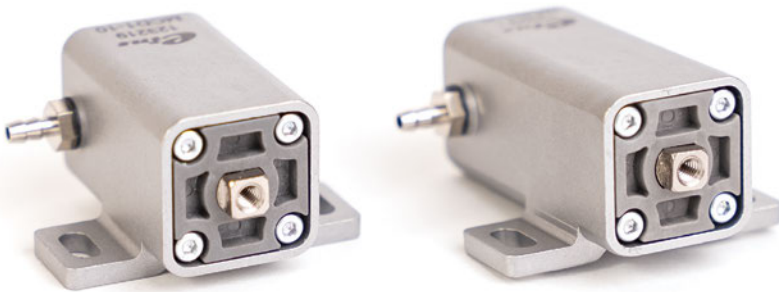


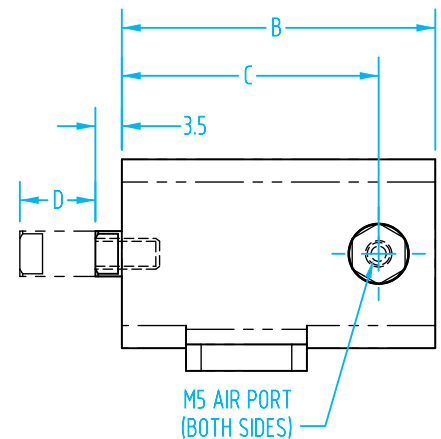
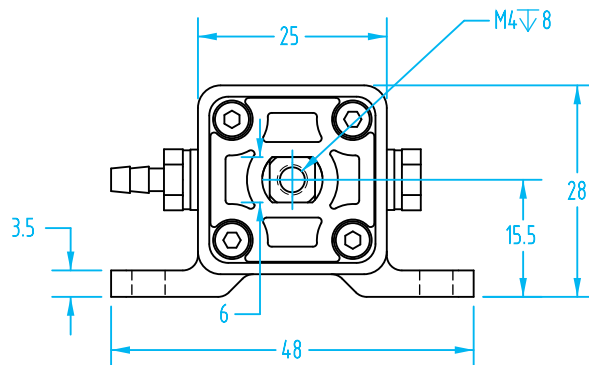
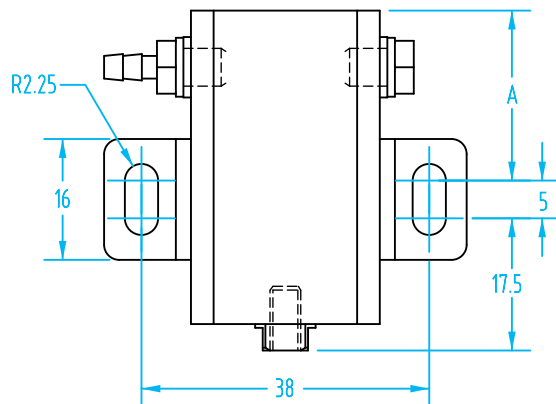
## Aluminum Mini-Cylinders – MCD

(Dimensioned drawings shown full scale)

- Aluminum-bodied version.
- Lightweight and more compact than comparable cylinders.
- Non-rotating rod makes them very versatile.
- Mounting brackets, grip pads and accessories available.
- Additional mounting brackets and mounting spacers can be found online.
- Single acting with spring return.



These are great little cylinders. They are lightweight, low cost, and have good push force. They are single acting with a spring return which make them very easy to install on robot EOAT. The rod is non-rotating due to its elliptical shape which makes them even more versatile. They have a variety of complementary grip pads and accessories shown on page 753–755. These mini-cylinders have many uses: sprue grippers, wide-part grippers, vacuum pad actuators, heavy-part support actuators, and much more.



Fittings Available on page 1043



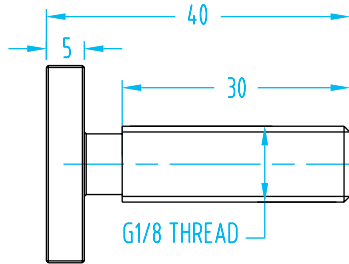
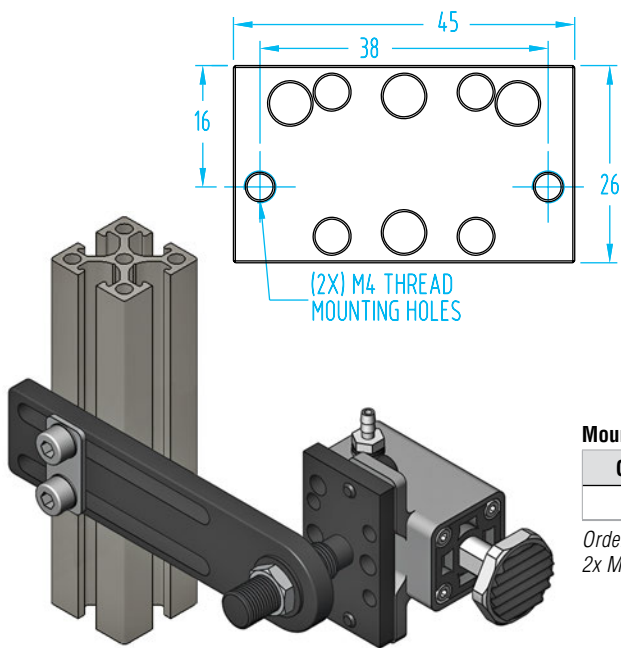
Lightweight Aluminum Cylinders

Quick#	Part#	Price	Stroke	Weight	Extension force*	A	B	C	D	Air pressure
1705	GSG-MCD-10	\$26.66	10mm	65g	22 lbf	22.8	41.5	34	10	71psi
1706	GSG-MCD-20	\$31.55	20mm	80g	22 lbf	32.8	51.5	44	20	71psi

\*Note: Force at 87psi (6 bar)

**Mini Cylinder Mounting Brackets**

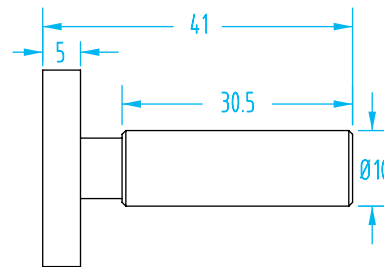
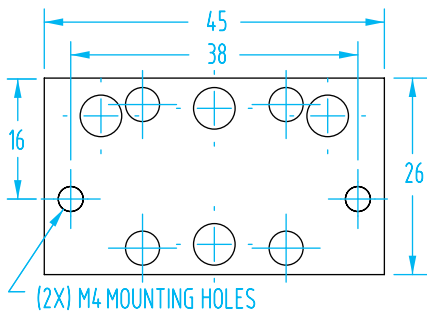
(Dimensioned drawings shown full scale)



**Mounting Bracket for Mini-Cylinders: #1705, & 1706**

Quick#	Part#	Weight	Price
1825	GSC-TMB-45	26	\$28.29

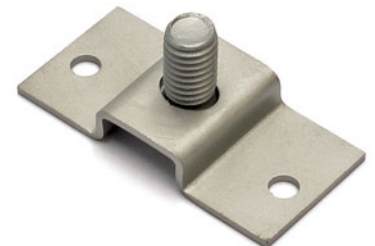
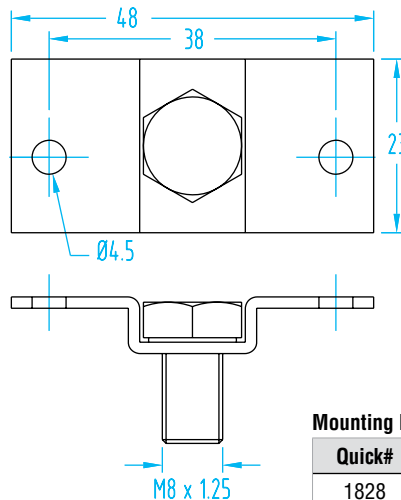
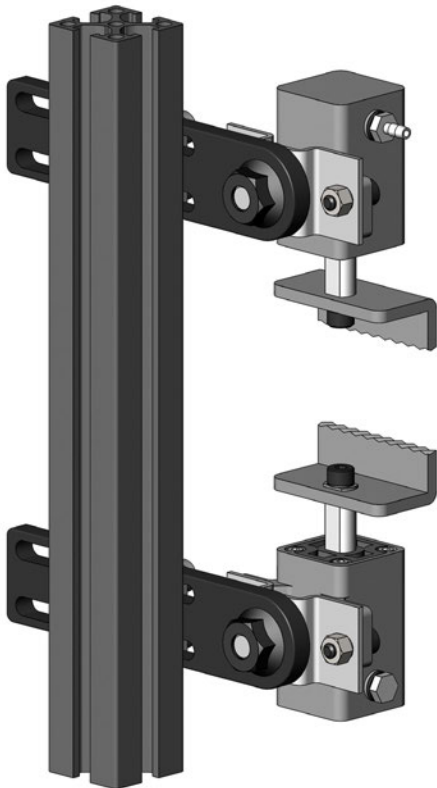
Order separately on page 1077: 2x M4x12mm screws (#835)  
2x M4 nuts (#849) 2x washers (#846)



**Mounting Bracket for Mini-Cylinders: #1705, & 1706**

Quick#	Part#	Weight	Price
5465	GSG-SMMB-45	26g	\$28.17

Order separately on page 1077: 2x M4x12mm screws (#835)  
2x M4 nuts (#849) 2x washers (#846)



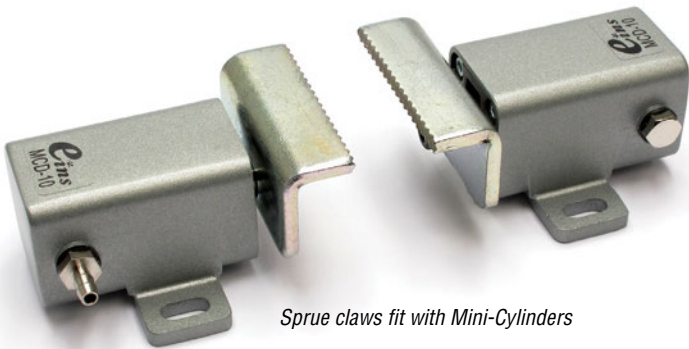
**Mounting Bracket for Mini-Cylinders: #1705, & 1706**

Quick#	Part#	Price	Weight
1828	GSC-VMB-MCY	\$9.75	26g

Includes M8 Hex Bolt.

## Mini-Cylinder Accessories

(Dimensioned drawings shown full scale)



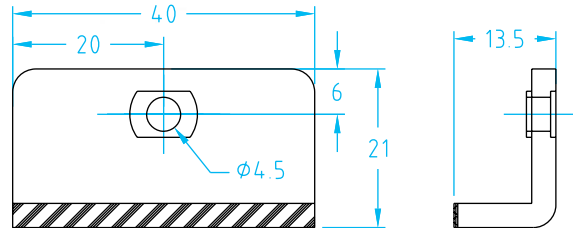
Sprue claws fit with Mini-Cylinders

Combine two #1705 lightweight cylinders with two #1730 claws and you have a lightweight (186g) sprue gripper for only \$51.52. With total grip force of 44 lbf and 20mm stroke, most any sprue can be reliably gripped.

#1733



#1730

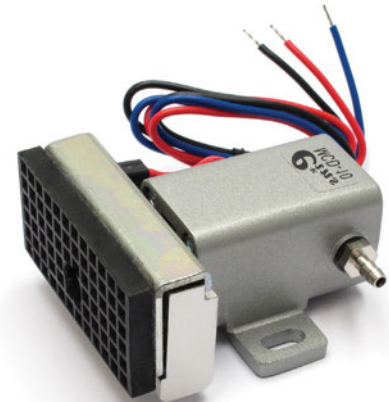


### Sprue Claws

Quick#	Part#	Wt.	Description	Price
1730	GSG-CP-014	28g	L-shaped Metal Claw	\$7.38
1733	GSG-CP-013	11g	Round, Aluminum $\phi 25\text{mm}$	\$5.02

M4 fasteners available on page 1077.

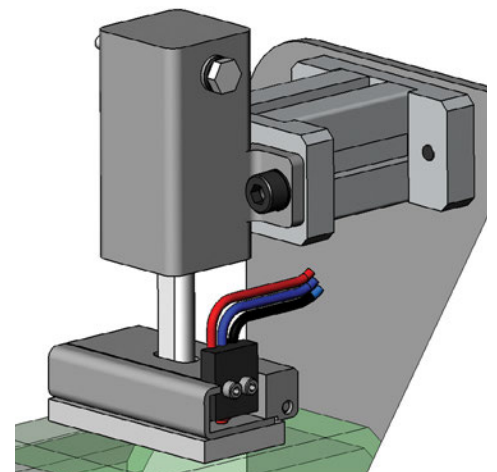
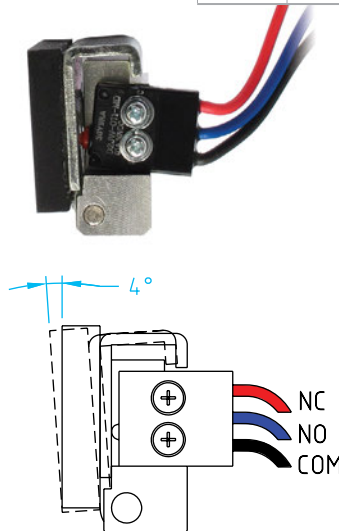
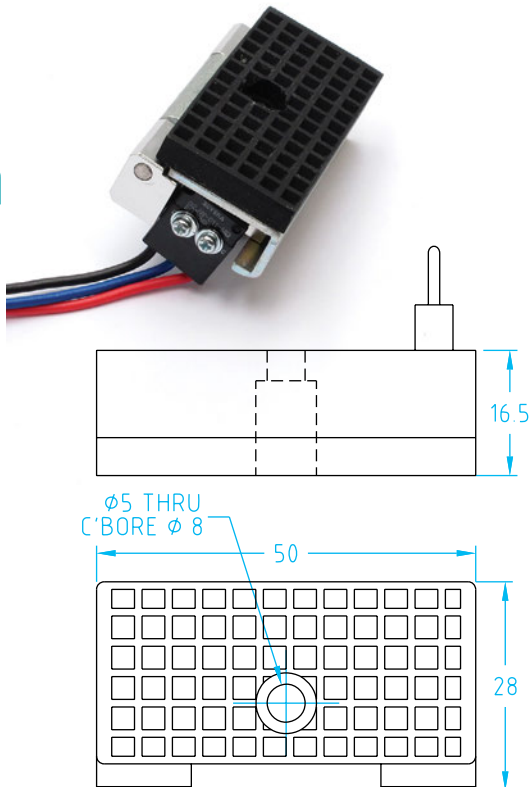
This combination relay switch and grip pad provides reliable part confirmation when used in conjunction with a mini-cylinder. The mini-cylinder extends its rod and grip pad switch to contact the part. The switch is made and closes the circuit to send confirmation to the controller.



### Product Confirmation Switch

Quick#	Part#	Wt.	Description	Price
1731	GSG-KRC-5	59g	Rubber Pad w/Switch	\$76.31
5273	GSG-KRCW-5000	59g	Silicone Pad w/Switch	\$72.82
1877	GSG-KRC-5-SW	-	Replacement Switch	\$9.84

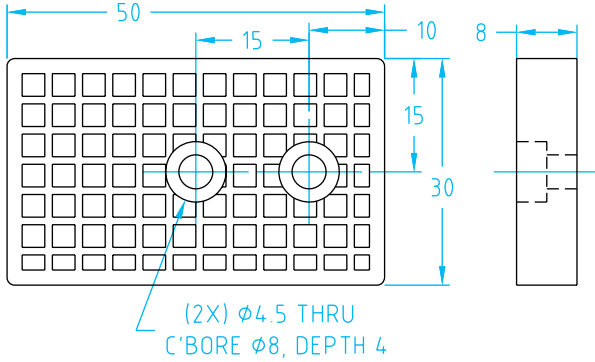
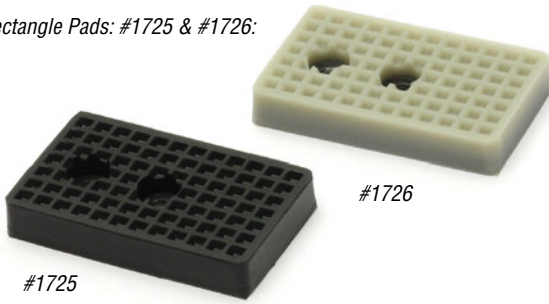
M4 fasteners available on page 1077.



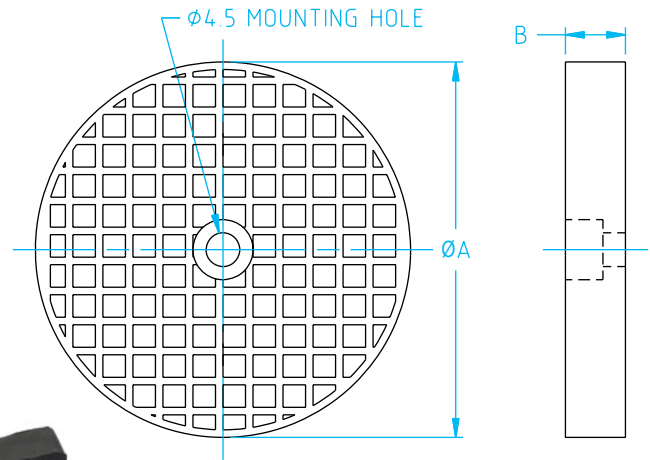
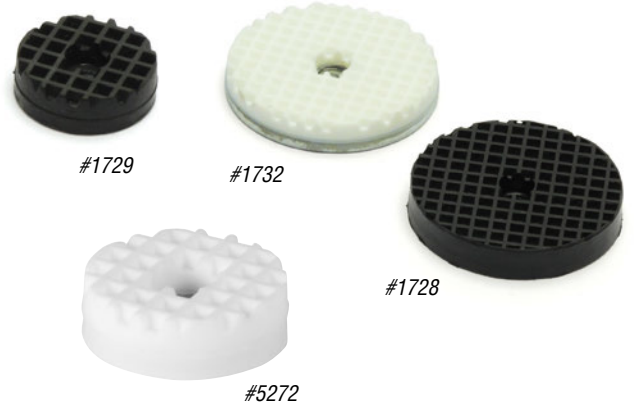
# Mini-Cylinder Grip Pads

(Dimensioned drawings shown full scale)

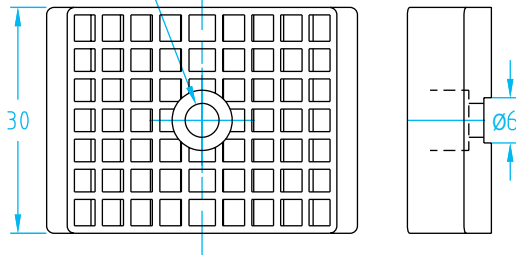
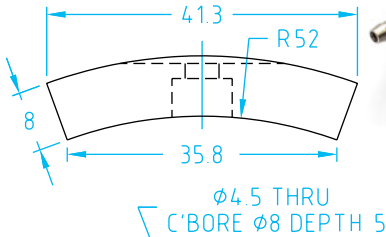
Rectangle Pads: #1725 & #1726:



Round Pads: #1728, #1732, #1729, #5272:



Curved Pads: #1727 & #5090:

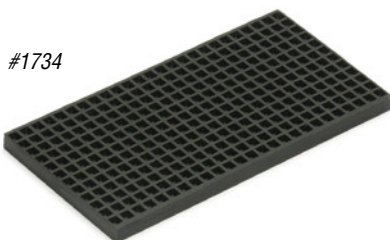


- Silicone Temperature range to 356°F
- Rubber Temperature range to 158°F

### Grip Pads for Mini-Cylinders

Quick#	Part#	Style	Material	A	B	Weight	Price
1725	GSG-CP-060	Rectangle	Rubber	-	-	42g	\$8.98
1726	GSG-CP-061	Rectangle	Silicone	-	-	42g	\$8.18
1727	GSG-CP-018	Curved	Rubber	-	-	46g	\$7.76
5090	GSG-CP-072	Curved	Silicone	-	-	46g	\$7.47
1728	GSG-CP-016	Round - Lg.	Rubber	50	8	54g	\$4.85
1732	GSG-CP-071	Round - Lg.	Silicone	50	8	54g	\$4.85
1729	GSG-CP-015	Round - Sm.	Rubber	25	8	14g	\$2.91
5272	GSG-CP-074	Round - Sm.	Silicone	25	8	14g	\$3.92

M4 fasteners available on page 1077.



### Grip Pad

Quick#	Part#	Size	Material	Mounting	Price
1734	GSG-CP-R	50x100x5	Rubber	No backing plate	\$2.68
5274	GSG-CP-SI	50x100x5	Silicone	No backing plate	\$11.26
584	GSG-GP-300	300x150x3.3mm	Elastomer	No backing plate	\$61.50
585	GSG-GP-300B	300x150x6.3mm	Elastomer	3mm Aluminum plate	\$99.50