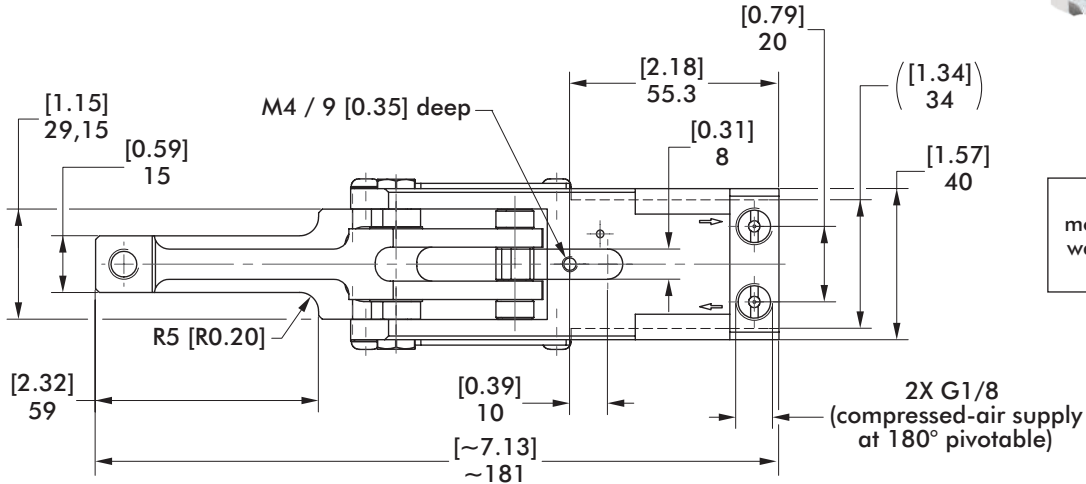
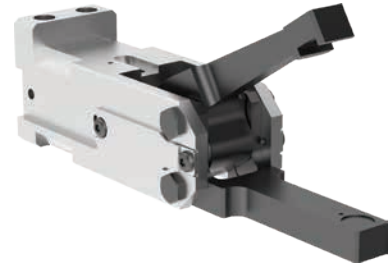
* Note! Addition of gripper teeth height and thickness of the clamped plate must be 20,5 [0.81]. It might be necessary to use shim plates or to grind off the gripper teeth.

Medium air, min. 3 bar, max. 6 bar. Operation with oil-free air is permissible.

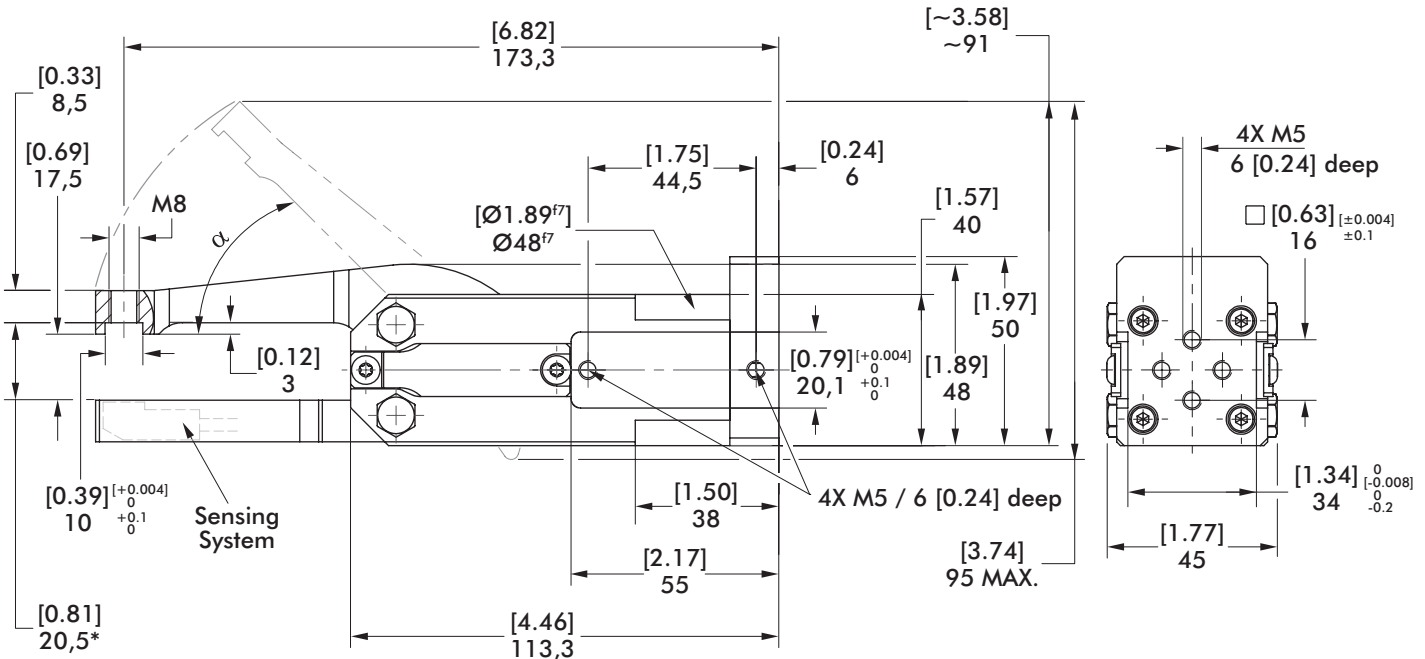
Model 84AF2.V1M	Opening Angle α	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
-	72°	560 [126]	0,62 [1.37]
X	30°		
Y	45°		

84AF2.V1L LONG LENGTH, FIXED LOWER JAW

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.



* Note! Addition of gripper teeth height and thickness of the clamped plate must be 20,5 [0.81]. It might be necessary to use shim plates or to grind off the gripper teeth.

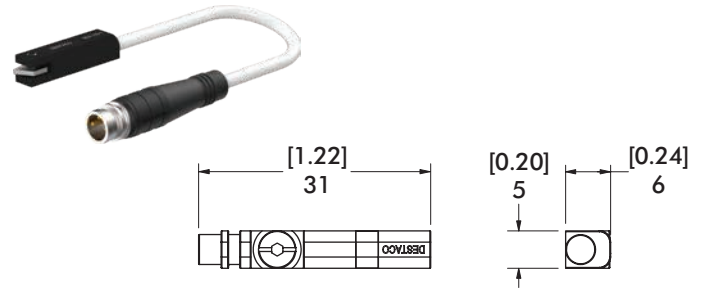
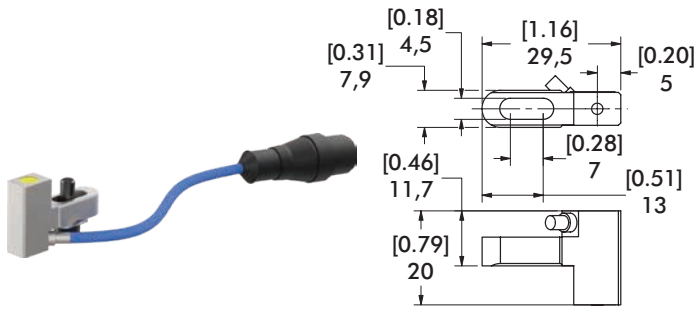
Medium air, min. 3 bar, max. 6 bar.
Operation with oil-free air is permissible.

Model 84AF2.V1L	Opening Angle α	Clamping force at 6 bar ~N [lbf]	Weight Kg [lbs]
X	30°	300 [67.4]	0,65 [1.43]
Y	45°		

84A2, 84AF2 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

Sensors



Part Present Sensor

Part

1.5mm Sensing Distance, M12x1 Plug

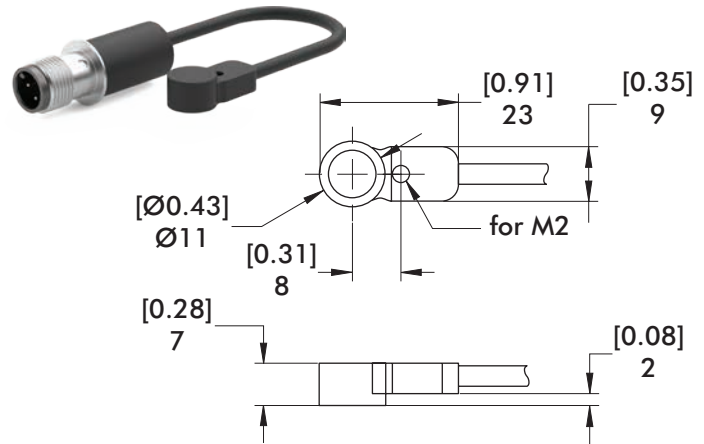
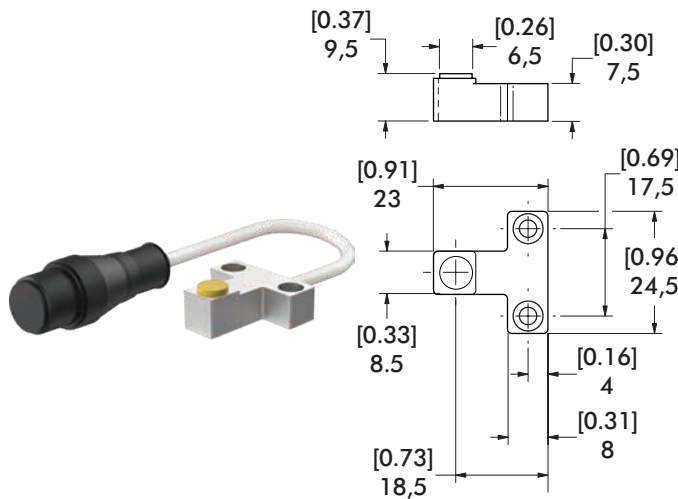
8EA-087-1

Proximity Switch (84AT2 only)

Part

T-Slot, M8x1 Plug

8EA-109-1



Part Present Sensor

Part

3mm Sensing Distance, 2m Cable

8EA-164-1

3mm Sensing Distance, M12x1 Plug

8EA-165-1

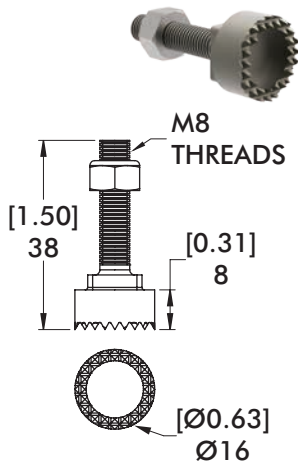
Jaw Part Present Sensor (84AF2 only)

Part

3mm Sensing Distance, M12x1 Plug

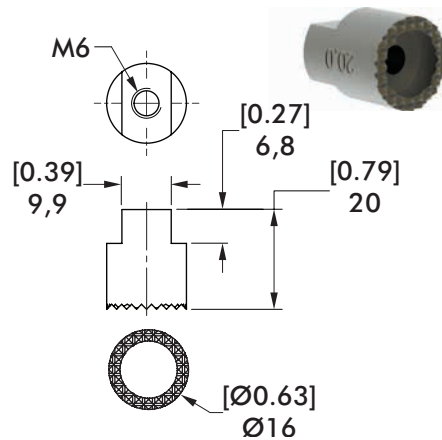
8EA-1024-1

Tips/Teeth (84AF2 only)



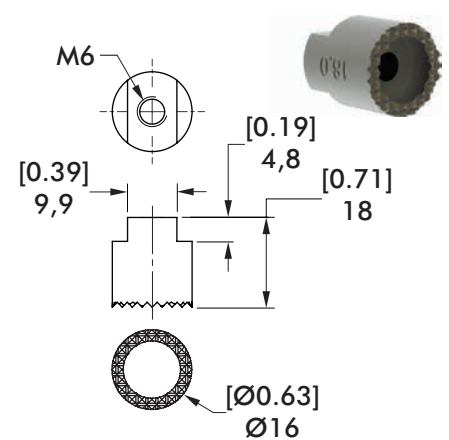
Part

8JD-1004-1



Part

8JZ-124-1



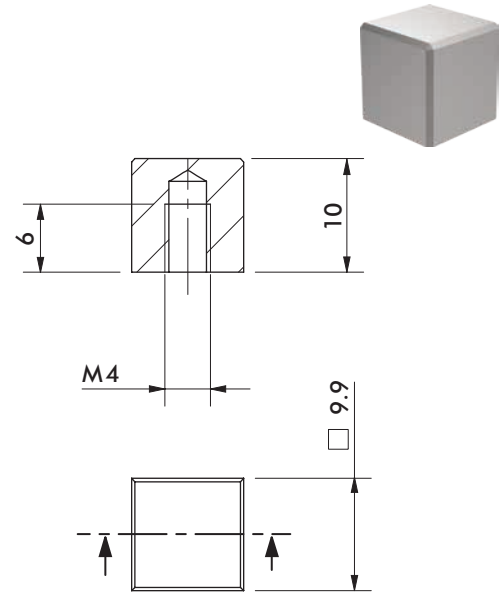
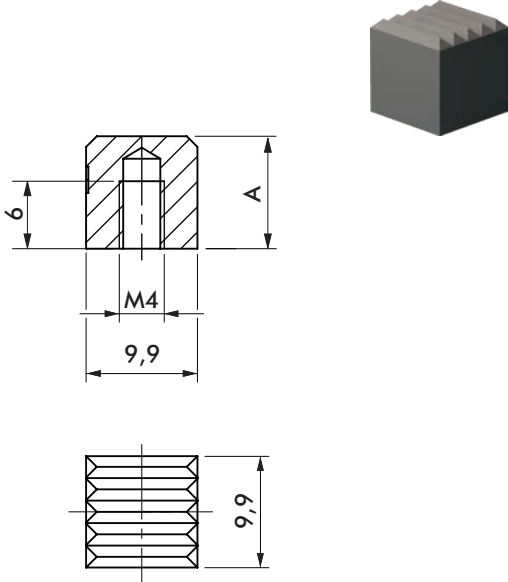
Part

8JZ-125-1

84A2 SERIES ACCESSORIES

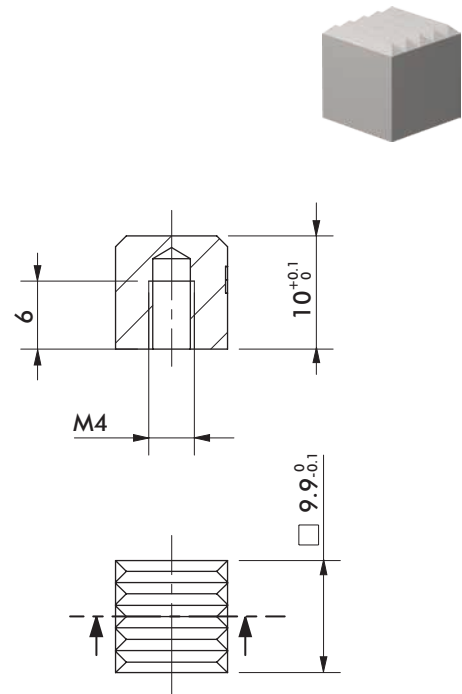
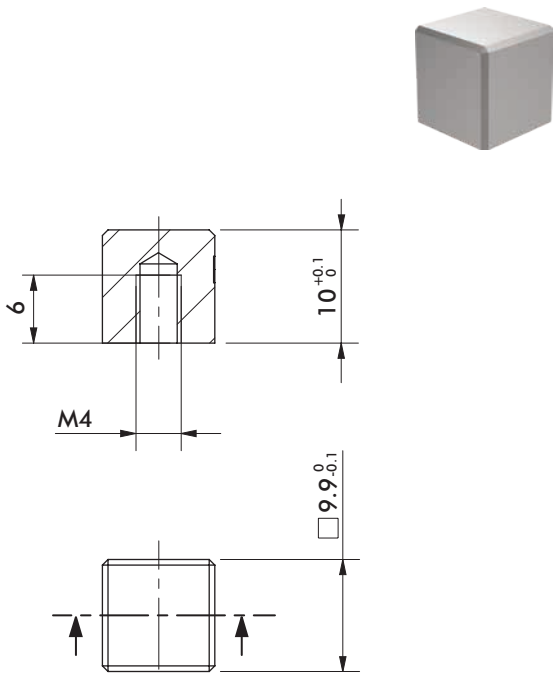
Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

Steel Teeth



Hardened Steel Teeth	Part #	A
Serrated	8JZ-049-1	9
Serrated	8JZ-027-1	10

Soft Steel Teeth	Part #
Non-Serrated	8JZ-028-1



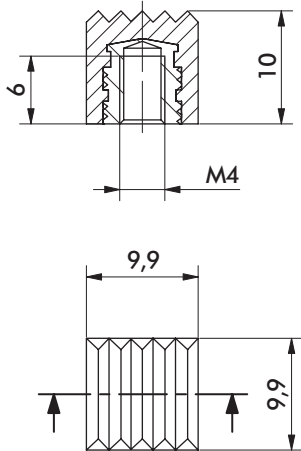
Hi-Temp Soft Steel Teeth	Part #
Non-Serrated	8JZ-085-1

Hi-Temp Soft Steel Teeth	Part #
Serrated	8JZ-092-1

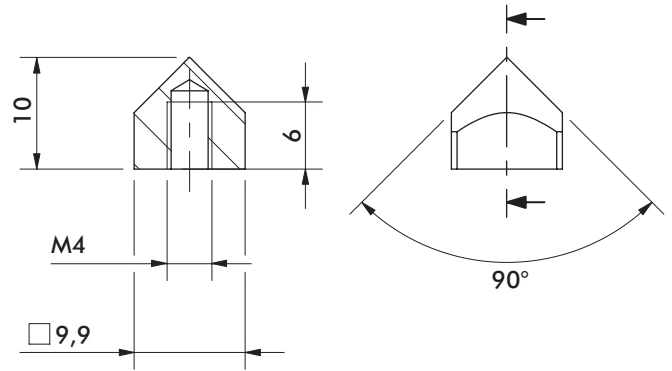
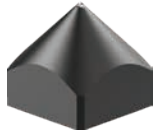
84A2 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

Plastic Teeth



Steel Points



Plastic Teeth

90 Shore, Serrated

Part

8JZ-045-2

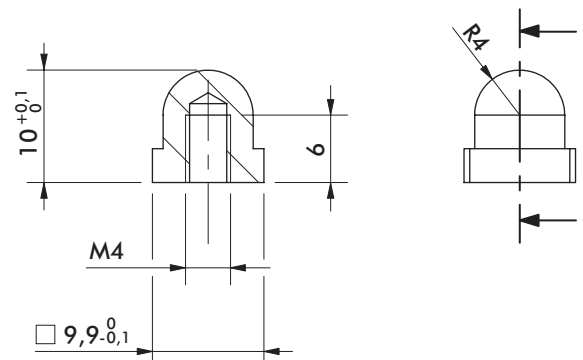
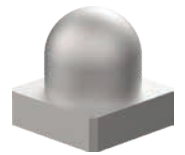
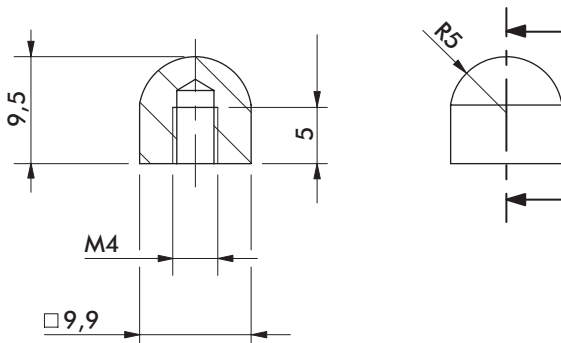
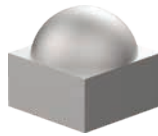
Hardened Steel Point

Pointed

Part

8JZ-029-1

Steel Points



Hi-Temp Soft Steel Point

Rounded

Part

8JZ-074-1

Hi-Temp Soft Steel Point

Rounded

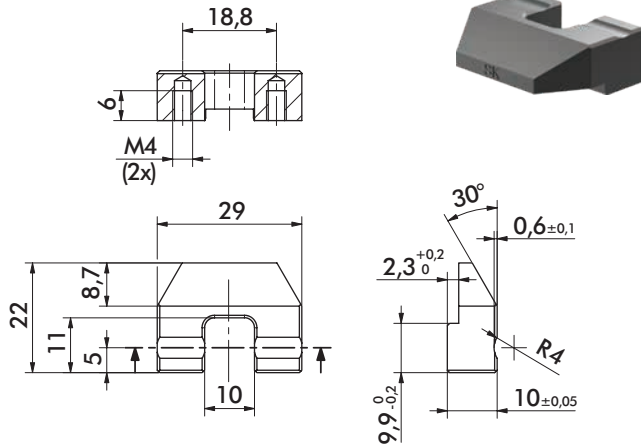
Part

8JZ-088-1

84A2 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

Crown Teeth

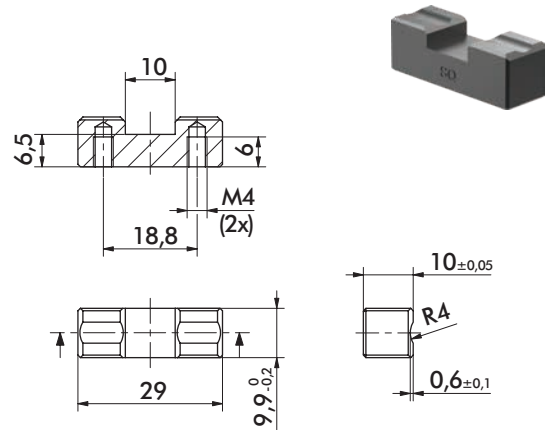


Hardened Steel Teeth

Part #

Crown Lower

8JZ-036-2

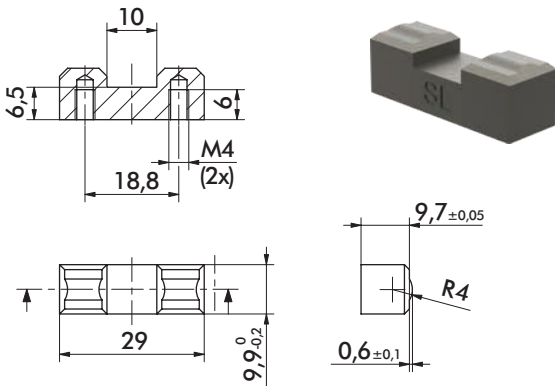


Hardened Steel Teeth

Part #

Crown Lower

8JZ-051-1



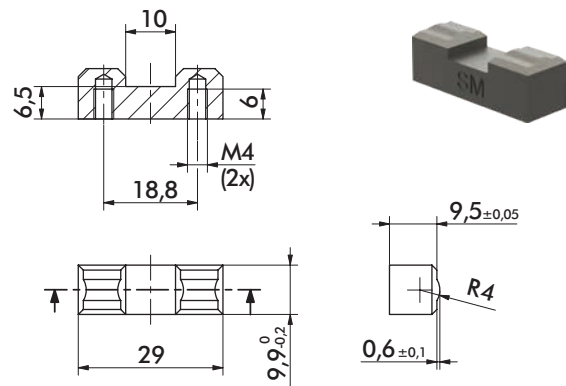
For material thickness 0,5 - 0,8 mm

Hardened Steel Teeth

Part #

Crown Upper

8JZ-037-1



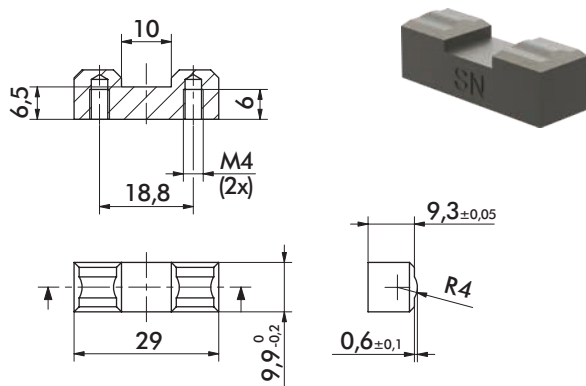
For material thickness 0,9 - 1,2 mm

Hardened Steel Teeth

Part #

Crown Upper

8JZ-038-1



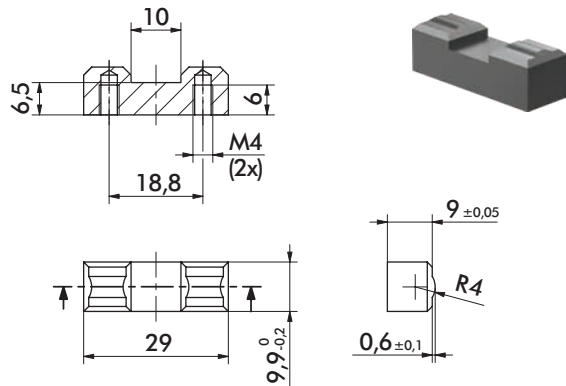
For material thickness 1,3 - 1,6 mm

Hardened Steel Teeth

Part #

Crown Upper

8JZ-039-1



For material thickness 1,7 - 2,1 mm

Hardened Steel Teeth

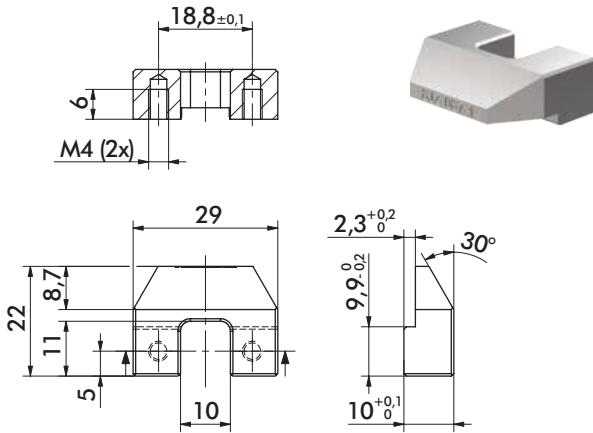
Part #

Crown Upper

8JZ-040-1

84A2, 84AF2 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

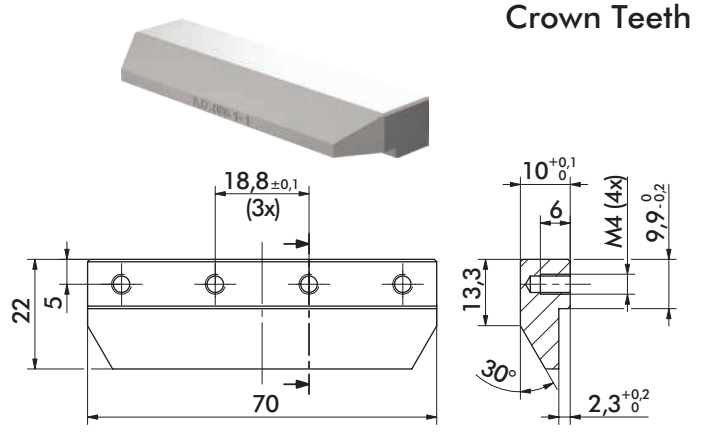


Hi-Temp Soft Steel Teeth

Part #

Crown Lower

8JZ-087-1



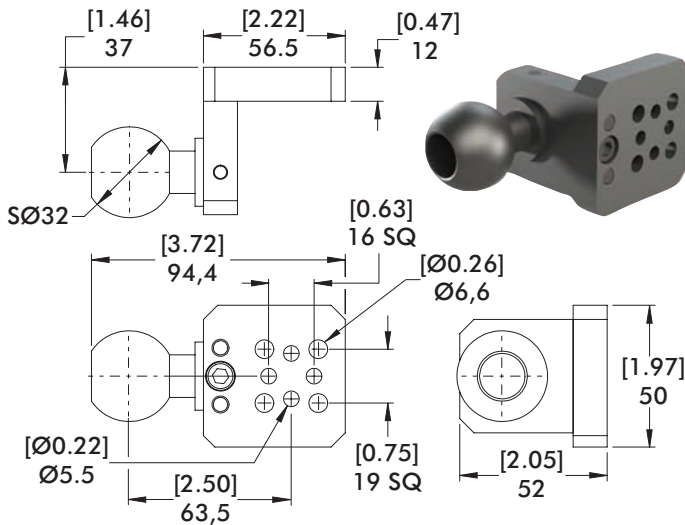
Crown Teeth

Hi-Temp Soft Steel Teeth

Part #

Crown Lower

8JZ-086-1

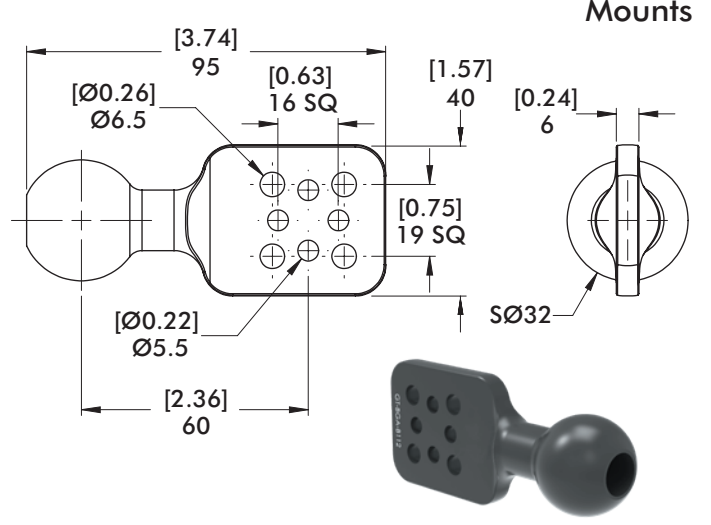


Mount

Part #

Ball Gripper Mount

GT-BGA-A

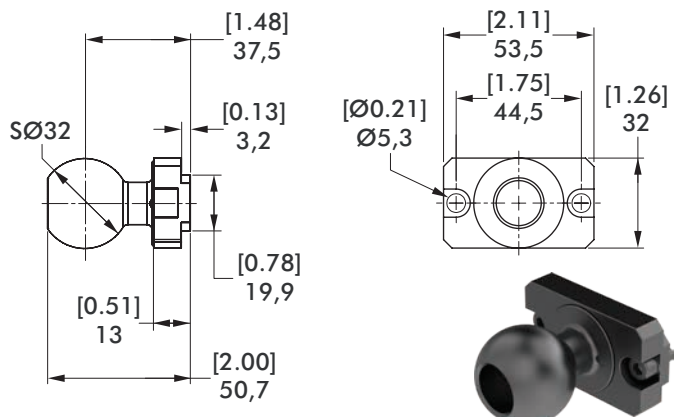


Mount

Part #

Paddle Gripper Mount

GT-BGA-32B

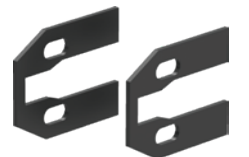
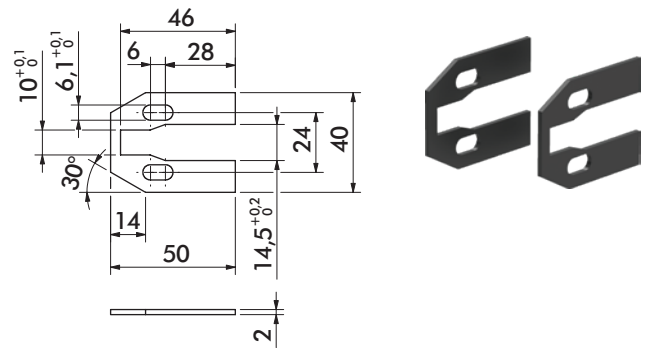


Mount

Part #

Ball Adapter Mount

82ZB-131-1



Mount

Part #

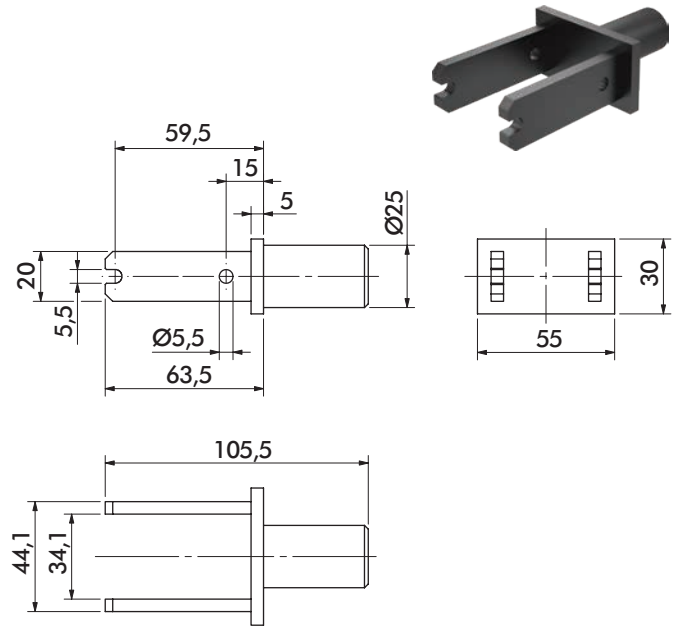
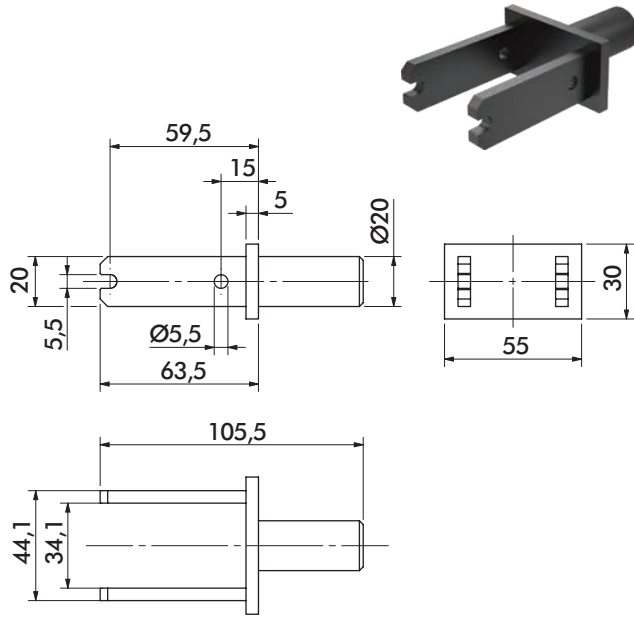
Guards

8MH-054-1

84A2, 84AF2 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

Mounts



Mount

Part #

Ø20mm Rear Rod

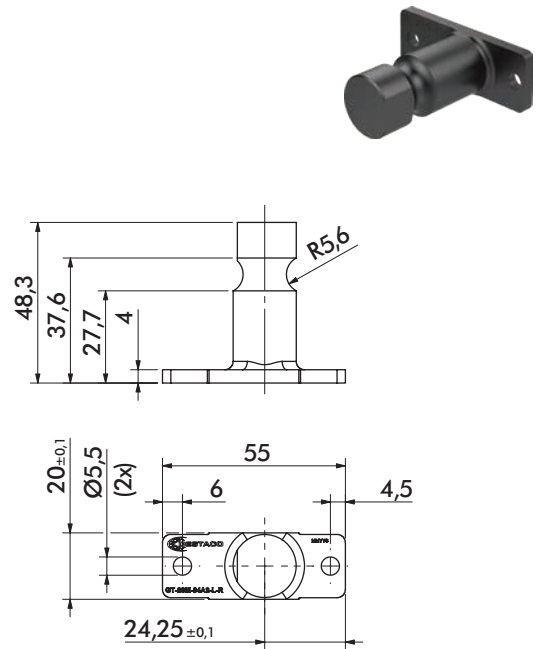
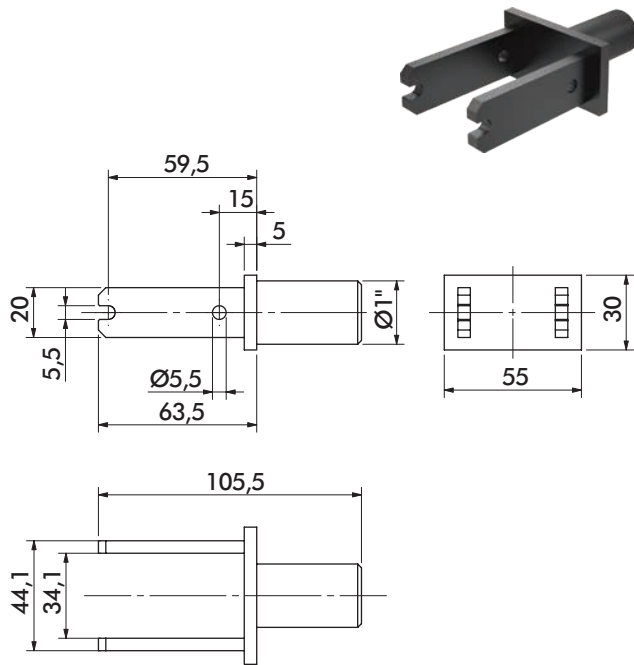
8MA-165-1

Mount

Part #

Ø25mm Rear Rod

8MA-166-1



Mount

Part #

Ø1.00" Rear Rod

8MA-168-1

Mount

Part #

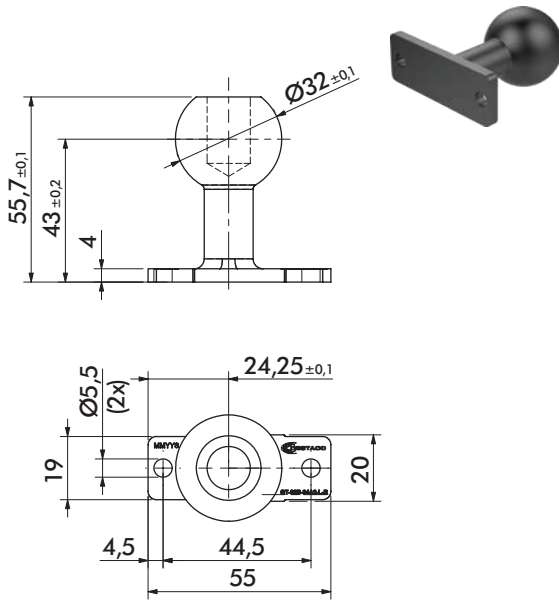
Ø20mm Apple Core

GT-20M-84A2-L-R

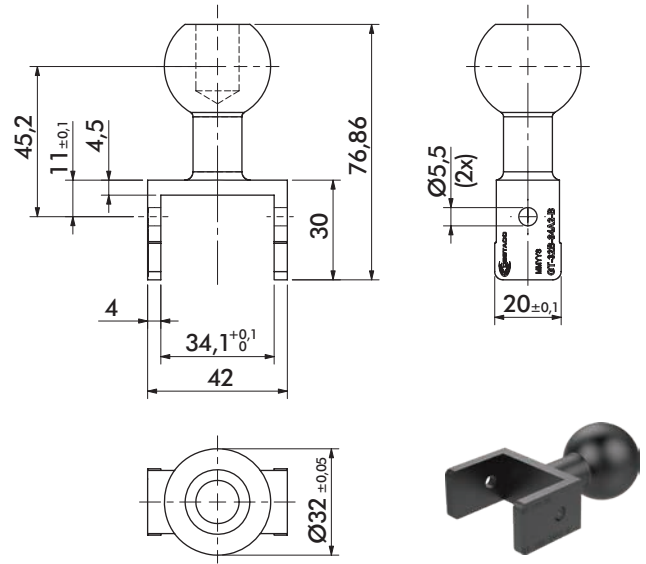
84A2, 84AF2 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

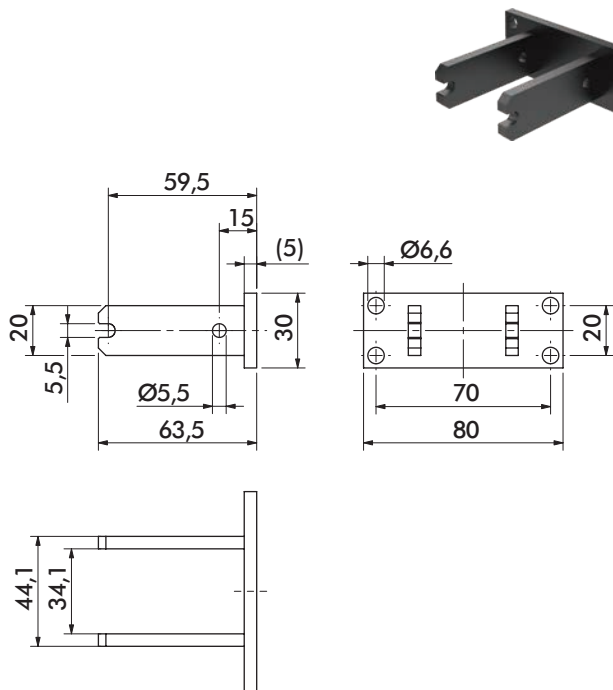
Mounts



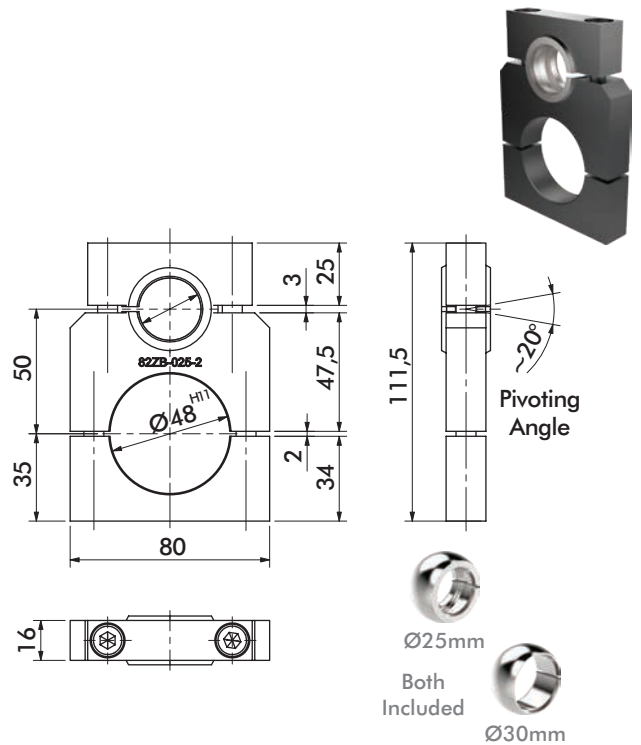
Mount	Part #
Ø32mm Flanged Ball	GT-32B-84A2-L-R



Mount	Part #
Ø32mm Rear Ball	GT-32B-84A2-B



Mount	Part #
Rear Flange	8MA-147-1



Mount	Part #
On-Body Swivel Ball	82ZB-025-2

Ø25mm
Both Included
Ø30mm

84A3-3 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Ordering Information

Fixed Lower & 90° Jaw

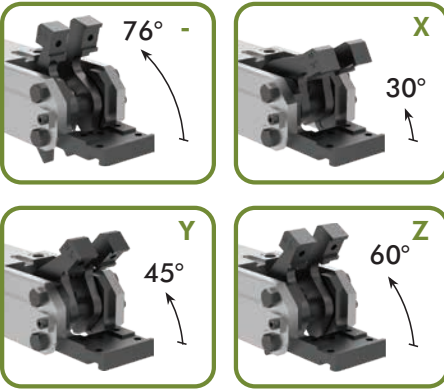
Sensors, Gripper Teeth & Mounting (See next page)

84A3 - 31 D5 S SF SB - T High Temperature

Jaw Opening Options

Description

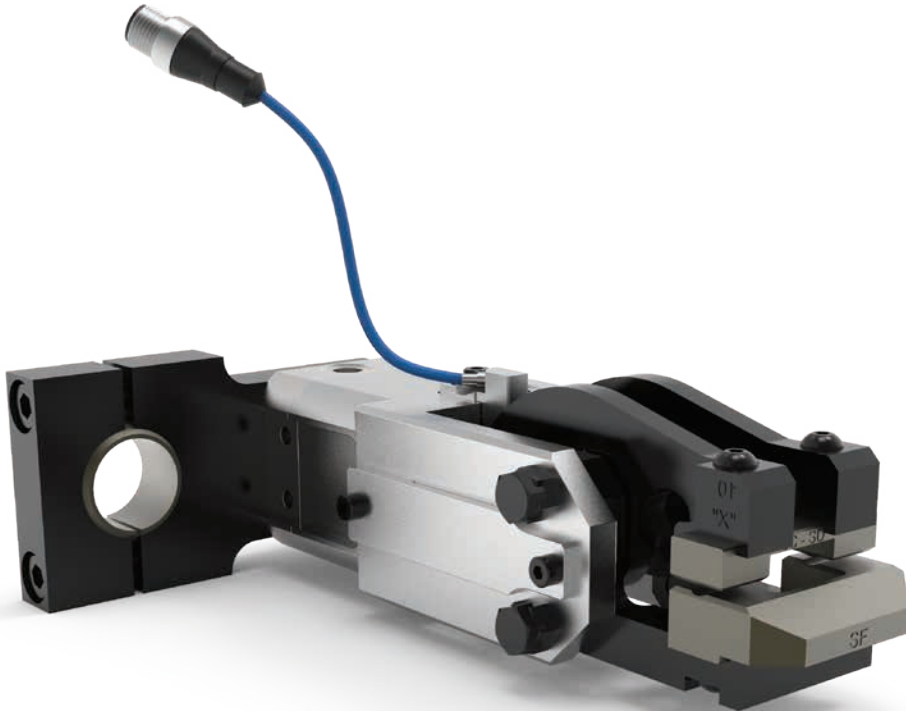
- 76° Jaw Opening (Standard)
- X 30° Jaw Opening
- Y 45° Jaw Opening
- Z 60° Jaw Opening



Jaw Arrangement Options

Description

- 30 Double Upper, Straight Design, Drop Jaw
- 31 Double Upper, Straight Design
- 32 Double Upper, 90° Design
- 34 Single Upper, Right, Straight Design
- 35 Double Upper, Narrow Jaw, Straight Design
- 36 Double Upper, Extended Jaw
- 37 Double Upper, 90° Design
- 38 Double Upper, Narrow Jaw, 90° Design
- 39 Single Upper, Left, Straight Design



Specifications	Unit	
Piston	mm	32
Actuation Time (open/close)	sec	0,2
Air Consumption per Double Stroke at 5 bar	L	0,4

84A3-3 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Ordering Information

Gripper Teeth, Points and Crown Options (Upper and Lower)

Steel Teeth

- 00** None
- AA** 14,9x21x12mm - 8JZ-014-3
- AH** 14,9x14x14mm - 8JZ-001-1
- AL** 14,9x14,9x9,8mm - 8JZ-003-1
- AC** 14,9x14x12mm - 8JZ-043-1
- AG** 14,9x14x12mm - 8JZ-050-1
- BK** 14,9x21x11mm - 8JZ-066-1

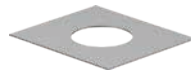


High Temperature
AS 8JZ-094-1



Plastic Teeth*

- 00** None
 - KA** 8JZ-021-1
 - KC** 8JZ-023-1 (Upper)
- *Not suitable for High Temperature applications



Shims for gripper teeth available
Order Separately **8SB-003-1**
Dimensions: 14,8 x 13 x 0,15 mm

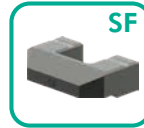
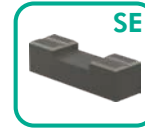
Steel Points (Upper only)

- 00** None
- PA** 8MJ-1001-1
- PB** 8MJ-1002-1
- PC** 8MJ-1003-1



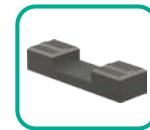
Crown Teeth - Concave (Lower Only)

- 00** None
- SE** 8JZ-019-1
(Not for use with A8 and GN Sensor)
- SF** 8JZ-020-3
- SH** 8JZ-048-1



Crown Teeth - Convex (Upper Only)

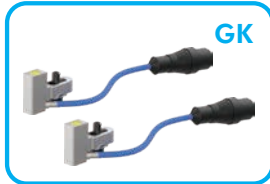
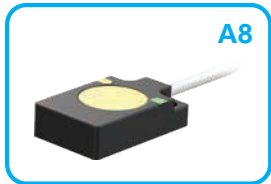
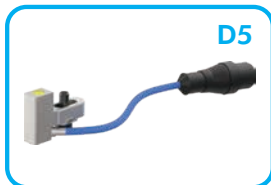
- SB** Mat. = 0,5-1mm - 8JZ-016-2
- SD** Mat. = 1-1,5mm - 8JZ-018-2



Sensor Options (not suitable for High Temperature applications)

Description

- 00** None
- KL** Position Control Set, Left for 76° Opening Angle - 8EA-022-4
- KR** Position Control Set, Right for 76° Opening Angle - 8EA-022-4
- A8** Workpiece Control, Switching Distance 7mm
8EA-092-1 (for 84A3-30/31/32/36)
- D5** Double Sheet Control, M12x1 Plug - 8EA-087-1
- GK** 2X D5
- GN** 1X A8 + 1X D5 (for 84A3-30/31/32/36 only)



Shims for Sensor A8 available
Order Separately **8MB-003-1**



Cable support for Sensing Systems **A8**
Order Separately **8MA-175-1**
Mounted on lower side of gripper (for 84A3-31/36 only)

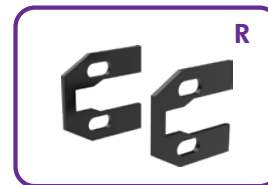


Cover for Sensing Systems **D5, GK, GN**
Order Separately **82ZB-185-1**

Mounting Options

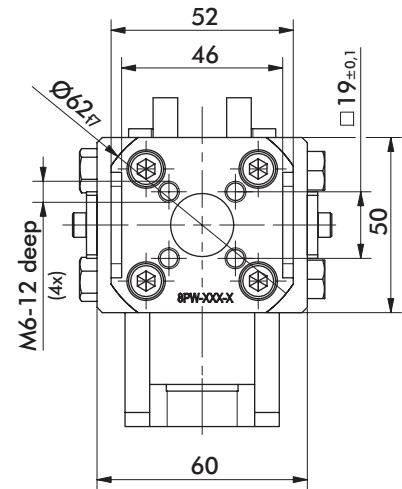
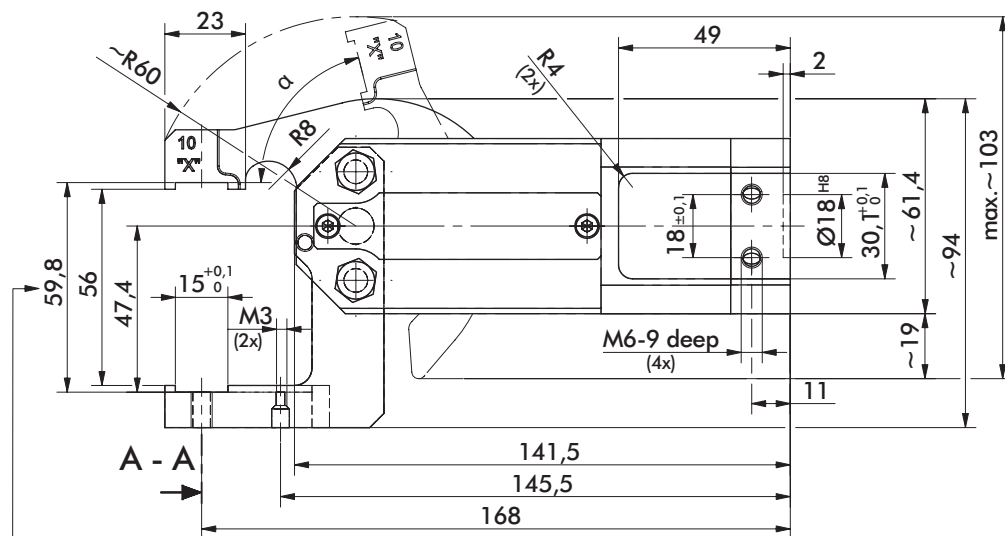
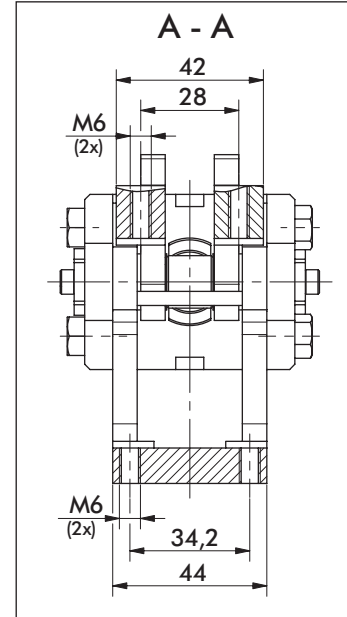
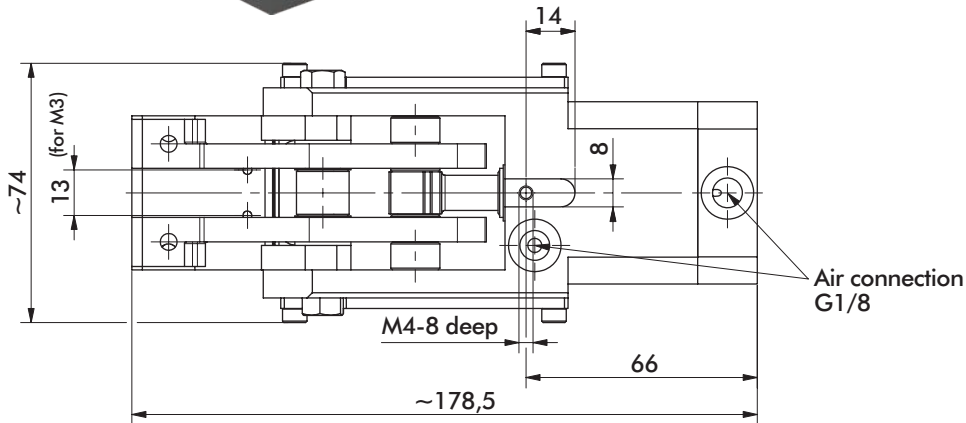
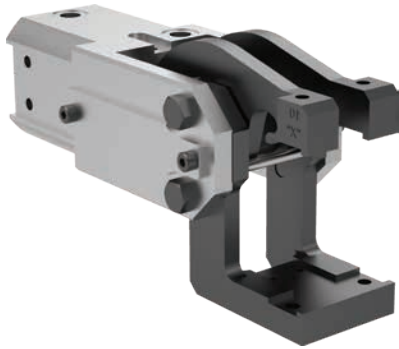
Description

- 0** None
- A** Rear Flange - 8MA-006-1
- 3** Rear Flange - 8MA-273-1
- R** Guards - 8MH-046-1
(for 84A3-31/34/35/39 only)
- S** Rear Swivel Ball - 82ZB-007-1
- X** On-Body Swivel Ball
82ZB-033-2



84A3.30 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Addition of gripper teeth height and thickness of the clamped plate must be 59,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

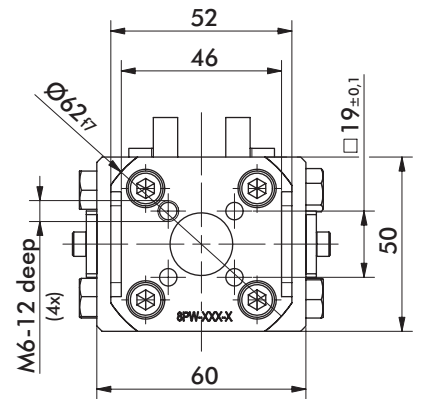
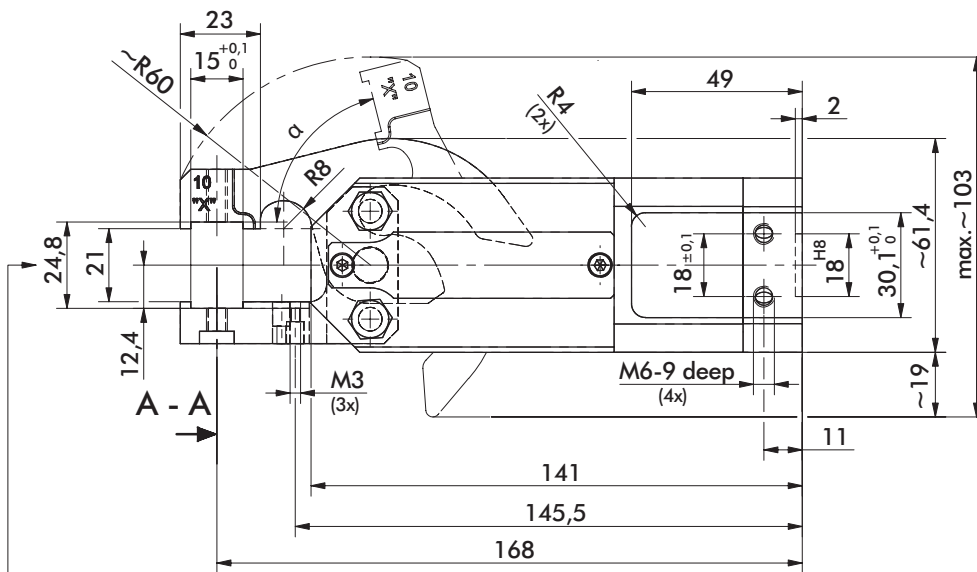
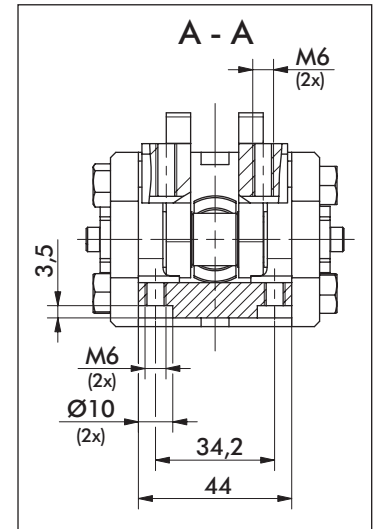
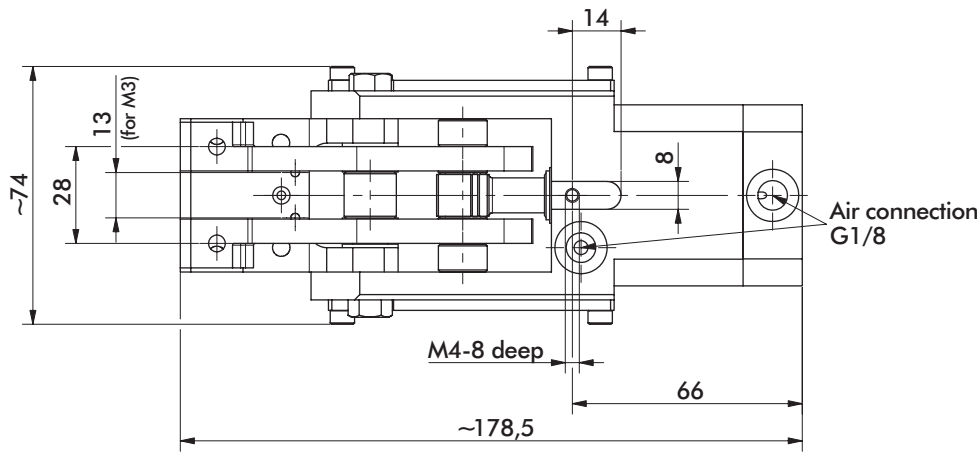
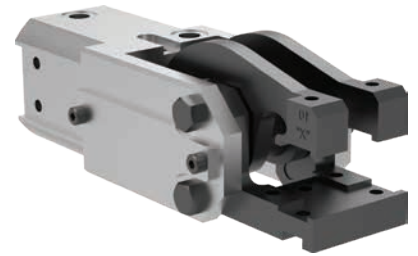
Medium air, max. 6 bar. Operation with oil-free air is permissible.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model 84A3.30	Opening Angle α	Clamping force at 5 bar ~N [lbf]	Weight Kg [lbs]
-	76°	1500 [337]	1,4 [3.09]
X	30°		
Y	45°		
Z	60°		

84A3.31 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Medium air, max. 6 bar. Operation with oil-free air is permissible.

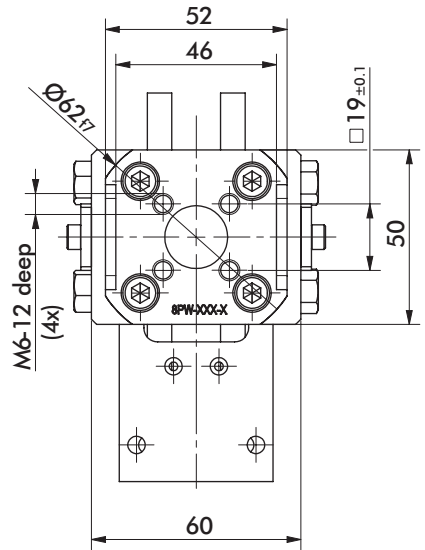
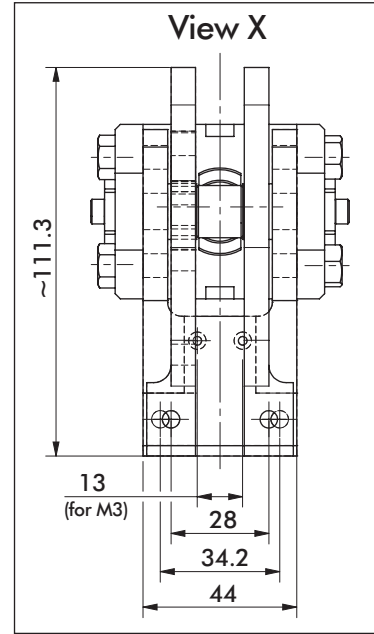
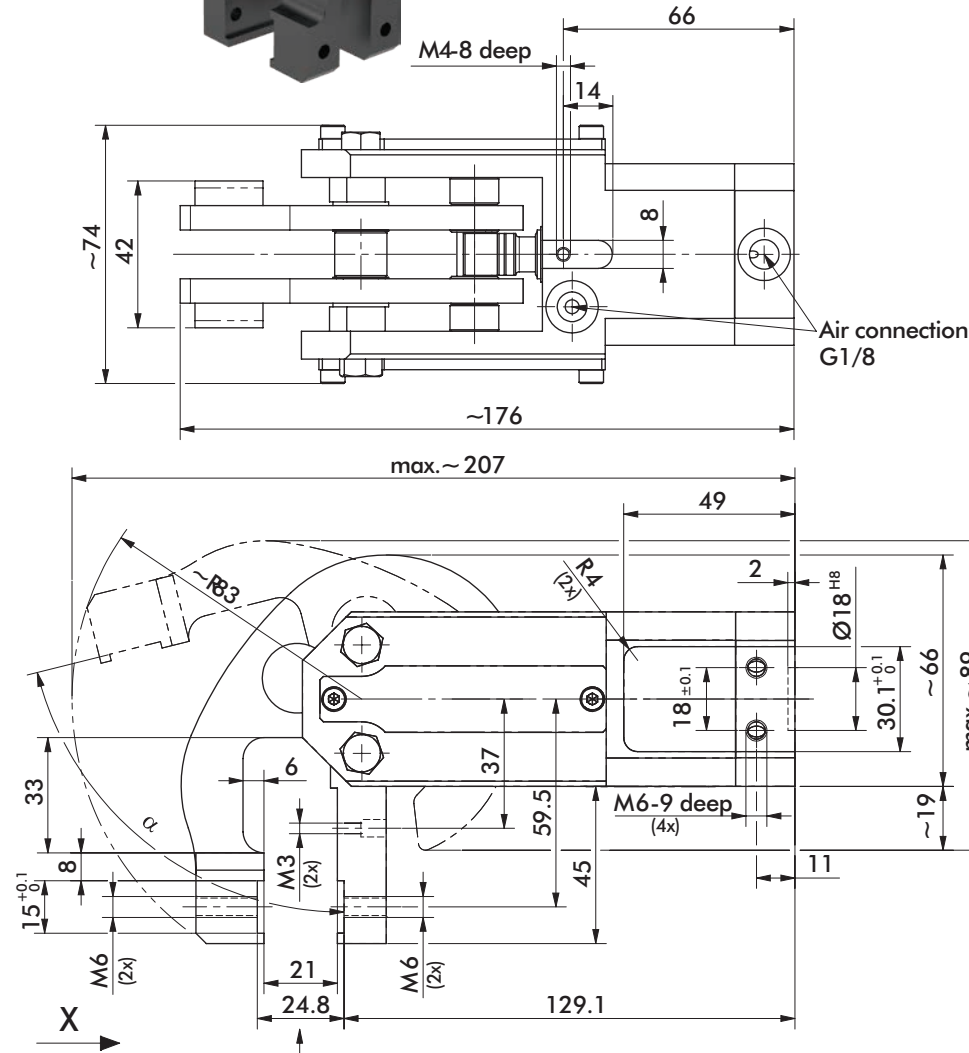
NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Addition of gripper teeth height and thickness of the clamped plate must be 24,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

Model 84A3.31	Opening Angle α	Clamping force at 5 bar ~N [lbf]	Weight Kg [lbs]
-	76°	1500 [337]	1,3 [2.87]
X	30°		
Y	45°		
Z	60°		

84A3.32 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Addition of gripper teeth height and thickness of the clamped plate must be 24,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

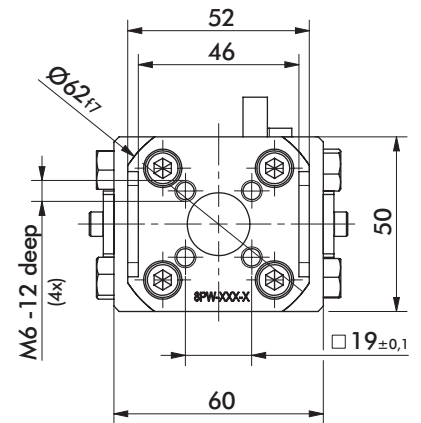
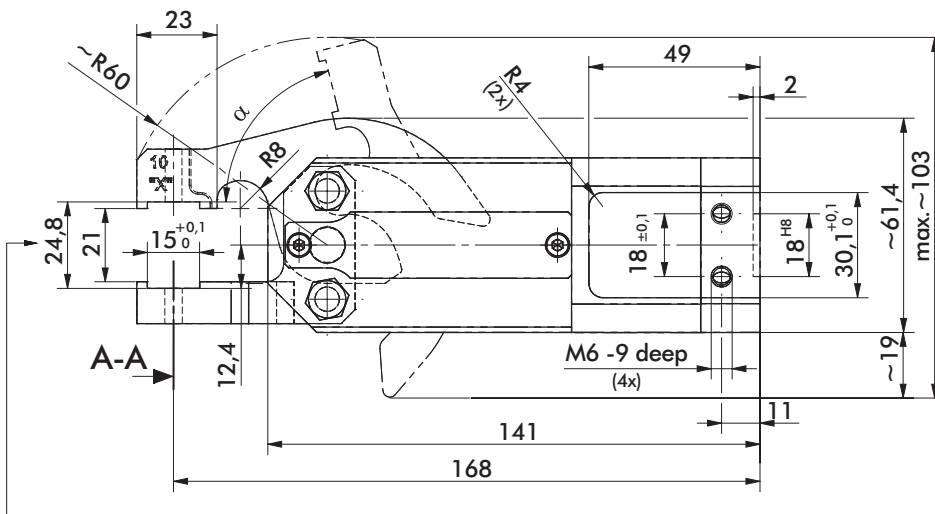
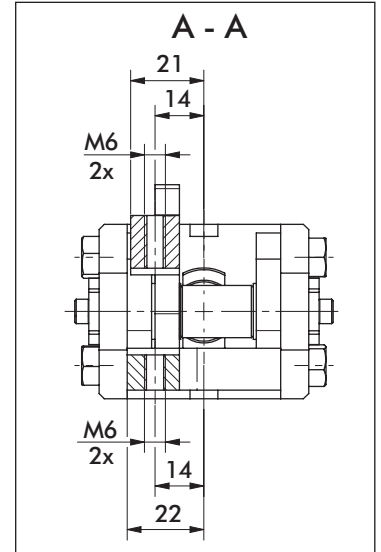
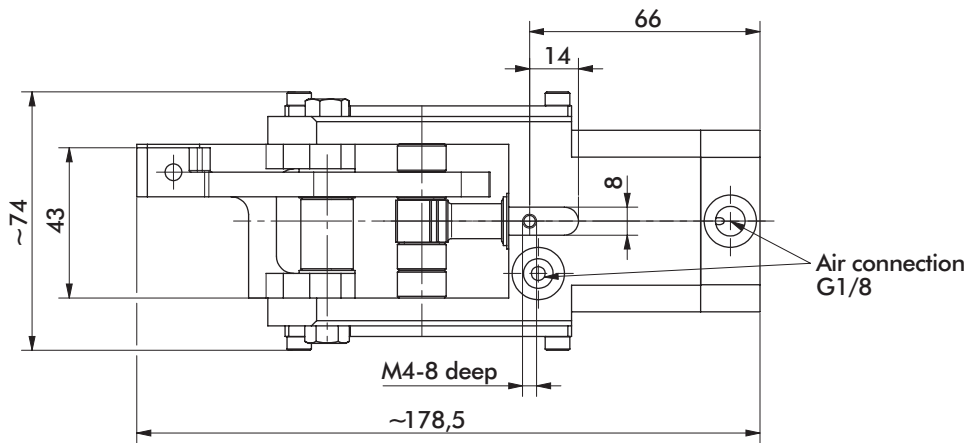
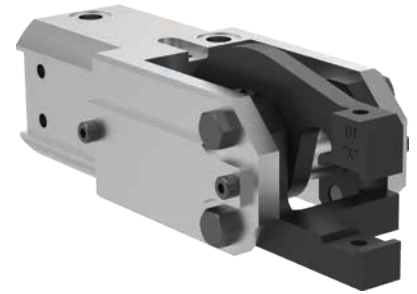
Medium air, max. 6 bar. Operation with oil-free air is permissible.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model 84A3.32	Opening Angle α	Clamping force at 5 bar ~N [lbf]	Weight Kg [lbs]
-	76°	950 [214]	1,6 [3.53]
X	30°		
Y	45°		
Z	60°		

84A3.34 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Addition of gripper teeth height and thickness of the clamped plate must be 24,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

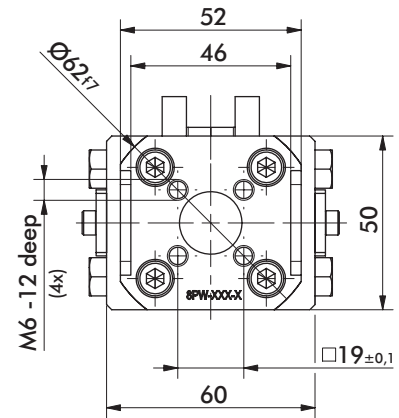
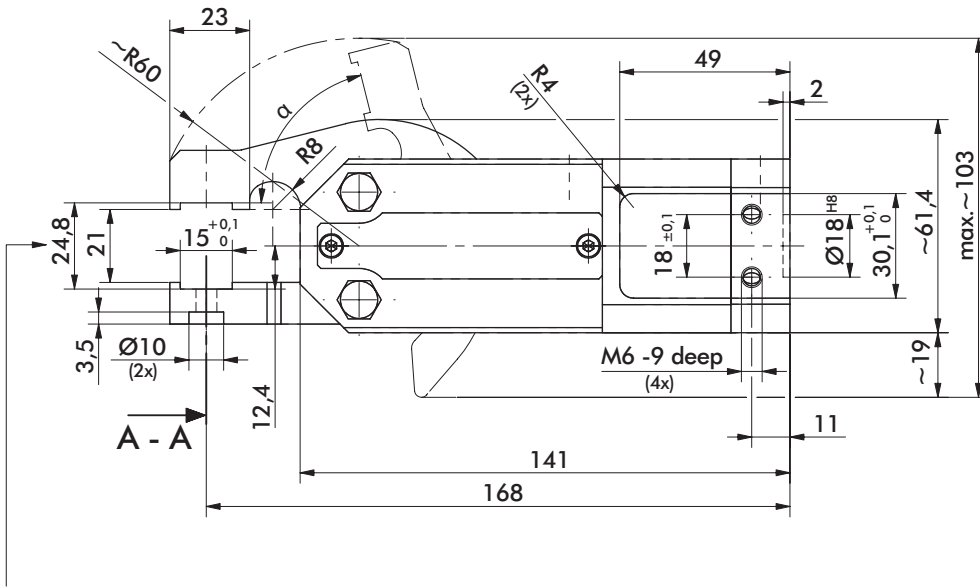
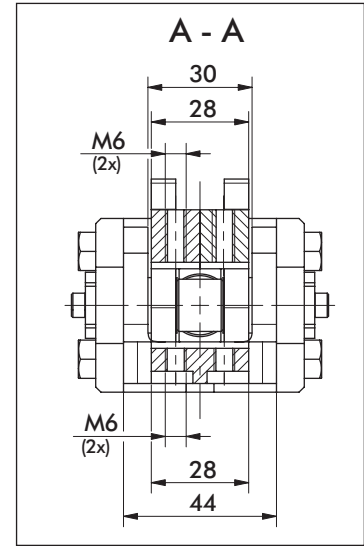
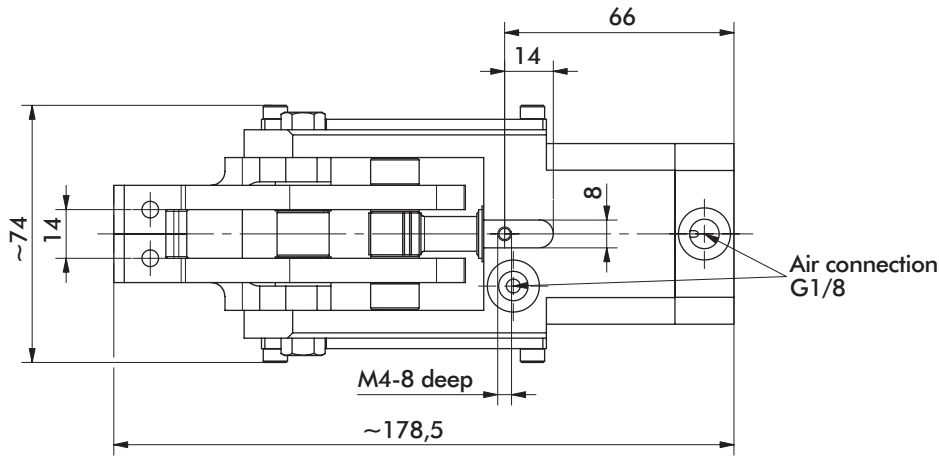
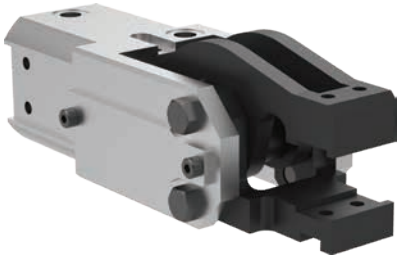
Medium air, max. 6 bar. Operation with oil-free air is permissible.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model 84A3.34	Opening Angle α	Clamping force at 5 bar ~N [lbf]	Weight Kg [lbs]
-	76°	1500 [337]	1,3 [2.87]
X	30°		
Y	45°		
Z	60°		

84A3.35 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Addition of gripper teeth height and thickness of the clamped plate must be 24,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

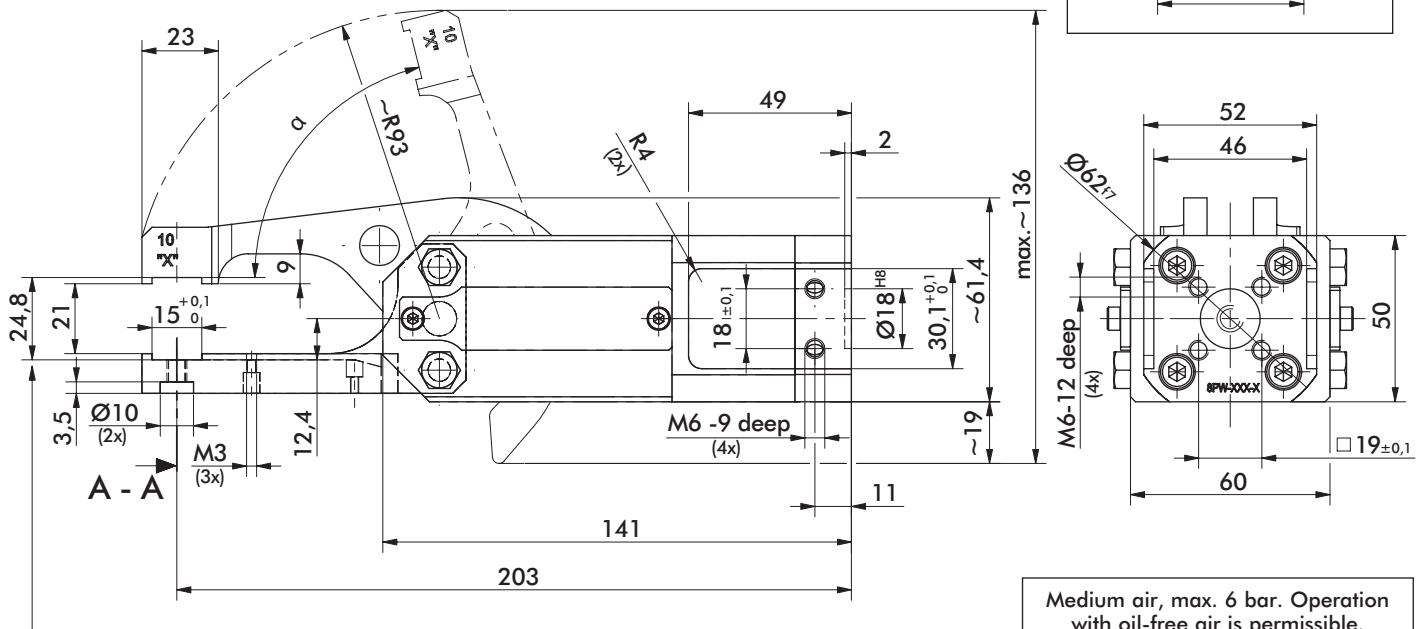
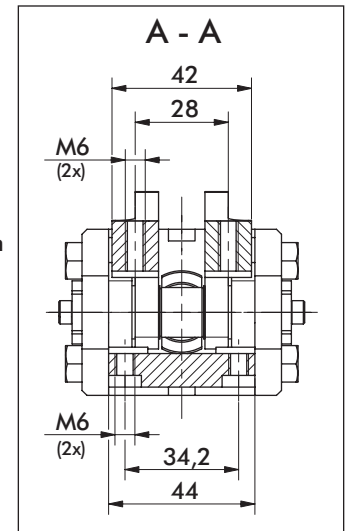
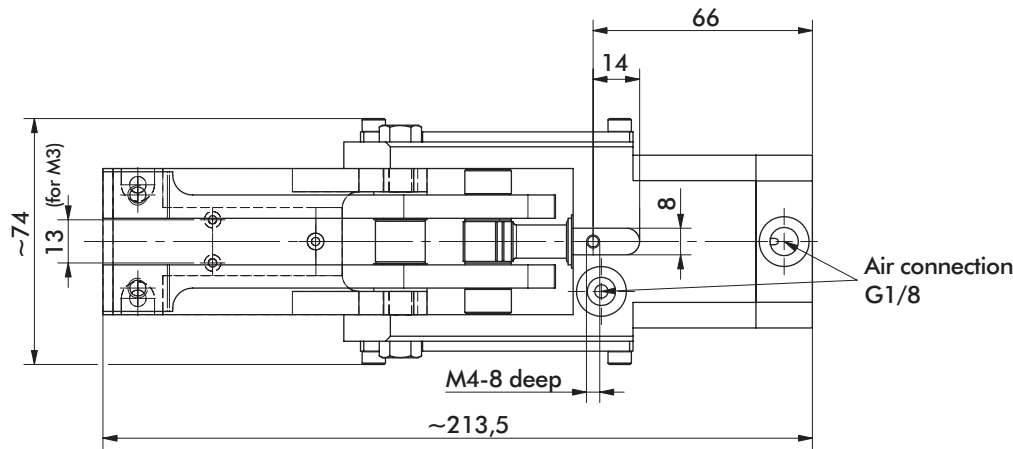
Medium air, max. 6 bar. Operation with oil-free air is permissible.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model 84A3.35	Opening Angle α	Clamping force at 5 bar ~N [lbf]	Weight Kg [lbs]
-	76°	1500 [337]	1,3 [2.87]
X	30°		
Y	45°		
Z	60°		

84A3.36 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Medium air, max. 6 bar. Operation with oil-free air is permissible.

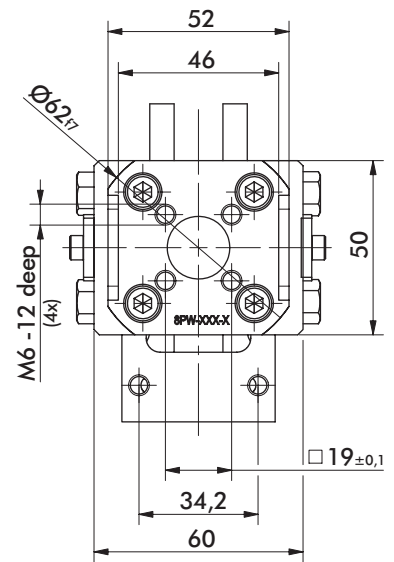
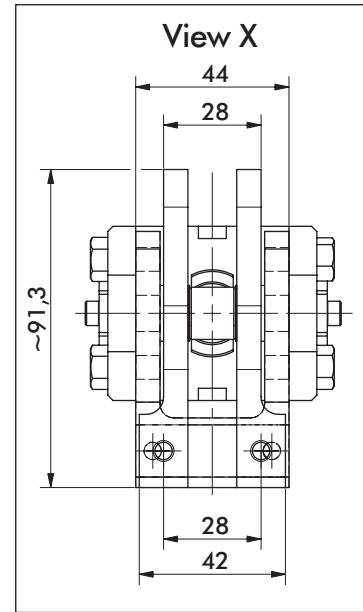
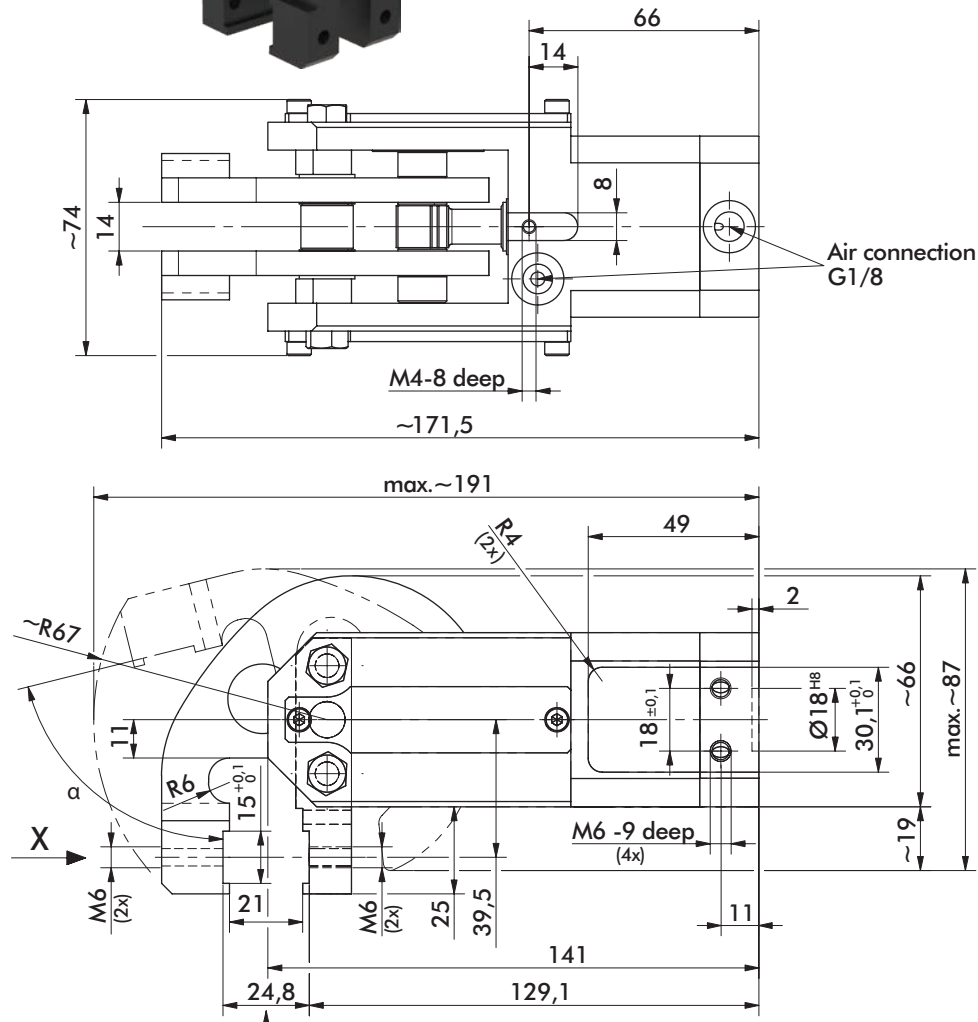
Addition of gripper teeth height and thickness of the clamped plate must be 24,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model 84A3.36	Opening Angle α	Clamping force at 5 bar ~N [lbf]	Weight Kg [lbs]
-	76°	570 [128]	1,55 [3.42]
X	30°		
Y	45°		
Z	60°		

84A3.37 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Addition of gripper teeth height and thickness of the clamped plate must be 24,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

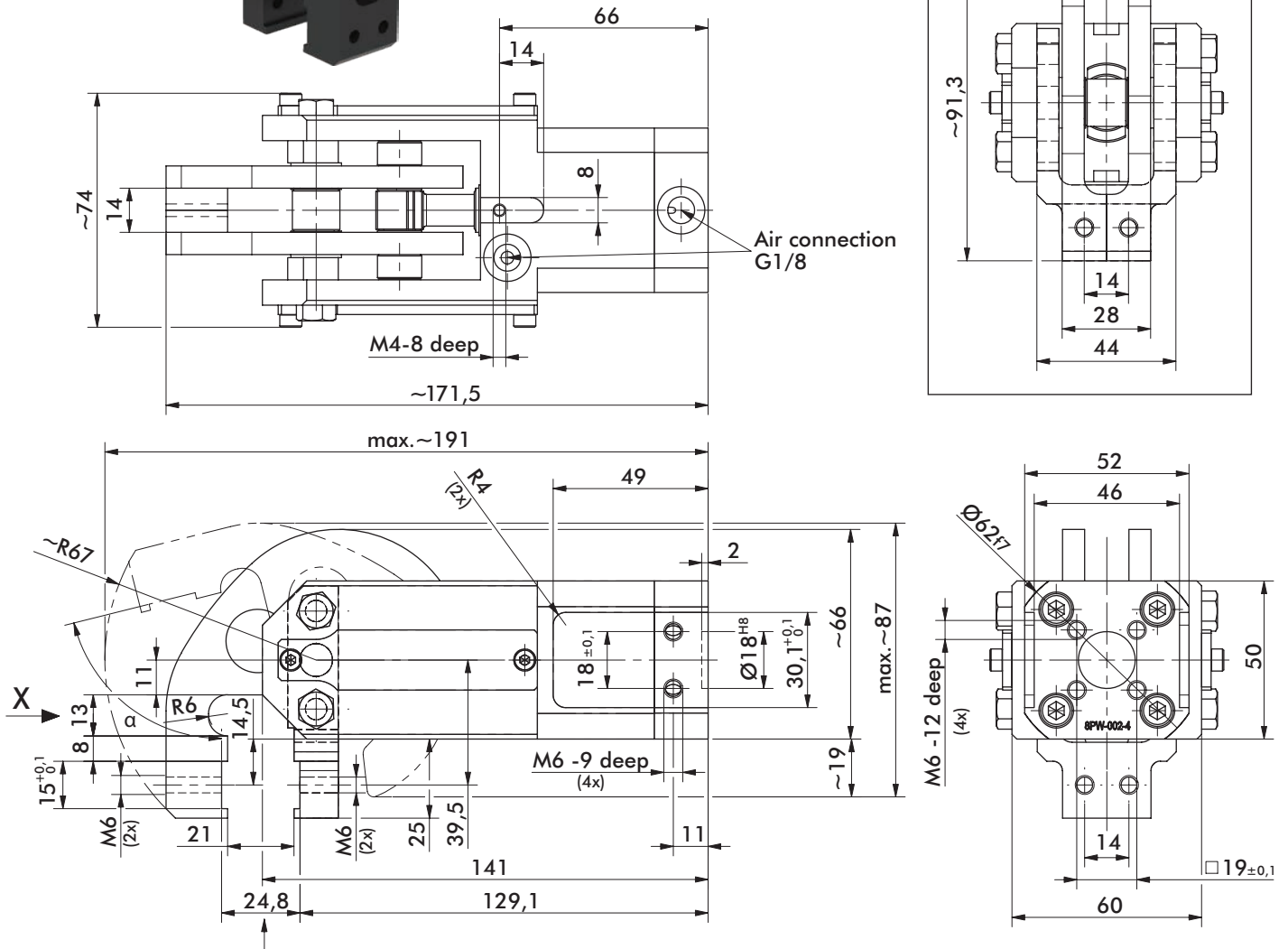
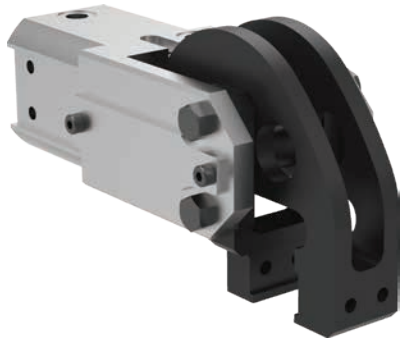
Medium air, max. 6 bar. Operation with oil-free air is permissible.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model 84A3.37	Opening Angle α	Clamping force at 5 bar ~N [lbf]	Weight Kg [lbs]
-	76°	1600 [360]	1,45 [3.20]
X	30°		
Y	45°		
Z	60°		

84A3.38 SERIES (FIXED LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Addition of gripper teeth height and thickness of the clamped plate must be 24,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

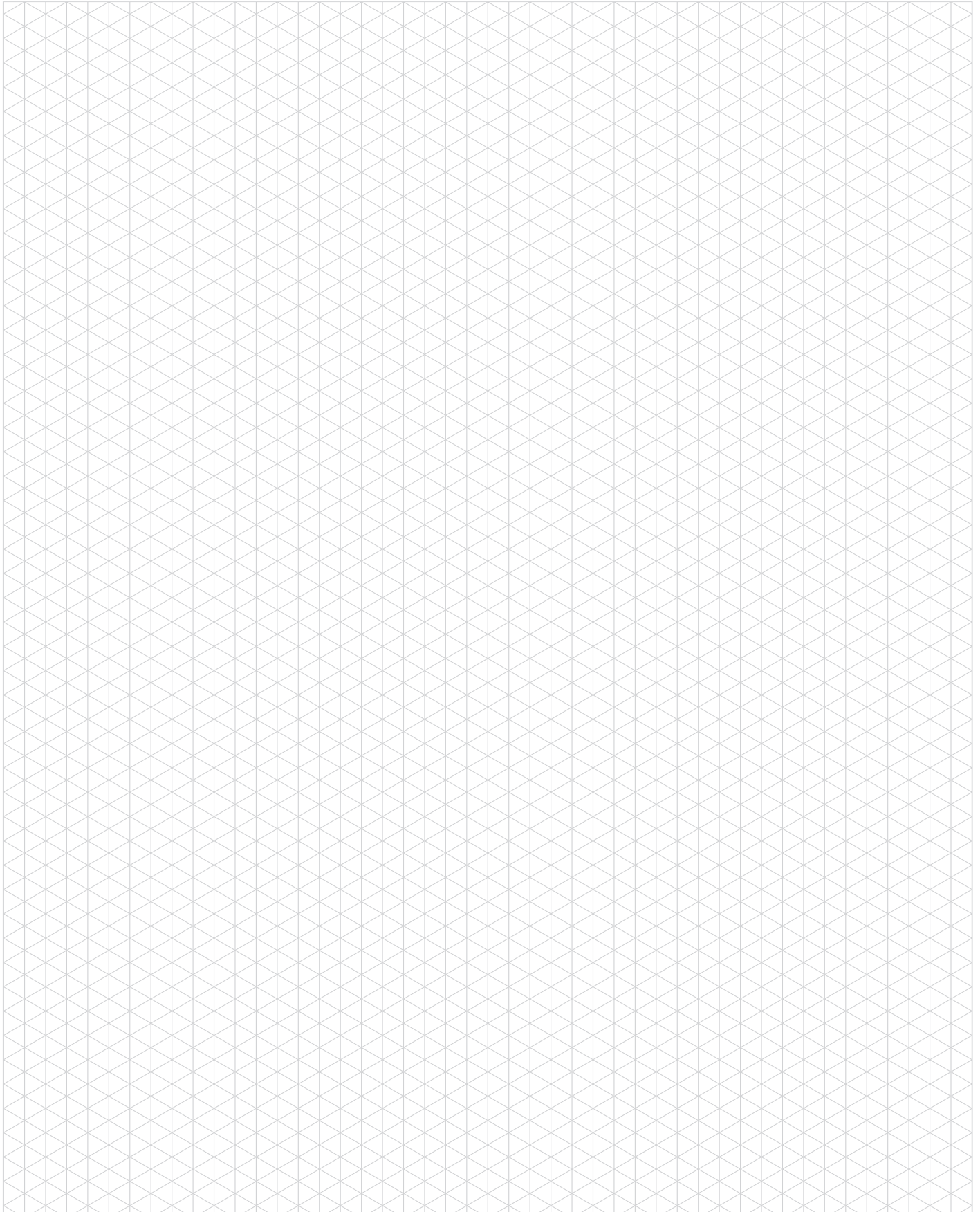
Medium air, max. 6 bar. Operation with oil-free air is permissible.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model 84A3.38	Opening Angle α	Clamping force at 5 bar $\sim N$ [lbf]	Weight Kg [lbs]
-	76°	1600 [360]	1,4 [3.09]
X	30°		
Y	45°		
Z	60°		

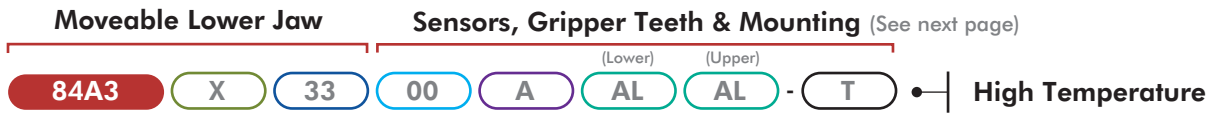
84A3 SERIES (FIXED LOWER JAW)

Notes



84A3-3 SERIES (MOVEABLE LOWER JAWS)

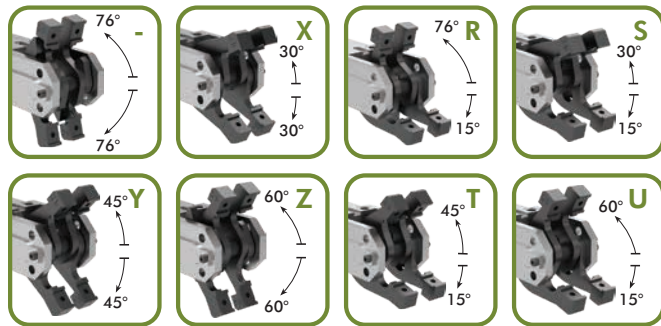
Cam Type Sheet Metal Grippers | Ordering Information



Jaw Opening Options

Description

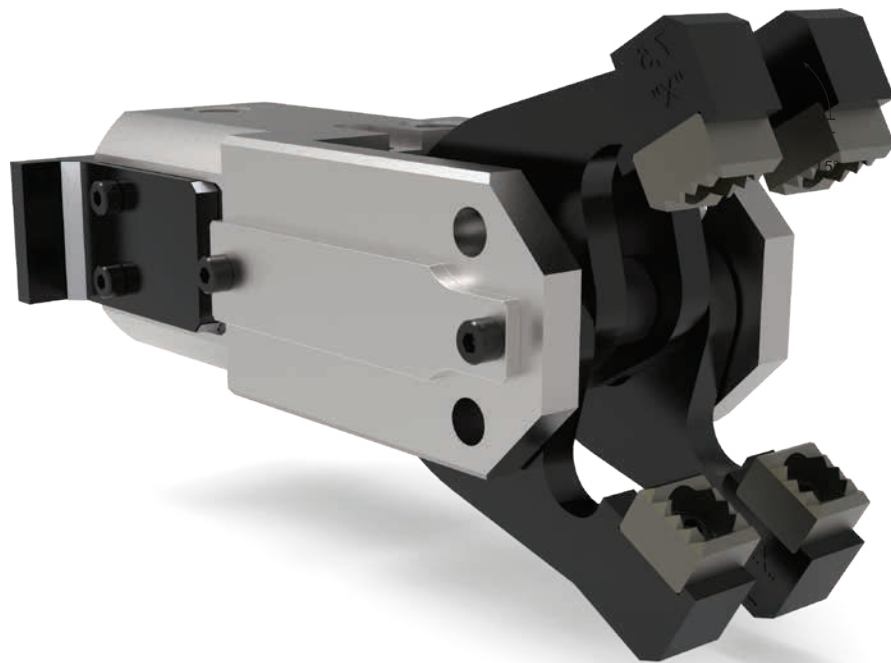
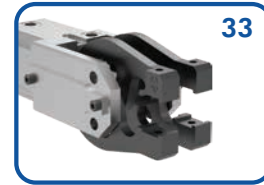
- 76° Jaw Opening (Symmetrical)
- X** 30° Jaw Opening (Symmetrical)
- Y** 45° Jaw Opening (Symmetrical)
- Z** 60° Jaw Opening (Symmetrical)
- R** 76° Upper/15° Lower Jaw
- S** 30° Upper/15° Lower Jaw
- T** 45° Upper/15° Lower Jaw
- U** 60° Upper/15° Lower Jaw



Jaw Arrangement Options

Description

- 33** Double Symmetrical, Straight Design -or- 15° Lower, Double Upper, Straight Design



Specifications	Unit	
Piston	mm	32
Actuation Time (open/close)	sec	0.2
Air Consumption per Double Stroke at 5 bar	L	0.4

84A3-3 SERIES (MOVEABLE LOWER JAWS)

Cam Type Sheet Metal Grippers | Ordering Information

Gripper Teeth, Points and Crown Options (Upper and Lower)

Steel Teeth

- 00** None
- AA** 14,9x21x12mm - 8JZ-014-3
- AH** 14,9x14x14mm - 8JZ-001-1
- AL** 14,9x14,9x9,8mm - 8JZ-003-1
- AC** 14,9x14x12mm - 8JZ-043-1
- AG** 14,9x14x12mm - 8JZ-050-1
- BK** 14,9x21x11mm - 8JZ-066-1

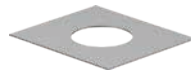


High Temperature
AS 8JZ-094-1



Plastic Teeth*

- 00** None
 - KA** 8JZ-021-1
 - KC** 8JZ-023-1 (Upper)
- *Not suitable for High Temperature applications



Shims for gripper teeth available
Order Separately **8SB-003-1**
Dimensions: 14,8 x 13 x 0,15 mm

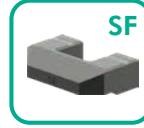
Steel Points (Upper only)

- 00** None
- PA** 8MJ-1001-1
- PB** 8MJ-1002-1
- PC** 8MJ-1003-1



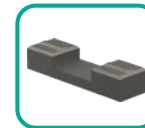
Crown Teeth - Concave (Lower Only)

- 00** None
- SE** 8JZ-019-1
- SF** 8JZ-020-3
- SH** 8JZ-048-1



Crown Teeth - Convex (Upper Only)

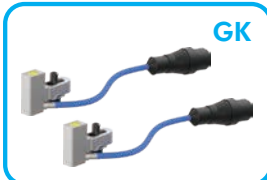
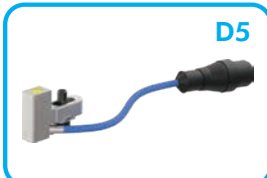
- SB** Mat. = 0,5-1mm - 8JZ-016-2
- SD** Mat. = 1-1,5mm - 8JZ-018-2



Sensor Options (not suitable for High Temperature applications)

Description

- 00** None
- KL** Position Control Set, Left for 76° Opening Angle - 8EA-022-4
- KR** Position Control Set, Right for 76° Opening Angle - 8EA-022-4
- D5** Double Sheet Control, M12x1 Plug - 8EA-087-1
- GK** 2X D5

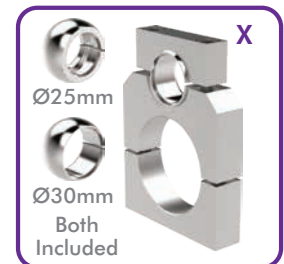


Cover for Sensing Systems **D5, GK**
Order Separately **82ZB-185-1**

Mounting Options

Description

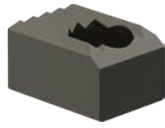
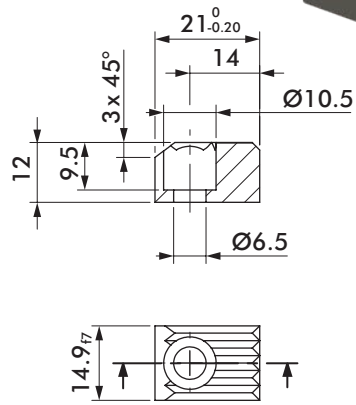
- 0** None
- A** Rear Flange - 8MA-006-1
- 3** Rear Flange - 8MA-273-1
- S** Rear Swivel Ball - 82ZB-007-1
- X** On-Body Swivel Ball - 82ZB-033-2



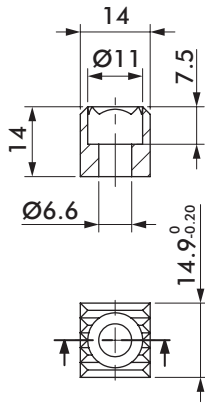
84A3 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

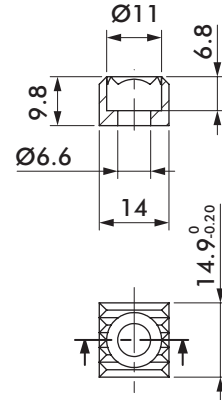
Steel Teeth



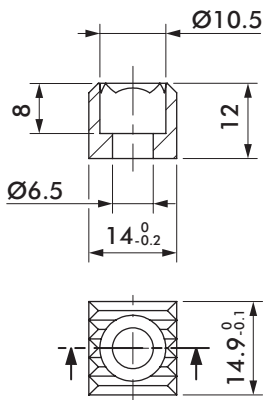
Steel Teeth Part #
Serrated **8JZ-014-3**



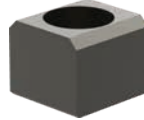
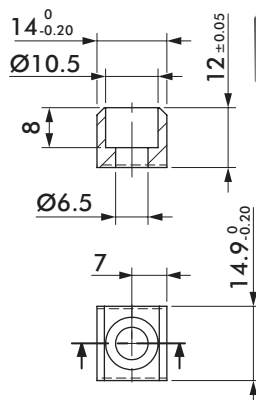
Steel Teeth Part #
Serrated **8JZ-001-1**



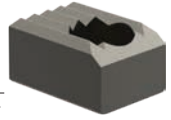
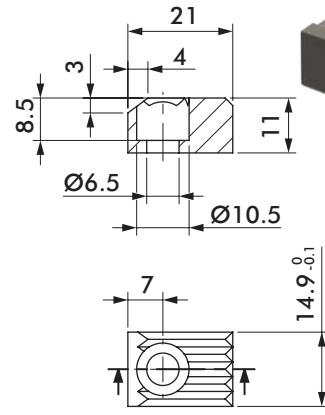
Steel Teeth Part #
Serrated **8JZ-003-1**



Steel Teeth Part #
Serrated **8JZ-043-1**

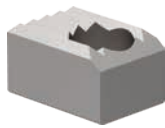
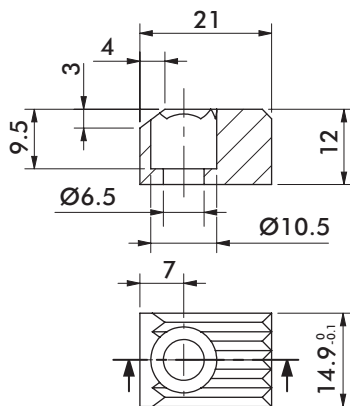


Steel Teeth Part #
Flat **8JZ-050-1**



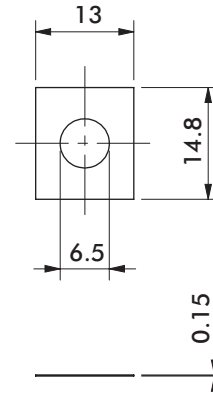
Steel Teeth Part #
Serrated **8JZ-066-1**

High Temperature Steel Teeth



Steel Teeth Part #
High Temperature, Serrated **8JZ-094-1**

Shims

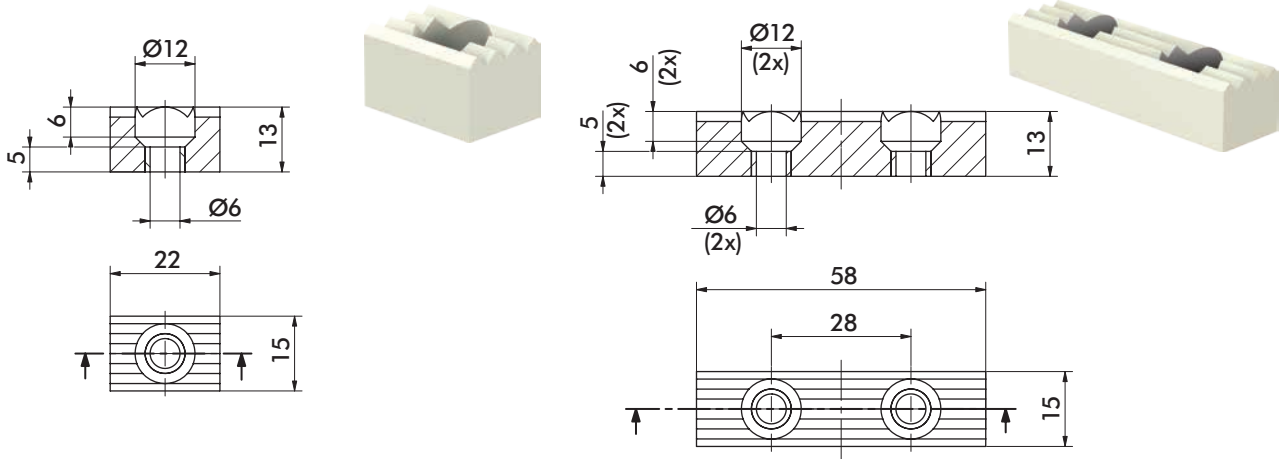


Shims Part #
Shims for Gripper Teeth **8SB-003-1**

84A3 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

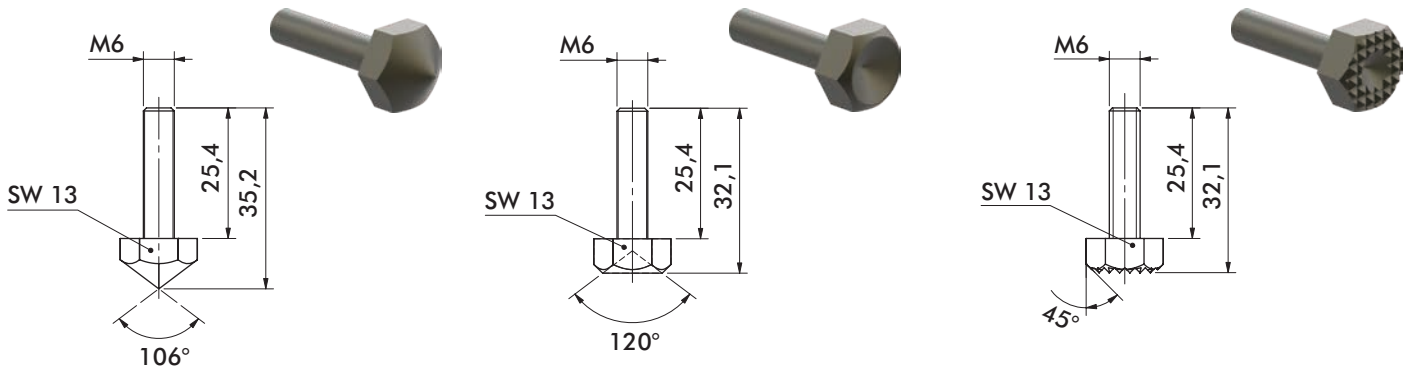
Plastic Teeth



Plastic Teeth Part #
90 Shore, Serrated **8JZ-021-1**

Plastic Teeth Part #
90 Shore, Serrated (Upper) **8JZ-023-1**

Steel Points

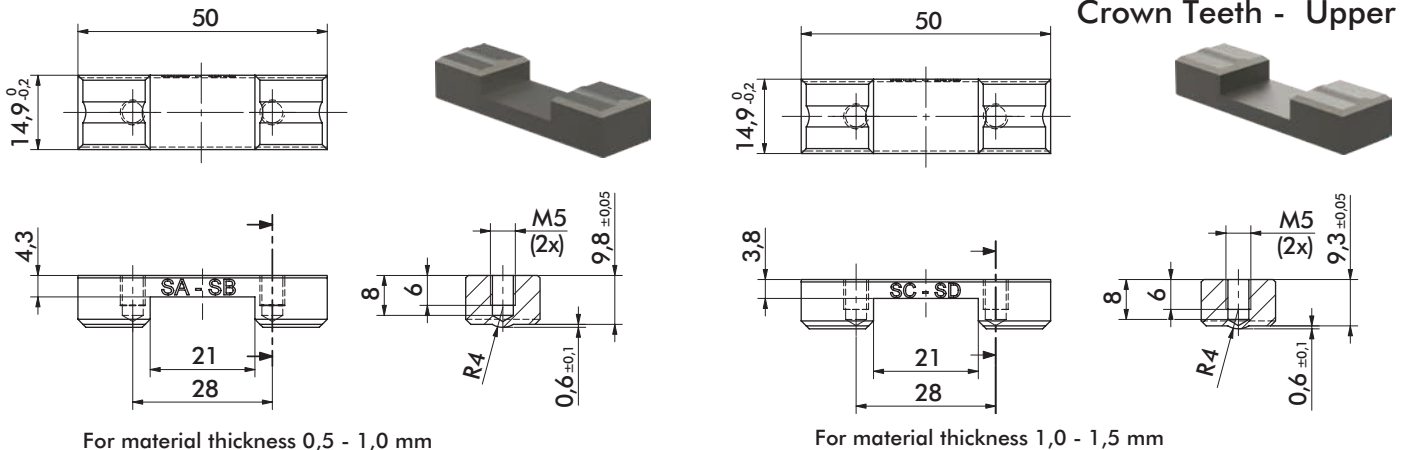


Steel Point Part #
Pointed **8MJ-1001-1**

Steel Point Part #
Flat **8MJ-1002-1**

Steel Point Part #
Serrated **8MJ-1003-1**

Crown Teeth - Upper



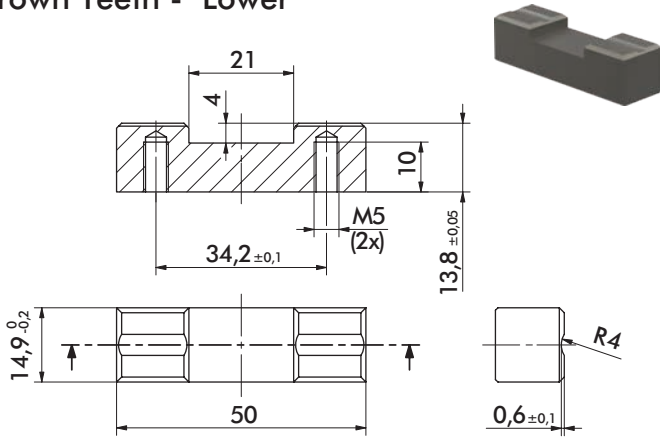
Crown Teeth Part #
Convex **8JZ-016-2**

Crown Teeth Part #
Convex **8JZ-018-2**

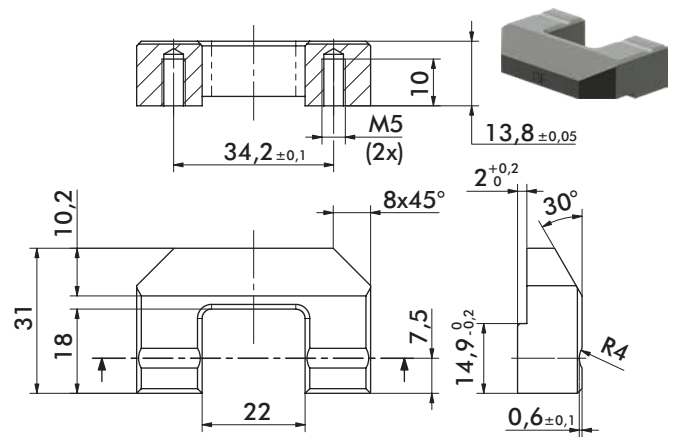
84A3 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

Crown Teeth - Lower

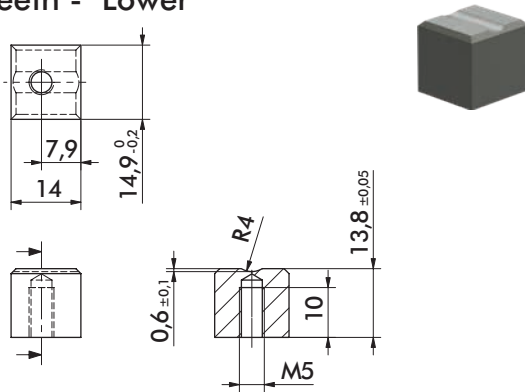


Crown Teeth Part # **8JZ-019-1**
Concave



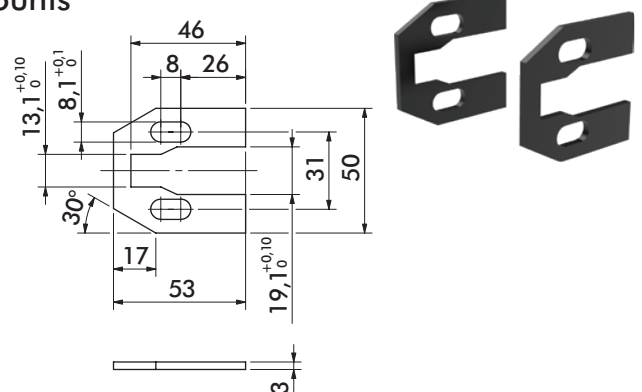
Crown Teeth Part # **8JZ-020-3**
Concave

Crown Teeth - Lower



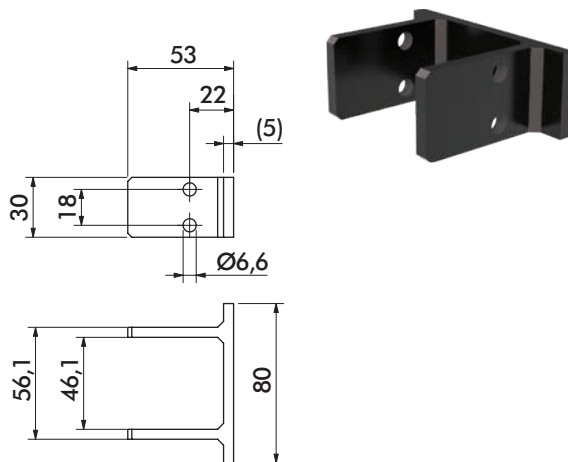
Crown Teeth Part # **8JZ-048-1**
Concave

Mounts

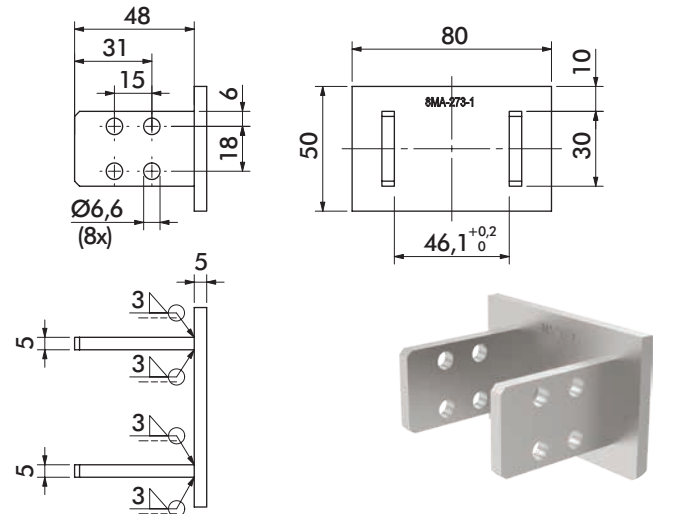


Mount Part # **8MH-046-1**
Guards

Mounts



Mount Part # **8MA-006-1**
Rear Flange

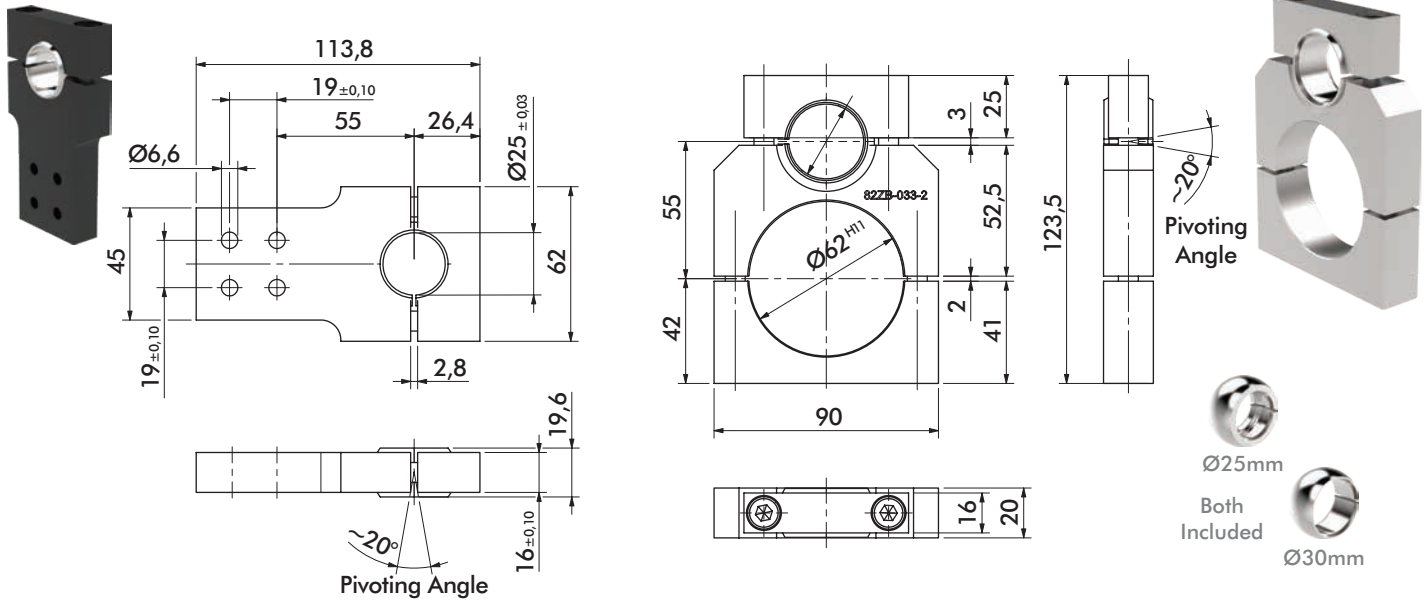


Mount Part # **8MA-273-1**
Rear Flange

84A3 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

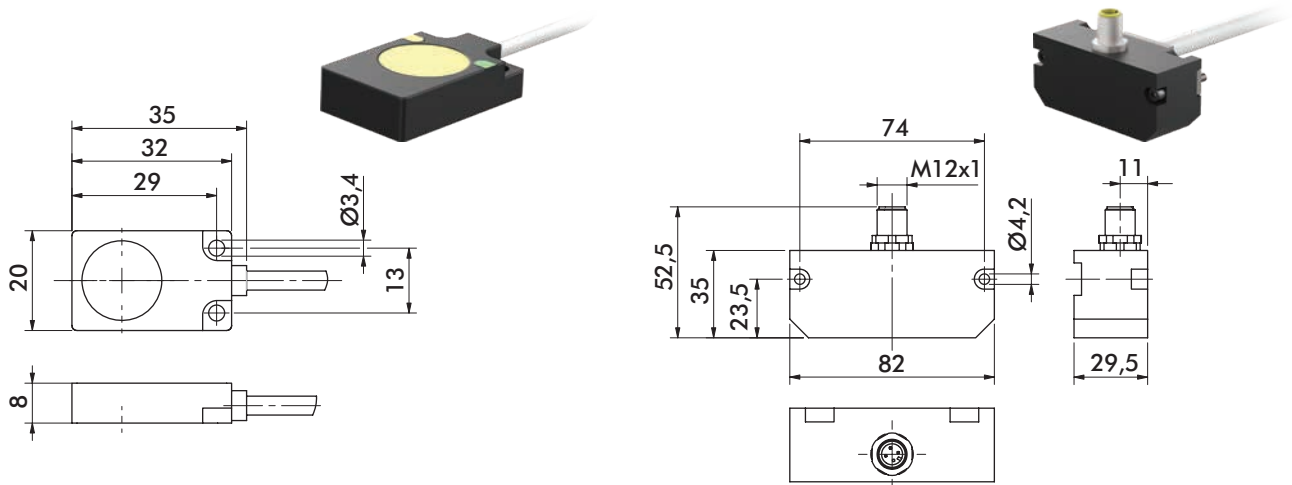
Mounts



Mount	Part #
Rear Swivel Ball	82ZB-007-1

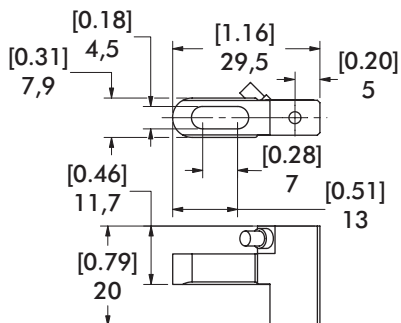
Mount	Part #
On-Body Swivel Ball	82ZB-033-2

Sensors



Workpiece Control Sensor	Part #
7mm Sensing Distance, 2m Cable	8EA-092-1

Position Control Set Sensor	Part #
For 76° Opening Angle Only	8EA-022-4



Double Sheet Control Sensor	Part #
1.5mm Sensing Distance	8EA-087-1

84A5-1 SERIES

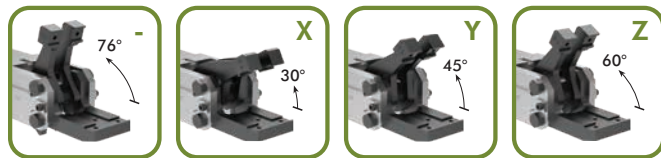
Cam Type Sheet Metal Grippers | Ordering Information

84A5 - 11 D5 A AA PA

Fixed Lower Jaw Opening Options

Description

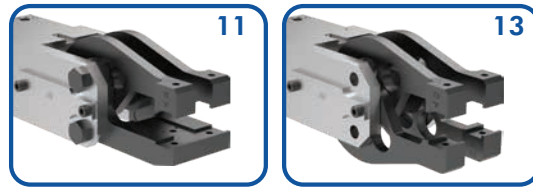
- 76° Jaw Opening (Standard)
- X 30° Jaw Opening
- Y 45° Jaw Opening
- Z 60° Jaw Opening



Jaw Arrangement Options

Description

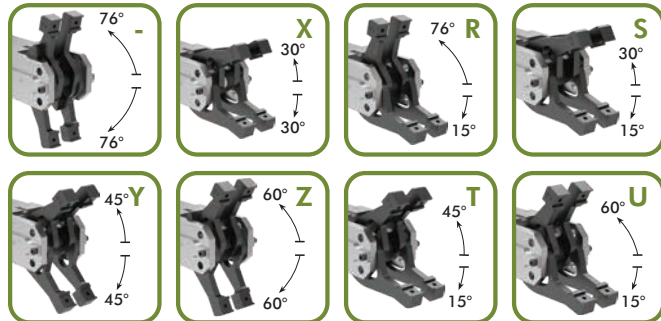
- 11 Double Upper, Single Lower, Straight Design
- 13 Double Upper and Lower, Straight Design



Moveable Lower Jaw Opening Options

Description

- 76° Jaw Opening (Symmetrical)
- X 30° Jaw Opening (Symmetrical)
- Y 45° Jaw Opening (Symmetrical)
- Z 60° Jaw Opening (Symmetrical)
- R 76° Upper/15° Lower Jaw
- S 30° Upper/15° Lower Jaw
- T 45° Upper/15° Lower Jaw
- U 60° Upper/15° Lower Jaw



Specifications	Unit	
Piston	mm	50
Actuation Time (open/close)	sec	0.6
Air Consumption per Double Stroke at 5 bar	L	0.66

Gripper Teeth and Points Options (Upper and Lower)

Steel Teeth

- 00 None
- AA 8JZ-014-3



Plastic Teeth

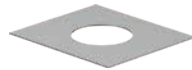
- 00 None
- KA 8JZ-021-1*



*Cannot be used with A8 sensor option.

Steel Points (Upper only)

- 00 None
- PA 8MJ-1001-1
- PB 8MJ-1002-1
- PC 8MJ-1003-1



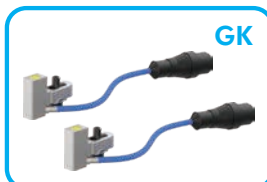
Shims for gripper teeth available
Order Separately **8SB-003-1**
Dimensions: 14,8 x 13 x 0,15 mm

Sensor Options

Description

- 00 None
- A8 Workpiece Control, Switching Distance 7mm
8EA-092-1 (for 84A5-11 only)*
- D5 Double Sheet Control, M12x1 Plug - 8EA-087-1
- GK 2X D5
- GN A8 + D5 (for 84A5-11 only)

*Cannot be used with KA plastic teeth option.



Shims for Sensor A8 available
Order Separately **8MB-003-1**

Mounting Options

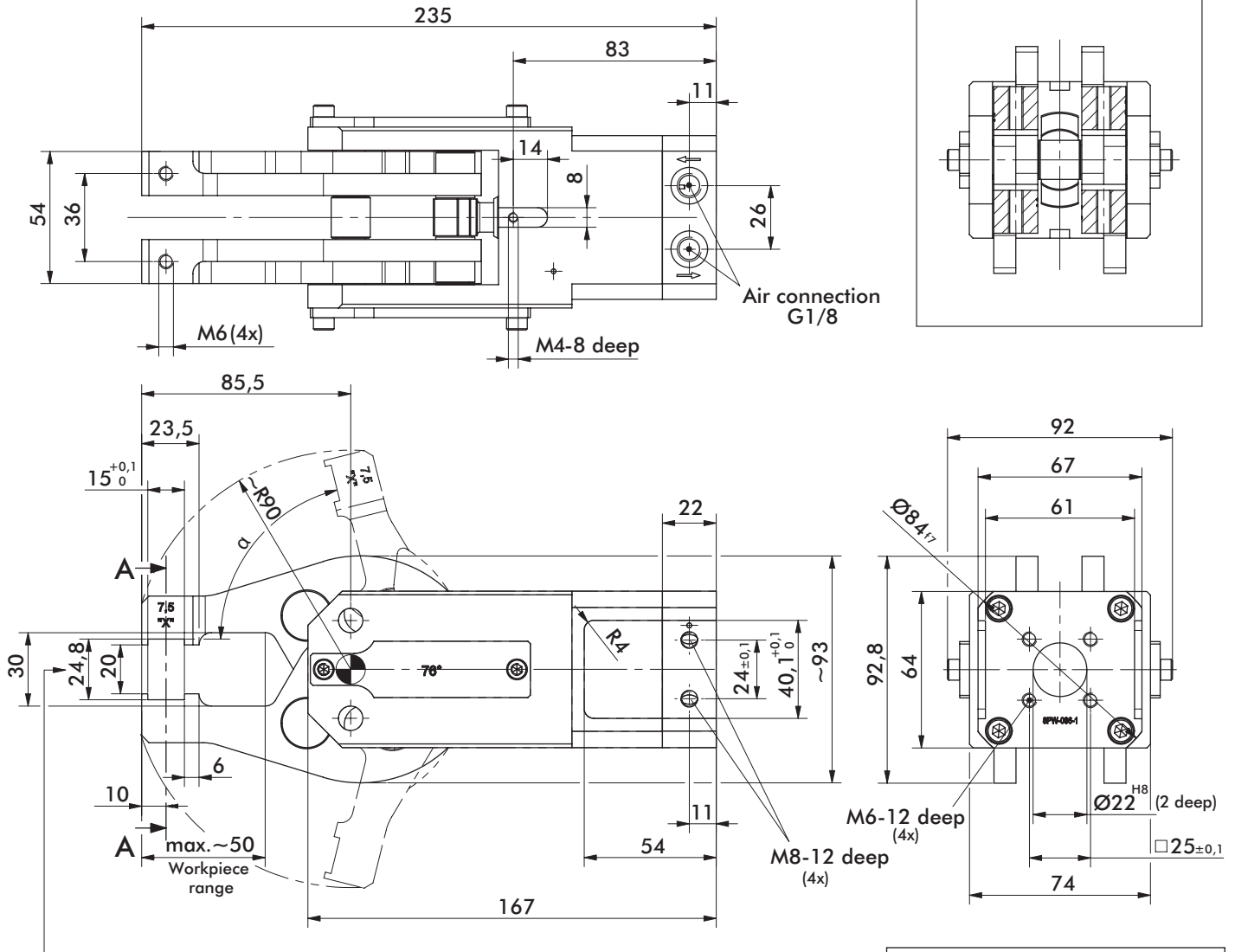
Description

- 0 None
- A Rear Flange - 8MA-196-1



84A5.13 SERIES (DOUBLE SYMMETRICAL JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Addition of gripper teeth height and thickness of the clamped plate must be 24,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

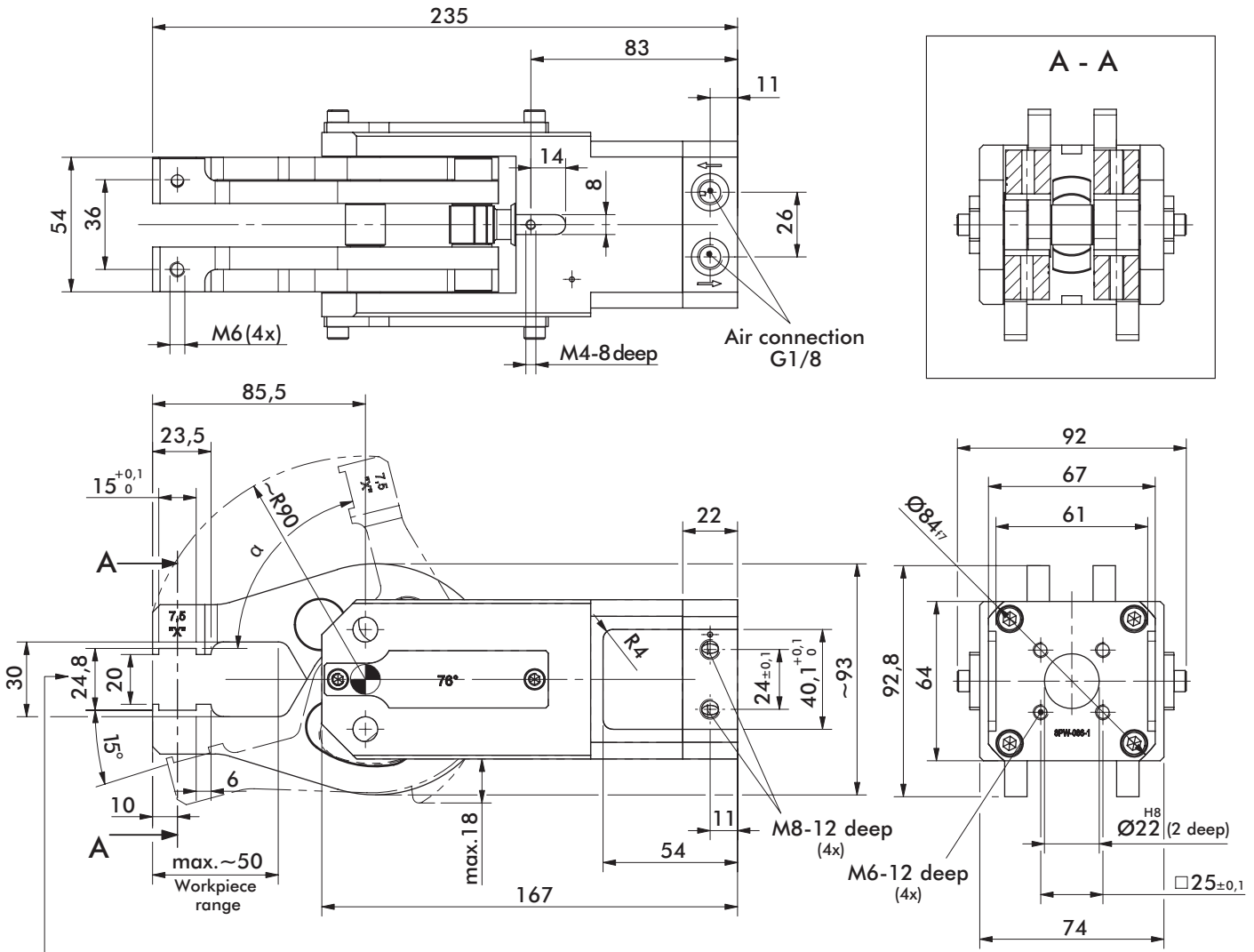
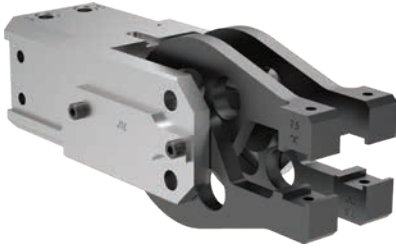
Medium air, max. 6 bar. Operation with oil-free air is permissible.

NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model 84A5.13	Opening Angle α Symmetrical	Clamping force at 5 bar ~N [lbf]	Weight Kg [lbs]
-	76°	1200 [270]	2,8 [6.17]
X	30°		
Y	45°		
Z	60°		

84A5.13 SERIES (DOUBLE 15° LOWER JAW)

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Addition of gripper teeth height and thickness of the clamped plate must be 24,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

Medium air, max. 6 bar. Operation with oil-free air is permissible.

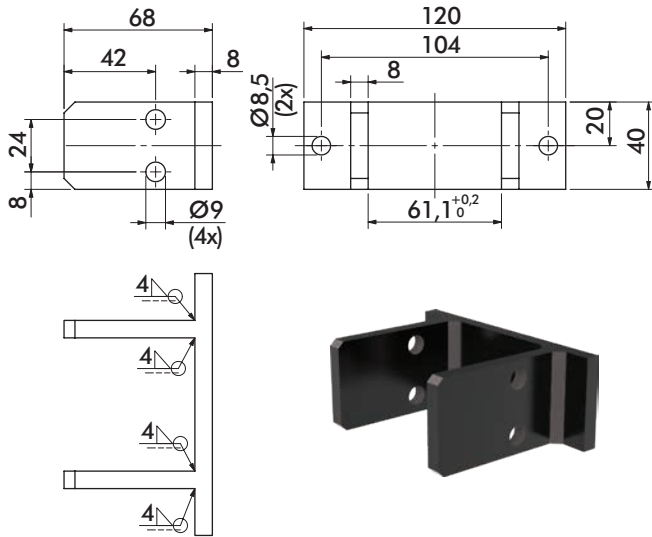
NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model 84A5.13	Opening Angle α Upper/Lower	Clamping force at 5 bar ~N [lbf]	Weight Kg [lbs]
R	76°/15°	1200 [270]	2,8 [6.17]
S	30°/15°		
T	45°/15°		
U	60°/15°		

84A5-1 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

Mount



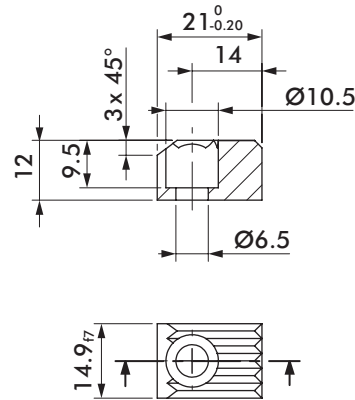
Mount

Rear Flange

Part

8MA-196-1

Steel Teeth



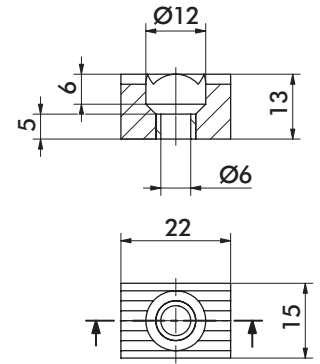
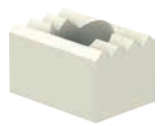
Steel Teeth

Serrated

Part

8JZ-014-3

Plastic Teeth



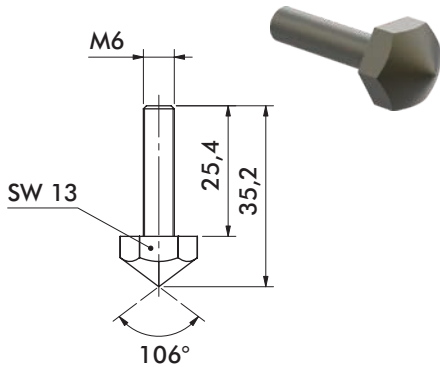
Plastic Teeth

Serrated

Part

8JZ-021-1

Steel Points

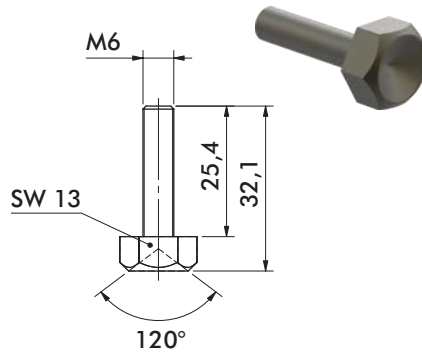


Steel Point

Pointed

Part

8MJ-1001-1

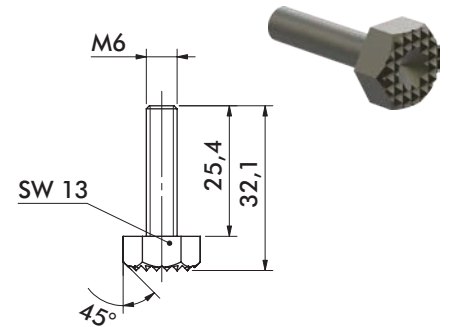


Steel Point

Flat

Part

8MJ-1002-1



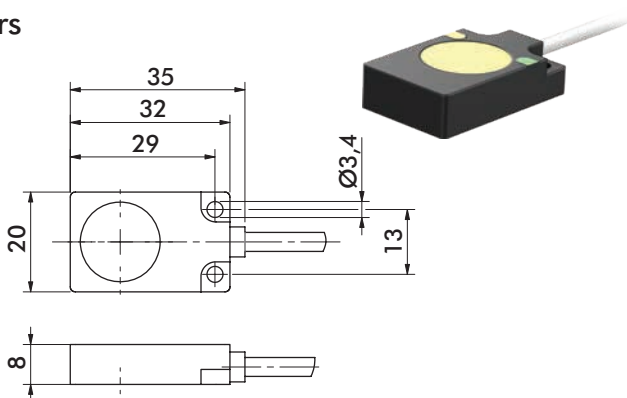
Steel Point

Serrated

Part

8MJ-1003-1

Sensors

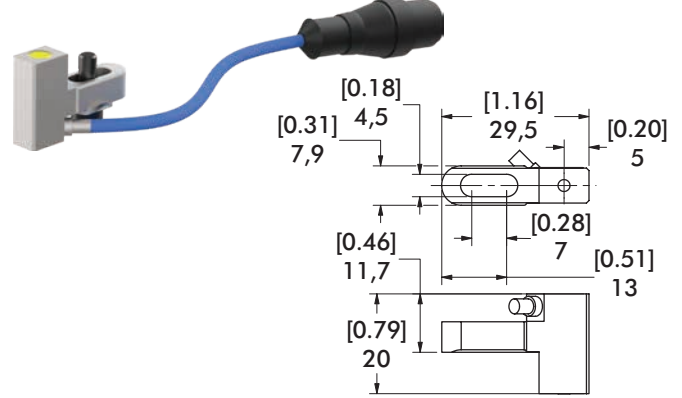


Workpiece Control Sensor

7mm Sensing Distance, 2m Cable

Part

8EA-092-1



Double Sheet Control Sensor

1.5mm Sensing Distance

Part

8EA-087-1

84L2-1 SERIES

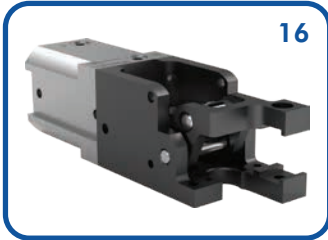
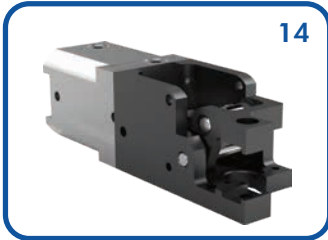
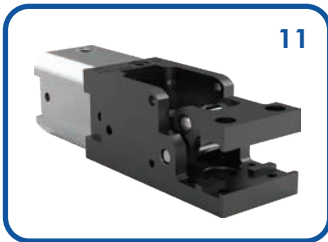
Cam Type Sheet Metal Grippers | Ordering Information



Jaw Arrangement Options

Description

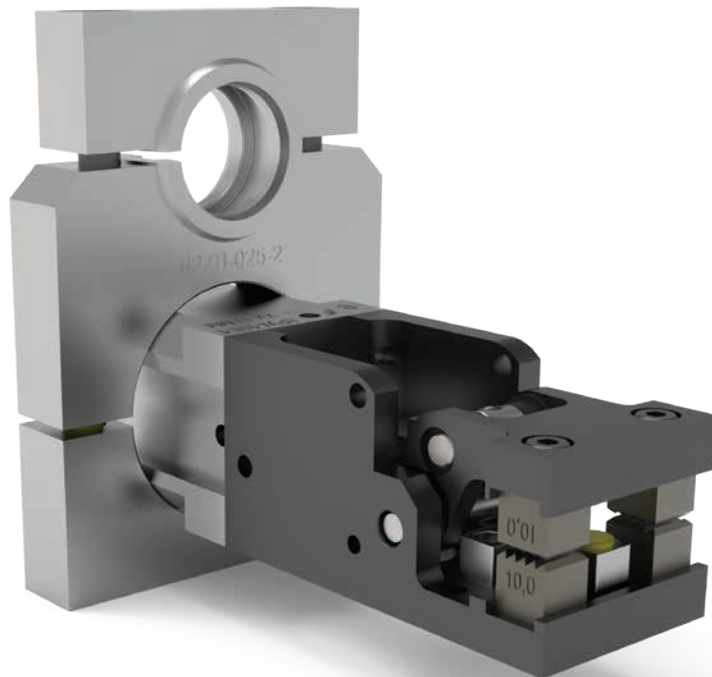
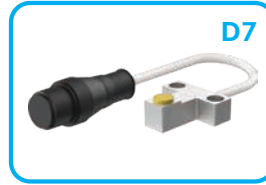
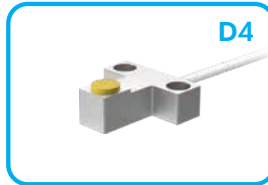
- 11** Double
- 14** Single, Right
- 16** Single, Left



Sensor Options

Description

- 00** None
- D4** Part Present Sensor, 3mm Sensing Distance, 2m Cable
8EA-164-1
- D7** Part Present Sensor, 3mm Sensing Distance, M12x1 Plug
8EA-165-1



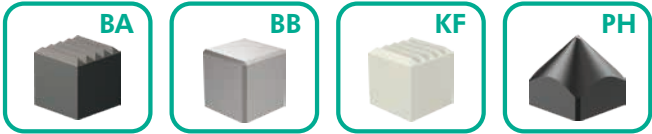
84L2-1 SERIES

Cam Type Sheet Metal Grippers | Ordering Information

Gripper Teeth Options

Upper Teeth Options

- 00** None
- BA** Hardened - 8JZ-027-1
- BB** Soft Steel - 8JZ-028-1
- KF** 90 Shore - 8JZ-045-2
- PH** Hardened - 8JZ-029-1



Lower Teeth Options

- 00** None
- BA** Hardened - 8JZ-027-1
- BB** Soft Steel - 8JZ-028-1
- KF** 90 Shore - 8JZ-045-2

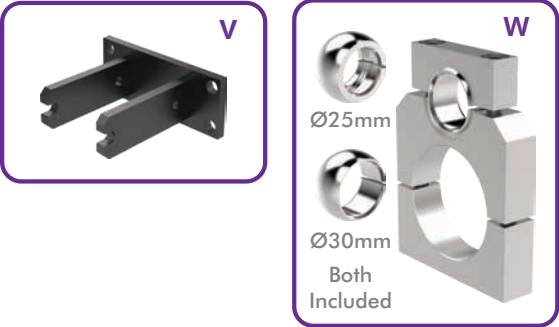


Shims for gripper teeth available
Order Separately **8SB-039-1**
Dimensions: 10 x 10 x 0,1 mm

Mounting Options

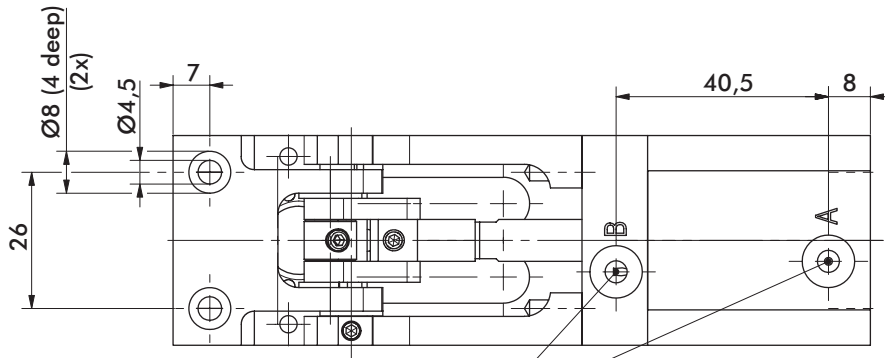
Description

- 0** None
- I** Ø20mm Rear Rod - 8MA-165-1
- J** Ø25mm Rear Rod - 8MA-166-1
- Z** Ø1.00" Rear Rod - 8MA-168-1
- V** Rear Flange - 8MA-147-1
- W** On-Body Swivel Ball - 82ZB-025-2

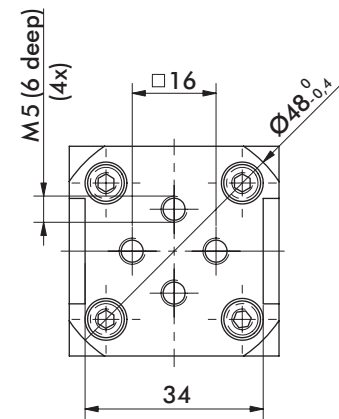
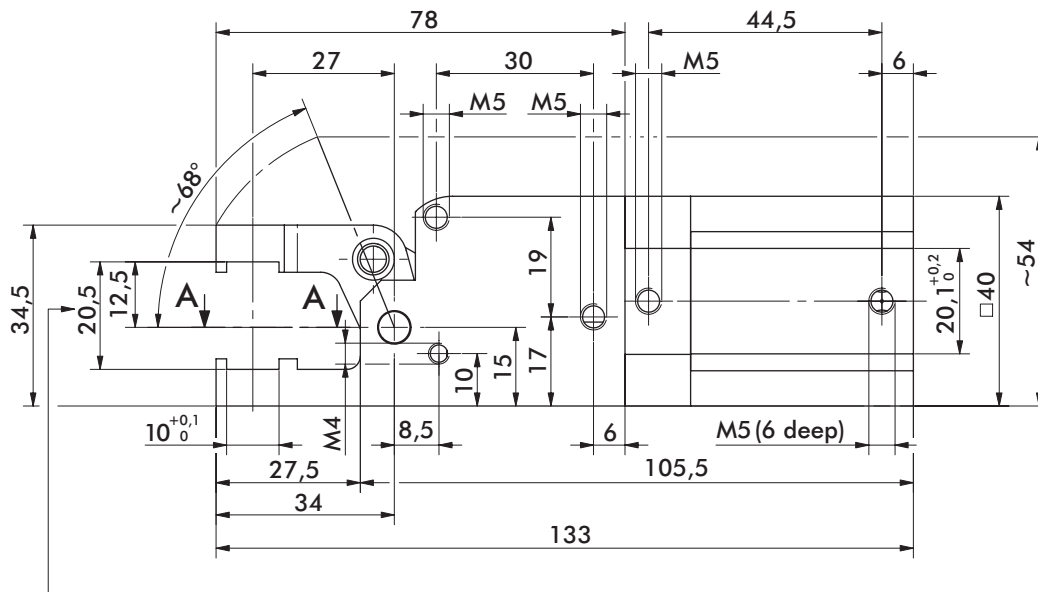
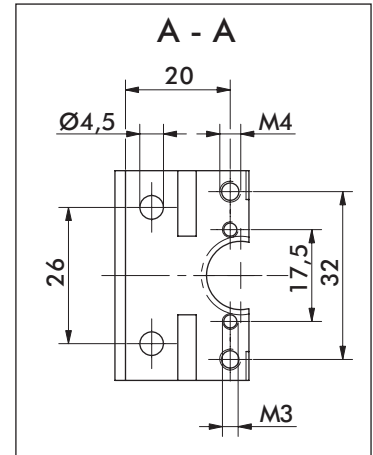


84L2-11 SERIES

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Air connection M5. Turning cylinder-air connection possible in 4x 90° increments.



Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

Medium air, max. 6 bar. Operation with oil-free air is permissible.

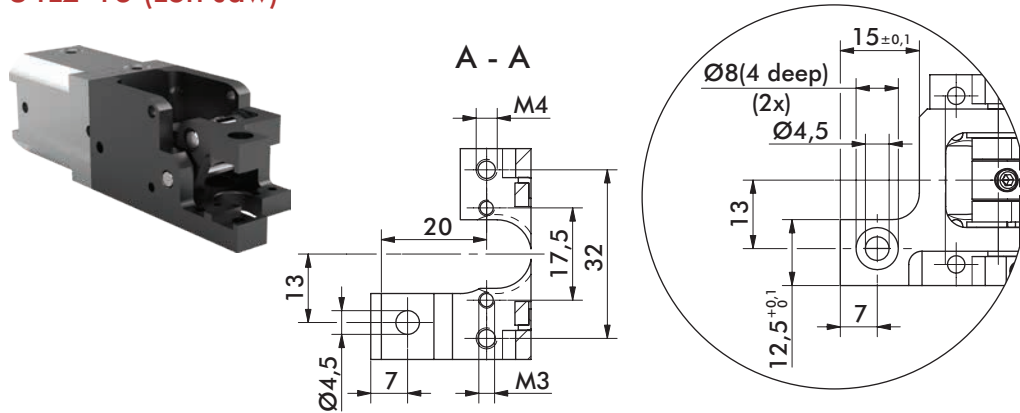
NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model	Clamping Force at 5 bar ~N [lbf]	Piston mm [in.]	Air Consumption per Double Stroke at 5 bar [L]	Weight Kg [lbs]	Acuation Time Open/Close Sec.
84L2-11	74 [16.6]	25 [0.98]	0,19	0,4 [0.88]	0.2

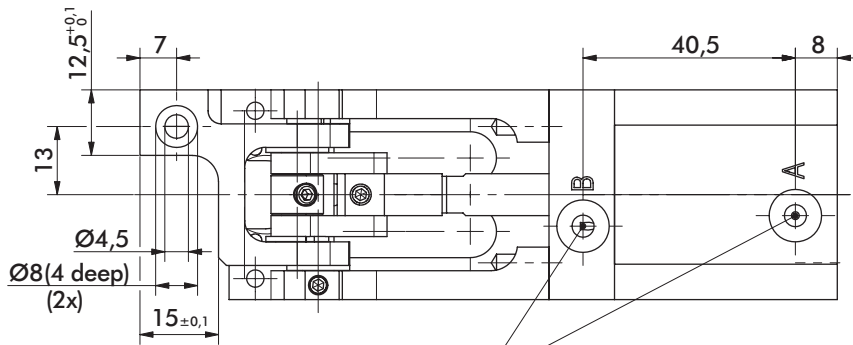
84L2-14/84L2-16 SERIES

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

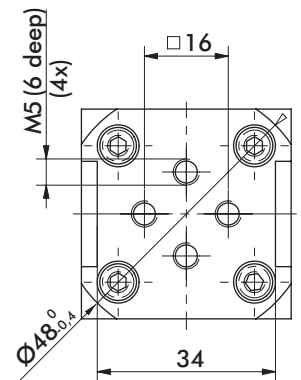
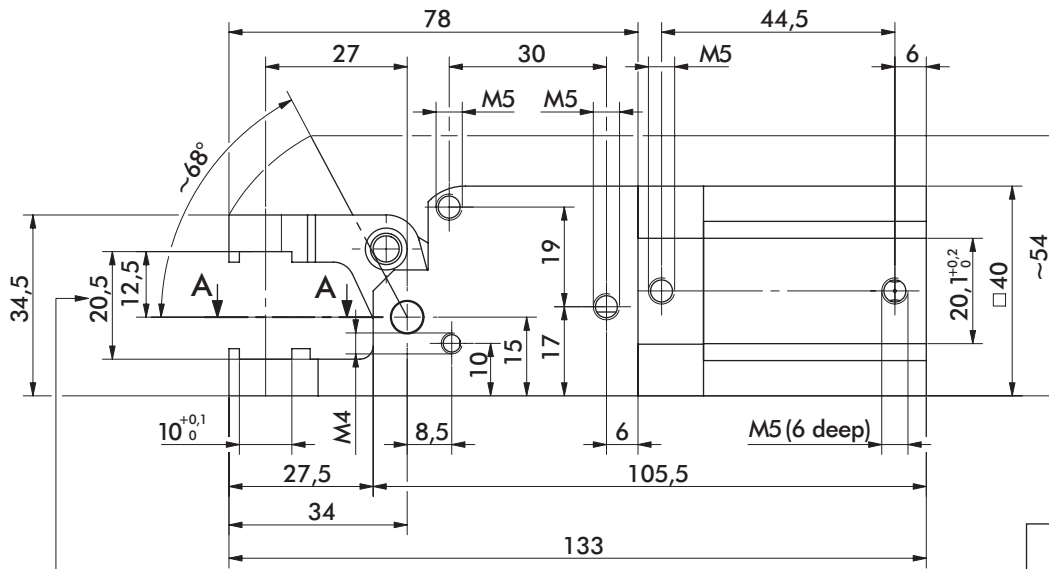
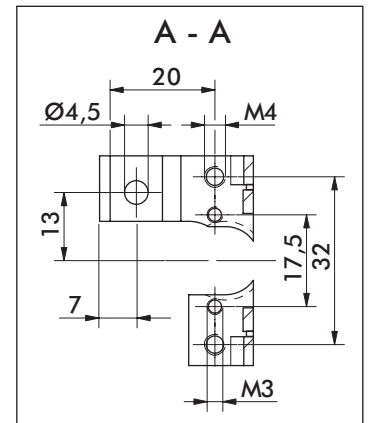
84L2-16 (Left Jaw)



84L2-14 (Right Jaw)



Air connection M5. Turning cylinder-air connection possible in 4x 90° increments.



Addition of gripper teeth height and thickness of the clamped plate must be 20,5 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

Medium air, max. 6 bar. Operation with oil-free air is permissible.

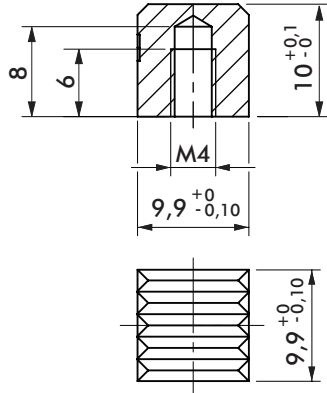
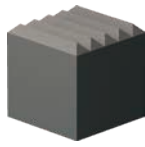
NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model	Clamping Force at 5 bar ~N [lbf]	Piston mm [in.]	Air Consumption per Double Stroke at 5 bar [L]	Weight Kg [lbs]	Actuation Time Open/Close Sec.
84L2-14/84L2-16	74 [16.6]	25 [0.98]	0,19	0,37 [0.82]	0.2

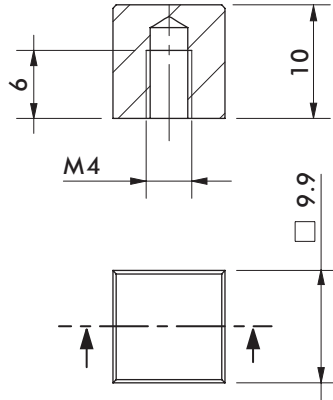
84L2-4 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

Steel Teeth

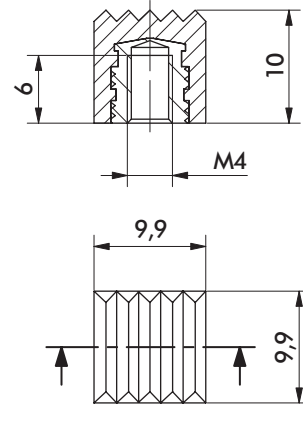


Hardened Steel Teeth **Part #**
Serrated **8JZ-027-1**



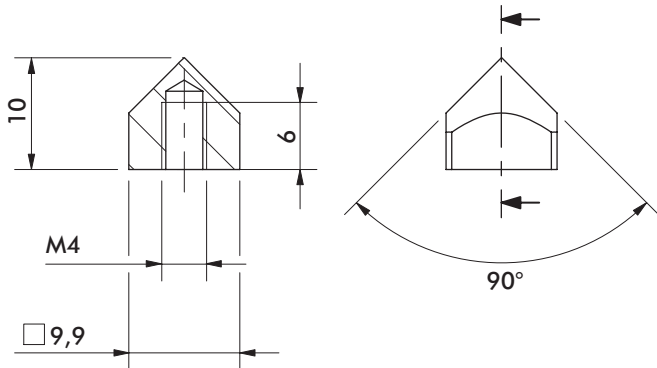
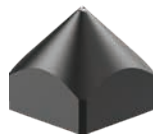
Soft Steel Teeth **Part #**
Non-Serrated **8JZ-028-1**

Plastic Teeth



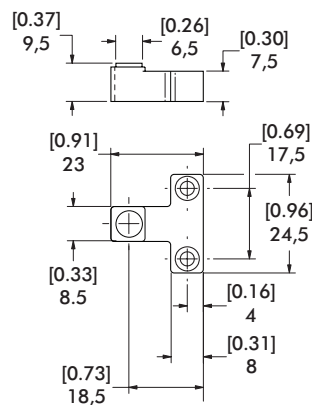
Plastic Teeth **Part #**
90 Shore, Serrated **8JZ-045-2**

Steel Points



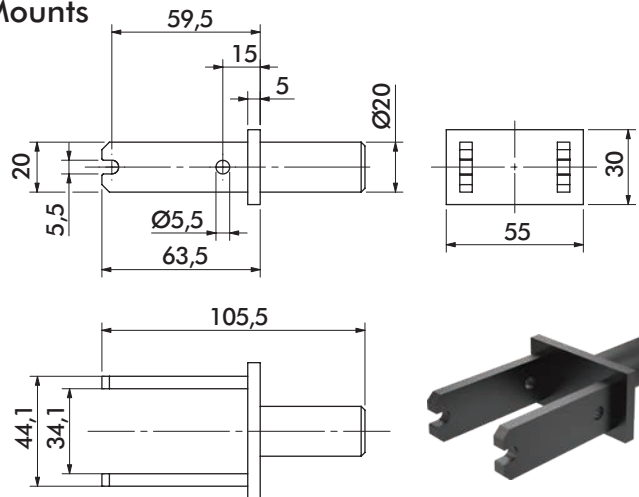
Hardened Steel Point **Part #**
Pointed **8JZ-029-1**

Sensors



Part Present Sensor **Part #**
3mm Sensing Distance, 2m Cable **8EA-164-1**
3mm Sensing Distance, M12X1 **8EA-165-1**

Mounts

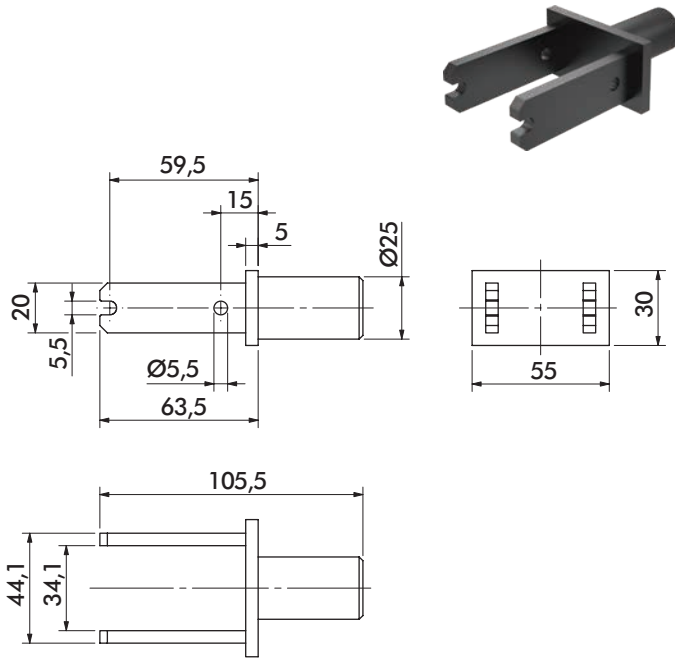


Mount **Part #**
Ø20mm Rear Rod **8MA-165-1**

84L2-1 ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

Mounts

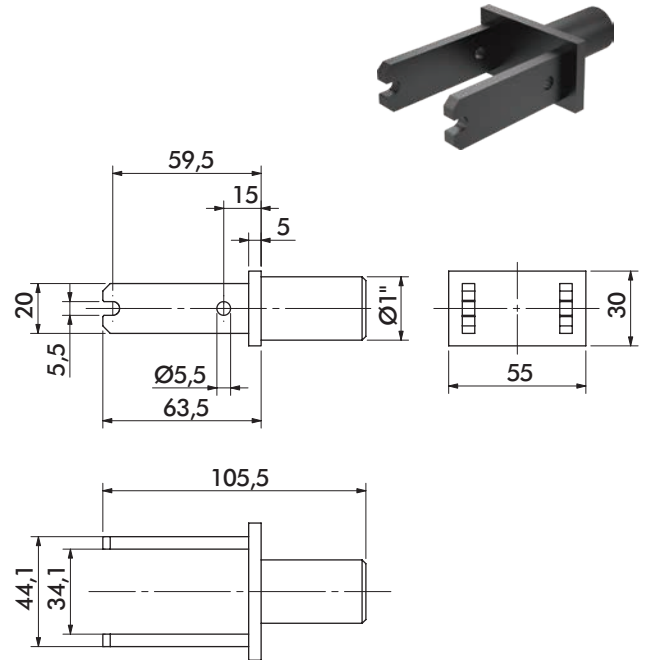


Mount

Ø25mm Rear Rod

Part #

8MA-166-1

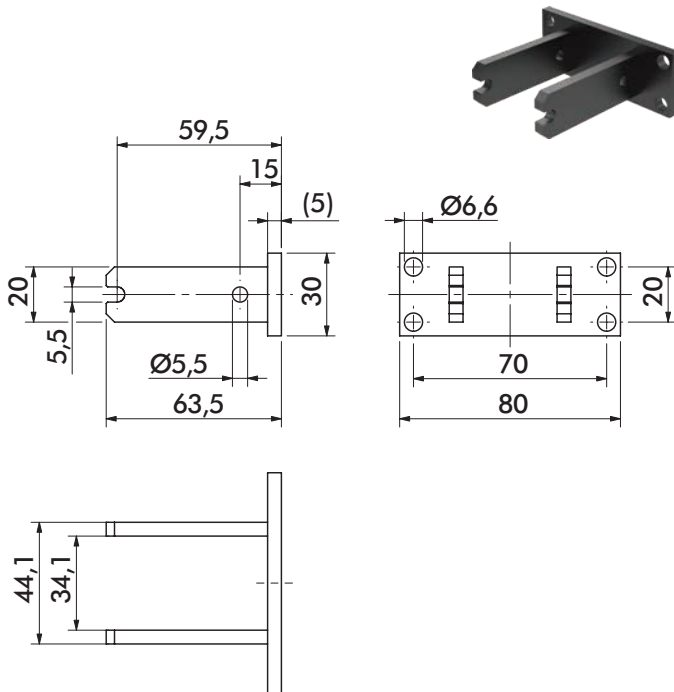


Mount

Ø1.00" Rear Rod

Part #

8MA-168-1

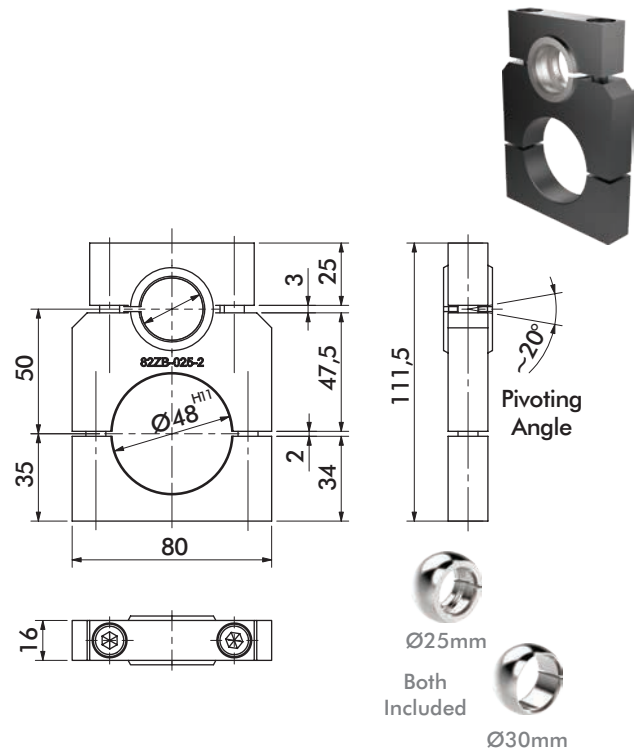


Mount

Rear Flange

Part #

8MA-147-1



Mount

On-Body Swivel Ball

Part #

82ZB-025-2

84L3-2 SERIES

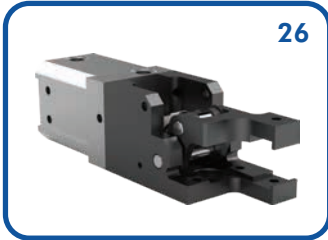
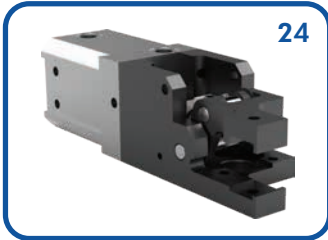
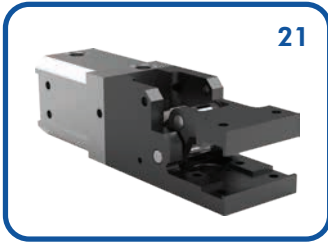
Cam Type Sheet Metal Grippers | Ordering Information



Jaw Arrangement Options

Description

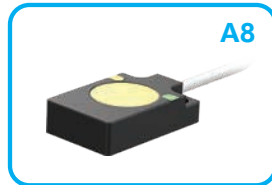
- 21** Double
- 24** Single, Right
- 26** Single, Left



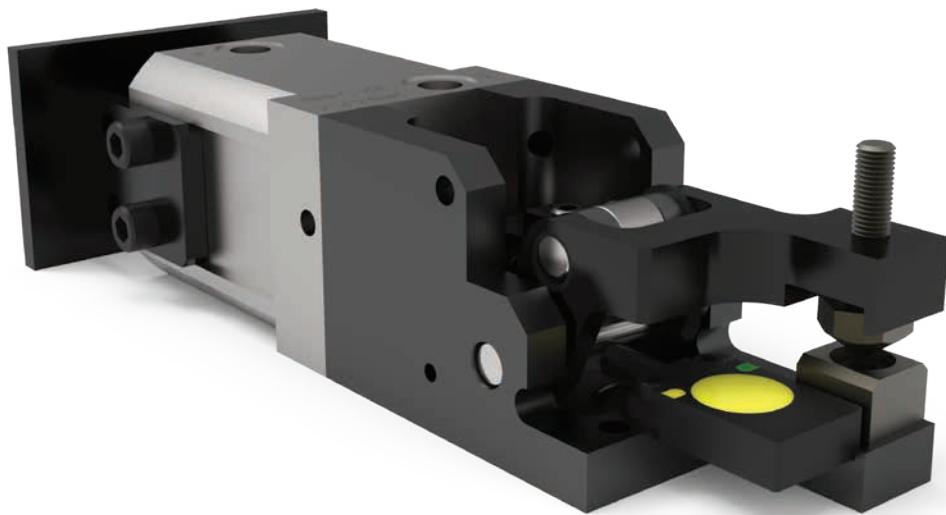
Sensor Options

Description

- 00** None
- A8** Workpiece Control, Switching Distance 7mm
8EA-092-1
- A9** Workpiece Control, Switching Distance 7mm,
M12x1 Plug, 3 Pin - 8EA-092-2



Shims for Sensor available
Order Separately **8MB-003-1**



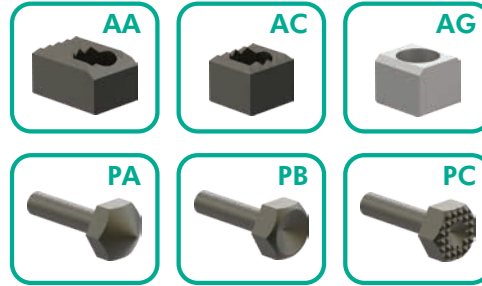
84L3-2 SERIES

Cam Type Sheet Metal Grippers | Ordering Information

Gripper Teeth and Points Options

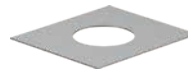
Upper Teeth Options

- 00** None
- AA** 14,9x21x12mm - 8JZ-014-3
- AC** 14,9x14x12mm - 8JZ-043-1
- AG** 14,9x14x12mm - 8JZ-050-1
- PA** 8MJ-1001-1
- PB** 8MJ-1002-1
- PC** 8MJ-1003-1



Lower Teeth Options

- 00** None
- AA** 14,9x21x12mm - 8JZ-014-3
- AC** 14,9x14x12mm - 8JZ-043-1
- AG** 14,9x14x12mm - 8JZ-050-1

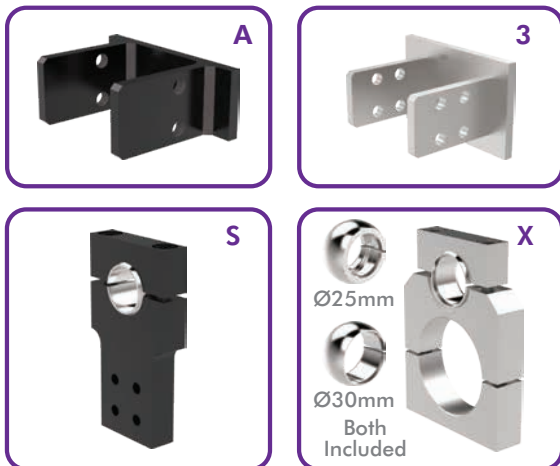


Shims for gripper teeth available
Order Separately **8SB-003-1**
Dimensions: 14,8 x 13 x 0,15 mm

Mounting Options

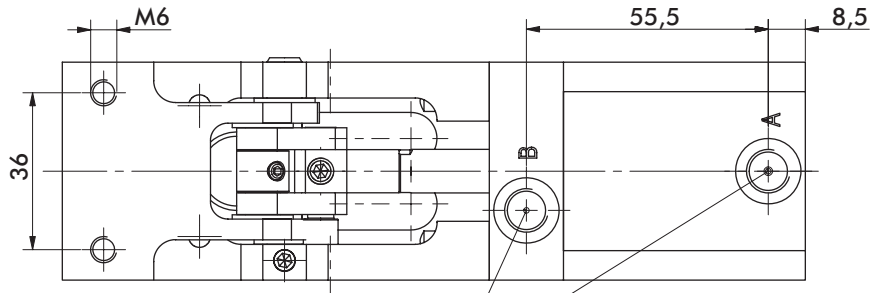
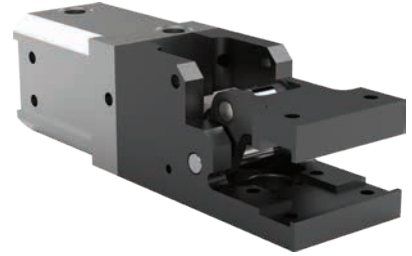
Description

- 0** None
- A** Rear Flange - 8MA-006-1
- 3** Rear Flange - 8MA-273-1
- S** Rear Swivel Ball - 82ZB-007-1
- X** On-Body Swivel Ball - 82ZB-033-2

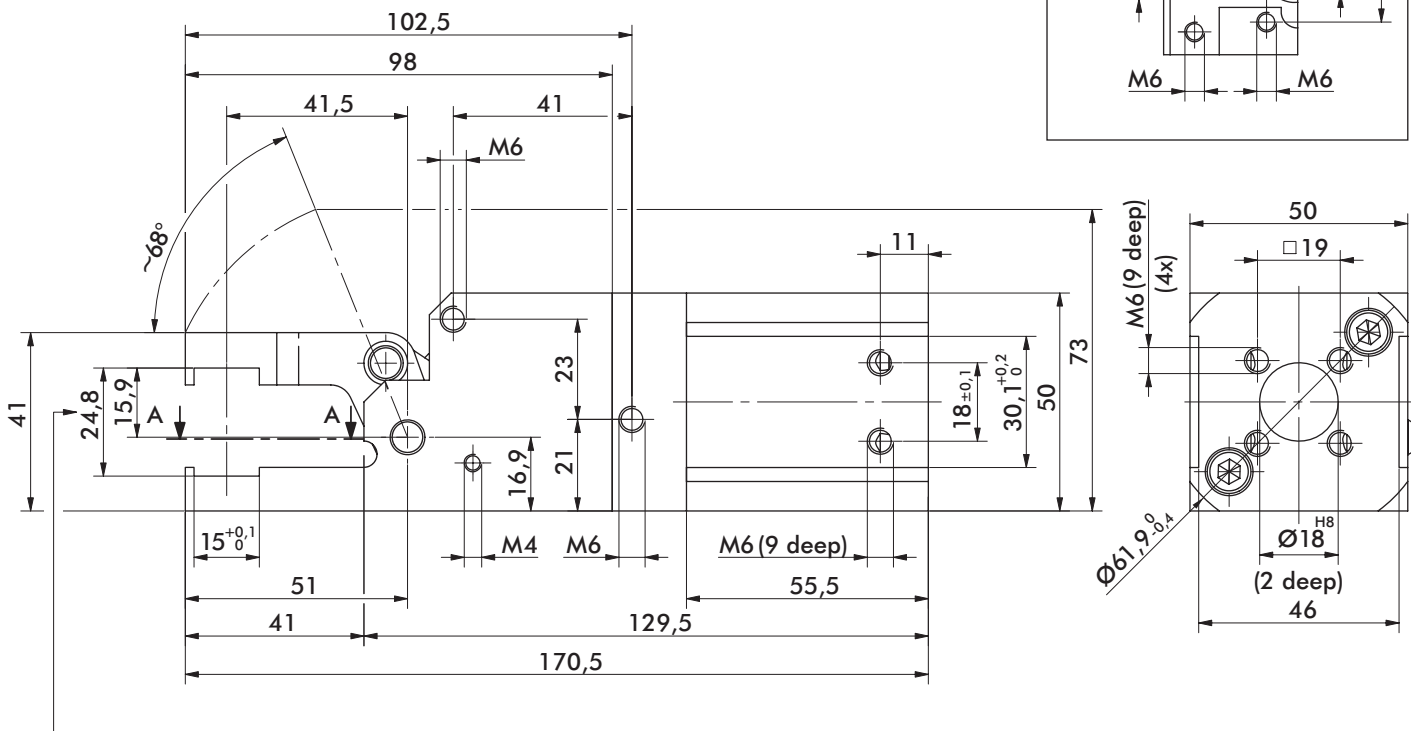
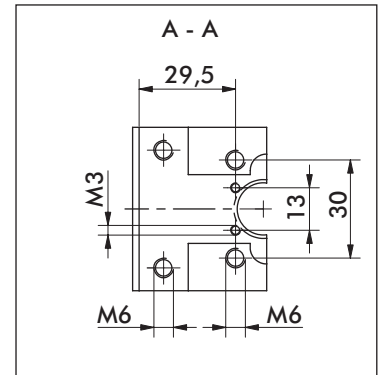


84L3-21 SERIES

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications



Air connection G1/8. Turning cylinder-air connection possible in 4x 90° increments.



Addition of gripper teeth height and thickness of the clamped plate must be 24,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

Medium air, max. 6 bar. Operation with oil-free air is permissible.

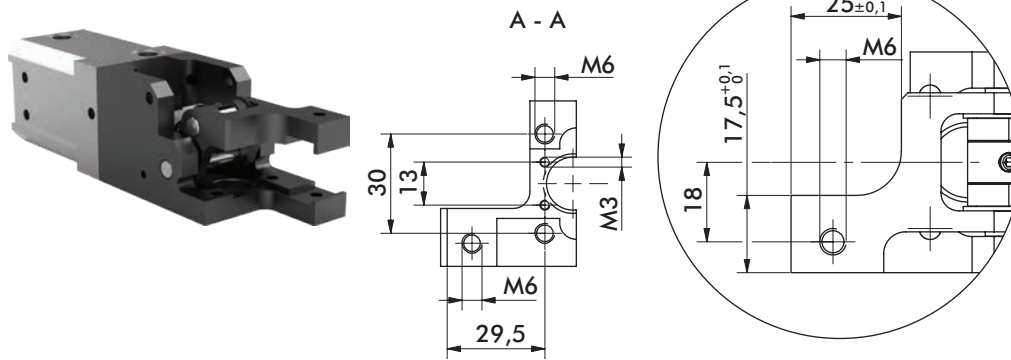
NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model	Clamping Force at 5 bar ~N [lbf]	Piston mm [in.]	Air Consumption per Double Stroke at 5 bar [L]	Weight Kg [lbs]	Acuation Time Open/Close Sec.
84L3-21	135 [30.3]	32 [1.26]	0,3	0,8 [1.76]	0.2

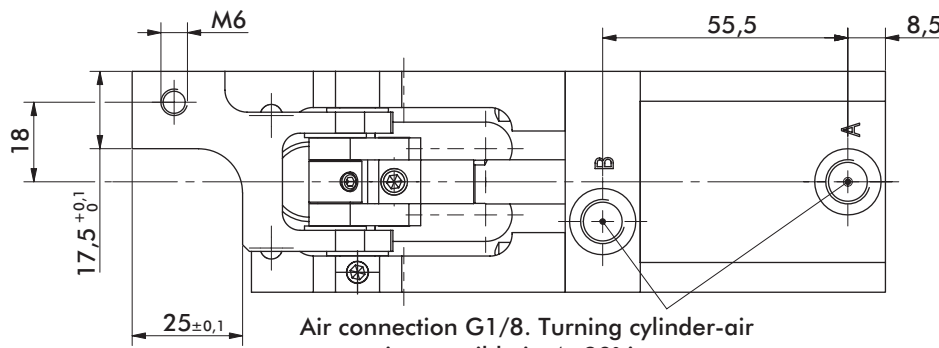
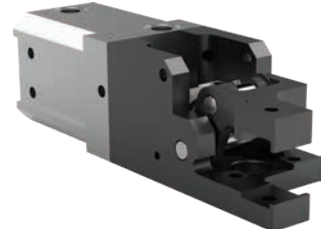
84L3-24/84L3-26 SERIES

Cam Type Sheet Metal Grippers | Dimensions and Technical Specifications

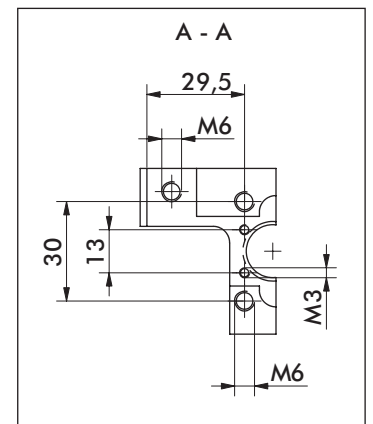
84L3-26 (Left Jaw)



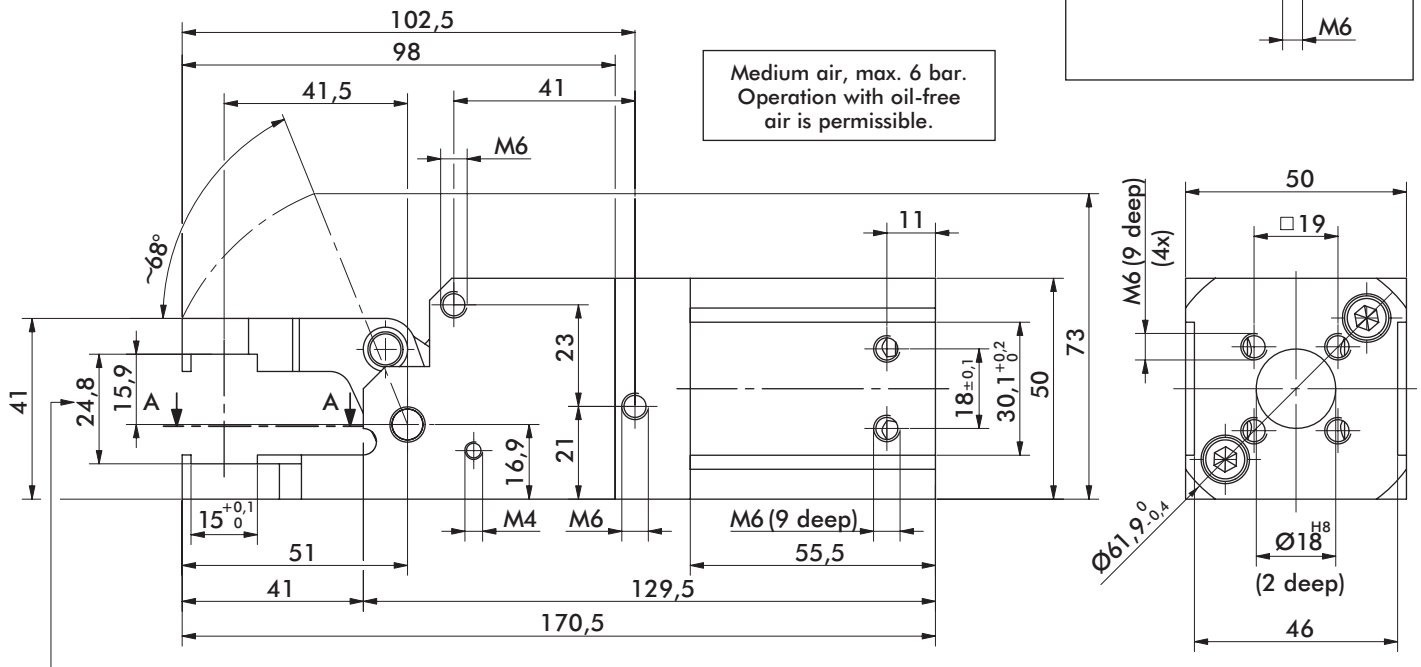
84L3-24 (Right Jaw)



Air connection G1/8. Turning cylinder-air connection possible in 4x 90° increments.



Medium air, max. 6 bar.
Operation with oil-free air is permissible.



Addition of gripper teeth height and thickness of the clamped plate must be 24,8 mm. It might be necessary to use shim plates or to grind off the gripper teeth.

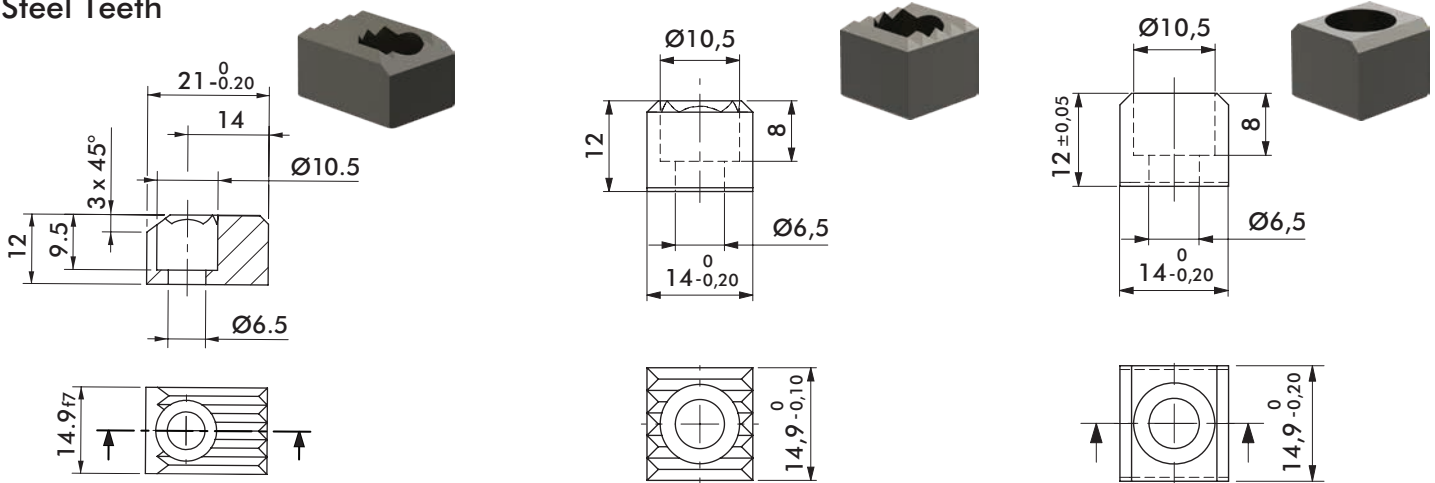
NOTE! Any extension of the moveable or fixed gripper jaws as well as the additional attachment of weights will void warranty.

Model	Clamping Force at 5 bar ~N [lbf]	Piston mm [in.]	Air Consumption per Double Stroke at 5 bar [L]	Weight Kg [lbs]	Actuation Time Open/Close Sec.
84L3-24/84L3-26	135 [30.3]	32 [1.26]	0,3	0,75 [1.65]	0.2

84L3 SERIES ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

Steel Teeth

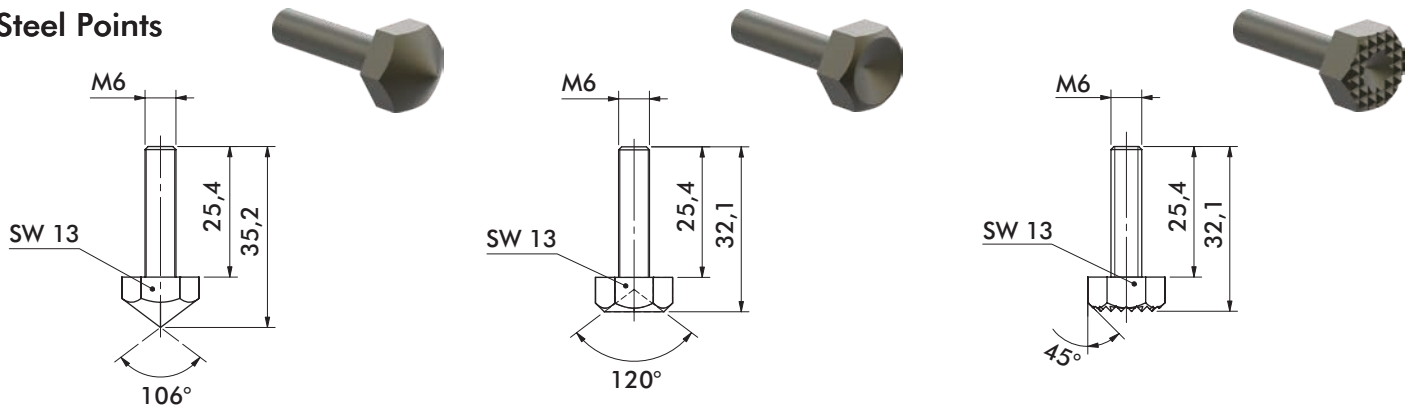


Steel Teeth Part #
Serrated **8JZ-014-3**

Steel Teeth Part #
Serrated **8JZ-043-1**

Steel Teeth Part #
Flat **8JZ-050-1**

Steel Points

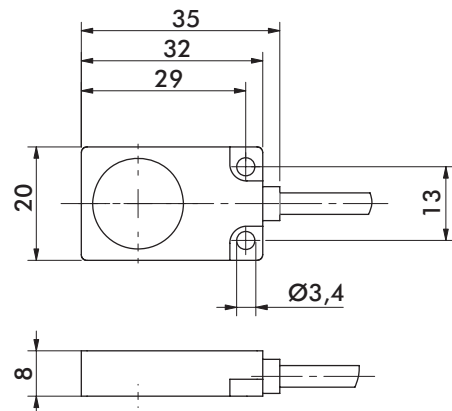
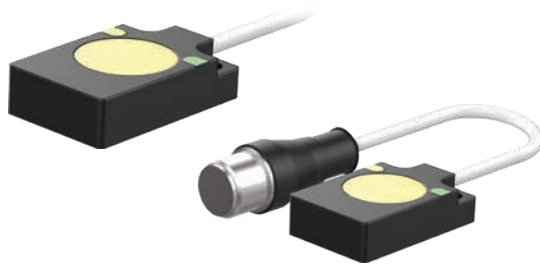


Steel Point Part #
Pointed **8MJ-1001-1**

Steel Point Part #
Flat **8MJ-1002-1**

Steel Point Part #
Serrated **8MJ-1003-1**

Sensors

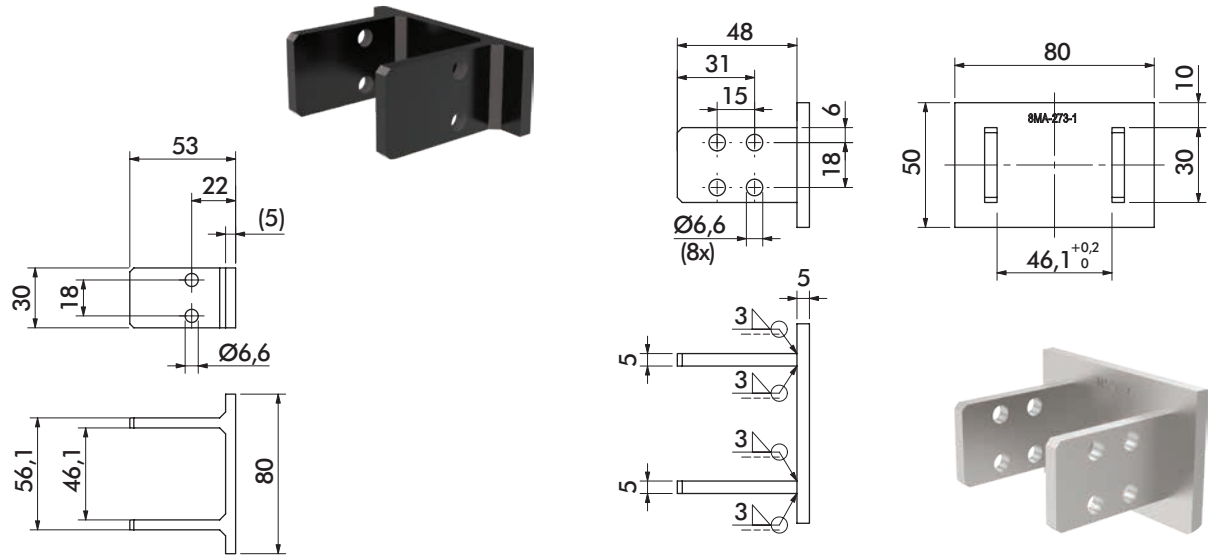


Part Present Sensor Part #
Switching Distance 7mm **8EA-092-1**
Switching Distance 7mm, M12x1 Plug, 3 Pin **8EA-092-2**

84L3 ACCESSORIES

Cam Type Sheet Metal Grippers | Dimensions and Ordering Information

Mounts



Mount

Part #

Rear Flange

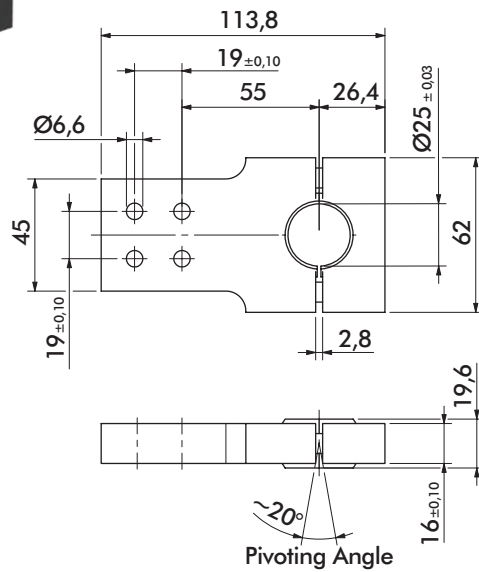
8MA-006-1

Mount

Part #

Rear Flange

8MA-273-1

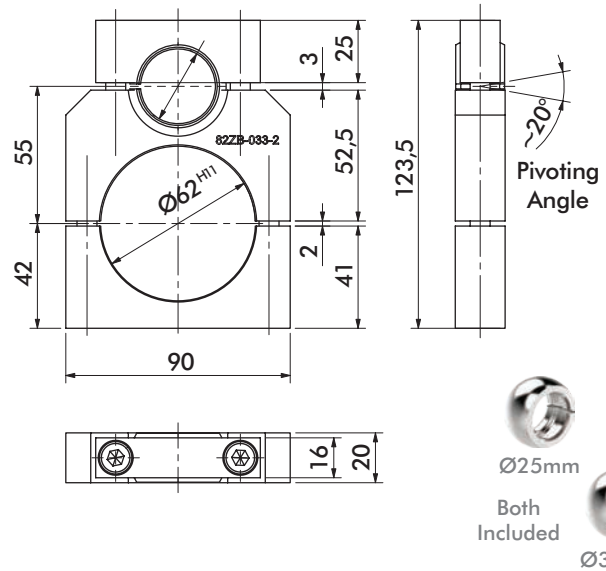


Mount

Part #

Rear Swivel Ball

82ZB-007-1



Mount

Part #

On-Body Swivel Ball

82ZB-033-2

GR84 SERIES

Toggle Lock Sheet Metal Grippers | Ordering Information

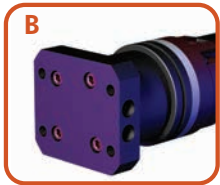
GR84-15 - BE - DD - 9S9 - RRSS - A1 - XX - 01

Cylinder Type & Porting

Step 1 - Cylinder Type Choose One

B **E**

- B** Flange Base
- C** Round Cylinder



Step 2 - Cylinder Ports Choose One

B **E**

- E** English (1/8 NPT)
- M** Metric (1/8 G)

Jaw Arm Option

Description

DD Double Arm

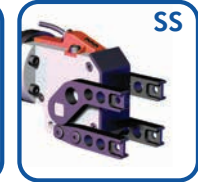
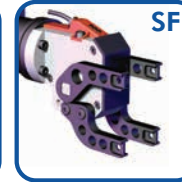
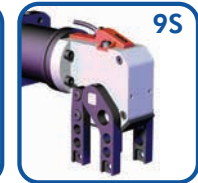
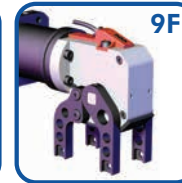
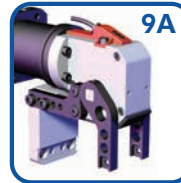


Jaw Arrangement & Opening

Step 1 - Jaw Arrangement Choose One

9S **9**

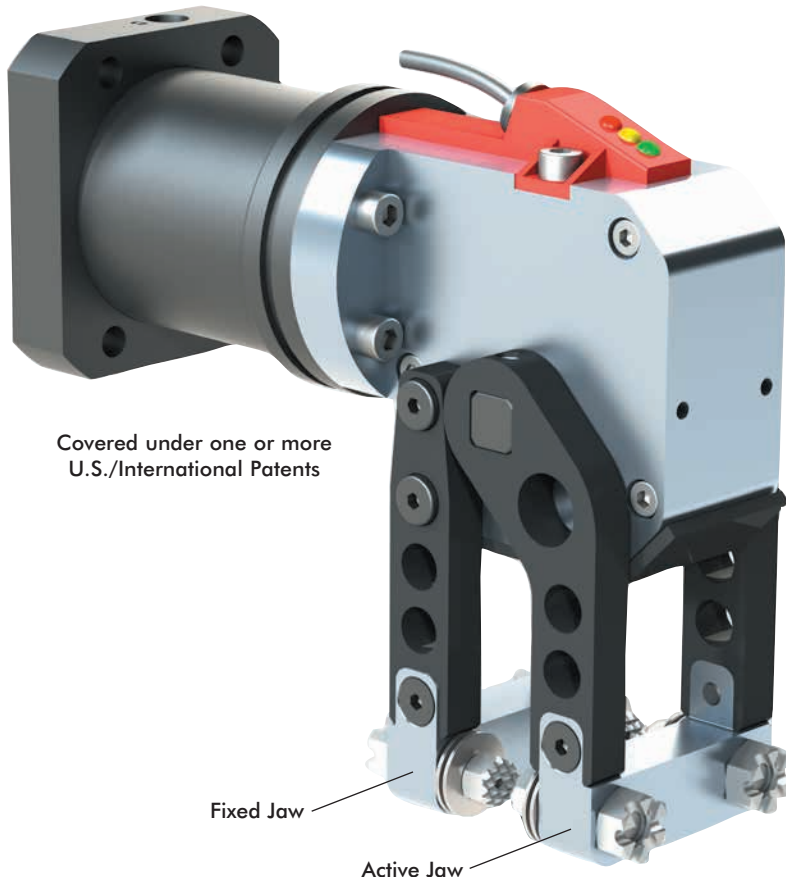
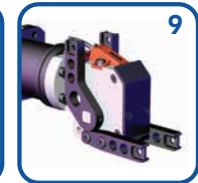
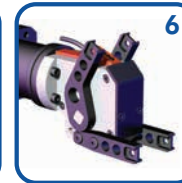
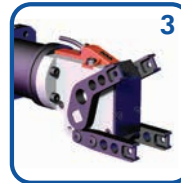
- 9A** 90° Grip Adj. Flange
- 9F** 90° Grip Flange
- 9S** 90° Grip Standard
- SA** Straight Adj. Flange
- SF** Straight Flange
- SS** Straight Standard



Step 2 - Active Jaw Opening Choose One

9S **9**

- 3** 30° Preset
- 6** 60° Preset
- 9** 90° Preset



Covered under one or more
U.S./International Patents

Fixed Jaw

Active Jaw

For GR-84 Mounting Options

Please Refer to **GR1 Series** "Mounting Options" for style of mounting and use the "Replacement Part#" to order the Preferred Mounting Style (See pages SG-TLG-31 to 33).

Jaw Block & Insert Options

Step 1 - Active Jaw Block Option Choose One

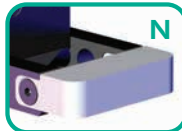
R R S S

X No Block

R Regular Block

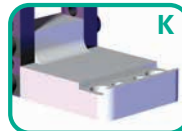
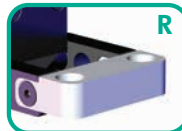
N Blank Block (No Tips)

M Jaw Block for Block Inserts "B" Only



For 9F 9S SF SS:
When choosing Active Jaw Block "M" Fixed Jaw Block must be "M"

M M B S



For 9A SA:
When choosing Active Jaw Block "M" Fixed Jaw Block must be "K"

M K B S

Step 2 - Fixed Jaw Block Options Choose One Above -or-

R R S S

L Flange Block (for 9F & SF Fixed Jaw Only)

K Adjustable Jaw Block (for 9A & SA Fixed Jaw Only)

Step 3 - Active Jaw Insert Options Choose One

R R S S

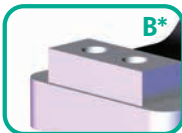
P Point

T Self-Adjusting Serrated N Non-Standard

C Cup X None

U Urethane Z Blank

S Serrated B Block (*See STEP 4 below for Block Insert Options)



Step 4 - Fixed Jaw Insert Options Choose One Above

R R S S

-or-

Step 4 - "B" Block Insert Options Choose One
*(Active and Fixed Jaws Use Common Inserts)

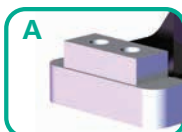
M M B S

S Serrated

U Urethane

A Aluminum

N Non-Standard



(Sensing mounts can not be used with (B) Block Option inserts)

Guard Options

Description

XX No Face Guard

01 Face Guard

02 Face + Skid Guard



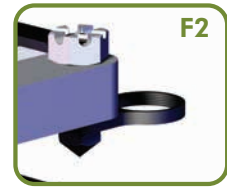
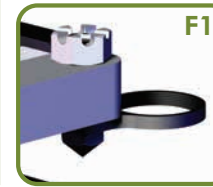
Sensor Mounts

Description

XX No Sensor Mounts

F1 Ø18mm Sensor

F2 Ø12mm Sensor



Sensor Options

Description

A1 (Turck) VDC

B8 (Pepperl Fuchs) VDC

C8 (DE-STA-CO) VDC

C9 (Allen-Bradley) VDC

D1 (Turck) AC/DC

E3 (Namco) VDC

E4 (Pepperl Fuchs) VDC

E5 (Efector) VDC

E6 (Baluff) VDC

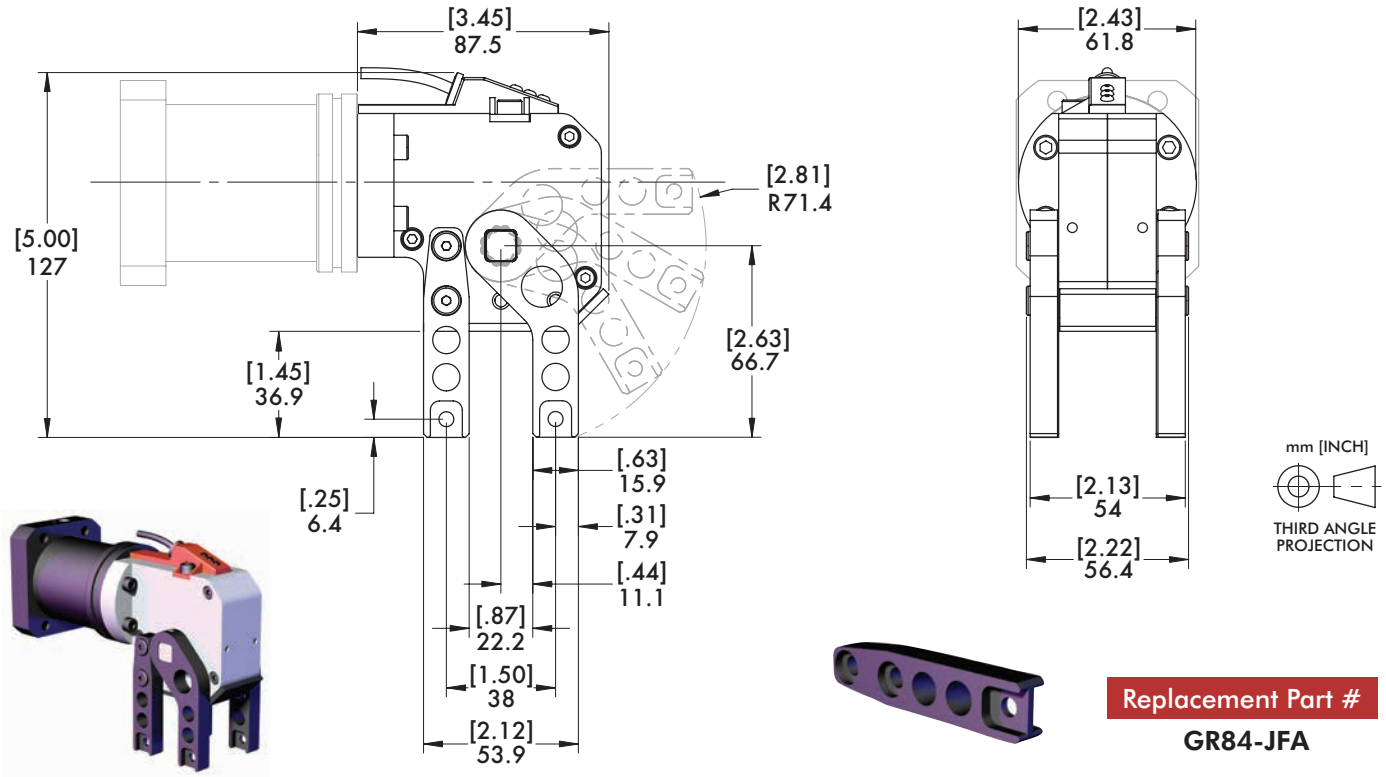
XC Cover Only

(See page SG-TGL-13 for sensor specifications)

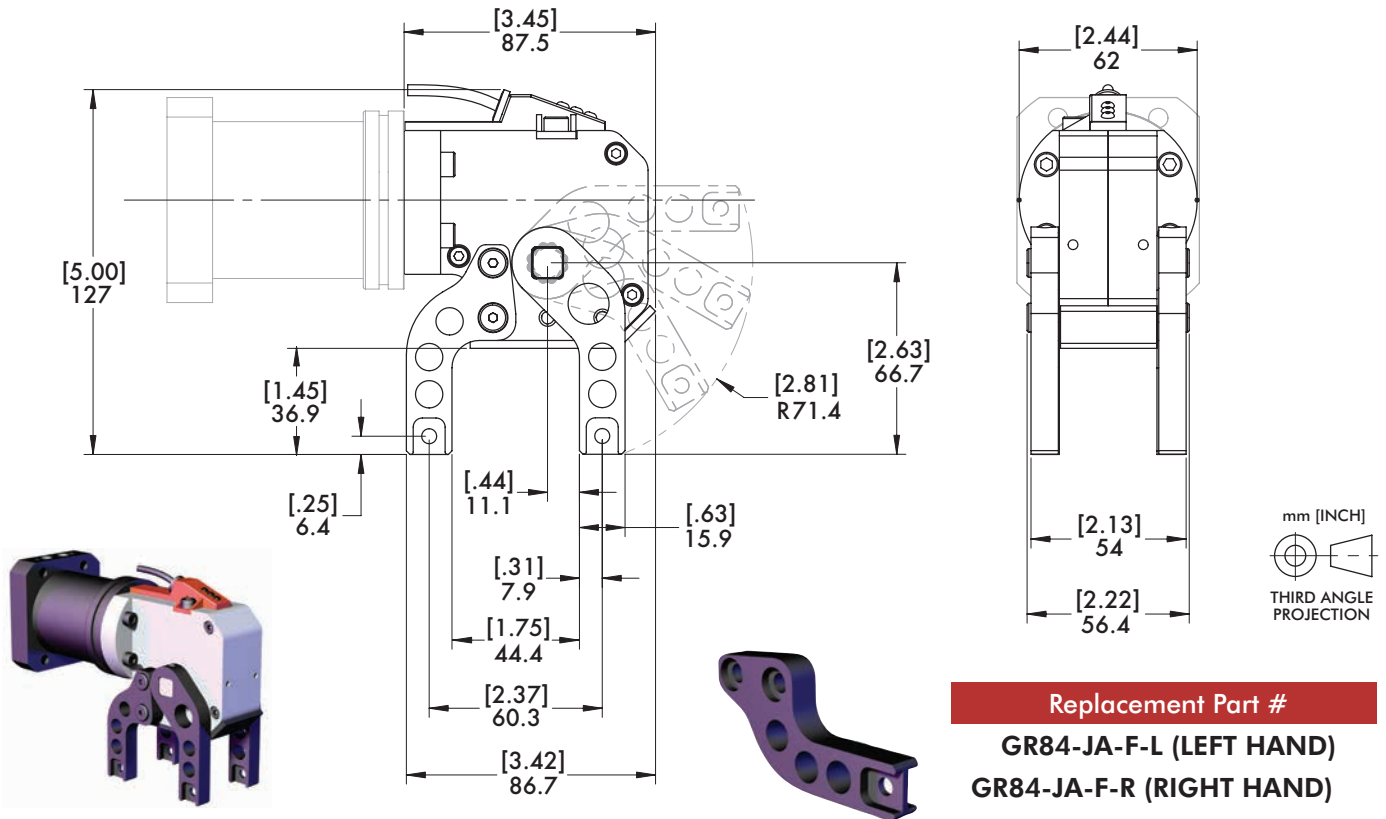
GR84 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"9Sx" 90° Jaw Arrangement - Standard Fixed Jaw



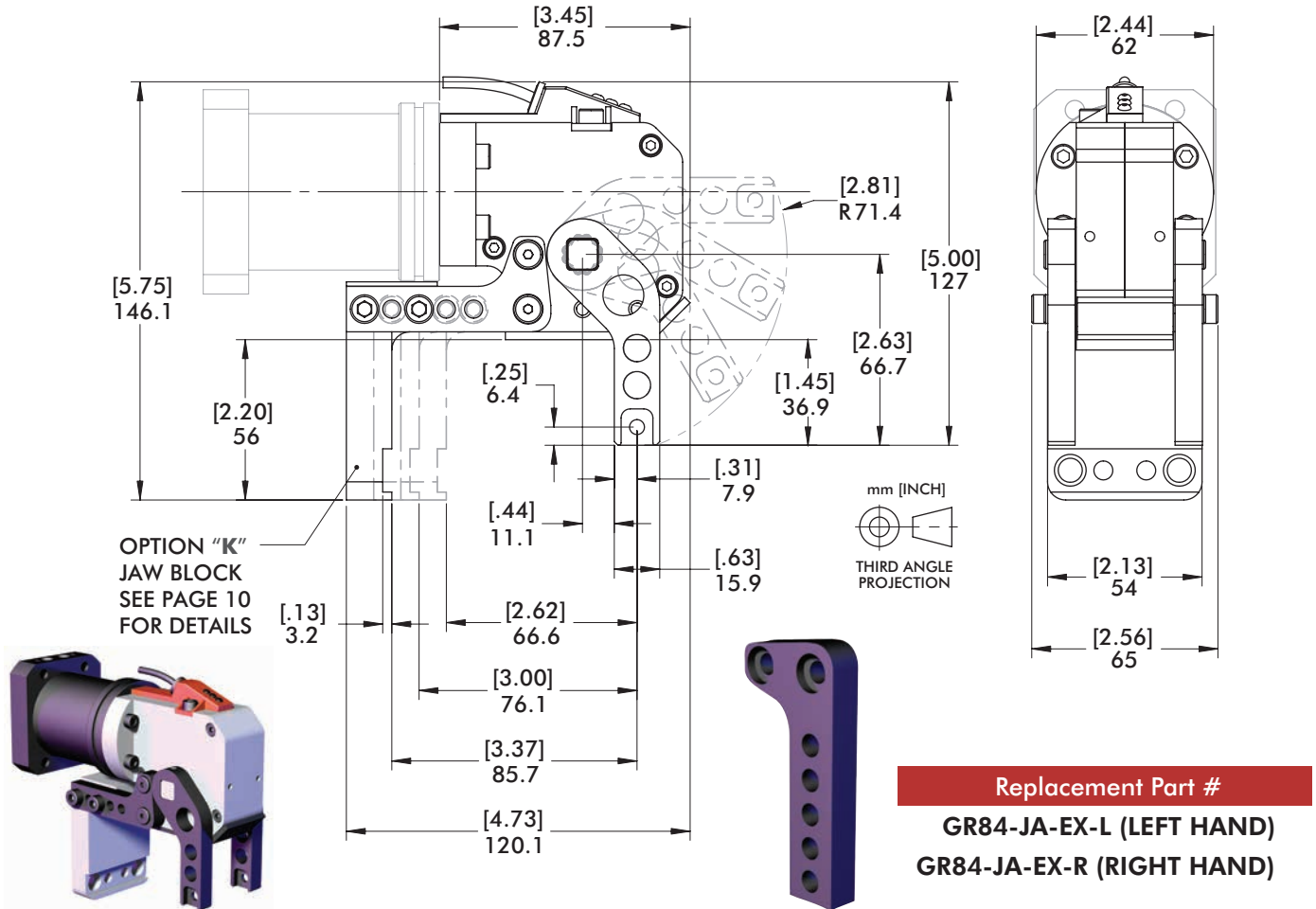
"9Fx" 90° Jaw Arrangement - Flange Fixed Jaw



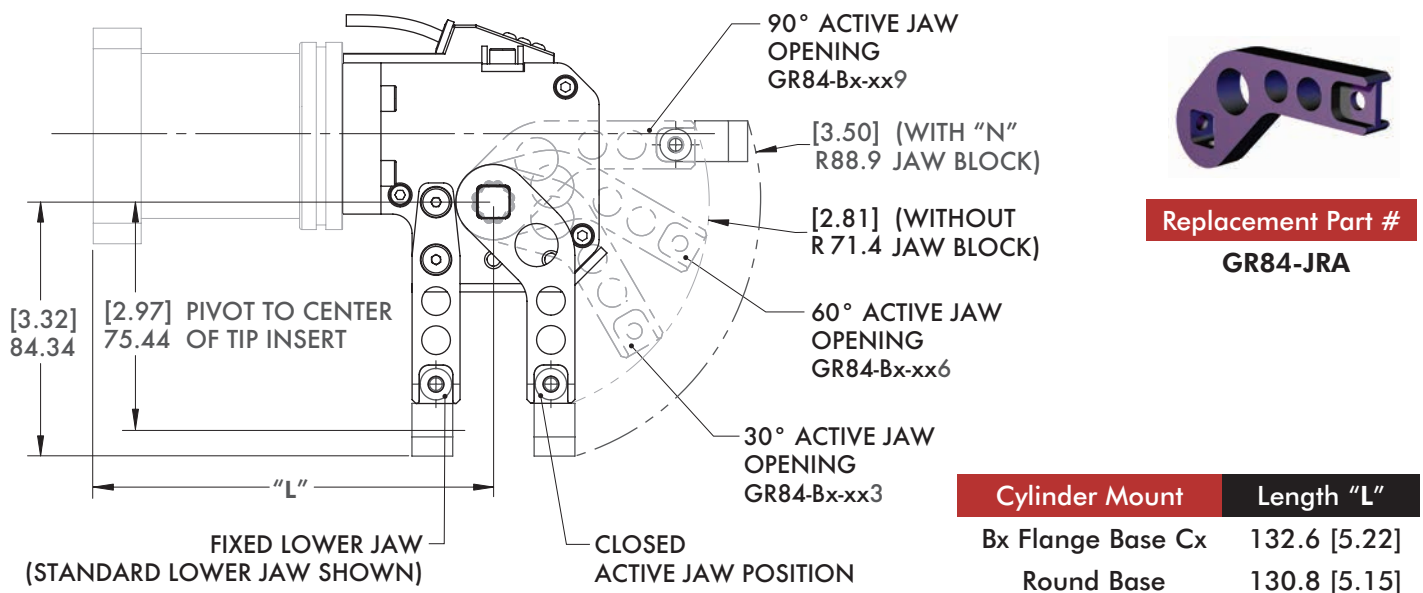
GR84 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"9Ax" 90° Jaw Arrangement - Adjustable Fixed Jaw



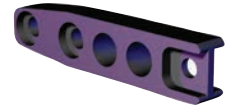
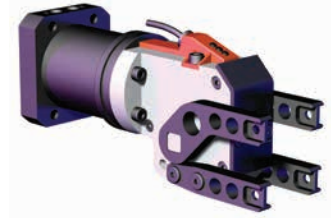
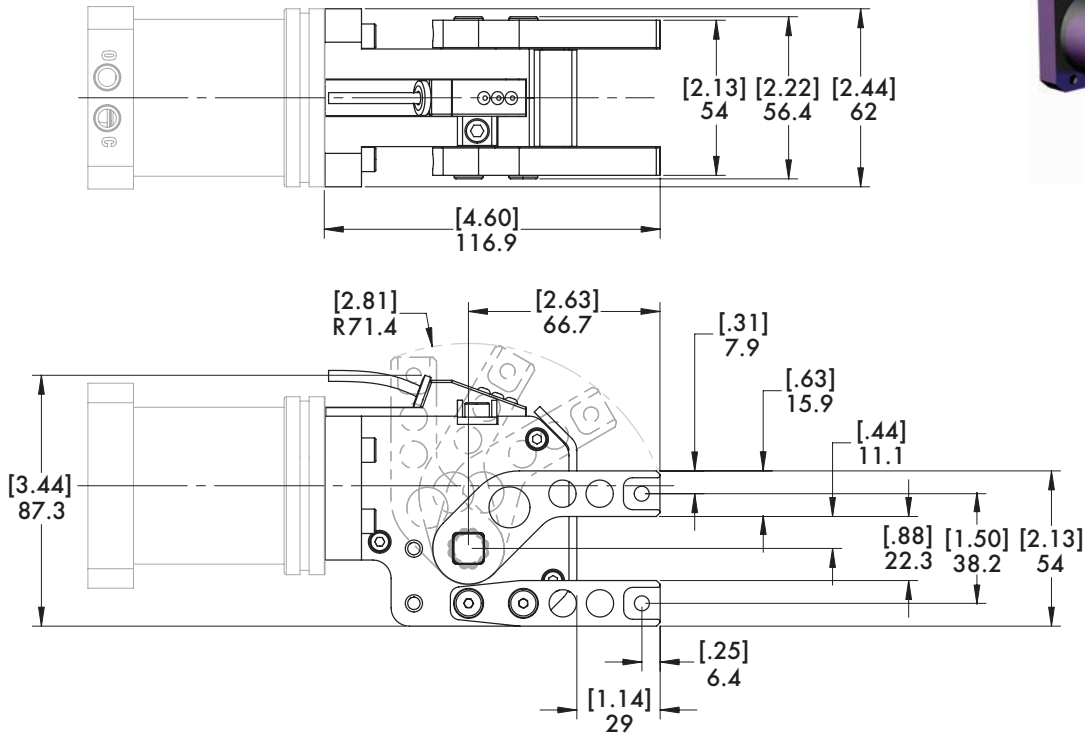
"xx3", "xx6", "xx9" 90° Jaw Arrangement - Preset Active Jaw Opening



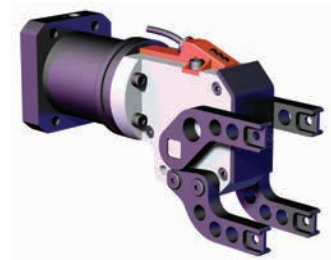
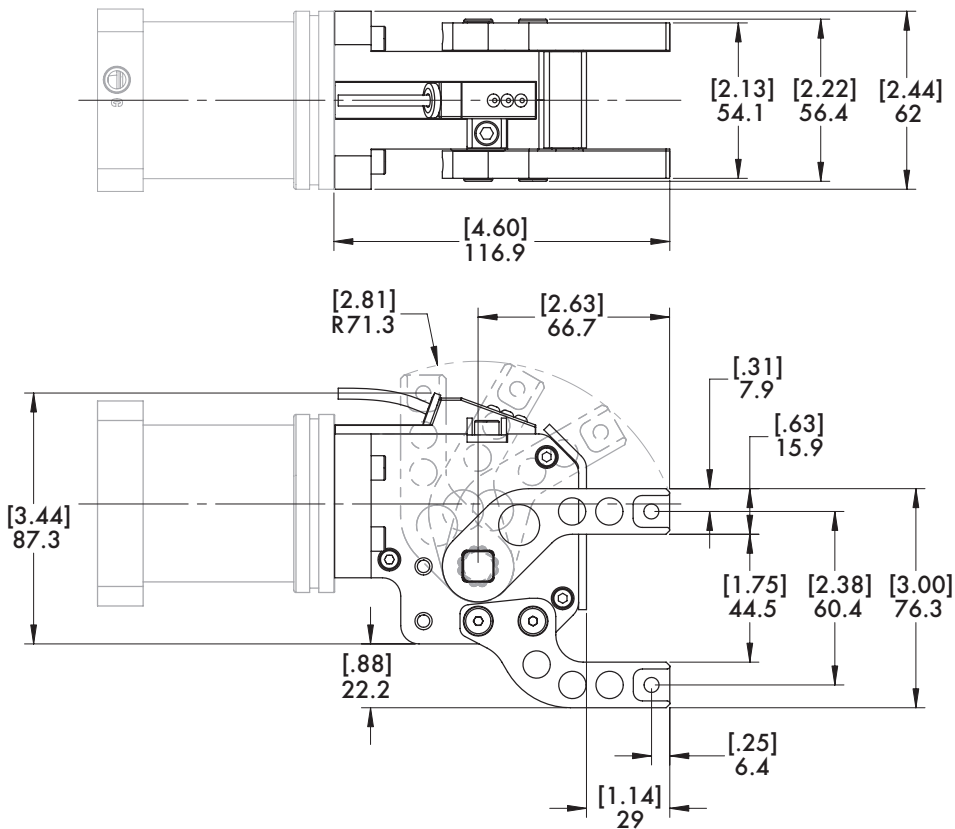
GR84 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

“SSx” Straight Jaw Arrangement - Standard Fixed Jaw



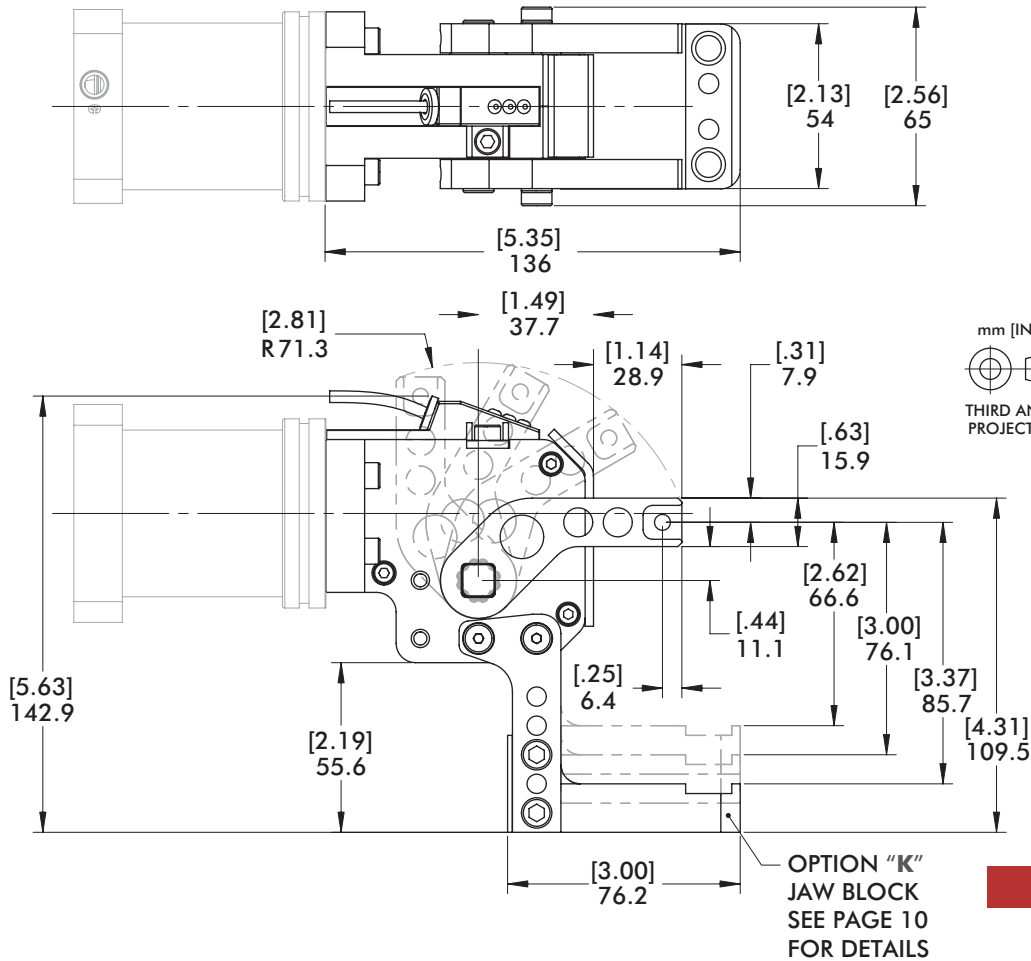
“SFx” Straight Jaw Arrangement - Flange Fixed Jaw



GR84 SERIES

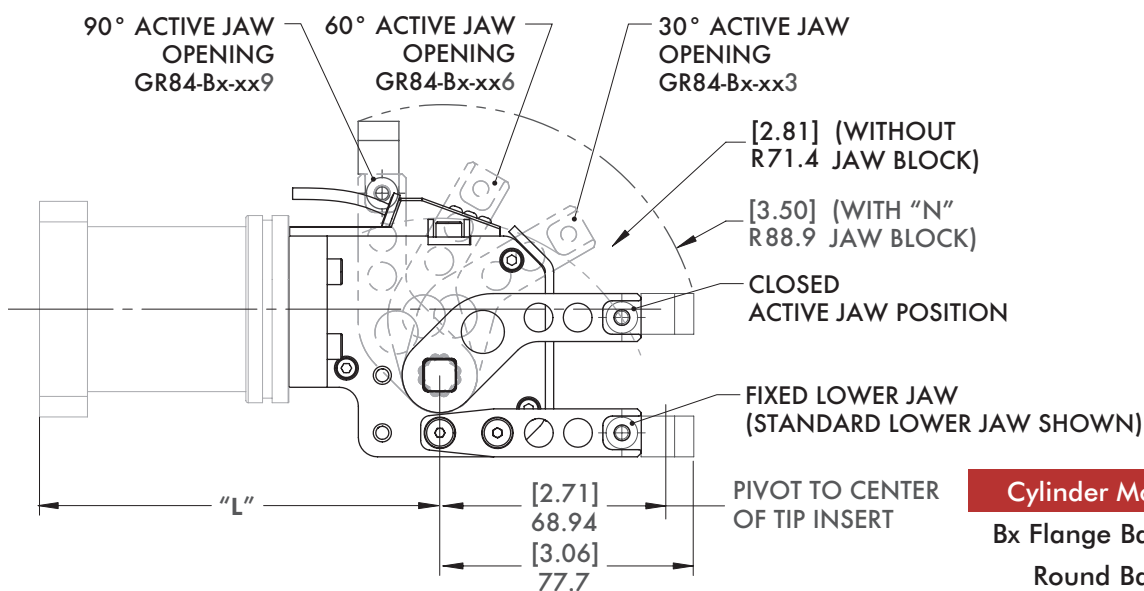
Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"SAx" Straight Jaw Arrangement - Adjustable Fixed Jaw



Replacement Part #
GR84-JA-EX-L (LEFT HAND)
GR84-JA-EX-R (RIGHT HAND)

"xx3", "xx6", "xx9" Straight Jaw Arrangement - Preset Active Jaw Opening



Replacement Part #
GR84-JRA

mm [INCH]

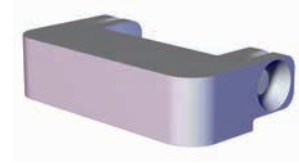
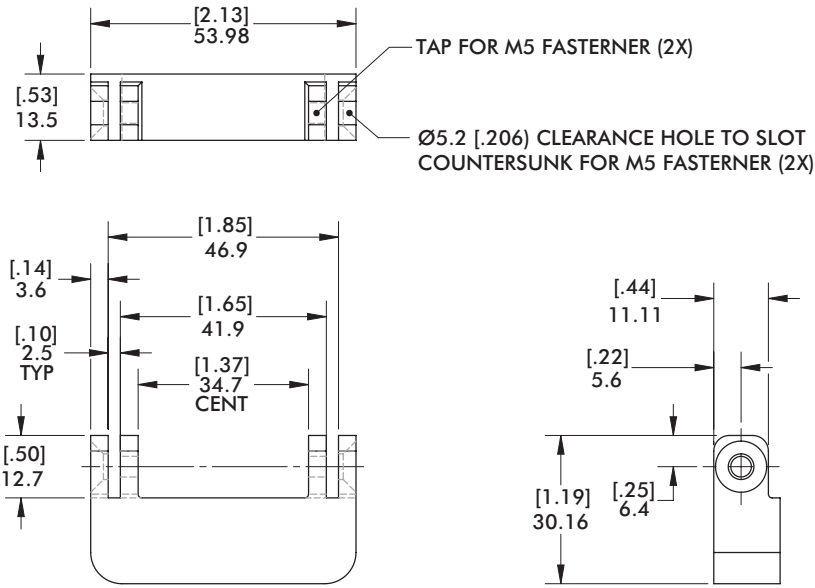
THIRD ANGLE PROJECTION

Cylinder Mount	Length "L"
Bx Flange Base Cx	132.6 [5.22]
Round Base	130.8 [5.15]

GR84 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

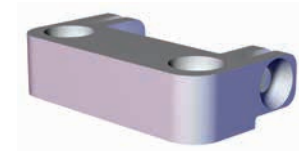
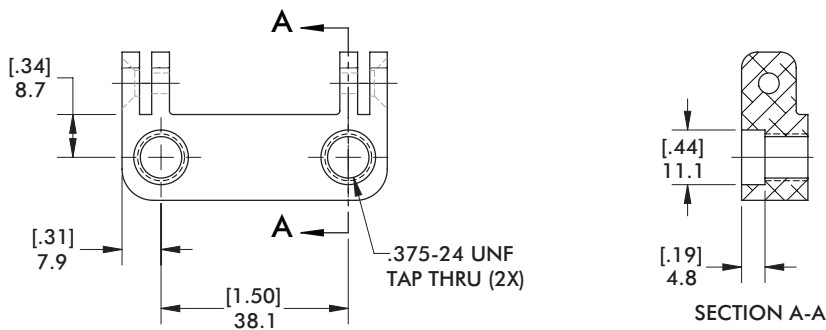
"N" Blank Jaw Block



Replacement Part #

GR84-JB

"R" Point Insert Jaw Block



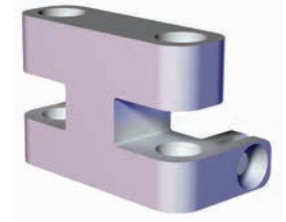
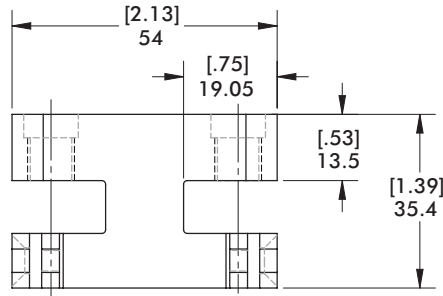
Replacement Part #

GR84-JB-3824

GR84 SERIES

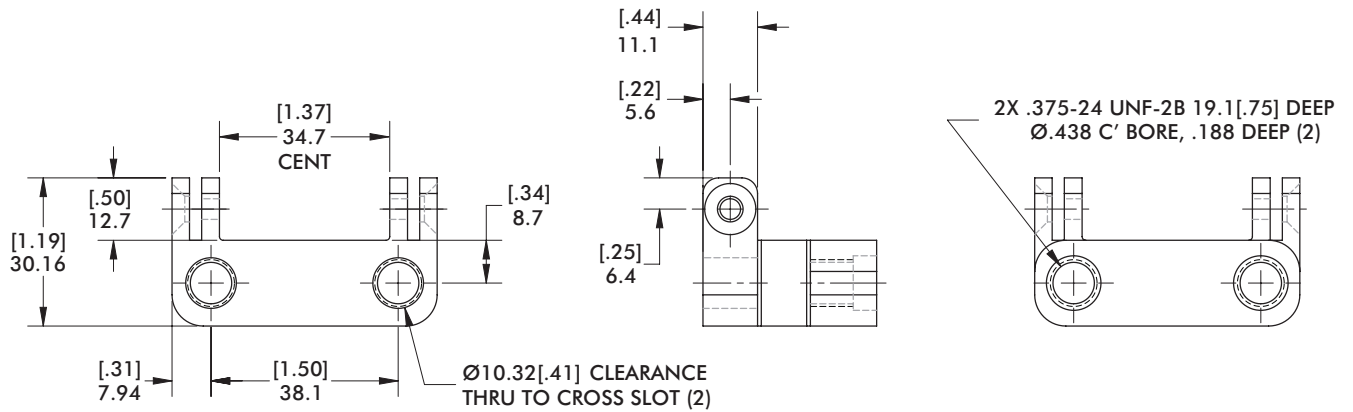
Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"L" Flange Point Insert Jaw Block

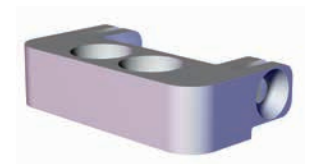


Replacement Part #

GR84-JB-F-3824

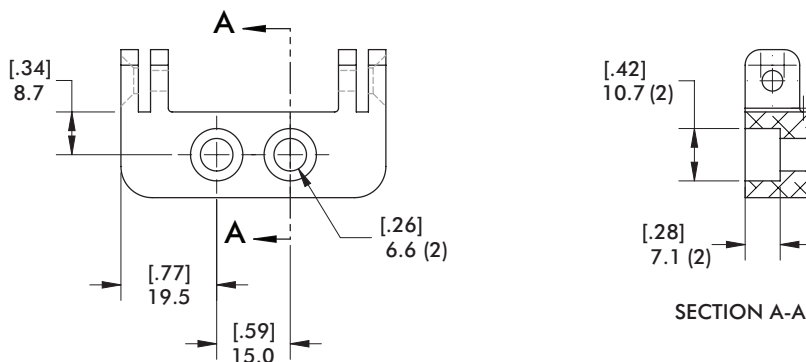


"M" Block Insert Jaw Block



Replacement Part #

GR84-JB-BM6

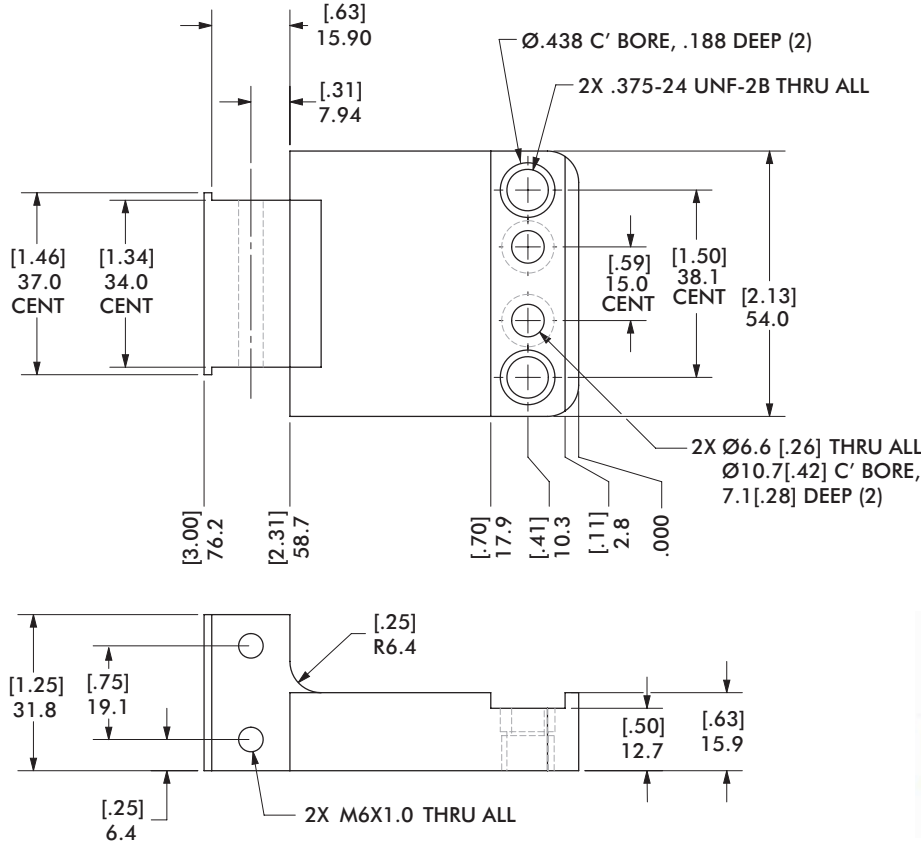


GR84 SERIES

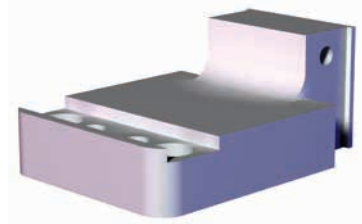
Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"K" Adjustable Jaw Block

(Can only be used with "SA" and "9A" fixed lower jaw)



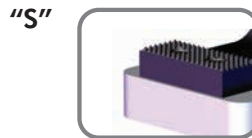
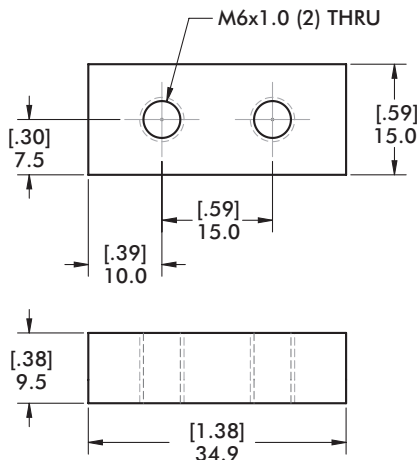
THIS JAW BLOCK GR84-JB-ADJ
CAN ONLY BE USED ON
SA AND 9A FIXED LOWER JAW



Replacement Part #
GR84-JB-ADJ

"S", "U", "A" Block Inserts

(Can only be used with "K" and "M" jaw blocks)



Serrated Block Inserts

Replacement Part #
GR84-JB-SS



Urethane Block Inserts

Replacement Part #
GR84-JB-UP



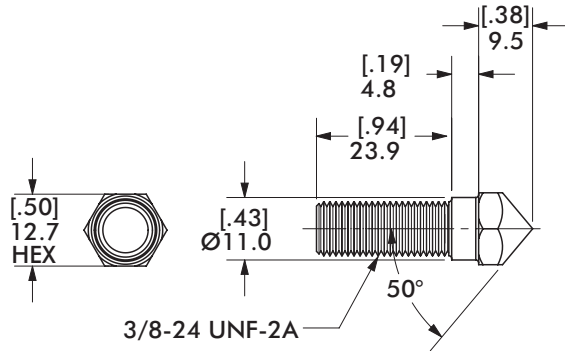
Aluminum Block Inserts

Replacement Part #
GR84-JB-PA

GR84 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"P", "C", "S", "T", "U" Jaw Inserts



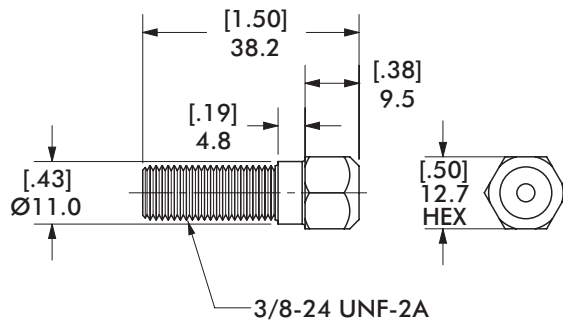
"P"



Point Jaw Inserts

Replacement Part #

GR0107



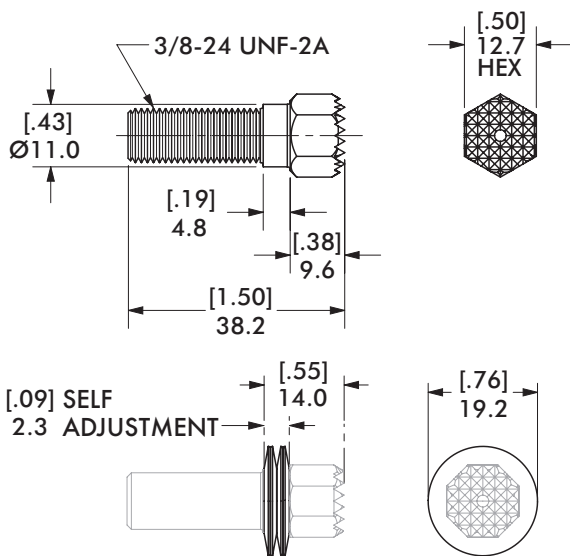
"C"



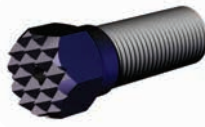
Cup Jaw Inserts

Replacement Part #

GR0108



"S"

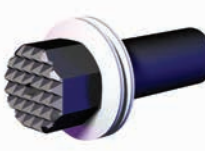


Serrated Jaw Inserts

Replacement Part #

GR0342

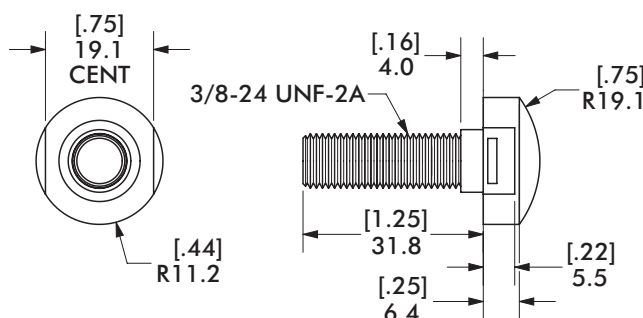
"T"



Self-Adjusting
Serrated Jaw Inserts

Includes (1) GR0342 and
(4) Belleville Washers
Part# 329-TPR-BDA-047

Self-adjusting jaw inserts require jaw blocks to have clearance holes in place of the standard tap thread in order for the inserts to function properly.



"U"



Urethane Jaw Inserts

Replacement Part #

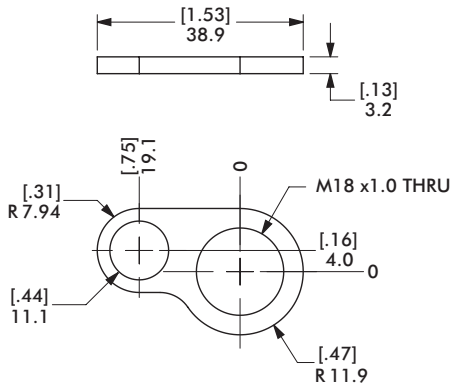
GR0353

GR84 SERIES

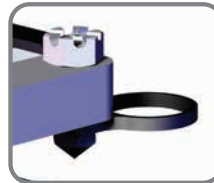
Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"F1" Ø18mm Sensor Mount

(Can only be used with "K" and "M" jaw blocks)



"F1"

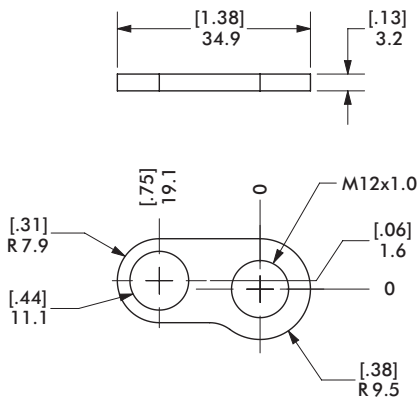


Replacement Part #

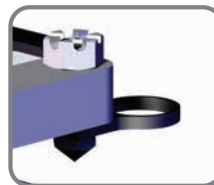
CPI-PM-18

"F2" Ø12mm Sensor Mount

(Can only be used with "K" and "M" jaw blocks)



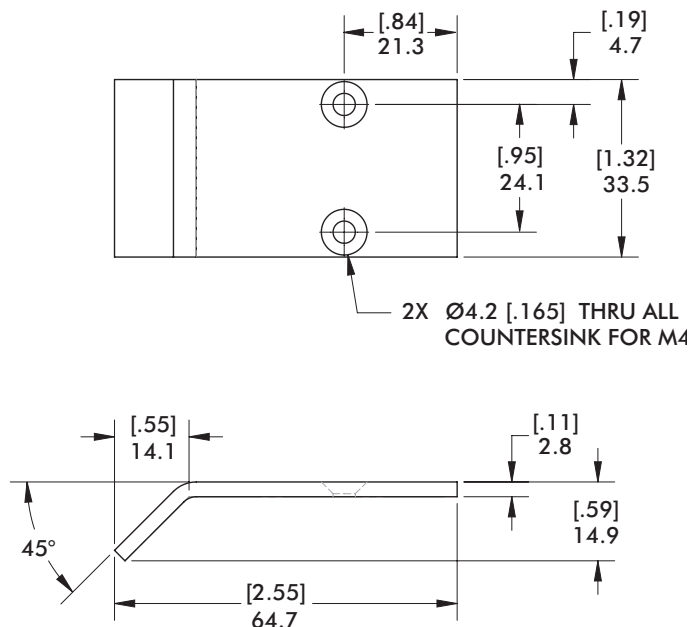
"F2"



Replacement Part #

CPI-PM-12

"01", "02" Face and Skid Guard



"01"



FACE GUARD

"02"



FACE AND SKID GUARD



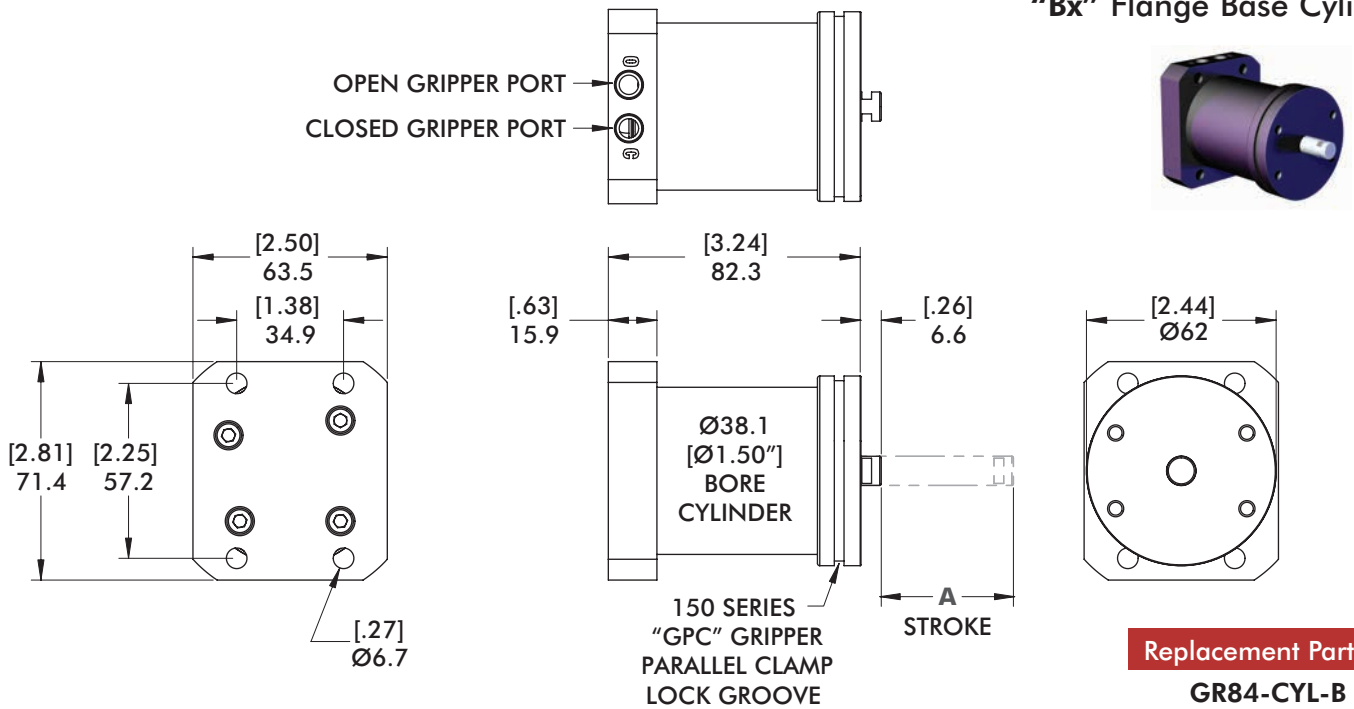
Replacement Part #

GR84-JFG

GR84 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"Bx" Flange Base Cylinder

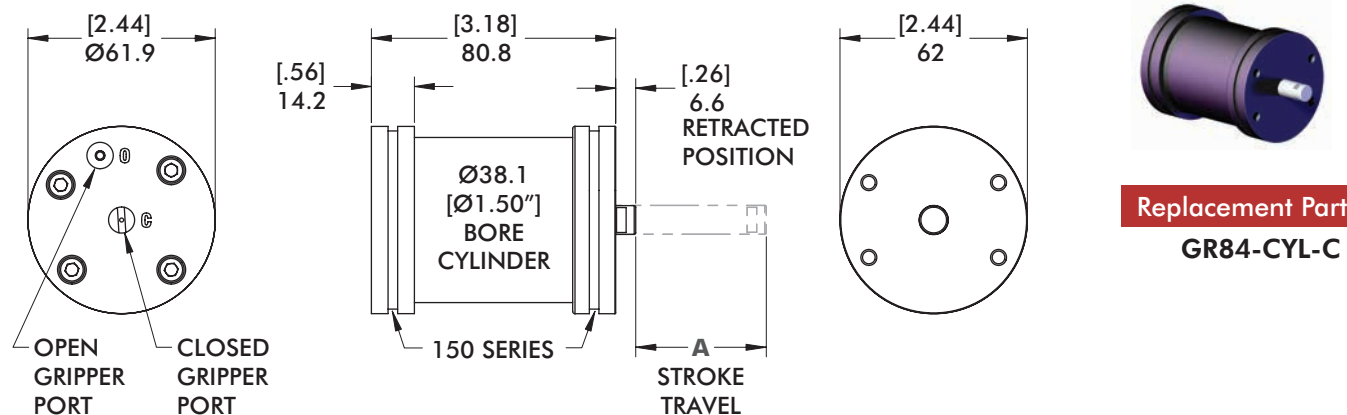


CYLINDER PORTS
E = 1/8" NPT (ENGLISH)
M = 1/8" G (METRIC)

Covered under one or more U.S./International Patents

Jaw Opening	30°	60°	90°
STROKE "A"	21.3 [0.84]	32.8 [1.29]	42.9 [1.69]

"Cx" Round Base Cylinder



CYLINDER PORTS
E = 1/8" NPT (ENGLISH)
M = 1/8" G (METRIC)

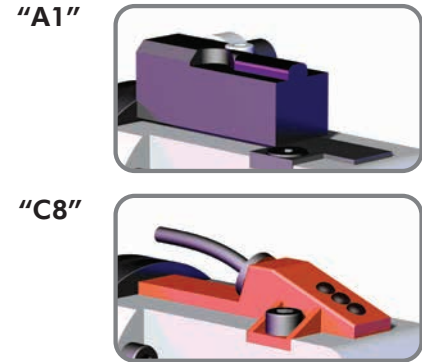
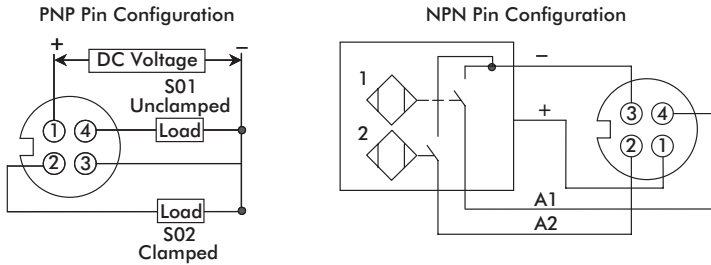
Covered under one or more U.S./International Patents

Jaw Opening	30°	60°	90°
STROKE "A"	21.3 [0.84]	32.8 [1.29]	42.9 [1.69]

GR84 SERIES

Toggle Lock Sheet Metal Grippers | Technical Information and Ordering Information

Wiring Diagram of Electrical Sensing System

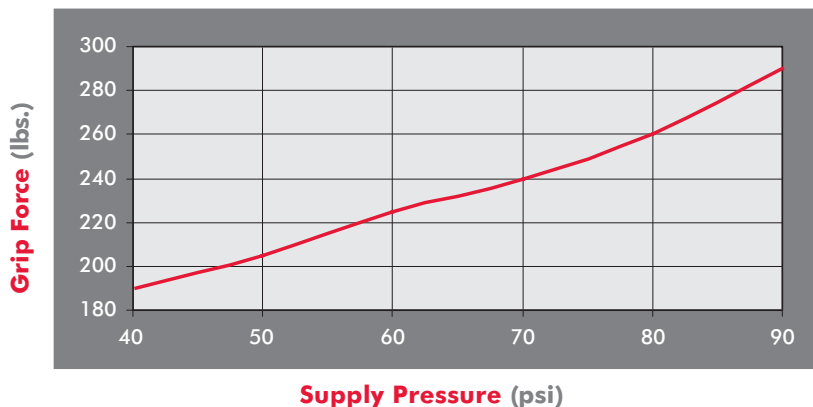


Open/Closed Sensor Options:

"A1" (Turck) Replacement Part# "8EA-054-1"+"GR84-SB"	10...30 VDC 150mA, PNP, 4-Pin, M12, Eurofast
<i>(Fasteners required for "A1" replacement: (2) M5x0.5 10mm FHCS, (1) M4 x 0.7 20mm SHCS)</i>	
"B8" (Pepperl Fuchs) Replacement Part# "8EA-031-1"	10...30 VDC 150mA, PNP, 4-Pin, M12, Eurofast
"C8" (DE-STA-CO Brand)	10...30 VDC 150mA, PNP, 4-Pin, M8, Pico
"C9" (Allen-Bradley) Replacement Part# "8EA-1006-1"	10...30 VDC 150mA, PNP, 4-Pin, M12, Eurofast
"D1" (Turck) Replacement Part# "8EA-1002-1"	20...250 AC/DC 150mA, 5-Pin, 1/2-20, Mini
"E3" (Namco) Replacement Part# "8EA-1007-1"	10...30 VDC 150mA, NPN, 4-Pin, M12
"E4" (Pepperl Fuchs) Replacement Part# "8EA-1010-1"	10...30 VDC 150mA, PNP, 4-Pin, M12, Eurofast
"E5" (Efector) Replacement Part# "8EA-1012-1"	10...30 VDC 150mA, PNP, 4-Pin, M12, Eurofast
"E6" (Baluff) Replacement Part# "8EA-1019-1"	10...30 VDC 150mA, PNP, 4-Pin, M12, Eurofast
"XC" Cover Only Replacement Part# "GR84-SC"	No Sensor Supplied

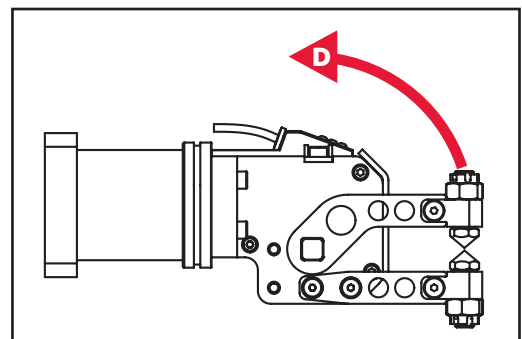
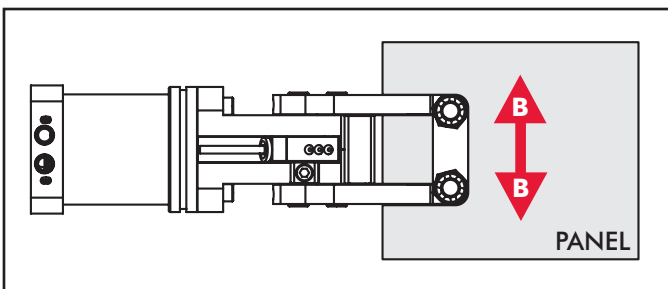
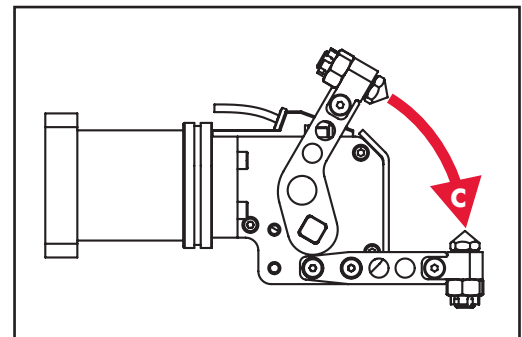
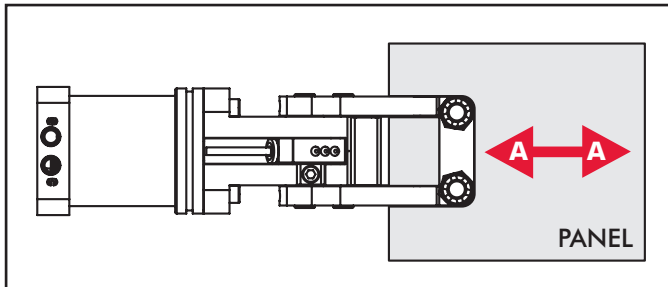
Specifications:

Weight:	3.2 lb [1.5 kg]
Grip Range (Standard and Flange with Jaw Inserts)	0 to 0.31" [0mm - 8mm]
Arm Position Tolerance:	±0.33°
Arm Lateral Tolerance:	±0.3mm
Cycle Speed @ 60 psi:	0.6 Sec (Open/Closed)
Displacement Per Cycle @ 60psi:	6.0 in3
Max Air Consumption @ 100 cycles/min:	34 ft3/min
Reliability:	
Mean Time Between Failure:	3.5 Million Cycles
Mean Time To Repair:	30 Minutes



Self-locking Linkage System

The GR84 Mini-Clamp utilizes a self-locking linkage system. If the air is lost while fully closed, the mini-clamp will continue to hold the part. The amount of air required to achieve the high gripping forces is greater than pressure to release or open the mini-clamp. If there is a slight drop of pressure during the opening cycle, the mini-clamp will still release the part. Other self locking systems can jam and require more air to release the part than it would need to grip it.



Single Jaw Arm Styles				
Pressure	"A"	"B"	"C"	"D"
2.8 bar [40 psi]	31.8 kg [70 lb]	31.8 kg [70 lb]	86.2 kg [190 lb]	294.8 kg [650 lb]
3.4 bar [50 psi]	34.0 kg [75 lb]	34.0 kg [75 lb]	93.0 kg [205 lb]	294.8 kg [650 lb]
4.1 bar [60 psi]	36.3 kg [80 lb]	36.3 kg [80 lb]	102.1 kg [225 lb]	294.8 kg [650 lb]
4.8 bar [70 psi]	38.6 kg [85 lb]	38.6 kg [85 lb]	108.9 kg [240 lb]	294.8 kg [650 lb]
5.5 bar [80 psi]	40.8 kg [90 lb]	40.8 kg [90 lb]	117.9 kg [260 lb]	294.8 kg [650 lb]
6.2 bar [90 psi]	43.1 kg [95 lb]	43.1 kg [95 lb]	131.5 kg [290 lb]	294.8 kg [650 lb]

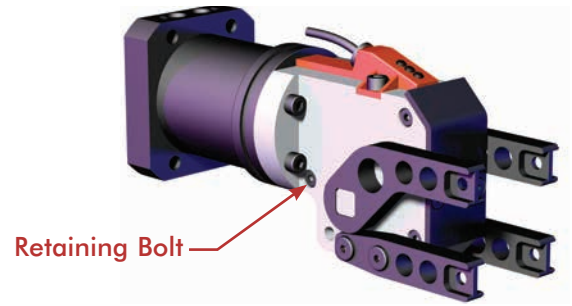
Double Jaw Arm Styles				
Pressure	"A"	"B"	"C"	"D"
2.8 bar [40 psi]	34.0 kg [75 lb]	34.0 kg [75 lb]	86.2 kg [190 lb]	589.4 kg [1300 lb]
3.4 bar [50 psi]	36.3 kg [80 lb]	36.3 kg [80 lb]	93.0 kg [205 lb]	589.4 kg [1300 lb]
4.1 bar [60 psi]	38.6 kg [85 lb]	38.6 kg [85 lb]	102.1 kg [225 lb]	589.4 kg [1300 lb]
4.8 bar [70 psi]	40.8 kg [90 lb]	40.8 kg [90 lb]	108.9 kg [240 lb]	589.4 kg [1300 lb]
5.5 bar [80 psi]	43.1 kg [95 lb]	43.1 kg [95 lb]	117.9 kg [260 lb]	589.4 kg [1300 lb]
6.2 bar [90 psi]	45.4 kg [100 lb]	45.4 kg [100 lb]	131.5 kg [290 lb]	589.4 kg [1300 lb]

GR84 SERIES

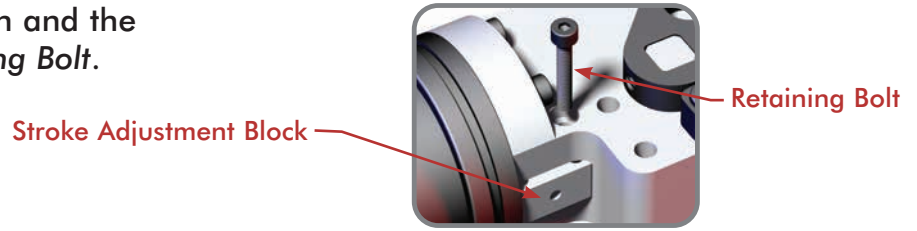
Toggle Lock Sheet Metal Grippers | Technical Information

Jaw Opening Adjustment

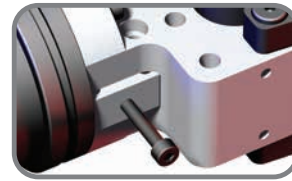
The **GR84 Modular Mini-Clamp** offers a feature allowing the jaw opening angle to be changed in the field. The **GR84 Modular Mini-Clamp** is ordered with a preset jaw opening angle. Follow the instructions below to change the jaw opening angle.



With the jaws in the closed position and the air off, loosen and remove *Retaining Bolt*.

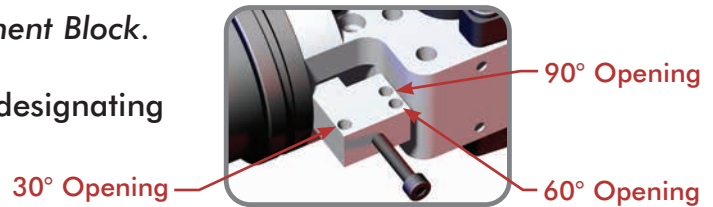


Thread retaining bolt into the bottom of the *Stroke Adjustment Block*.

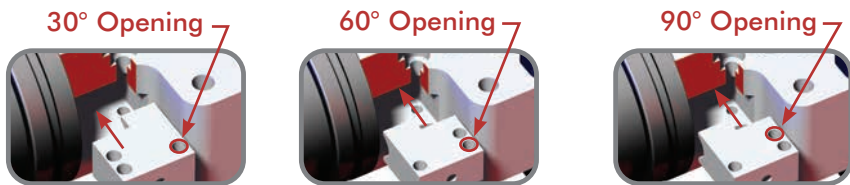


Use *Retaining Bolt* to remove the *Stroke Adjustment Block*.

There are holes in the *Stroke Adjustment Block* designating three different jaw opening angles.



Position the *Stroke Adjustment Block* so the *Retaining Bolt* hole aligns with the desired jaw opening hole.



Replace and tighten *Retaining Bolt* to secure the stroke adjustment block in the new position.



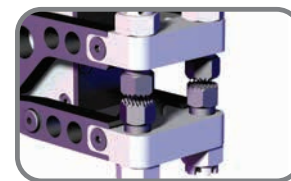
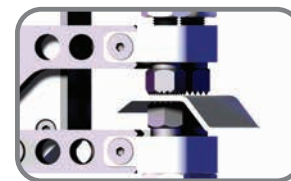
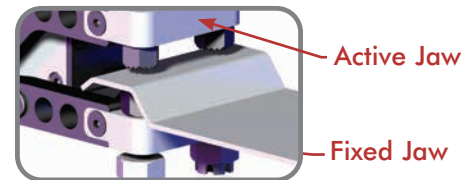
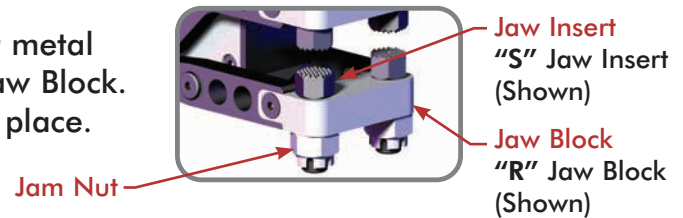
Once the mechanical adjustment is complete, the sensor must be relocated to detect the new target location.

Jaw Opening Adjustment

All Jaw Inserts can be adjusted for different sheet metal thicknesses. The *Jaw Insert* is threaded into the *Jaw Block*. The *Jam Nut* is used to secure the *Jaw Insert* into place.

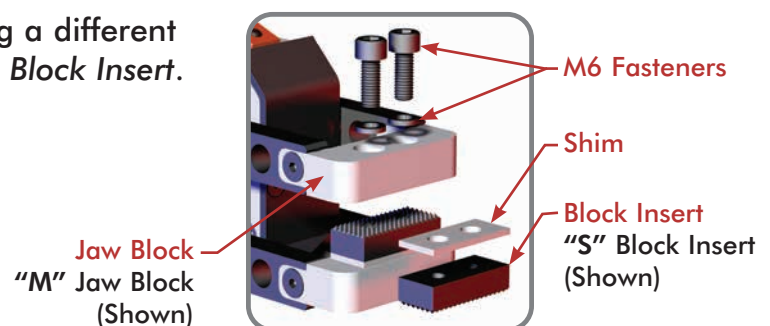
(This procedure can be used for both the GR84 Mini-Clamp and GR1 Grippers)

- Loosen jam nuts to allow jaw inserts to be adjusted.
- Adjust jaw inserts fully toward jaw blocks.
- Adjust jaw inserts on the fixed jaw toward panel to establish panel location.
- Hold fixed jaw inserts in place and tighten jam nuts.
- With panel in position, and clamp in closed position, adjust the jaw inserts on the active jaw. (Make sure to close the clamp by air pressure and not by hand.)
- Turn the jaw inserts by hand until they make contact with the panel and can no longer turn.
- Open the clamp and continue to turn the active jaw Inserts (1) turn further toward the part. This ensures there will be a tight grip on the panel.
- Hold active jaw inserts in place and tighten jam nuts.



Block Insert Adjustment

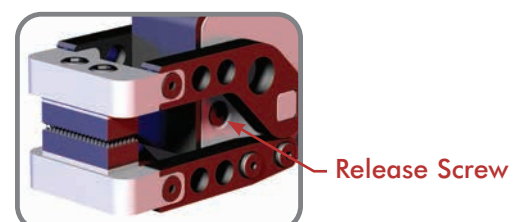
Block Insert height can be adjusted by placing a different thickness *Shim* between the *Jaw Block* and *Block Insert*.



Manual Lock Override

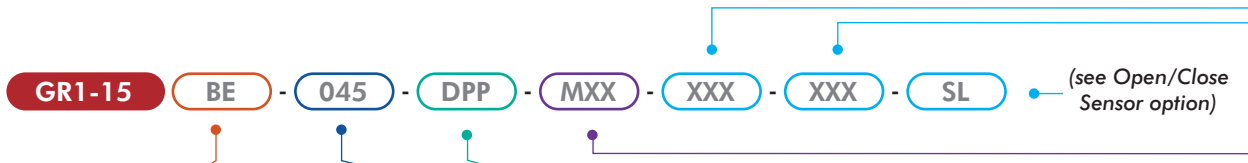
The GR84 Modular Mini-Clamp's manual lock override enables the gripper to be release from the closed position. This lock override eliminates the need to cycle air to the mini-clamp in order to open the jaws, if the part needs to be removed.

- With the air off, using a 3mm hex wrench, rotate the *Release Screw* approximately 15° clockwise.
- Once unlocked, the Mini-Clamp Jaws can be manually opened.



GR1-15 SERIES

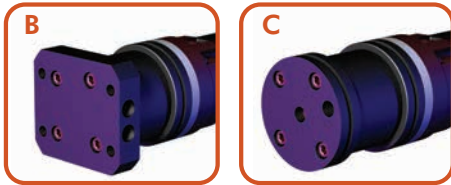
Toggle Lock Sheet Metal Grippers | Ordering Information



Cylinder Type & Porting

Step 1 - Cylinder Type Choose One

- B** Flange Base
- E** Round Cylinder



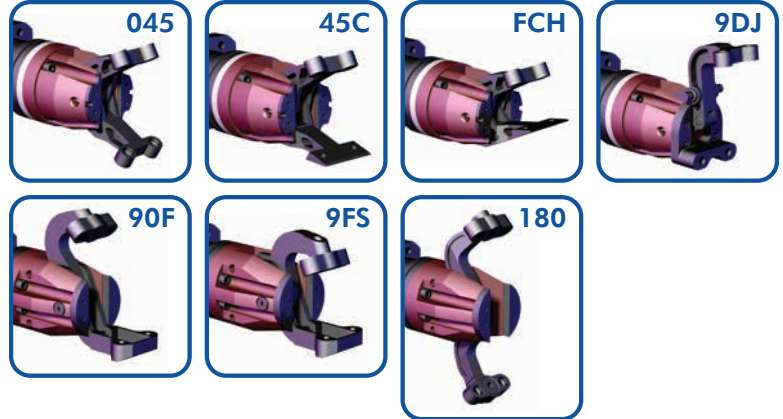
Step 2 - Cylinder Ports Choose One

- B** English (1/8 NPT)
- E** Metric (1/8 G)

Jaw Arrangement Options

Step 1 - Jaw Arrangement Choose One

- 045** 45° Angular
- 45C** 45° Chisel
- FCH** 45° Fixed Chisel
- 9DJ** 90° Drop Jaw
- 90F** 90° (clearance) Fixed Lower
- 9FS** 25° Fixed Lower Limited Stroke
- 180** 180° (clearance) Angular



Covered under one or more U.S./International Patents

GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Ordering Information

Open/Closed Sensor

Sensor Type	Description	Mounting	Description
T04	Internal Sensor	-	Right-Side
XXX	No Sensor	SL	Left-Side



Part Present Sensor*

Sensor Type	Description
A04	Turck (4-PIN)
P03	P & F (4-PIN)
XXX	No Sensor



*Part Present Sensor Option is only available on the Double Point Insert Option and not available for the 9DJ, 45C and FCH Jaw Arrangement Options or any of the Block Insert Options. With 90F and 9FS, GR0326 is not necessary for the Part Present Sensor as the sensor is mounted in the lower jaw. See pages SG-TGL-34 to 37 for specifications.

Mount Options

Step 1 - Mount Type Choose One

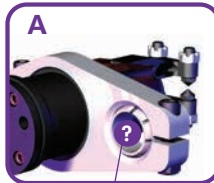
M X

- A Parallel Swivel Mount
- B Rear Swivel Clamp Mount
- C Rear Fixed Welded Style
- D Rear Fixed Clamp Mount
- X No Mount

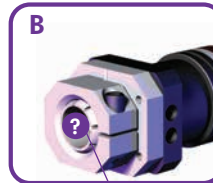
Step 2 - Mount Ball/Rod Size Choose One

M X

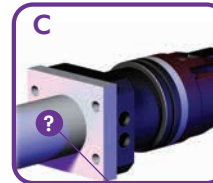
- 1 1.00" w/Metric Fasteners
- 2 1.25" w/Metric Fasteners
- 3 25mm Metric Fasteners
- 4 30mm Bodybuilder/Metric
- 5 1.50" (Type C Only)
- 6 40mm (Type C Only)
- 7 M1514 (Type D Only)
- X No Mount



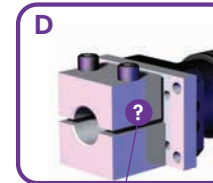
1 2 3 4
Mount Ball Sizes Available



1 2 3 4
Mount Ball Sizes Available



1 3 5 6
Mount Rod Sizes Available



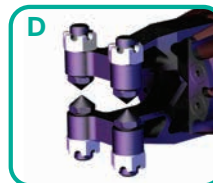
7
Mount Size Available

Points & Tip Insert Options

Step 1 - Point Tip Options Choose One

D P

- S Single Point
- D Double Point



Step 2 - Upper Tip Insert Options Choose One

D P

- P Point
- C Cup
- U Urethane
- S Serrated
- X No Tips



Step 3 - Lower Tip Insert Options Choose One Above

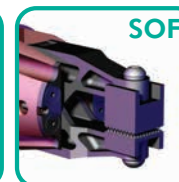
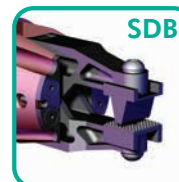
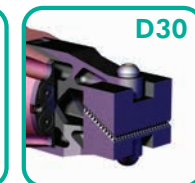
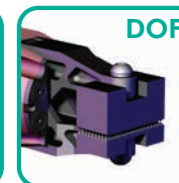
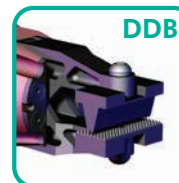
D P

- or -

Block Insert Options†

† Only available on the 180 Angular Jaw Arrangement.

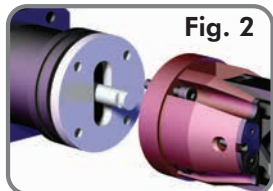
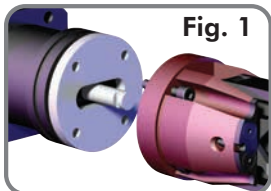
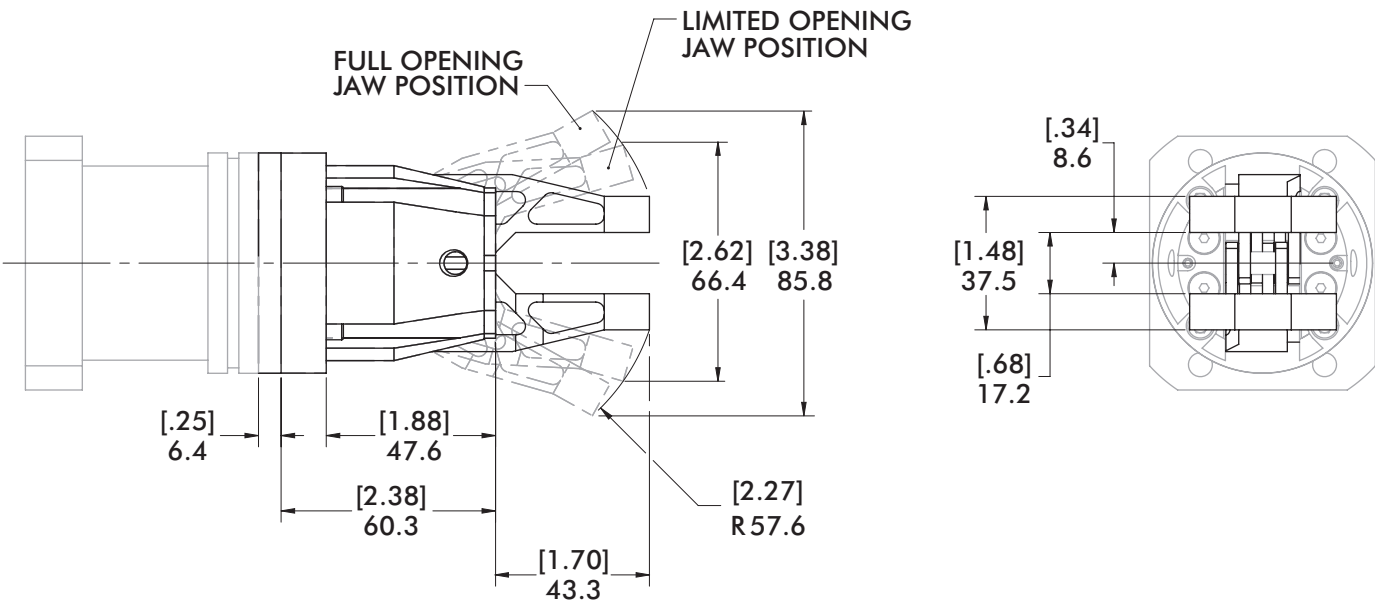
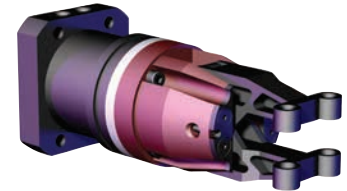
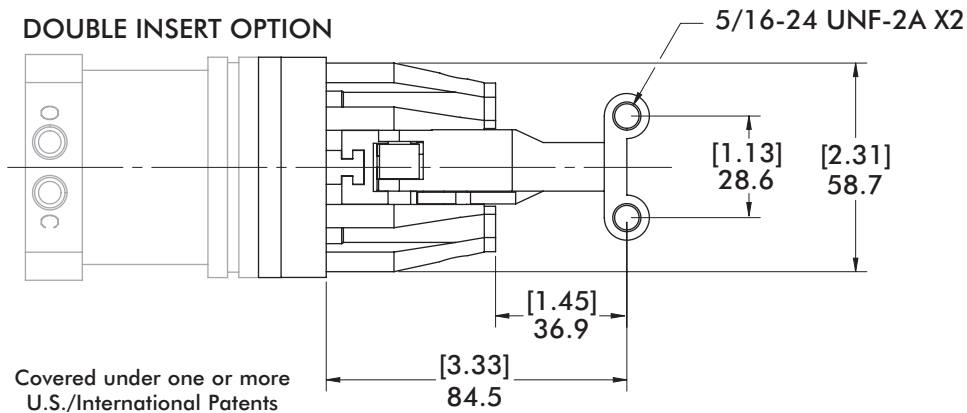
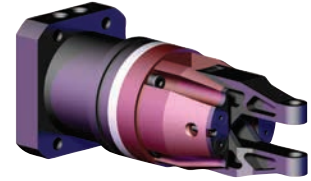
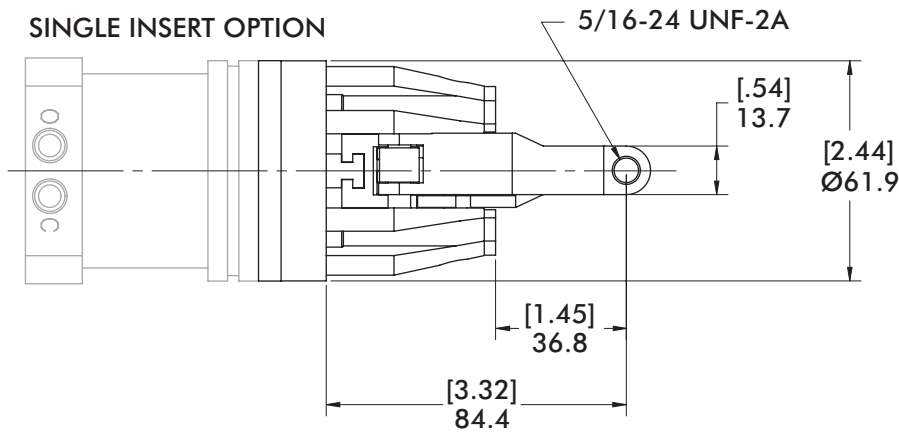
- | Block Insert | Choose One |
|--------------|---------------------------|
| DDB | Double Draw Bead |
| DOF | Double Offset |
| D30 | Double 30° Angle |
| SDB | Single Draw Bead |
| SOF | Single Offset |
| S30 | Single 30° Angle |
| SED | Single Extended Draw Bead |



GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Technical Specifications

"045" 45° Angular Jaw Arrangement - Single and Double Insert



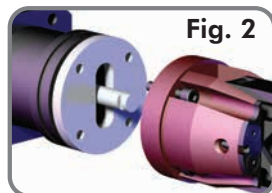
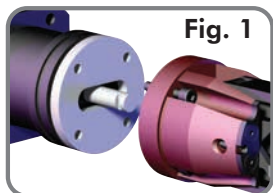
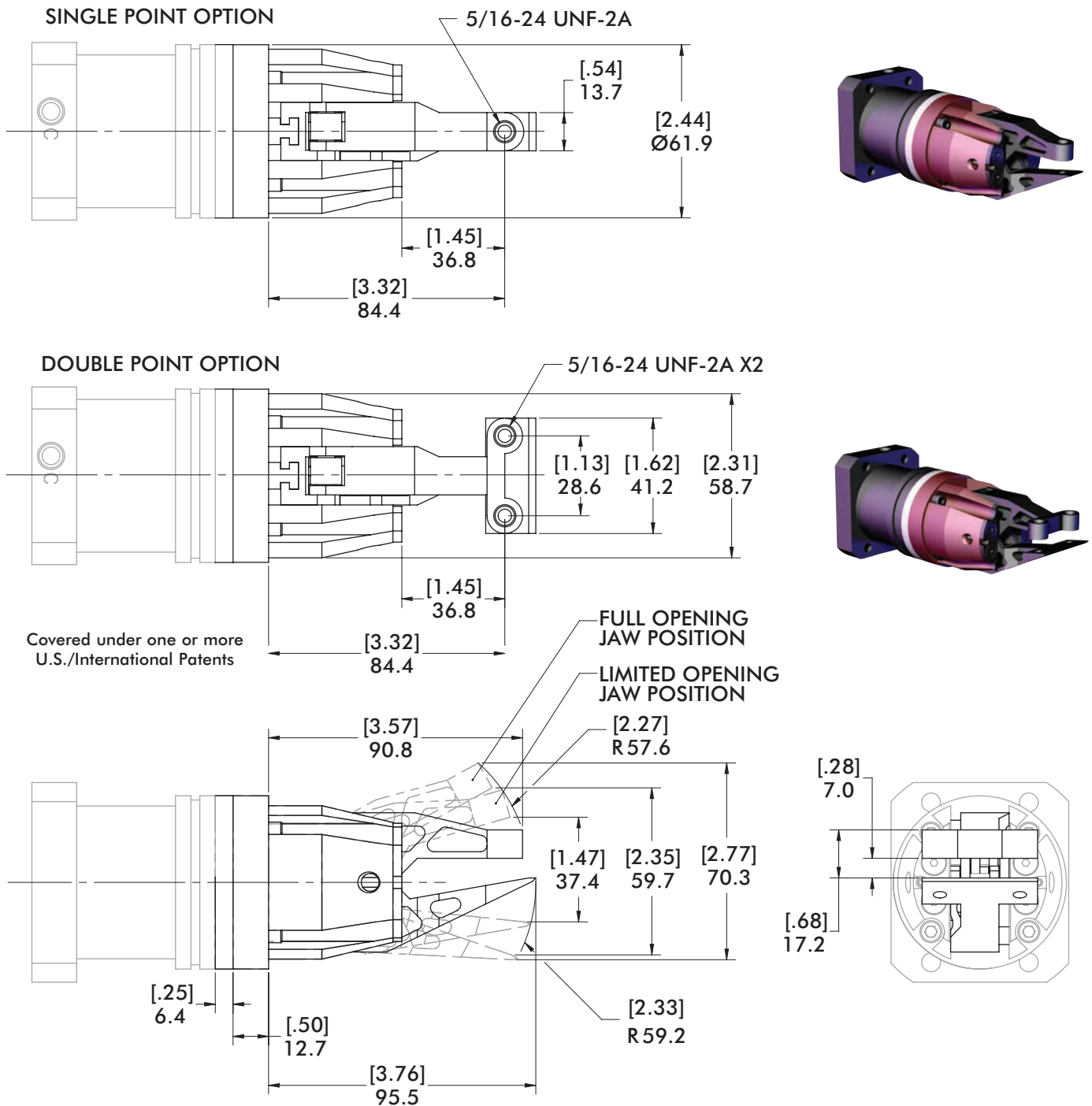
For Limited Stroke Option

1. Loosen fasteners securing gripper body from cylinder.
2. Pull gripper body away so fasteners clear the spacer.
3. Rotate Spacer 90° (Fig. 2).
4. Reattach gripper body to cylinder and tighten fasteners.

GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Technical Specifications

"45C" 45° Chisel Lower Jaw Arrangement - Single and Double Insert



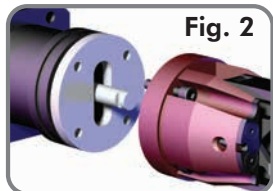
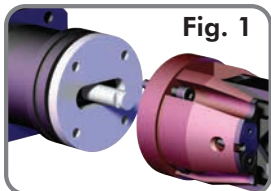
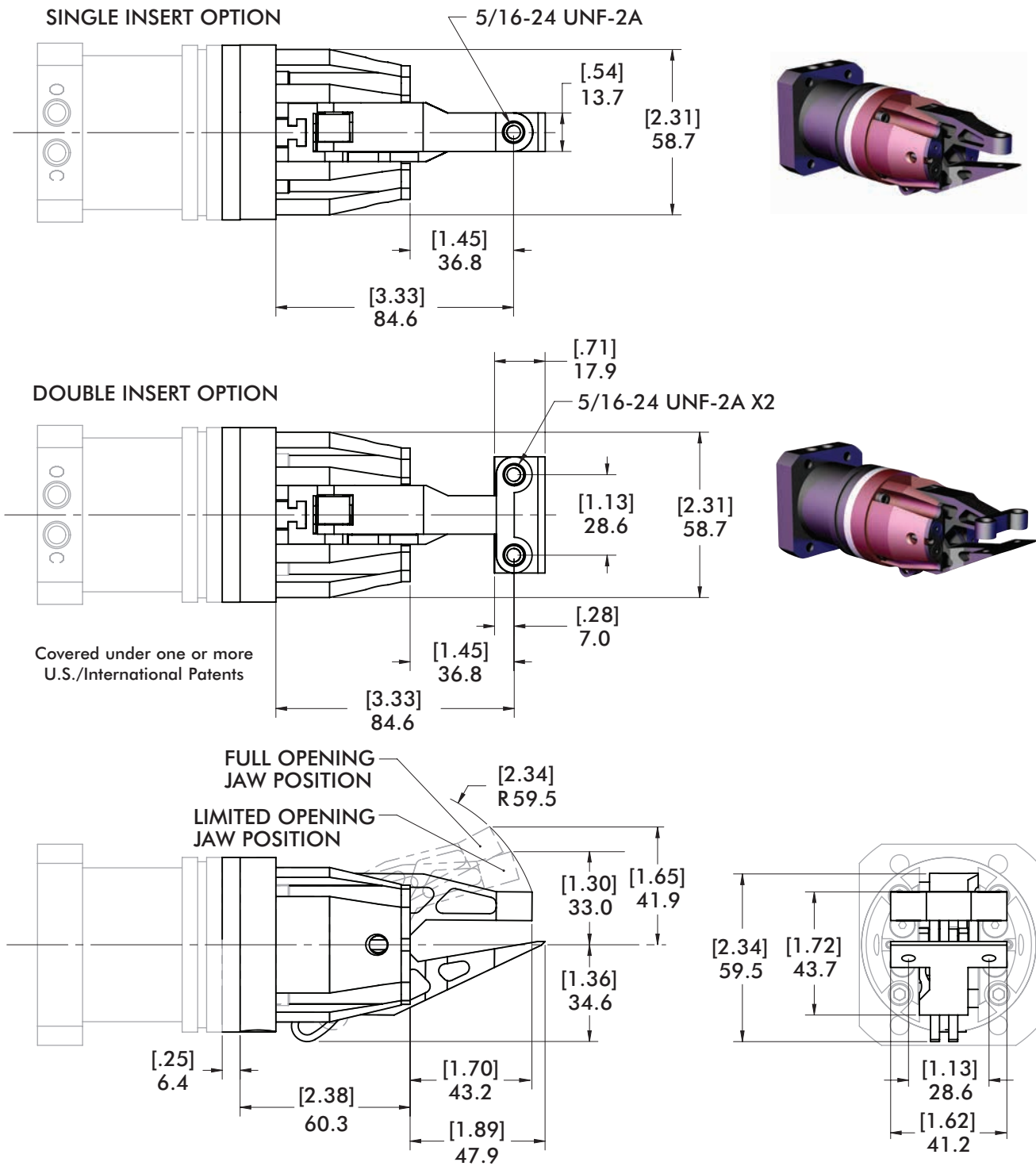
For Limited Stroke Option

1. Loosen fasteners securing gripper body from cylinder.
2. Pull gripper body away so fasteners clear the spacer.
3. Rotate Spacer 90° (Fig. 2).
4. Reattach gripper body to cylinder and tighten fasteners.

GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Technical Specifications

“FCH” Fixed Chisel Jaw Arrangement - Single and Double Insert



For Limited Stroke Option

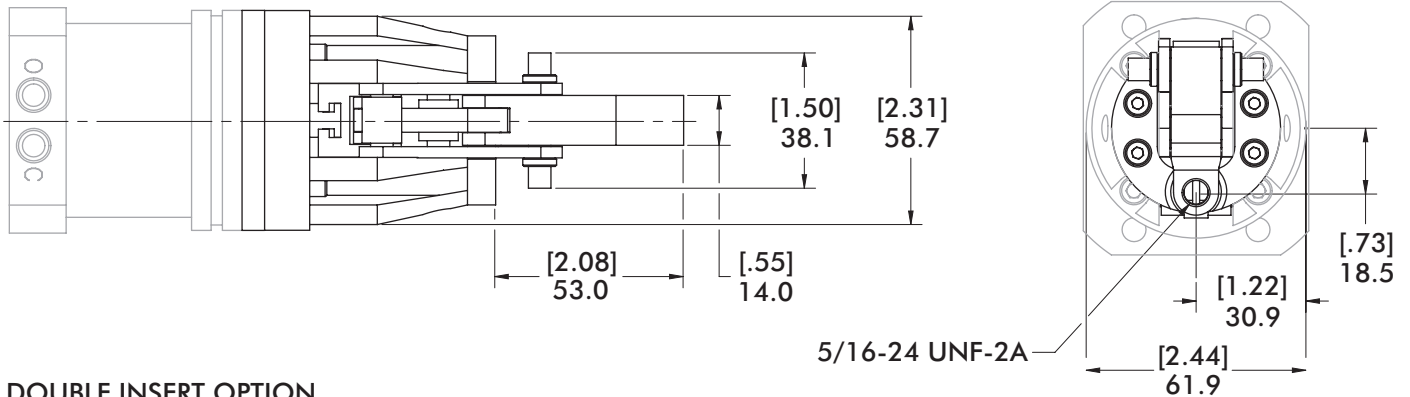
1. Loosen fasteners securing gripper body from cylinder.
2. Pull gripper body away so fasteners clear the spacer.
3. Rotate Spacer 90° (Fig. 2).
4. Reattach gripper body to cylinder and tighten fasteners.

GR1-15 SERIES

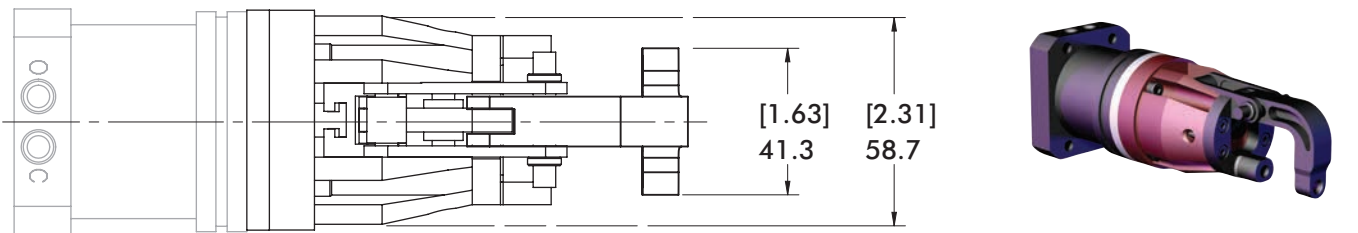
Toggle Lock Sheet Metal Grippers | Dimensions and Technical Specifications

"9DJ" 90° Drop Jaw Arrangement - Single and Double Insert

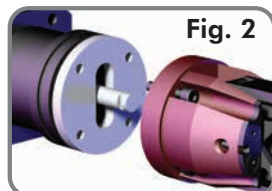
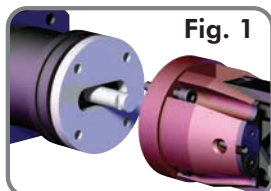
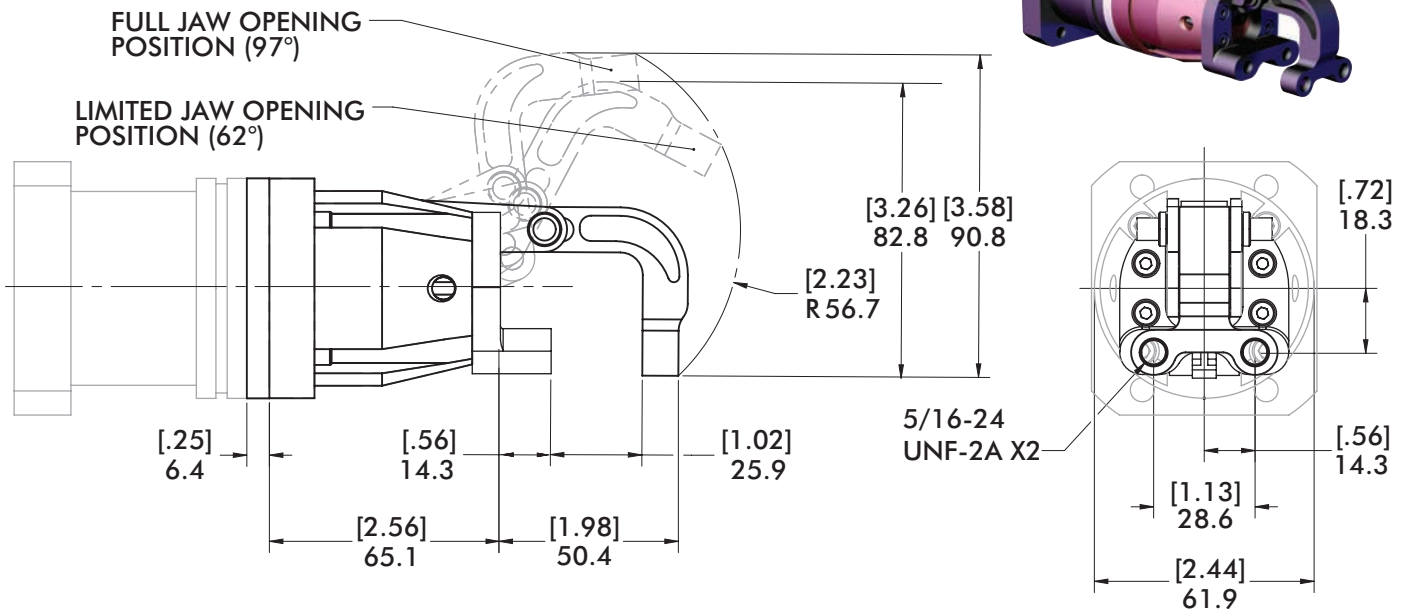
SINGLE INSERT OPTION



DOUBLE INSERT OPTION



Covered under one or more
U.S./International Patents



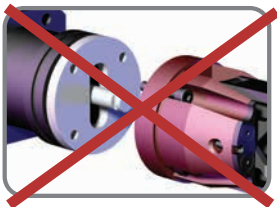
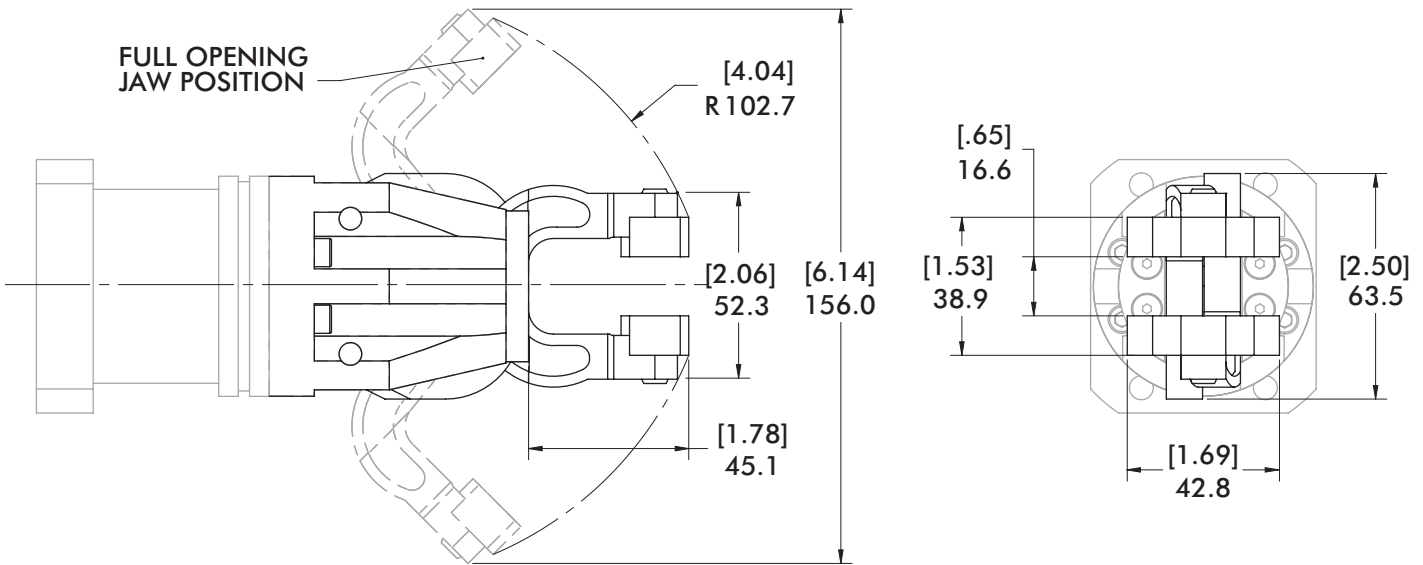
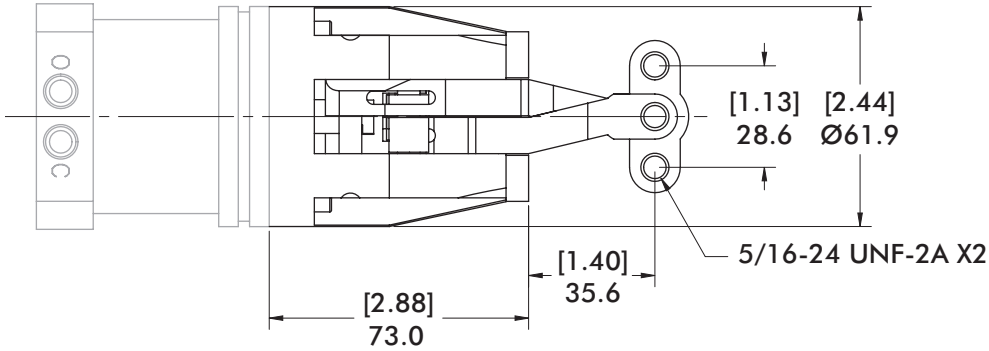
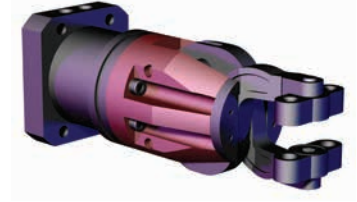
For Limited Stroke Option

1. Loosen fasteners securing gripper body from cylinder.
2. Pull gripper body away so fasteners clear the spacer.
3. Rotate Spacer 90° (Fig. 2).
4. Reattach gripper body to cylinder and tighten fasteners.

GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Technical Specifications

"180" 180° Angular Jaw Arrangement - Double Insert

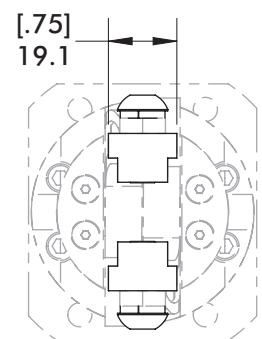
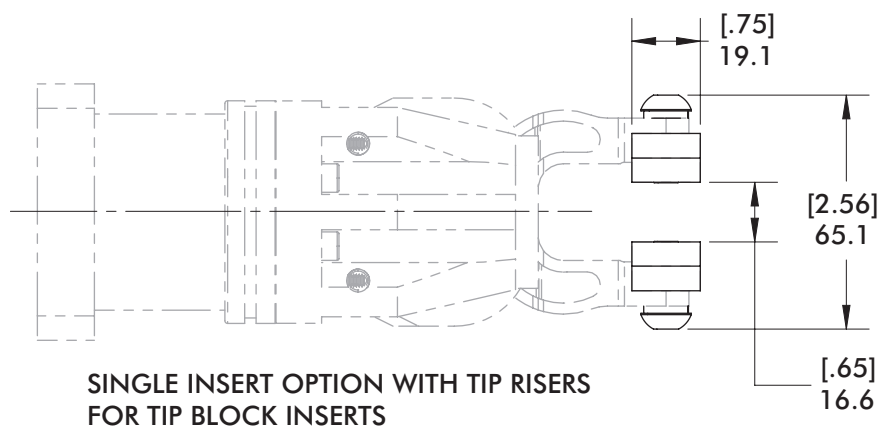
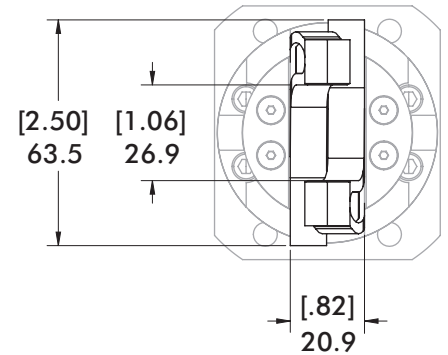
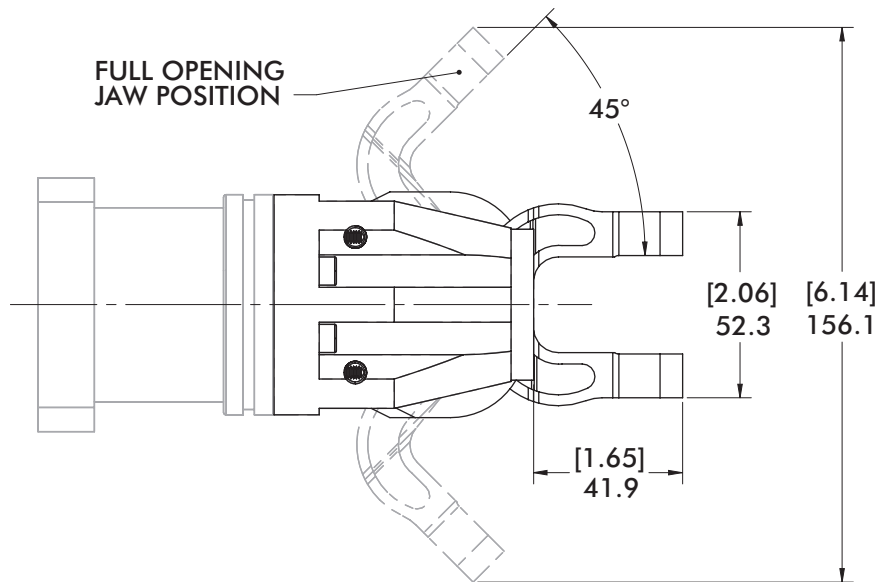
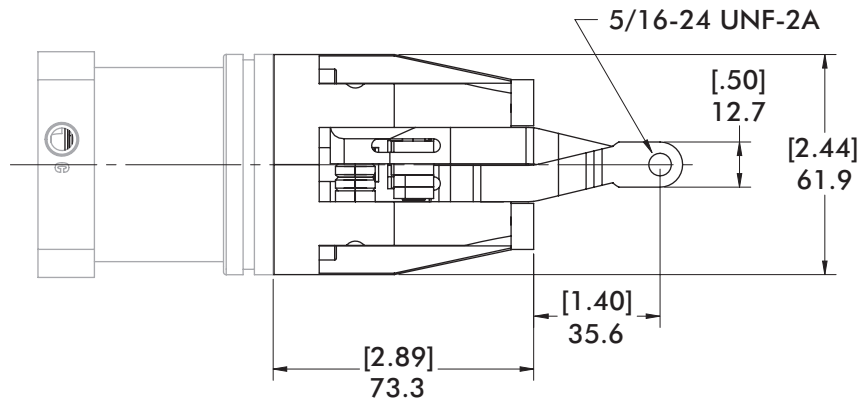


Limited Stroke Ring is **NOT** Available

GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Technical Specifications

"180" 180° Angular Jaw Arrangement - Single Insert



Tip Risers for Block Inserts

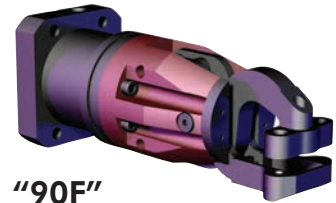
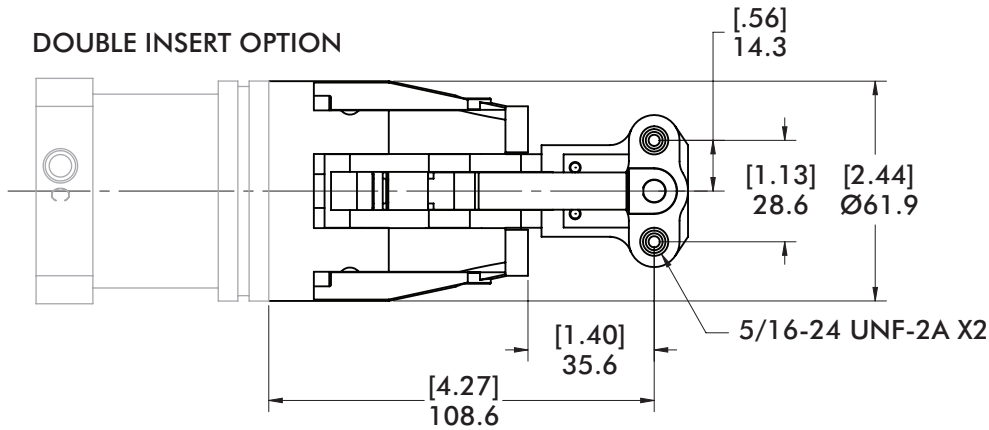
Replacement Part #

GR0314-TR

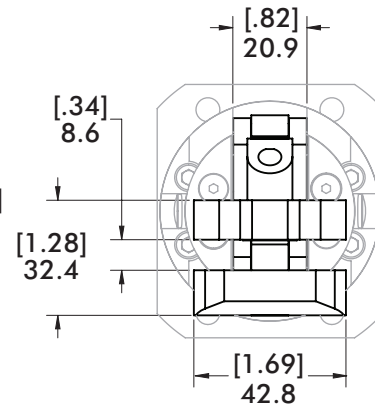
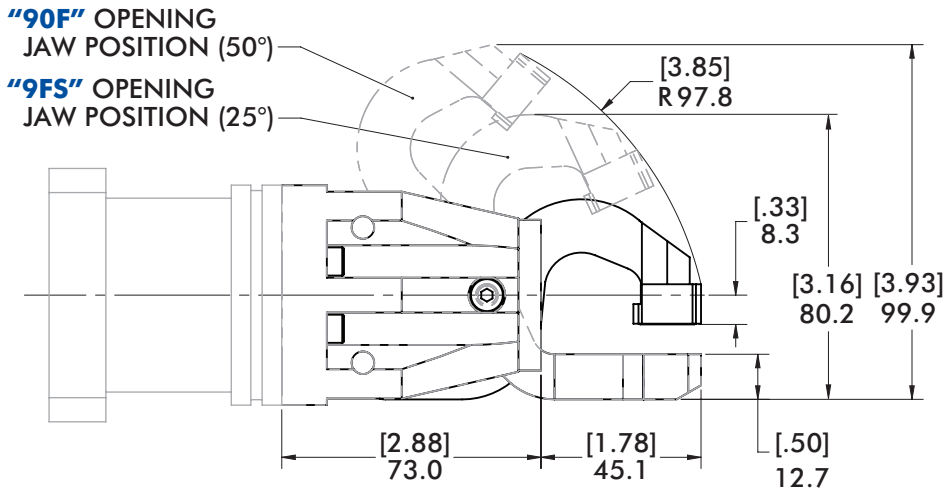
GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Technical Specifications

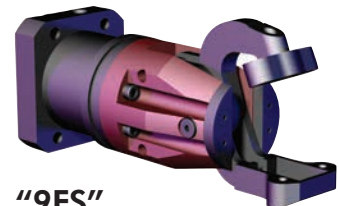
"90F" and "9FS" Fixed Lower Jaw Arrangement - Double Insert



"90F"
Full Arm Opening



Limited Stroke Ring is **NOT** Available

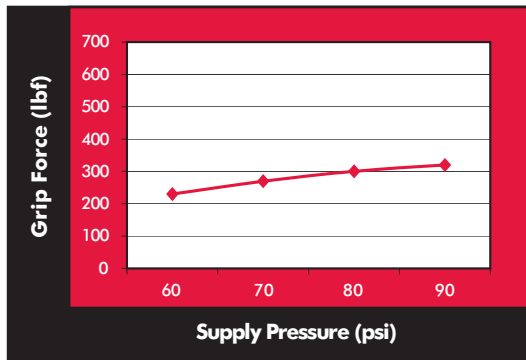


"9FS"
Limited Arm Opening
(Stroke Limiter Installed)

GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Grip Force and Technical Specifications

045/45C/FCH



"045" 45° Angular



Weight:
1 kg [2.2 lb]
Grip Range:
0" - 0.125" [0 - 3mm]

"45C" 45° Chisel



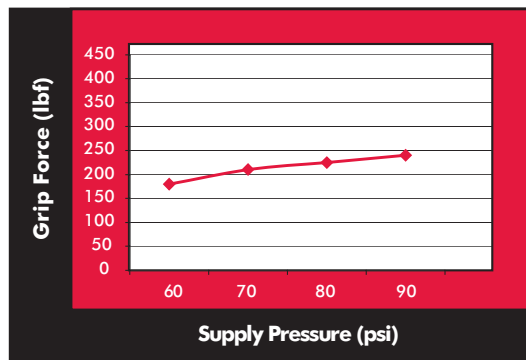
Weight:
1 kg [2.2 lb]
Grip Range:
0" - 0.063" [0 - 1mm]

"FCH" 45° Fixed Chisel



Weight:
1 kg [2.2 lb]
Grip Range:
0" - 0.063" [0 - 1mm]

9DJ

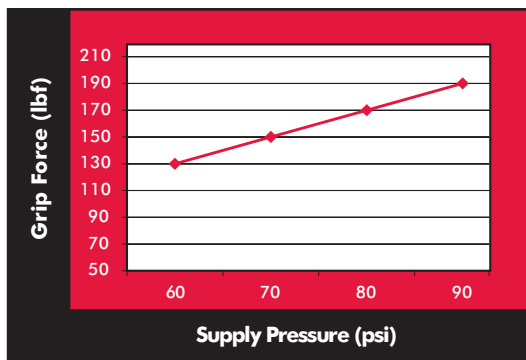


"9DJ" 90° Drop Jaw



Weight:
1 kg [2.2 lb]
Grip Range:
0" - 0.125" [0 - 3mm]

90F/9FS



"90F" 90° Fixed Lower



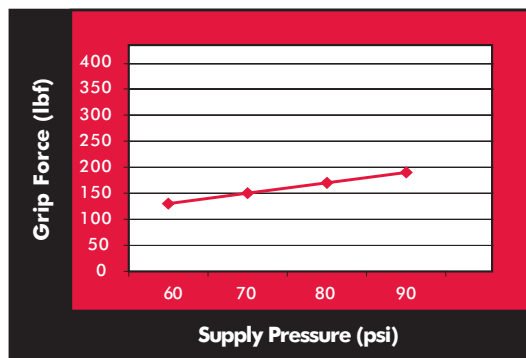
Weight:
1.1 kg [2.6 lb]
Grip Range:
0" - 0.125" [0 - 3mm]

"9FS" 90° Fixed Lower with Limited Stroke



Weight:
1.1 kg [2.6 lb]
Grip Range:
0" - 0.125" [0 - 3mm]

180



"180" 180° Angular



Weight:
1.2 kg [2.7 lb]
Grip Range:
0" - 0.125" [0 - 3mm]

Technical Information

(for all GR1 Gripper Jaw Styles)

Air Requirements:

Recommended operating Pressure:
2-6 bar [30-90 psi]

Ports: 1/8" BSPP [1/8" NPT]

Air flow controls recommended for maximum life

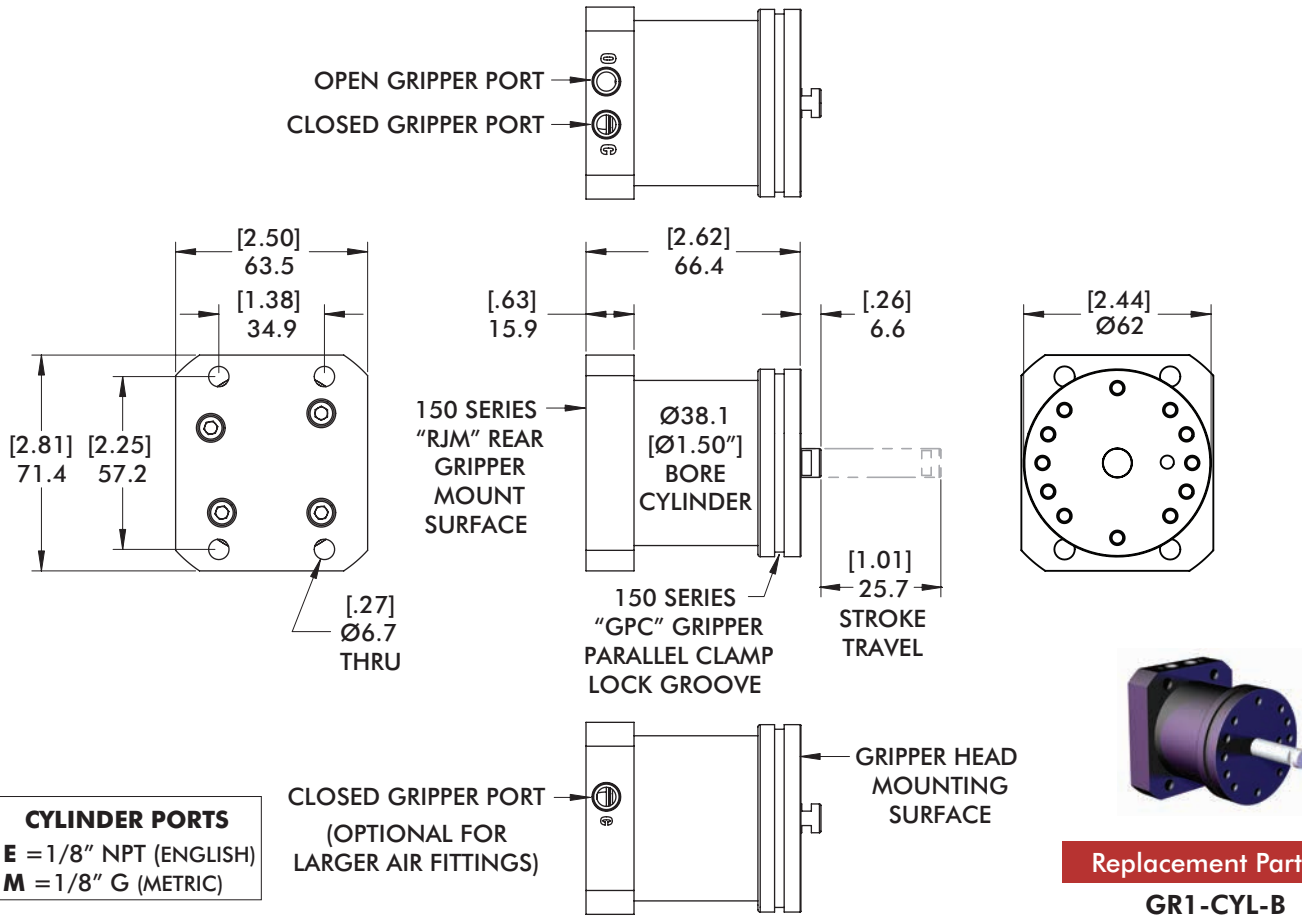
Operating Temperature:

0° - 93°C [32° - 200°F]

GR1-15 SERIES

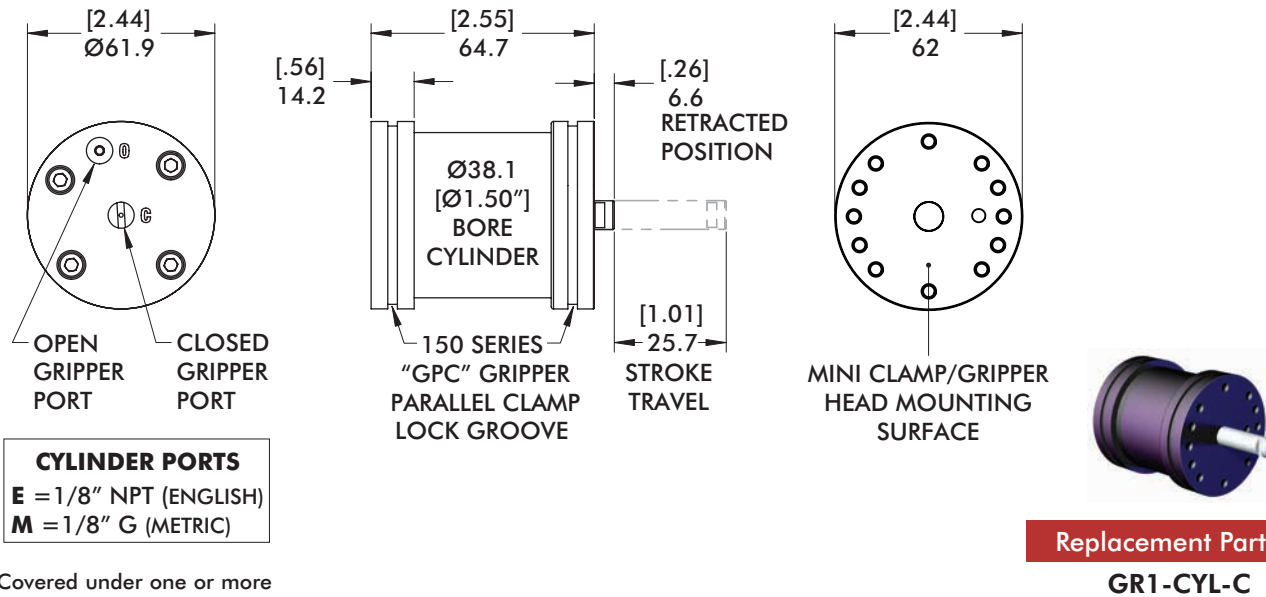
Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"Bx" Flange Base Cylinder



Covered under one or more U.S./International Patents

"Cx" Round Base Cylinder

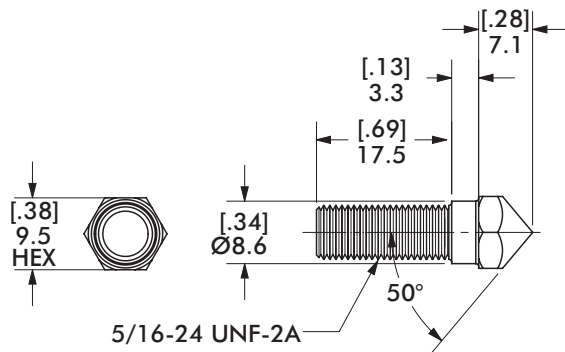


Covered under one or more U.S./International Patents

GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"P", "C", "S", "U" Jaw Inserts



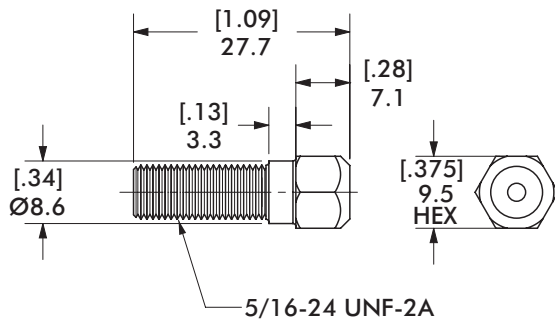
"P"



Point Jaw Inserts

Replacement Part #

GR0304



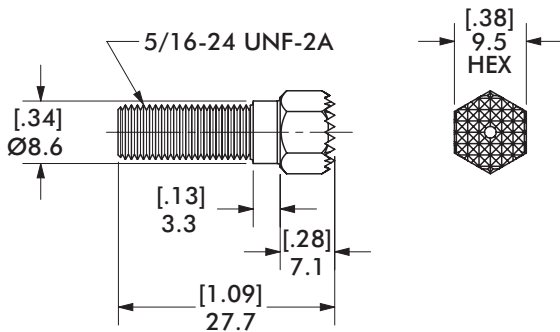
"C"



Cup Jaw Inserts

Replacement Part #

GR0305



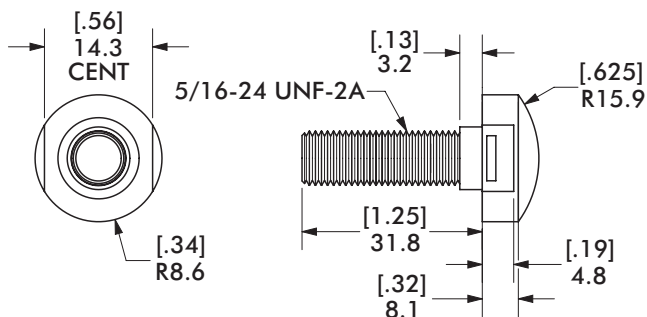
"S"



Serrated Jaw Inserts

Replacement Part #

GR0341



"U"



Urethane Jaw Inserts

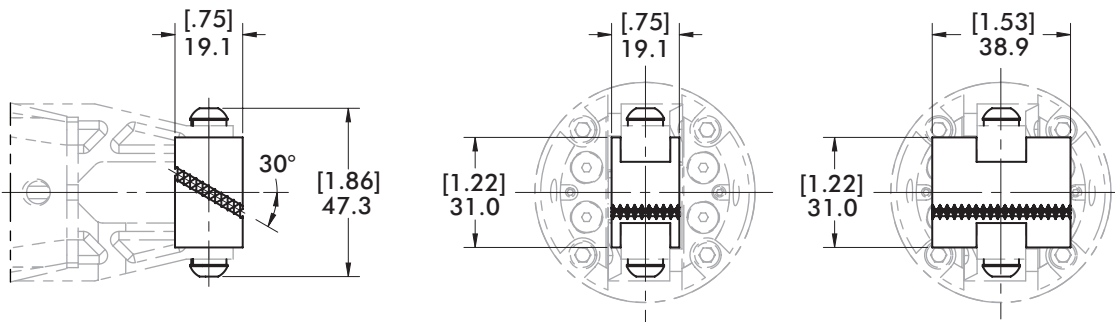
Replacement Part #

GR0338

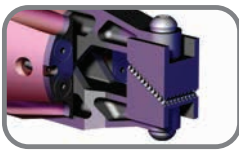
GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"S30" and "D30" 30° Angle Serrated Block Inserts



"S30"



"D30"



Single Upper/Lower
30° Angle Insert Block

Replacement Part #

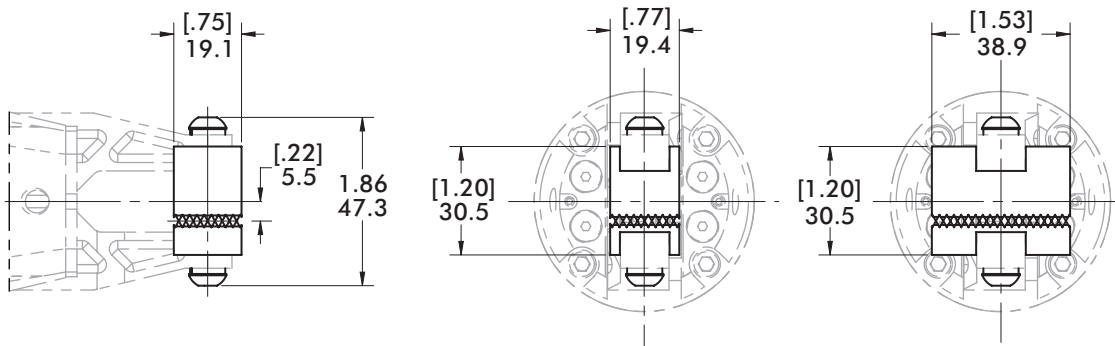
GR1-INS-SD30S

Double Upper/Lower
30° Angle Insert Block

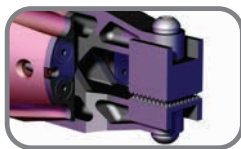
Replacement Part #

GR1-INS-D30S

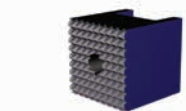
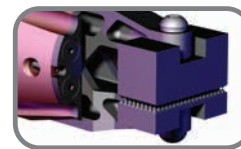
"SOF" and "DOF" Offset Serrated Block Inserts



"SOF"



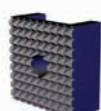
"DOF"



Single Upper
Offset Insert Block

Replacement Part #

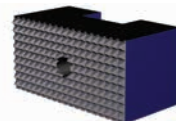
GR1-INS-SDUOS



Single Lower
Offset Insert Block

Replacement Part #

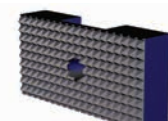
GR1-INS-SDLOS



Double Upper
Offset Insert Block

Replacement Part #

GR1-INS-DUOS



Double Lower
Offset Insert Block

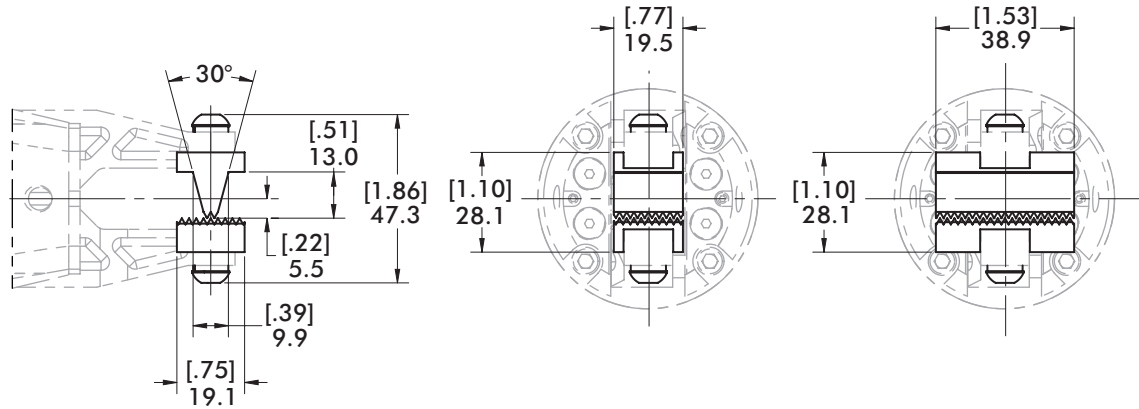
Replacement Part #

GR1-INS-DLOS

GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

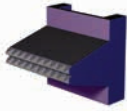
"SDB" and "DDB" Draw Bead Serrated Block Inserts



"SDB"



"DDB"



Single Upper Draw Bead Insert Block

Replacement Part #

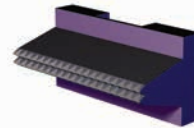
GR1-INS-SDDB



Single Lower Draw Bead Insert Block

Replacement Part #

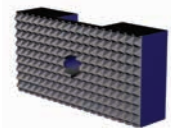
GR1-INS-SDLOS



Double Upper Draw Bead Insert Block

Replacement Part #

GR1-INS-DDB

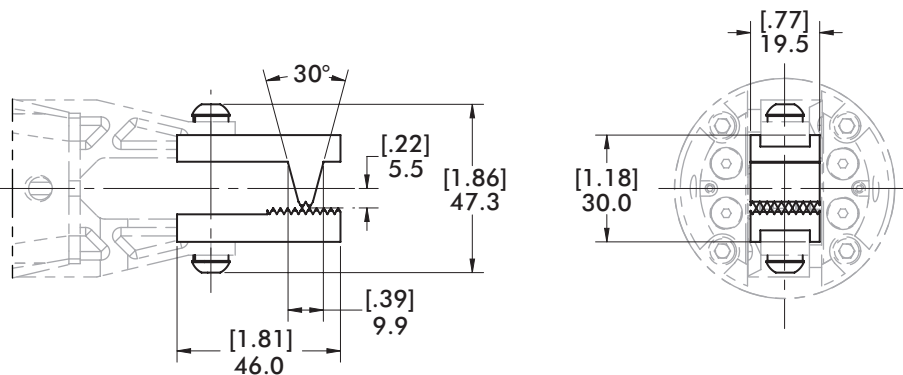


Double Lower Draw Bead Insert Block

Replacement Part #

GR1-INS-DLOS

"SED" Extended Draw Bead Serrated Block Inserts



"SED"



Upper Extended Draw Bead Insert Block

Replacement Part #

GR1-INS-SDDB-3



Lower Extended Draw Bead Insert Block

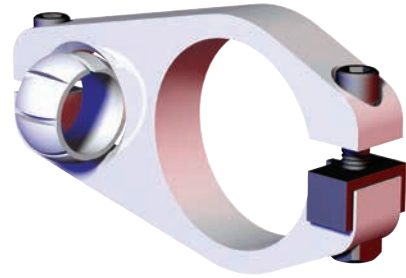
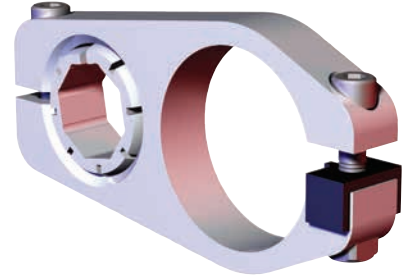
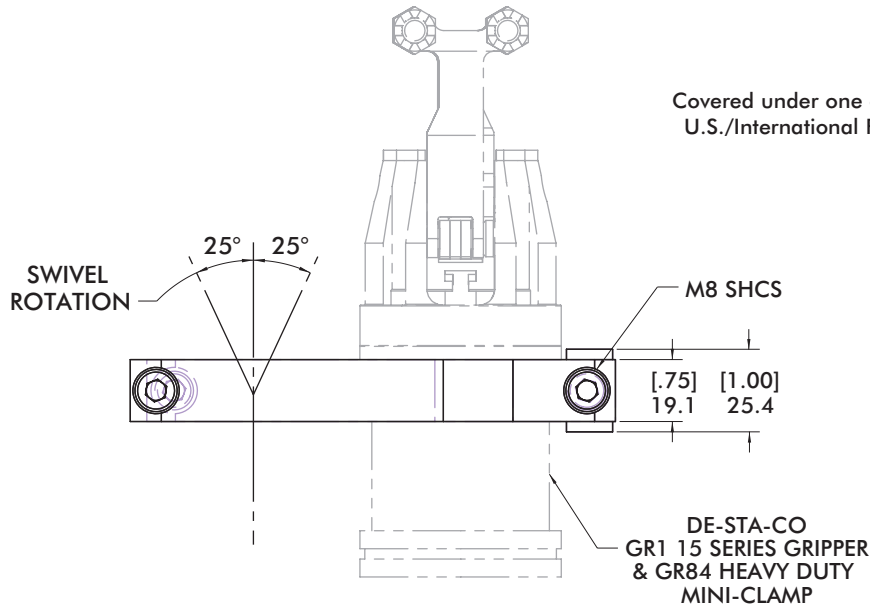
Replacement Part #

GR1-INS-SDLOS-3

GR1-15 SERIES

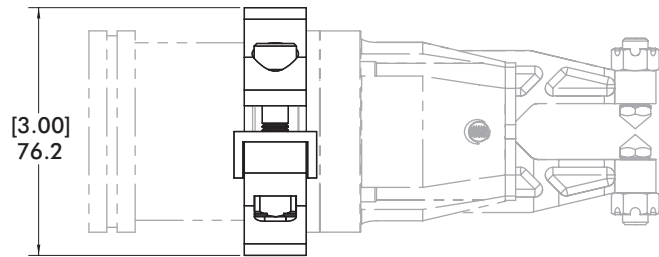
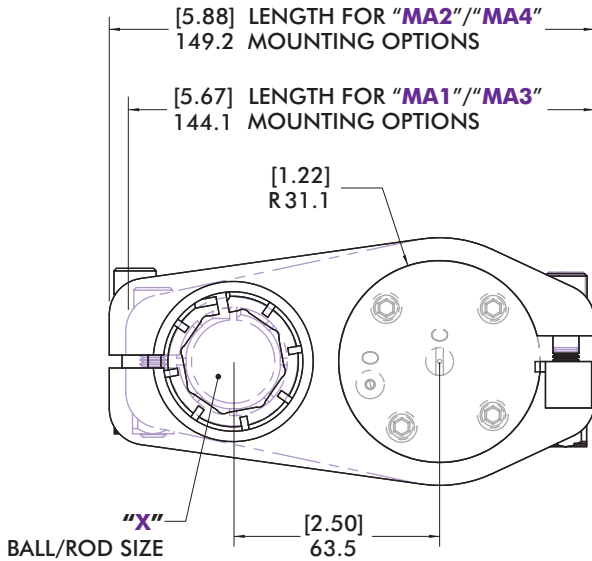
Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"MAx" Swivel Parallel Gripper Mounts



Snap-In Ball

Special patented design allows user to replace ball without disassembly



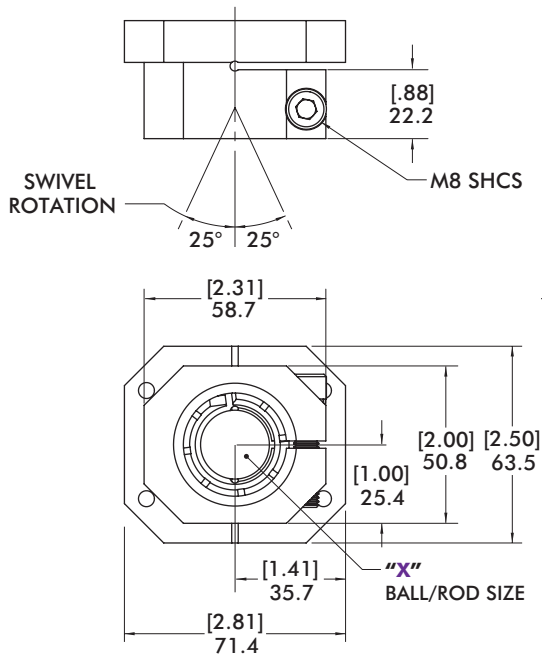
Mounting Option	Rod/Ball "X"	Replacement Part#
MA1	Ø1.00"	CPI-GPC-150-100S-DC
MA2	Ø1.25"	CPI-GPC-150-125S-DC
MA3	Ø25mm	CPI-GPC-150-25MS-DC
MA4*	30mm BB	CPI-GPC-150-30BBS-DC

*"MA4" and "MB4" Mounts to the 30mm BodyBuilder™ octagonal extruded aluminum boom. For more information on this octagonal boom, please refer to the BodyBuilder™ Robotic End Effector Systems Catalog.

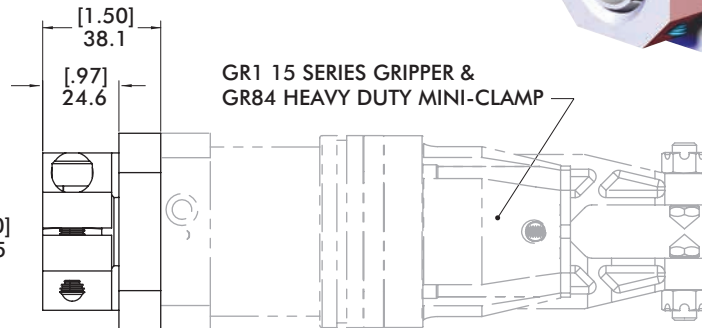
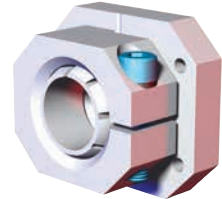
GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"MB1" and "MB3" Rear Swivel Gripper Mount

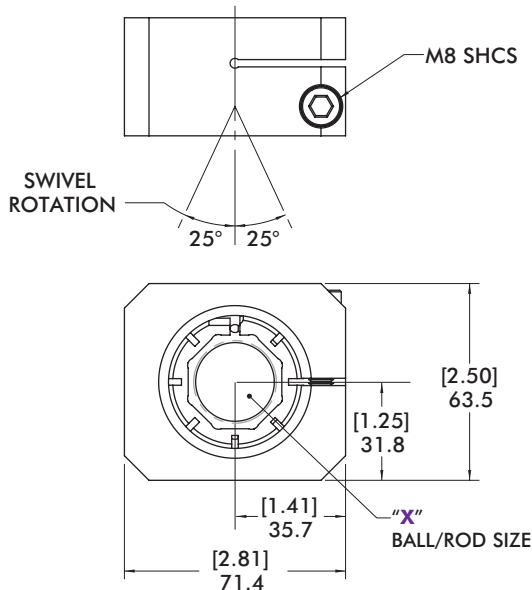


Covered under one or more U.S./International Patents

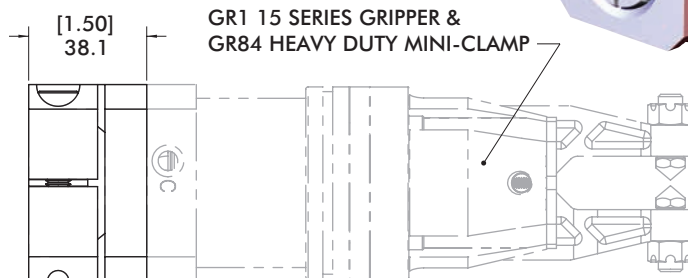
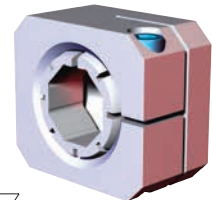


Mounting Option	Rod/Ball "X"	Replacement Part#
MB1	Ø1.00"	CPI-RJM-150-100S
MB3	Ø25mm	CPI-RJM-150-25S

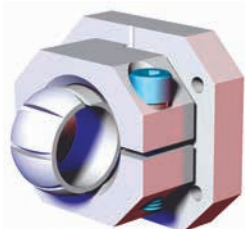
"MB2" and "MB4" Rear Swivel Gripper Mount



Covered under one or more U.S./International Patents



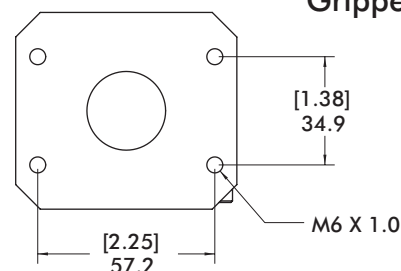
Mounting Option	Rod/Ball "X"	Replacement Part#
MB2	Ø1.25"	CPI-RJM-150-125S
MB4*	30mm BB	CPI-RJM-150-30BBS



Snap-In Ball
Special patented design allows user to replace ball without disassembly

Covered under one or more U.S./International Patents

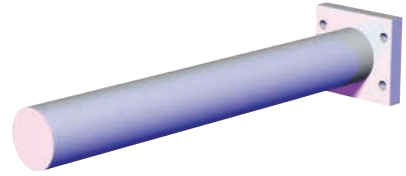
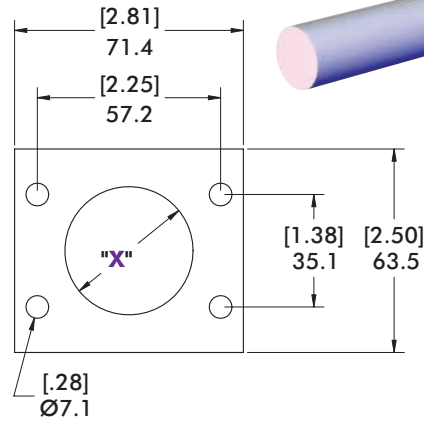
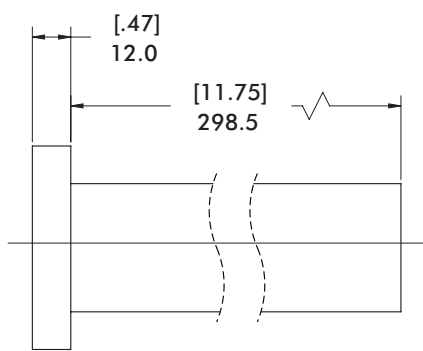
"MBx" Rear Swivel Gripper Mount Gripper Mounting Pattern



GR1-15 SERIES

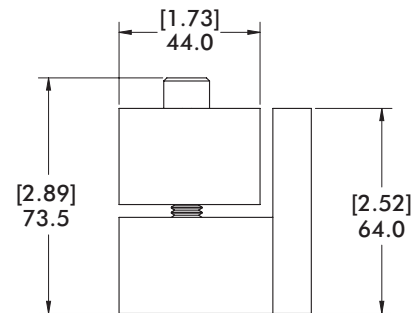
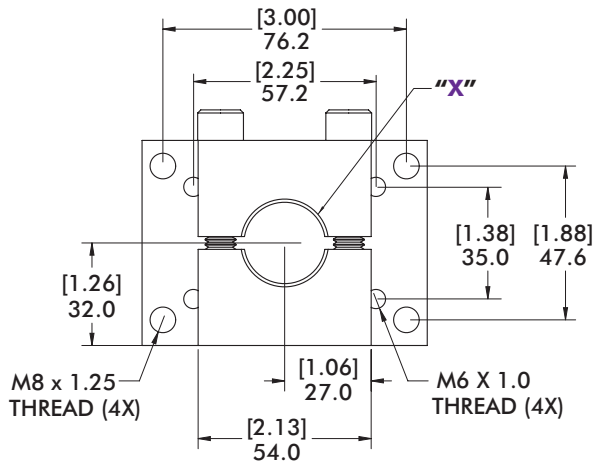
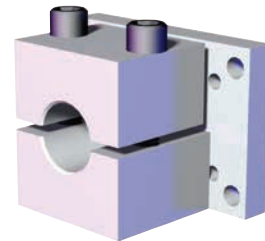
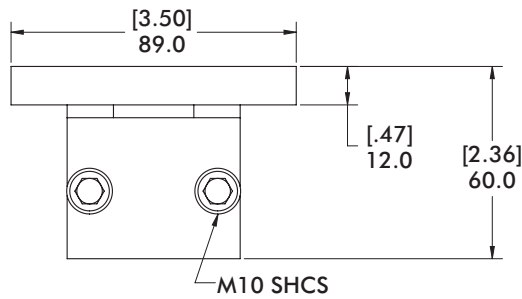
Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

"MCx" Swivel Parallel Gripper Mounts



Mounting Option	Rod "X"	Replacement Part#
MC1	Ø1.00"	CPI-RJM-150-100
MC3	Ø25mm	CPI-RJM-150-25
MC5	Ø1.50"	CPI-RJM-150-150
MC6	Ø40mm	CPI-RJM-150-40

"MD7" Rear Fixed Clamp Mount

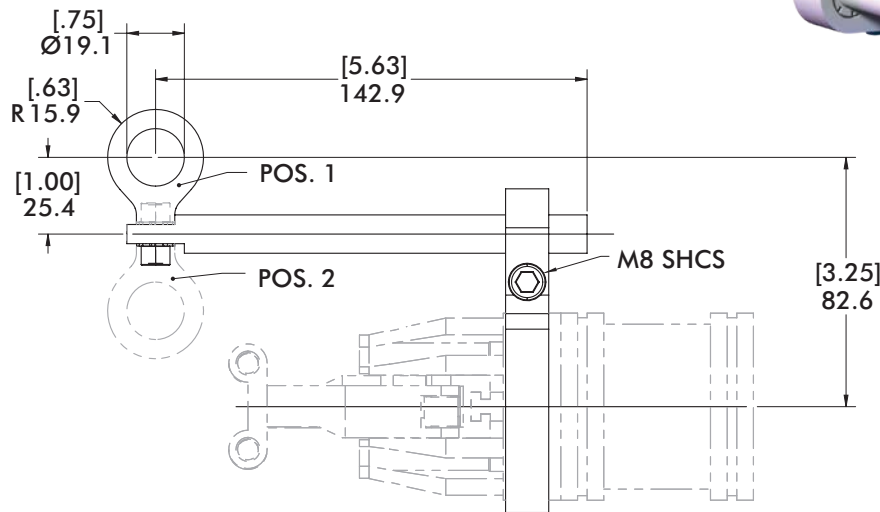
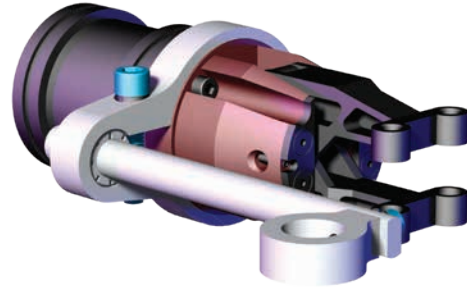


Mounting Option	Rod/Ball "X"	Replacement Part#
MD7	Ø1.00"	M1514

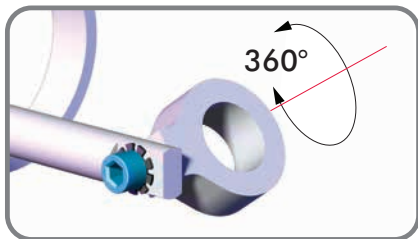
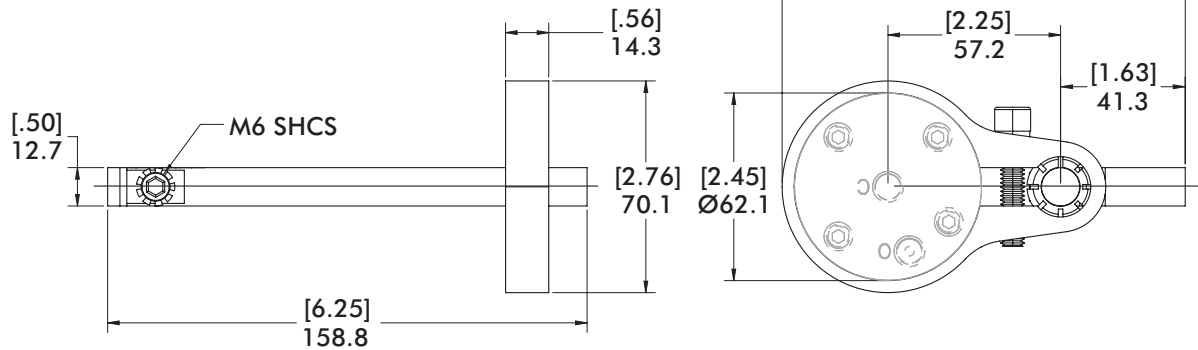
GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

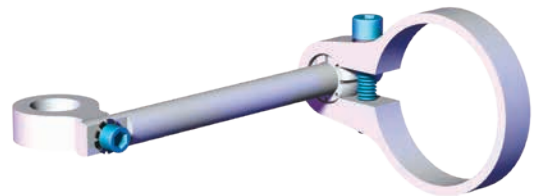
18mm Swivel Proximity Sensor Mount



POS. 1 = NON ROTATING MOUNTING
 POS. 2 = 360° ROTATIONAL MOUNTING



**POS. 2: 360° ROTATION OPTION
 ALONG ONE AXIS**



Replacement Part #

CPI-GPM-15-18

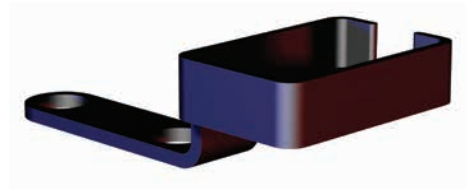
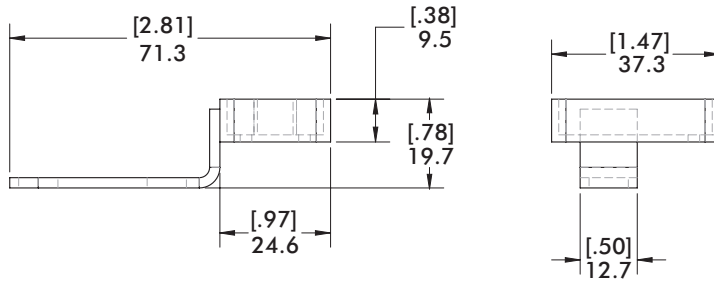
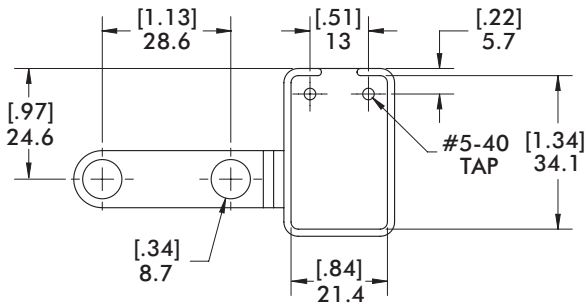
GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions, Technical and Ordering Information

“A04” and “P03” Sensor Options

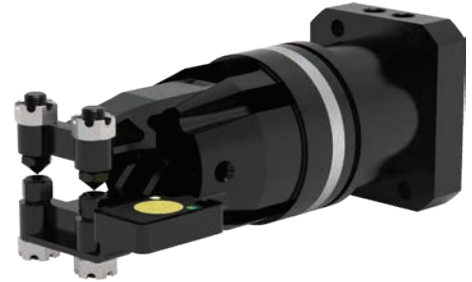
“A04” (Turck) Replacement Part# “Bi 5-Q08-VP6X2-0.2M-RS4.4T”10...30 VDC 150mA, PNP, 4-Pin, M12, Eurofast
“P03” (P & F) Replacement Part# “NBB5-F104M-E2-C-200MM-V1”10...30 VDC 150mA, PNP, 4-Pin, M12, Eurofast
(Sensors include “GR0326” Proximity Switch Mount when ordered with GR1-15 Series.)

Proximity Switch Mount for “A04” and “P03” Sensor Options

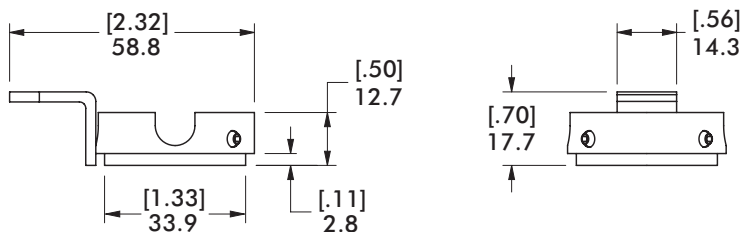
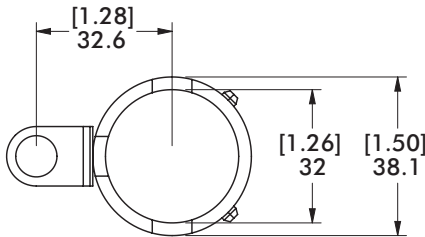


Replacement Part #

GR0326



Barrel Style Proximity Switch Mount



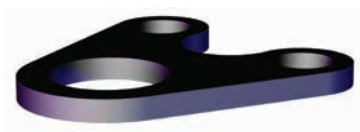
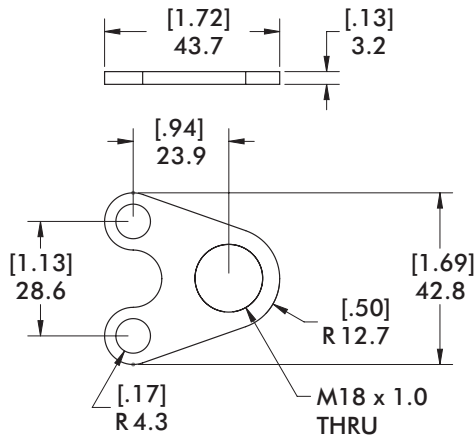
Replacement Part #

GR1-15-PM-31

GR1-15 SERIES

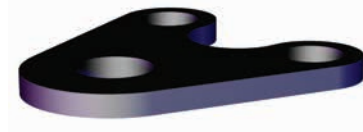
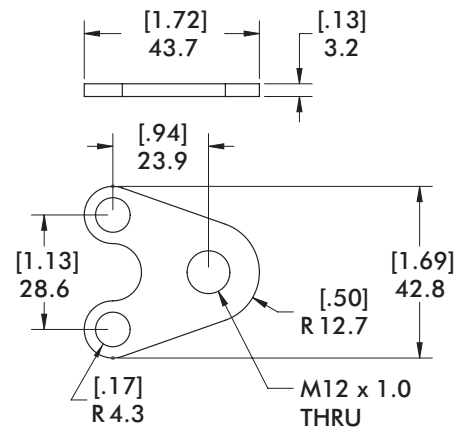
Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

Ø18mm and Ø12mm Inline Proximity Switch Mount



Replacement Part #

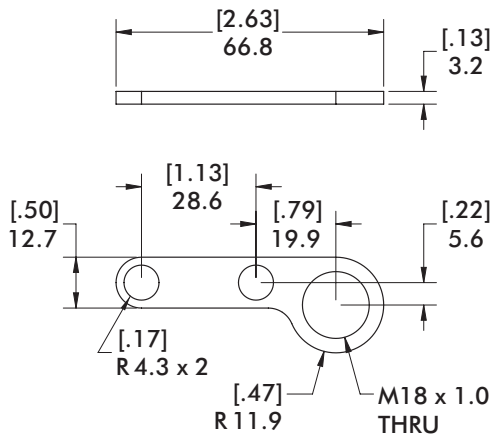
CPI-PM-15D-18



Replacement Part #

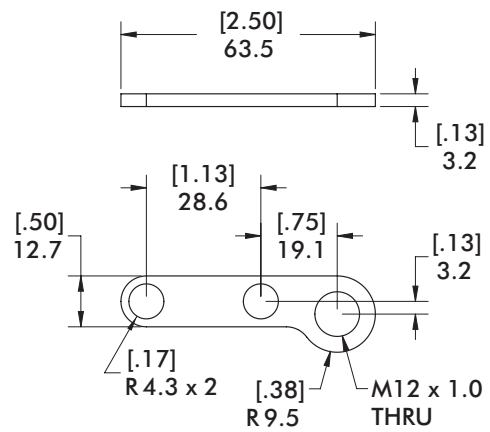
CPI-PM-15D-12

Ø18mm and Ø12mm Offset Proximity Switch Mount



Replacement Part #

CPI-PM-15S-18



Replacement Part #

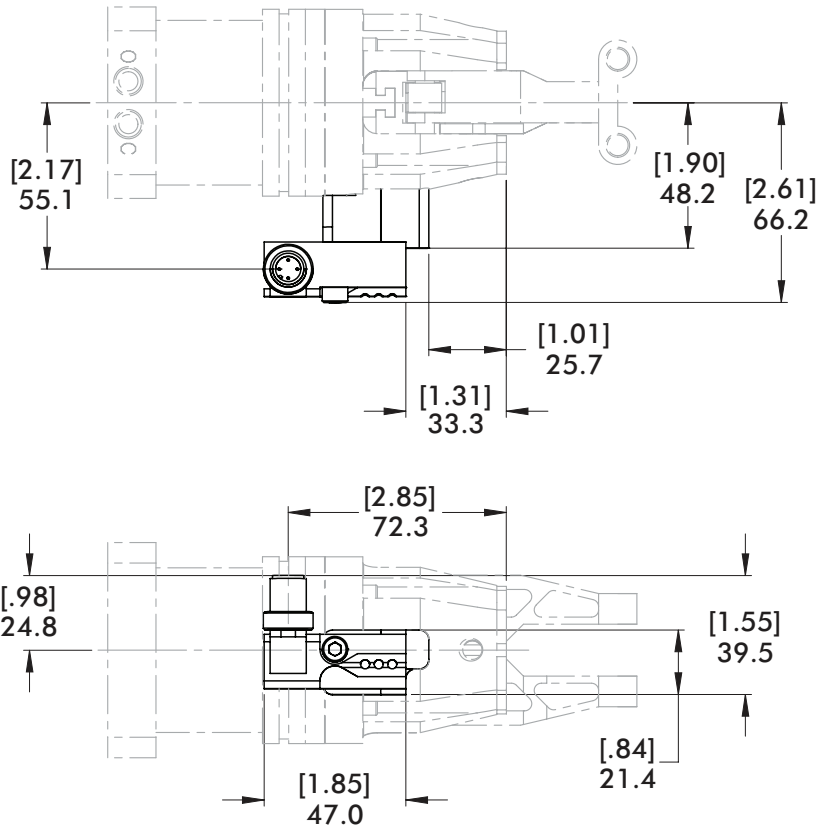
CPI-PM-15S-12

GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions, Technical and Ordering Information

"T04" Open/Closed Sensor Option

This sensor option can only be used at full stroke.

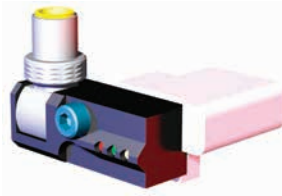


Replacement Part

CPI-GR1-15-TK-DC-T04

This Sensor Part #
is used on the following
GR1 Gripper Styles

"T04"



This sensor option is used in conjunction with a special gripper body used in place of the standard gripper body in order for the sensor to function properly.

"T04" Proximity Switch Wiring



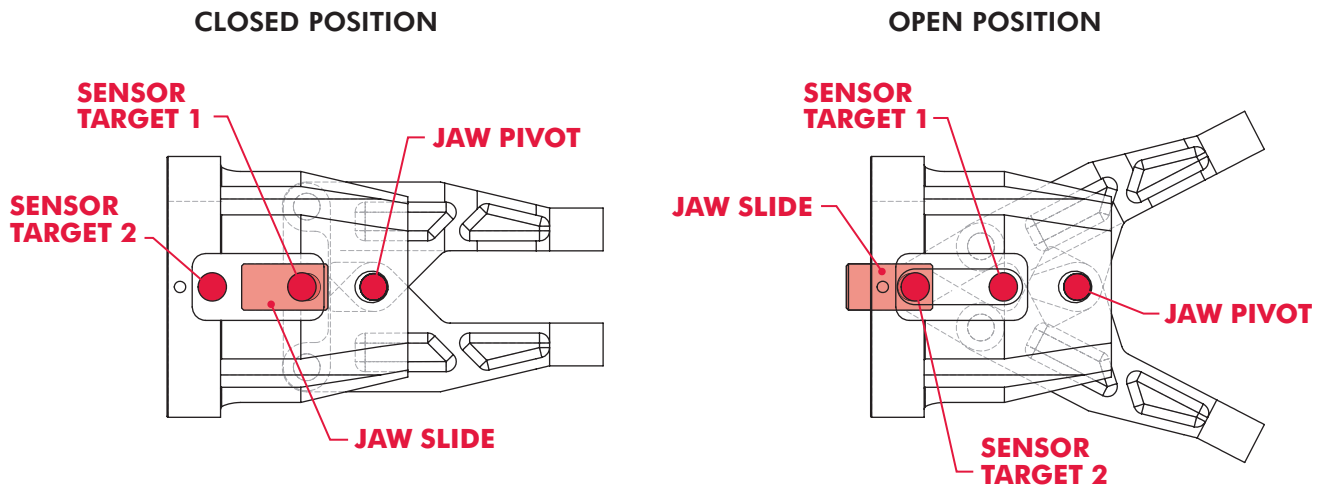
- PIN 1) BROWN: POSITIVE POWER
- PIN 2) BLACK: SIGNAL FOR GRIPPER CLOSED
- PIN 3) BLUE: NEGATIVE POWER
- PIN 4) BLACK: SIGNAL FOR GRIPPER OPEN

3 amps, 250 volts, VDC
4-Pin Euro Micro Connector

GR1-15 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions and Technical Information

"T04" Open/Closed Target Position



"045" 45° Angular



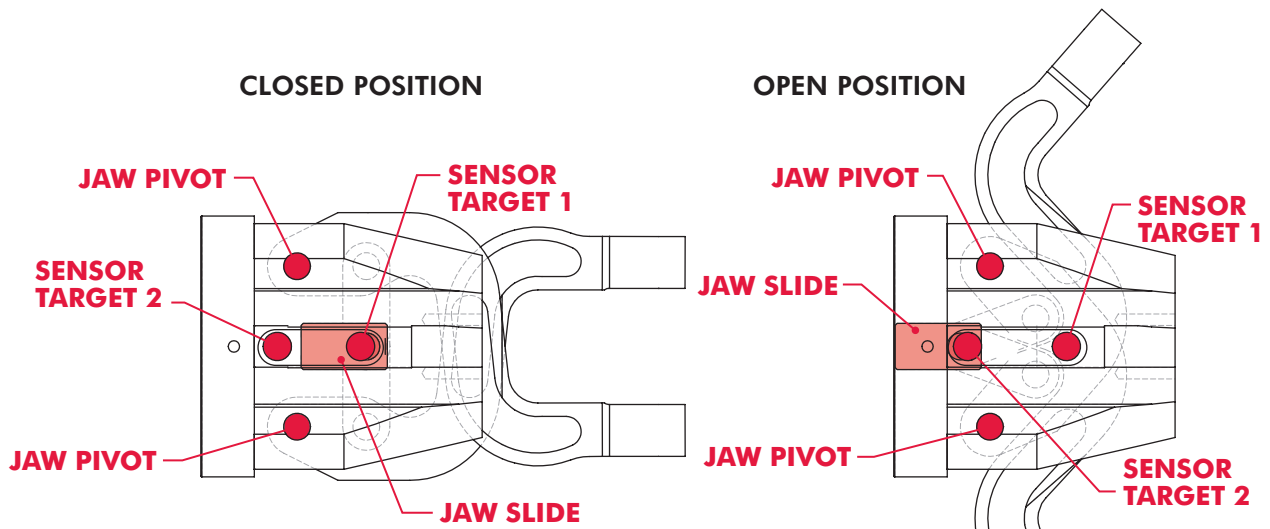
"45C" 45° Chisel



"FCH" 45° Fixed Chisel



"9DJ" 90° Drop Jaw



"90F" 90° Fixed Lower



"9FS" 90° Fixed Lower with Limited Stroke



"180" 180° Angular



GR1-20 SERIES

Toggle Lock Sheet Metal Grippers | Ordering Information

GR1-20 - BE - 180 - DXX - MXX -

Cylinder Type & Porting

Step 1 - Cylinder Ports Choose One

B **E**

- E** English (1/8 NPT)
- M** Metric (1/8 G)

Open/Closed Sensor

Sensors Type	Description
T04	Internal Sensor
(Leave Blank)	No Sensor

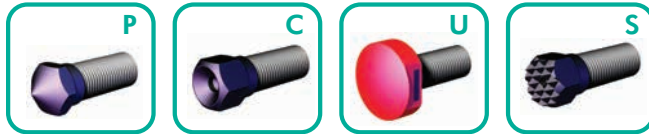
(See page SG-TGL-43 for sensor specifications)

Tip Insert Options

Step 2 - Upper Tip Insert Options Choose One

D **P** **P**

- P** Point
- C** Cup
- U** Urethane
- S** Serrated
- X** No Tips



Step 3 - Lower Tip Insert Options Choose One Above

D **P** **P**

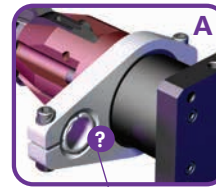
For tip insert dimensions and replacement part #'s, please refer to GR84 Mini Clamp Tip Insert options.

Mount Options

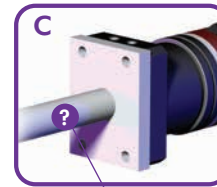
Step 1 - Mount Type Choose One

M **X** **X**

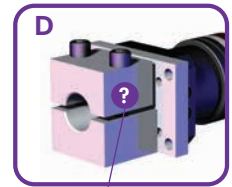
- A** Parallel Swivel Mount
- C** Rear Fixed Welded Style
- D** Rear Fixed Clamp Mount
- X** No Mount



1 **3**
Mount Ball Sizes Available



1 **3**
Mount Rod Sizes Available



7
Mount Size Available

Step 2 - Mount Ball/Rod Type Choose One

M **X** **X**

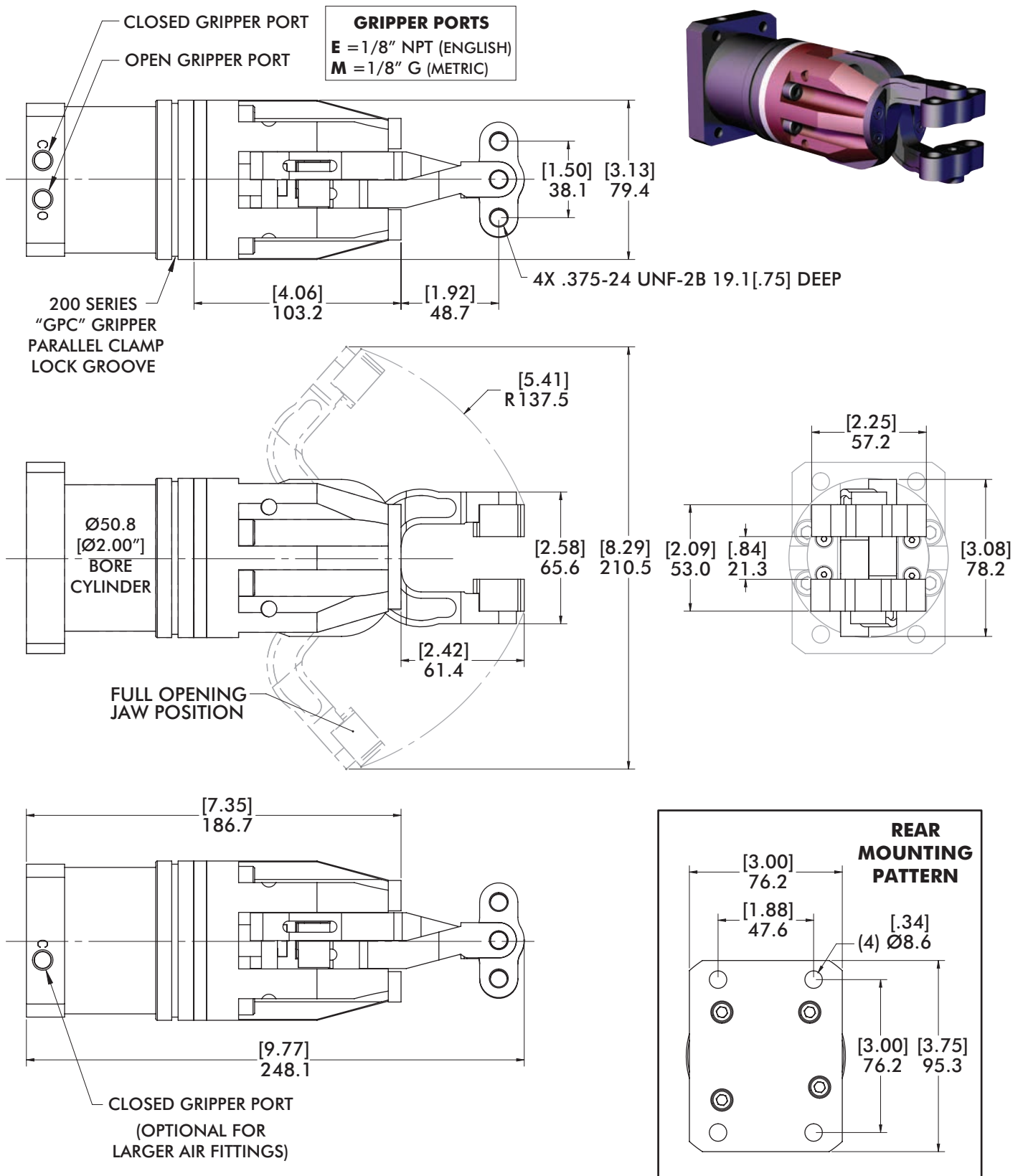
- 1** 1.00" w/Metric Fasteners (A & C Only)
- 3** 25mm Metric Fasteners (A & C Only)
- 7** M1514 (Type D Only)
- X** No Mount



GR1-20 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions

"180" 180° Angular Jaw Arrangement - Double Insert

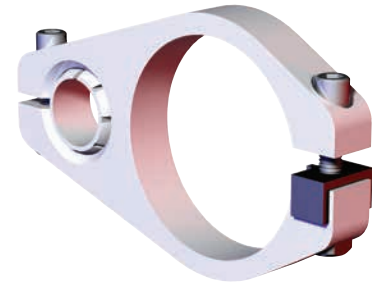
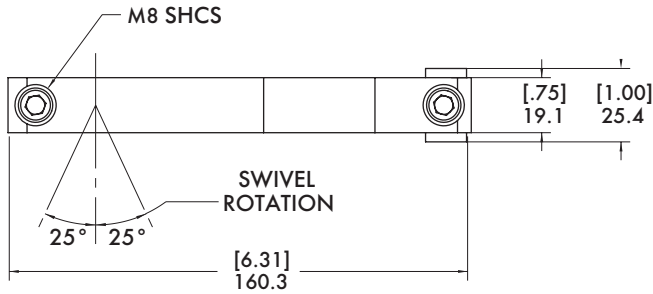


GR1-20 SERIES

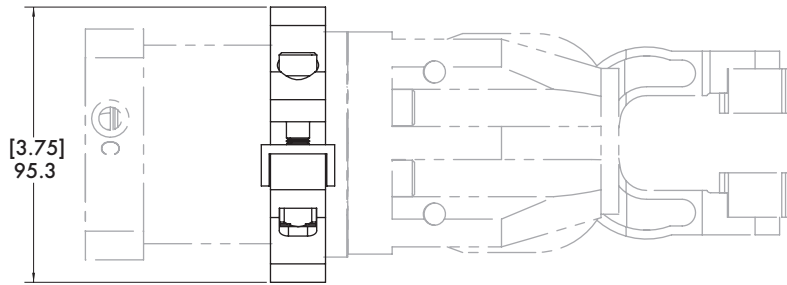
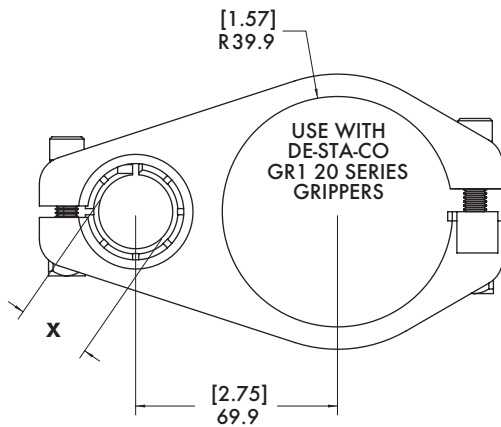
Toggle Lock Sheet Metal Grippers | Dimensions and Ordering Information

“MAX” Swivel Parallel Gripper Mounts

Covered under one or more
U.S./International Patents

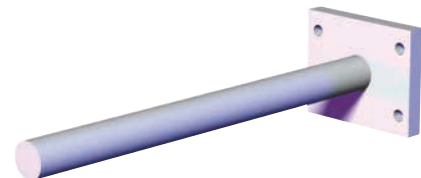
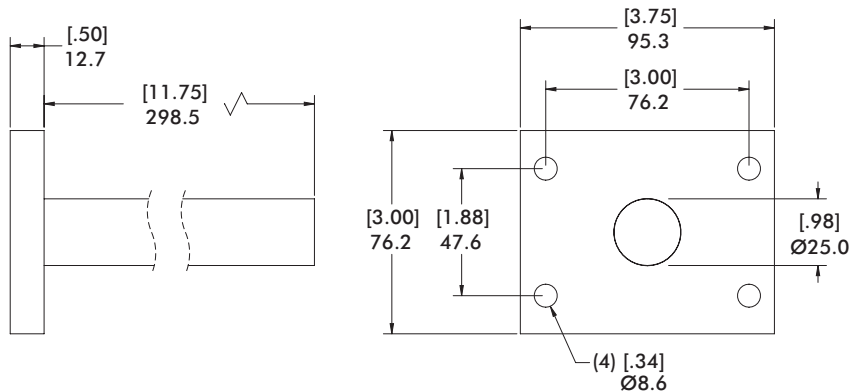


Snap-In Ball
Special patented design allows
user to replace ball without
disassembly



Mounting Option	Rod/Ball "X"	Replacement Part #
MA1	Ø1.00"	CPI-GPC-200-100S-DC
MA3	Ø25mm	CPI-GPC-200-25MS-DC

“MCx” Rear Fixed Welded Mount

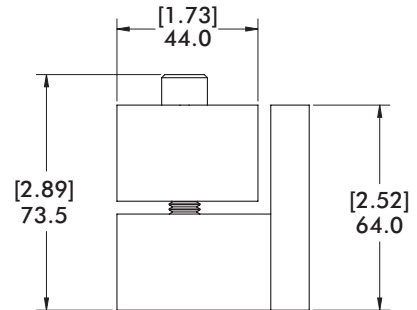
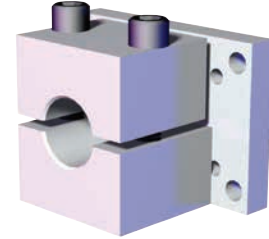
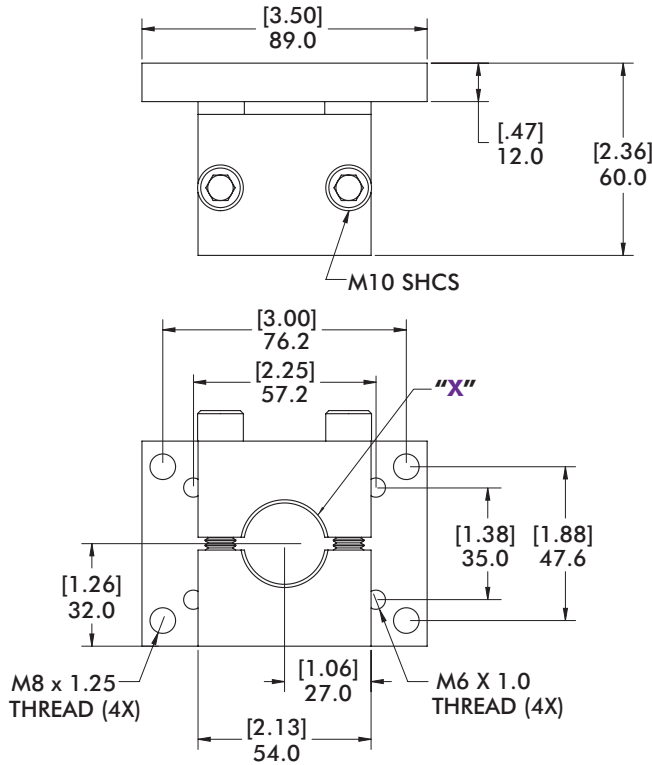


Mounting Option	Rod/Ball "X"	Replacement Part #
MC1	Ø1.00"	CPI-RJM-200-100
MC3	Ø25mm	CPI-RJM-200-25

GR1-20 SERIES

Toggle Lock Sheet Metal Grippers | Dimensions, Ordering Information

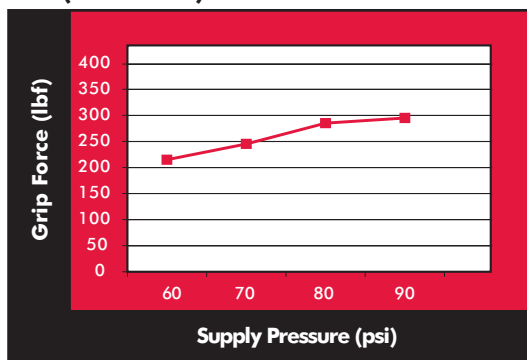
“MD7” Rear Fixed Clamp Mount



Mounting Option	Rod/Ball "X"	Replacement Part #
MD7	Ø1.00"	M1514

Technical Information

180 (20 SERIES)



“180” 180° Angular



Weight:
2.4 kg [5.4 lb]
Grip Range:
0" - 0.125" [0 - 3mm]

Air Requirements:

Recommended operating Pressure:
2-6 bar [30-90 psi]
Ports: 1/8" BSPP [1/8" NPT]
Air flow controls recommended for maximum life

Operating Temperature:

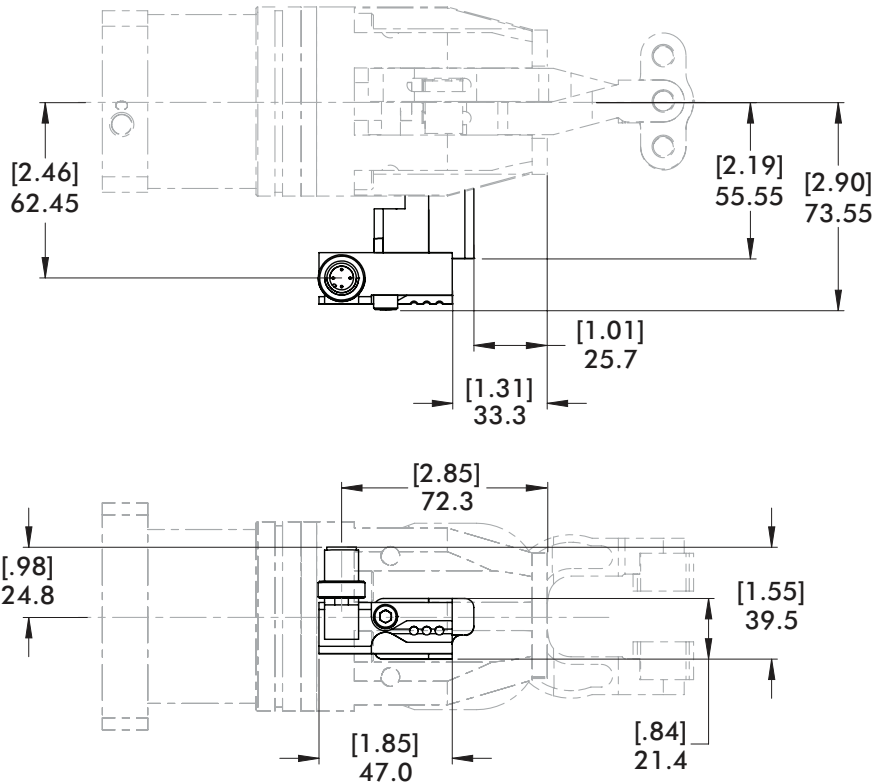
0° - 93°C [32° - 200°F]

SHEET METAL GRIPPERS

Toggle Lock Sheet Metal Grippers | Dimensions, Technical and Ordering Information

"T04" Open/Closed Sensor Option

This sensor option can only be used at full stroke.

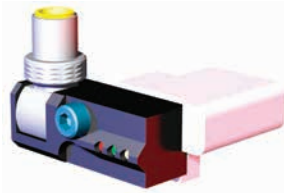


Replacement Part

CPI-GR1-15-TK-DC-T04

This Sensor Part #
is used on the following
GR1 Gripper Styles

"T04"



This sensor option is used in conjunction with a special gripper body used in place of the standard gripper body in order for the sensor to function properly.

"T04" Proximity Switch Wiring

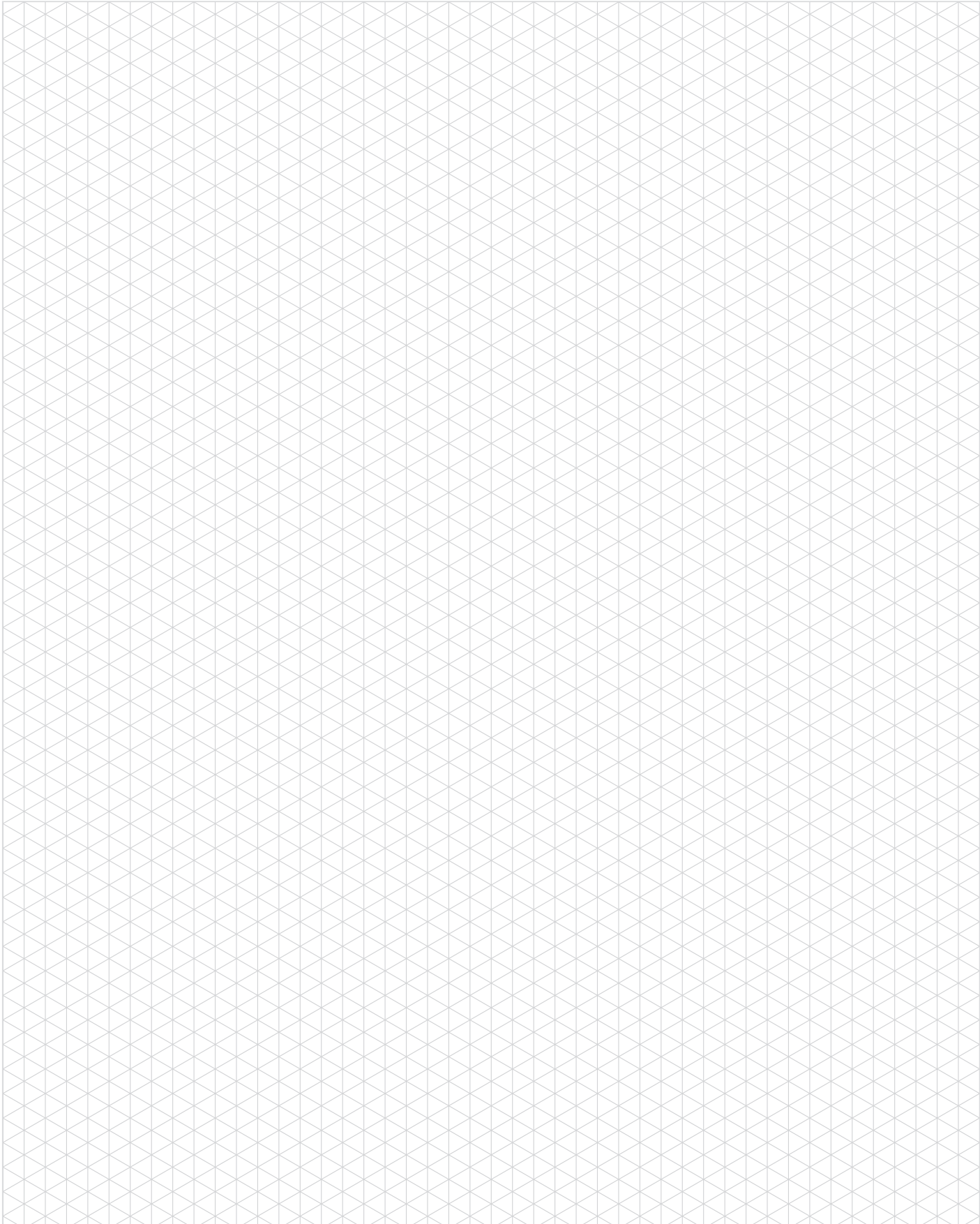


- PIN 1) BROWN: POSITIVE POWER
- PIN 2) BLACK: SIGNAL FOR GRIPPER CLOSED
- PIN 3) BLUE: NEGATIVE POWER
- PIN 4) BLACK: SIGNAL FOR GRIPPER OPEN

3 amps, 250 volts, VDC
4-Pin Euro Micro Connector

SHEET METAL GRIPPERS

Notes





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