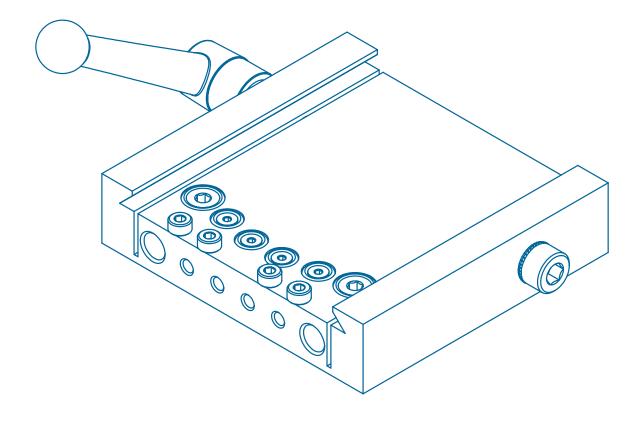
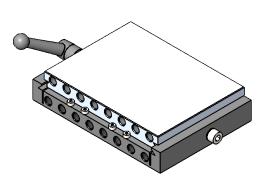
# Tooling Section 17

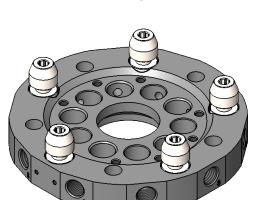




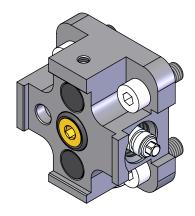




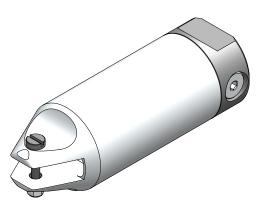
**Quick Change Slides** 



**Quick Changers** 



**Robot Quick Change Pump** 



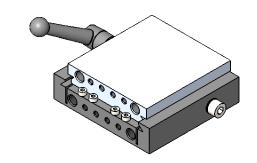
**End of Arm Tooling** 

QCS: Quick Change Slides	3-5
RQCP: Robot Quick Change Pump	6-7
Quick Changers	8-9
End of Arm Tooling	10-32

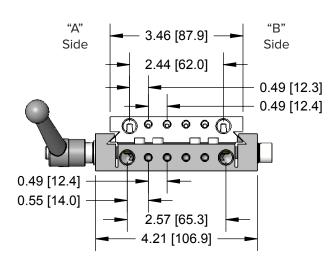


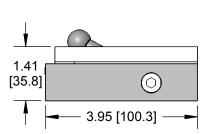
## **Quick Change Slides**

QCS provides a cost-effective method to increase productivity by virtually eliminating end-of-arm tool change-over time. With QCS, a robot can be re-tooled for a different part and back in service within a few minutes. Compressed air and vacuum lines are automatically connected as the tool plate mates with the clamp base on the robot arm. The clamp handle can be indexed to a convenient position in 30° increments

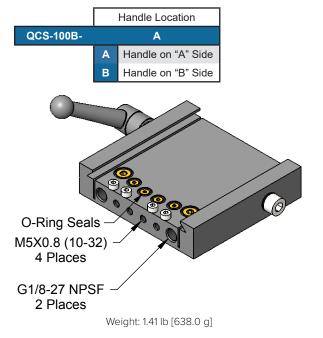


Please contact us for details about custom layouts.

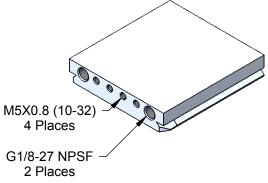




## **Robot Clamp Base**



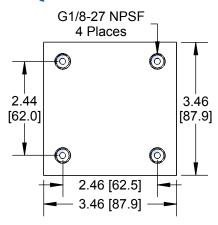
## **Tool Plate: QCS-100T**

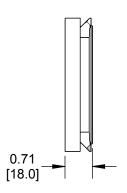


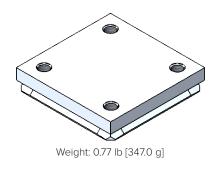
Weight: 0.85 lb [383.0 g]



## **Tool Plate: QCS-100TD**

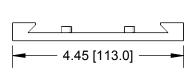




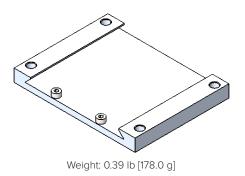


# Tool Park: QCS-100P

An optional Tool Park provides convenient storage and protection for end-of-arm tools when not in service. One Tool Park per Tool Plate is required for efficient operation.





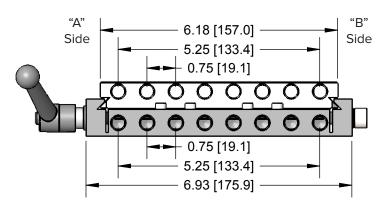


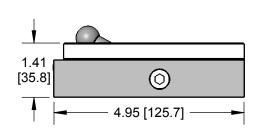


#### **Quick Change Slides**

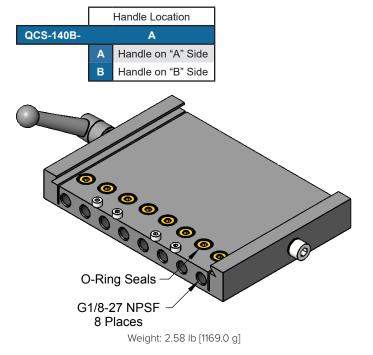
QCS provides a cost-effective method to increase productivity by virtually eliminating end-of-arm tool change-over time. With QCS, a robot can be re-tooled for a different part and back in service within a few minutes. Compressed air and vacuum lines are automatically connected as the tool plate mates with the clamp base on the robot arm. The clamp handle can be indexed to a convenient position in 30° increments.

Please contact us for details about custom layouts.





#### **Robot Clamp Base**



#### Tool Plate: QCS-140T

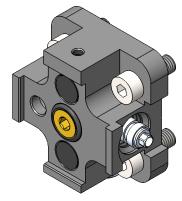




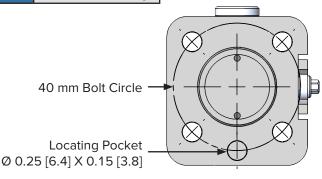
#### **RQCP: Robot Quick Change Pump**

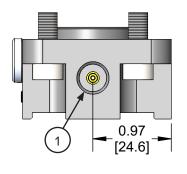
Vacuum pump fits Flexpicker and other robots with four 6mm tapped interface on 40 mm bolt circle. Tool is magnetically coupled to pump for fast replacement for either maintenance or for changeover to manipulate a different part. Handles up to 4.4 lbs (2kg) load. High vacuum flow venturis allow fast evacuation and the purge options quickly dissipate vacuum to optimize cycle times.

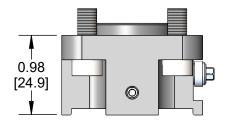
	Venturi Series			Purge Option
RQCP-		10L		Α
	08L	ER08L	(Blank)	None
	10L	ER10L	-LP	Limited Pressure Purge
			-PP	Positive Pressure Purge

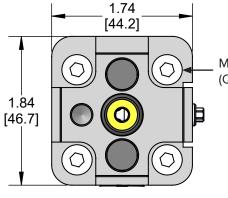


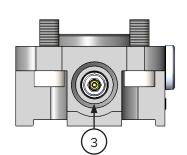
Weight: 3.70 oz [104.9 g]



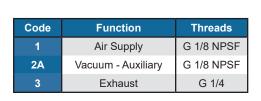


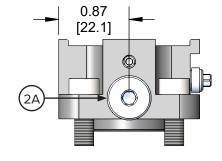


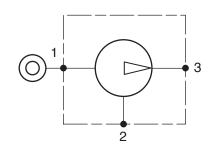




M6 Screws Included (Qty 4)





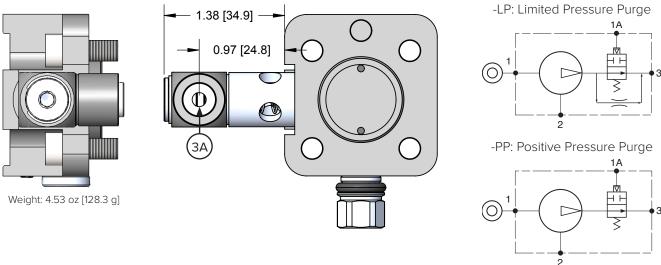




#### **RQCP: Purge Options**

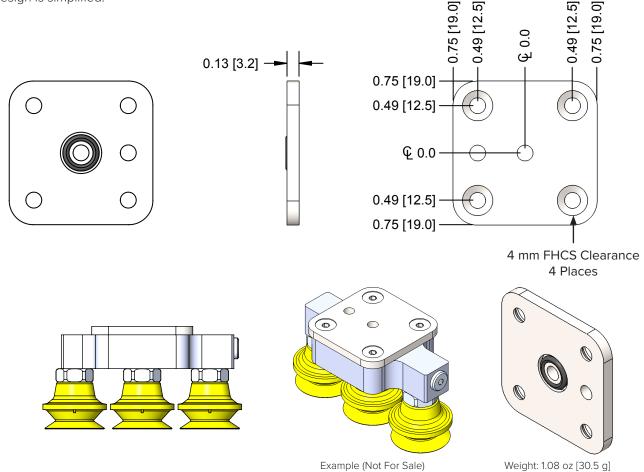
Purge option provides faster part placement by quickly dissipating residual vacuum which is especially useful when using bellows-style vacuum cups. When placing a part, the air supply to the vacuum pump is left on and a compressed air signal to the Purge unit blocks off the pump exhaust to redirect venture air into the vacuum tool to quickly dissipate any residual vacuum.

The purge should remain on until the suction cups have separated from the part that was placed then for a brief additional time to blow out any ingested debris. VSP-18 Switch protector is highly recommended when using both a Purge option and a monitoring vacuum sensor to prevent overpressure damage.



#### **RQCP-P: Tool Plate**

Precision steel tool plate is used to mount and register tooling to the RQCP pump. A port seal passes pump vacuum into the tool so that tool design is simplified.

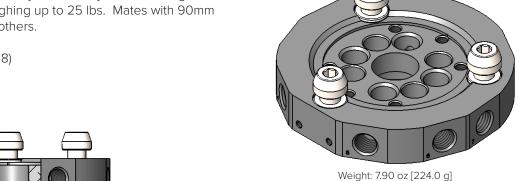


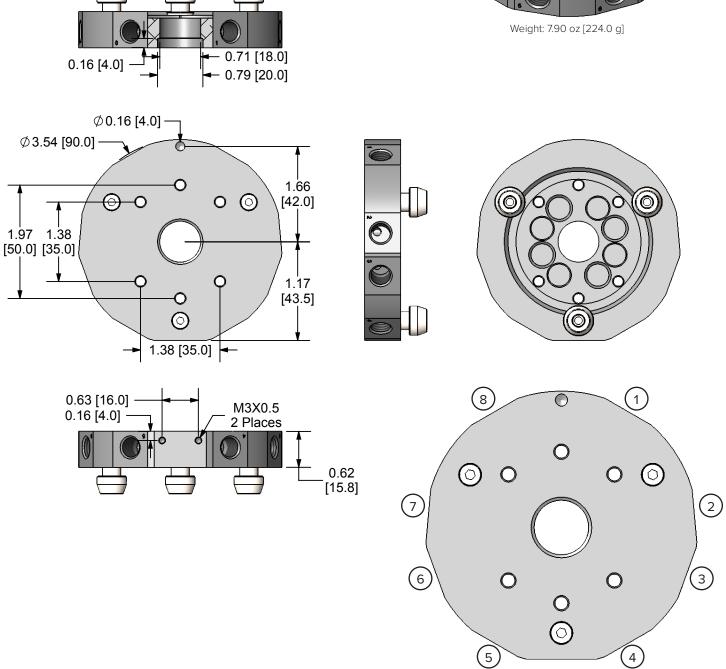


#### QC90-B: Quick Changer Base

Tool-side EOAT Changer is typically used on injection molding machines to handle tools weighing up to 25 lbs. Mates with 90mm robot-side changer made by others.

G 1/8 NPSF Connections (Qty 8)



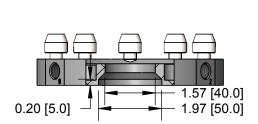


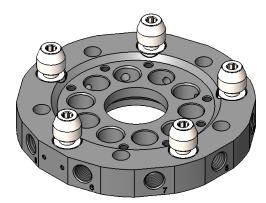


#### QC150-B: Quick Changer Base

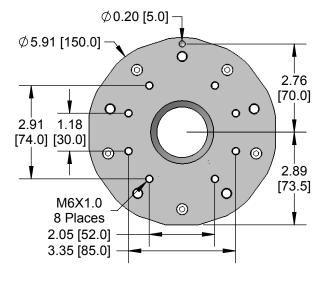
Tool-side EOAT Changer is typically used on injection molding machines to handle tools weighing up to 65 lbs. Mates with 150mm robot-side changer made by others.

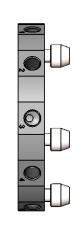
G 1/4 Connections (Qty 10)

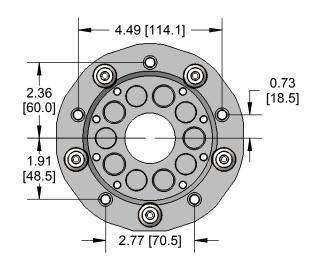


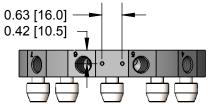


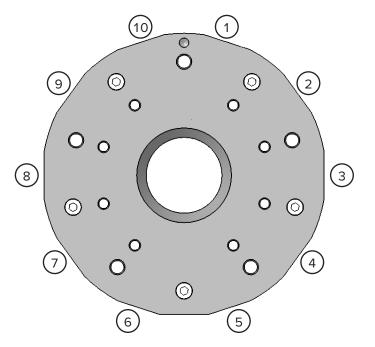
Weight: 29.69 oz [841.6 g]







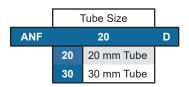


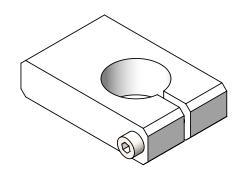


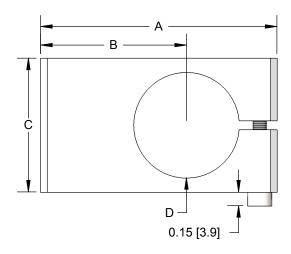


# **Edge Mounts**

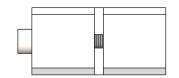
EDCO Edge Clamps are made out of Delrin and are designed for use with the EDCO Finger Grippers, acting as a stop for the part being gripped.



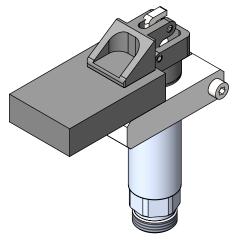








	A in [mm]	B in [mm]	C in [mm]	D in [mm]	E in [mm]	Weight oz [g]
ANF20D	2.02 [51.2]	1.20 [30.5]	1.25 [31.8]	0.79 [20.0]	0.50 [12.7]	0.91 [25.8]
ANF30D	2.65 [67.3]	1.64 [41.5]	1.50 [38.1]	1.18 [30.0]	0.75 [19.1]	1.83 [51.8]



Example: ANF20D w/ GRF20-95



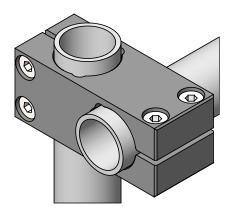
# **Cross Clamp Blocks**

EDCO USA Cross Clamp Blocks are provided in a number of sizes to easily help you to construct the needed structure for your system. The multiple sizes allow for many different configurations of tubing of varying sizes.

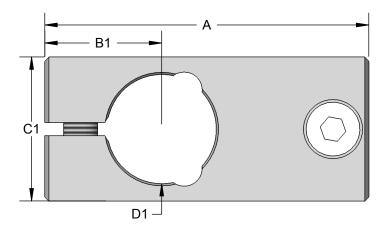
When building part numbers, Tube  $\oslash$  1 will always be the larger diameter

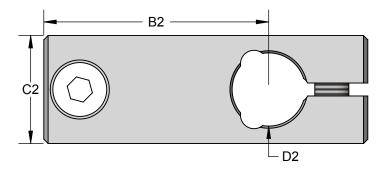
Example: CLM7550, CLM1050, CLM1075

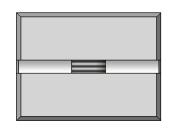
	Т	ube Ø 1	Tube Ø 2		
CLM	75			50	
	50	1/2" Tube	50	1/2" Tube	
	75	3/4" Tube	75	3/4" Tube	
	10	10 1" Tube		1" Tube	



Example: Tubing not for sale.







	A in [mm]	B1 in [mm]	C1 in [mm]	D1 in [mm]	B2 in [mm]	C2 in [mm]	D2 in [mm]	Weight oz [g]
CLM5050*	2.00 [50.8]	0.69 [17.5]	0.75 [19.1]	0.51 [12.9]	1.31 [33.4]	0.75 [19.1]	0.51 [12.9]	1.39 [39.5]
CLM7550	2.25 [57.2]	0.69 [17.5]	0.75 [19.1]	0.51 [12.9]	1.44 [36.5]	1.00 [25.4]	0.76 [19.3]	1.87 [53.1]
CLM7575	2.50 [63.5]	0.81 [20.7]	1.00 [25.4]	0.76 [19.3]	1.69 [42.9]	1.00 [25.4]	0.76 [19.3]	2.57 [72.9]
CLM1050	2.50 [63.5]	0.69 [17.5]	0.75 [19.1]	0.51 [12.9]	1.56 [39.7]	1.25 [31.8]	1.01 [25.6]	2.37 [67.2]
CLM1075	2.88 [73.0]	0.88 [22.2]	1.00 [25.4]	0.76 [19.3]	1.88 [47.6]	1.25 [31.8]	1.01 [25.6]	3.55 [100.6]
CLM1010	3.00 [76.2]	0.94 [23.8]	1.25 [31.8]	1.01 [25.6]	2.06 [52.4]	1.25 [31.8]	1.01 [25.6]	4.65 [131.7]

<sup>\*</sup>Screw heads protrude by approximately 0.07 in [1.8 mm].

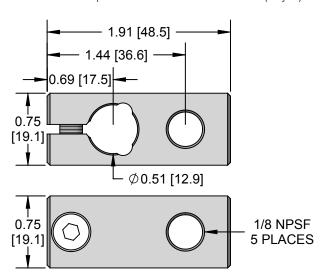


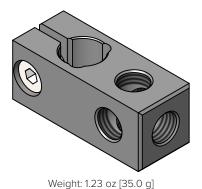
## **Clamp Mount Blocks**

EDCO USA Clamp Mount Blocks come with a tubing clamp on one end and several 1/8" NPSF connections on the other.

#### **CM505**

1/2" Tube Clamp with 1/8 NPSF Connections (Qty 5)

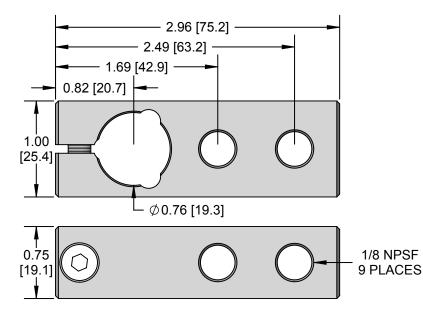


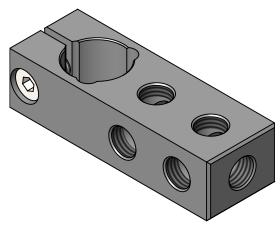




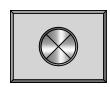
#### **CM759**

3/4" Tube Clamp with 1/8 NPSF Connections (Qty 9)





Weight: 2.48 oz [70.2 g]

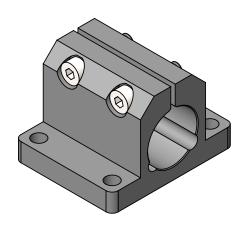


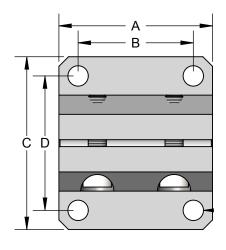


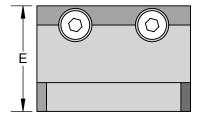
# Flanged Clamps (Horizontal)

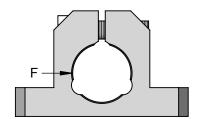
Horizontal Flanged Clamps give the base needed to build your end of arm tooling.

	Tube Ø			
FCH	100			
	75	3/4" Tube		
	75L	3/4" Tube		
	100	1" Tube		

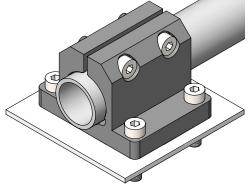








	A in [mm]	B in [mm]	C in [mm]	D in [mm]	E in [mm]	F in [mm]	Weight oz [g]
FCH75	2.00 [50.8]	1.50 [38.1]	2.25 [57.2]	1.75 [44.5]	1.38 [34.9]	0.76 [19.3]	4.95 [140.3]
FCH75L	2.25 [57.2]	1.75 [44.5]	2.25 [57.2]	1.75 [44.5]	1.38 [34.9]	0.76 [19.3]	5.50 [156.0]
FCH100	2.00 [50.8]	1.50 [38.1]	2.49 [63.2]	2.00 [50.8]	1.68 [42.7]	0.76 [19.3]	5.56 [157.6]

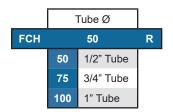


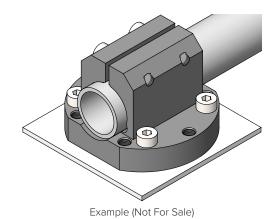
Example (Not For Sale)



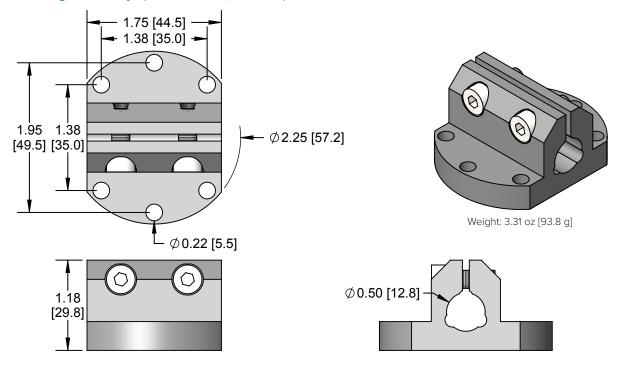
## Flanged Clamps (Horizontal, Round)

Horizontal Flanged Clamps give the base needed to build your end of arm tooling. The round clamps provide the same function with a rounded base.



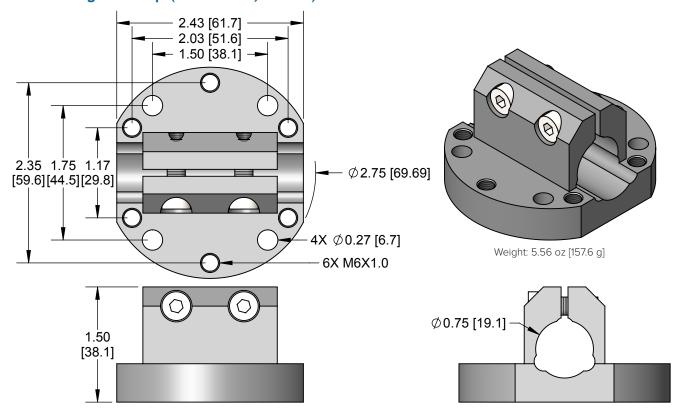


FCH50R: Flanged Clamp (Horizontal, Round)

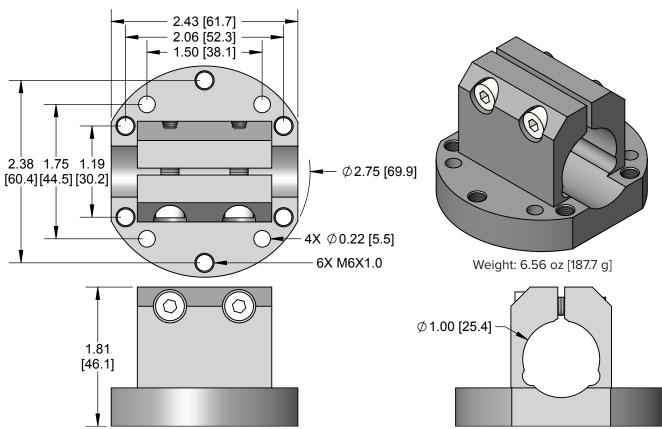




#### FCH75R: Flanged Clamp (Horizontal, Round)



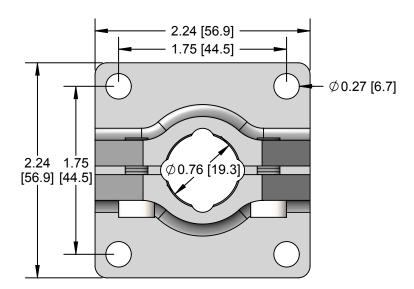
# FCH100R: Flanged Clamp (Horizontal, Round)

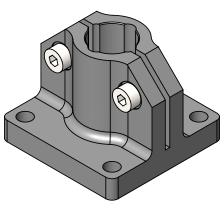




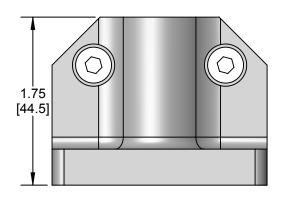
# FCV75: Flanged Clamps (Vertical)

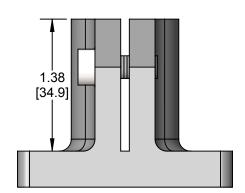
EDCO USA Flanged Clamps give the base needed to build your end of arm tooling structure. Vertical Flanged Clamps offer the same quality and function as the Horizontal Flaned Clamps.





Weight: 5.08 oz [144.0 g]



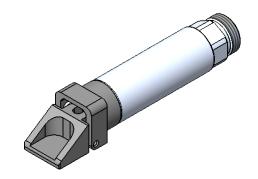




## **Gripper Finger Mounts**

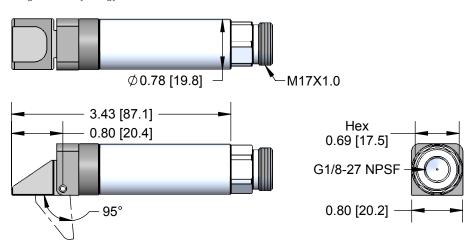
Pneumatic Finger Grippers with spring returns are used to secure parts at the edge.

The GRF20-95 and GRF30-95 provide a full 95° reach and are typically used with an edge clamp



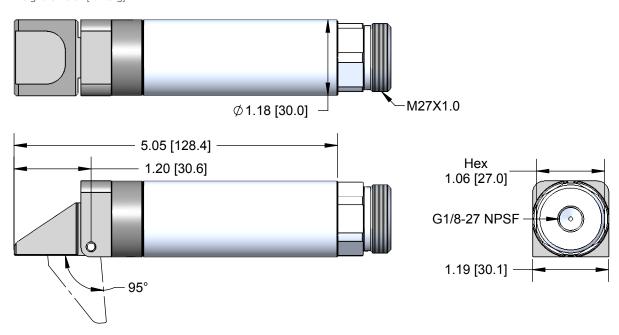
#### **GRF20-95**

Weight: 2.14 oz [60.8 g]



#### **GRF30-95**

Weight: 6.45 oz [182.9 g]

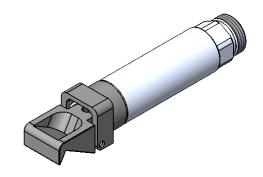




## **Gripper Finger Mounts**

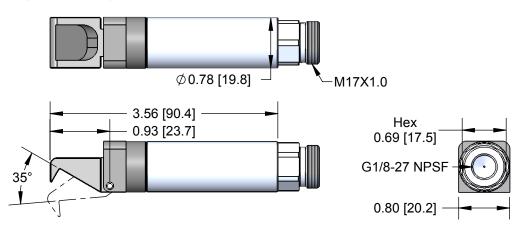
Pneumatic Finger Grippers with spring returns are used to secure parts at the edge.

The GRF20-35 and GRF30-35 provide a full  $35^{\circ}$  reach and are typically used with an edge clamp



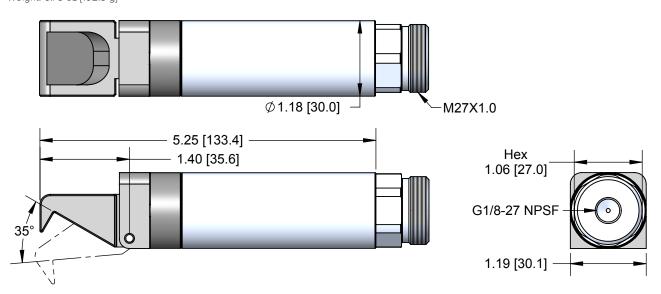
#### **GRF20-35**

Weight: 2.24 oz [63.5 g]



#### **GRF30-35**

Weight: 6.78 oz [192.3 g]

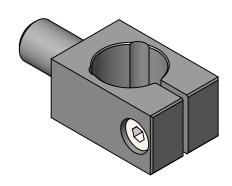


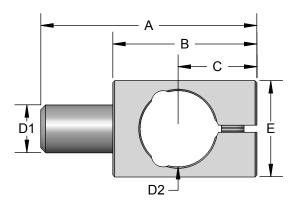


# **Gripper Finger Mounts**

EDCO USA Finger Gripper Clamps come in various sizes to provide a quality clamp for use with a Finger Gripper.

	Tube Ø			
FGM-M20	50			
	50	1/2" Tube		
	75	3/4" Tube		
	100	1" Tube		

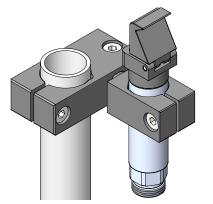








	A in [mm]	B in [mm]	C in [mm]	D1 in [mm]	D2 in [mm]	E in [mm]	F in [mm]	Weight oz [g]
FGM-M2050	2.25 [57.2]	1.50 [38.1]	0.82 [20.8]	0.50 [12.6]	0.79 [20.1]	1.00 [25.4]	0.75 [19.1]	1.48 [42.0]
FGM-M2075	2.25 [57.2]	1.50 [38.1]	0.82 [20.8]	0.75 [19.1]	0.79 [20.1]	1.00 [25.4]	0.75 [19.1]	1.75 [49.7]
FGM-M3075	2.70 [68.6]	1.95 [49.5]	1.02 [25.9]	0.75 [19.1]	1.18 [30.0]	1.50 [38.1]	0.75 [19.1]	2.77 [78.4]

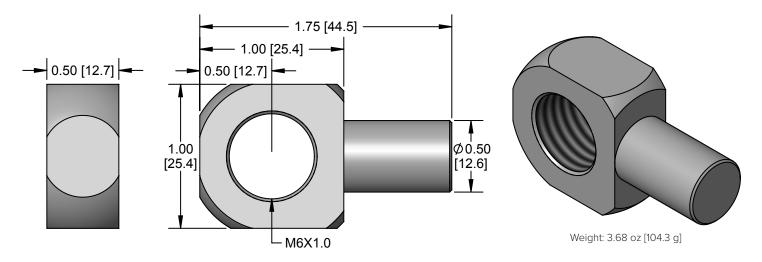


Example: CLM1050, FGM-M2050, and GRF20-35



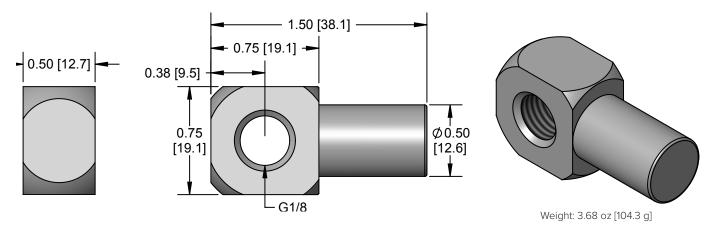
#### LCM18: Level Compensator Mounts

Level compensator mounts make it easy to mount level compensators to tubing.



## **LCM10: Level Compensator Mounts**

Level compensator mounts make it easy to mount level compensators to tubing.

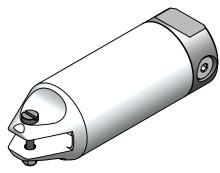




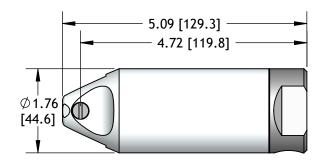
#### NR20: Nipper Body

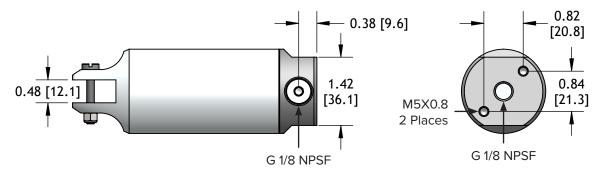
High-quality nipper bodies are designed for reliable operation over a long lifespan.

- accepts any brand size 20 nipper blades
- corrosion resistant stainless-steel spring
- machined aluminum body with low-friction, co-deposited nickel plating with teflon finish
- end cap includes 1/8" bottom and side air-supply ports.
- repair components made by EDCO USA available for purchase



Weight: 10.00 oz [283.6 g]





Tecnical Specifications				
Sprue Ø Cut:	0.28 in [7.0 mm]			
Cutting Pressure:	980 lbf*			
Air Consumption:	4.75 in <sup>3</sup>			

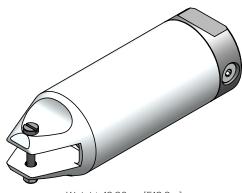
\*When compressed air is supplied at 87 psi.



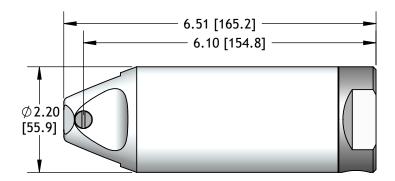
#### NR30: Nipper Body

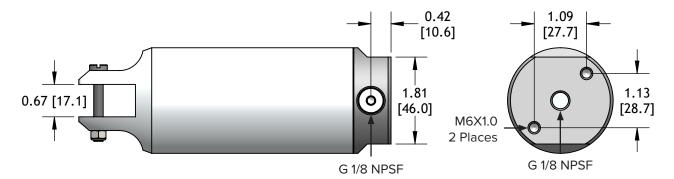
High-quality nipper bodies are designed for reliable operation over a long lifespan.

- accepts any brand size 30 nipper blades
- corrosion resistant stainless-steel spring
- machined aluminum body with low-friction, co-deposited nickel plating with teflon finish
- end cap includes 1/8" bottom and side air-supply ports.
- repair components made by EDCO USA available for purchase



Weight: 18.30 oz [518.8 g]





Tecnical Specifications				
<b>Sprue Ø Cut:</b> 0.39 in [10.0 mm]				
Cutting Pressure:	1,320 lbf*			
Air Consumption:	10.35 in <sup>3</sup>			

<sup>\*</sup>When compressed air is supplied at 87 psi.



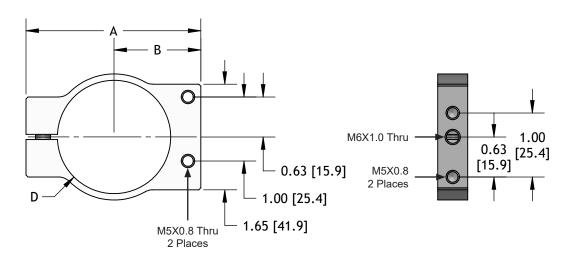
## **Nipper Mounts**

Anodized aluminum nipper mounts are perfect for mounting nippers with other EOAT components.

See page 17:29 to order a preassembled Swivel Nipper Mount.

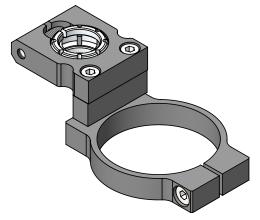
	Nipper Body Size		
NM	20		
	20	NR20	
	<b>30</b> NR30		







	A in [mm]	B in [mm]	D in [mm]	Compatible Nipper	Weight oz [g]
NM20	2.73 [69.3]	1.36 [34.4]	1.97 [50.0]	NR20	1.52 [43.0]
NM30	3.13 [79.5]	1.56 [39.5]	2.21 [56.1]	NR30	1.72 [48.6]



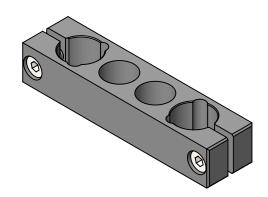
Example: SNM7530-50

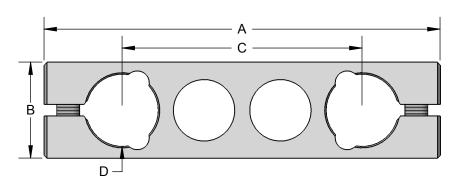


# **Parallel Clamp Mounts**

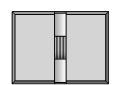
Parallel Clamp Mounts are the perfect solution when you need to mount two tubes in parallel.

	-	Tube Size			
PCLM	5050				
	5050	Ø 1/2" Tube			
	7575	Ø 3/4" Tube			
	<b>1010</b> Ø 1" Tube				









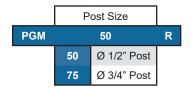
	A in [mm]	B in [mm]	C in [mm]	D in [mm]	E in [mm]	Weight oz [g]
PCLM5050*	2.63 [66.7]	0.75 [19.1]	1.25 [31.8]	0.50 [12.8]	0.75 [19.1]	1.79 [50.8]
PCLM7575	4.13 [104.8]	1.00 [25.4]	2.50 [63.5]	0.75 [19.1]	0.75 [19.1]	3.08 [87.4]
PCLM1010	4.63 [117.5]	1.25 [31.8]	2.75 [69.9]	1.00 [25.4]	0.75 [19.1]	4.20 [118.9]

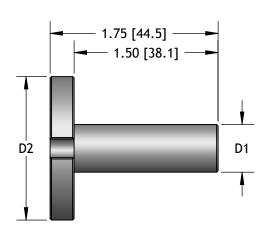
<sup>\*</sup>PCLM5050 screw heads protude by 0.07 [1.8].

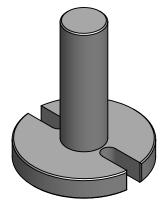


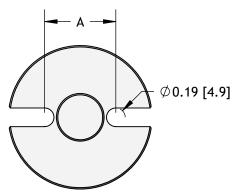
## **Post-Style Gripper Mounts**

Our Post-Style Gripper Mounts work well with a variety of our clamp mounts when you'd like to mount to a plate rather than use tubing.









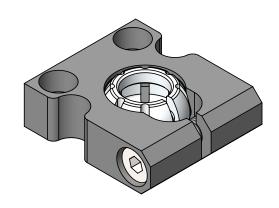
	A in [mm]	D1 in [mm]	D2 in [mm]	Weight oz [g]
PGM50R	0.74 [18.8	0.50 [12.6]	1.50 [38.0]	1.07 [30.3]
PGM75R	0.99 [25.2]	0.75 [19.0]	1.74 [44.1]	1.56 [44.2]

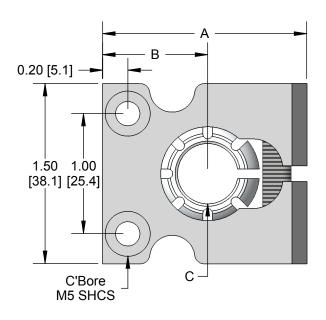


#### **Swivel-Ball Mounts**

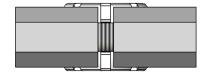
Swivel-Ball Mounts give a degree of movement when mounting tubing. One end has clearance for two M5 socket head cap screws while the other end is fitted with a machined aluminum swivel-ball for mounting tubing.

	Т	ube Size	
SMB		75	
	50	Ø 1/2" Tube	
	<b>75</b> Ø 3/4" Tube		









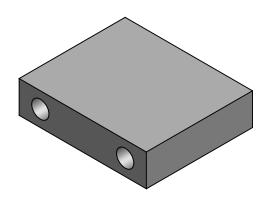
	A in [mm]	B in [mm]	C in [mm]	Weight oz [g]
SMB50	1.70 [43.2]	0.88 [22.2]	0.50 [12.8]	1.55 [43.9]
SMB75		0.98 [24.8]	0.75 [19.1]	1.70 [48.2]

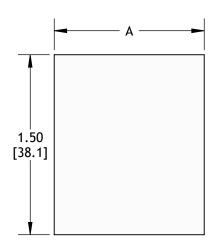


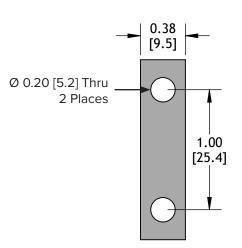
## **Stand-Off Mounts (Spacers)**

Stand-Off Mounts provide a great deal of flexibility when using multiple EOAT components together. We use our Stand-Off Mounts with Swivel-Ball Mounts and Nipper Mounts to give us a wide variety of mounting options.

	S	pacer Size	
SP-		125	
	50	1/2" Height	
	125 1-1/4" Height		





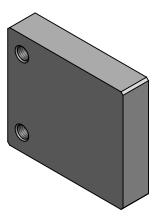


	A in [mm]	Weight oz [g]
SMB50	1.70 [43.2]	0.39 [11.0]
SMB75	1.95 [49.5]	0.97 [27.5]

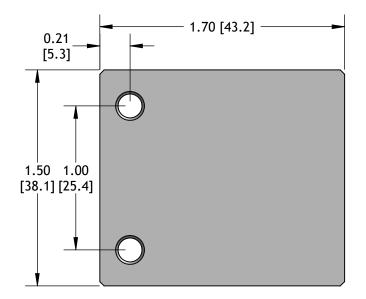


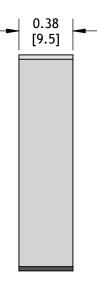
#### **SMB-GP: Mount Plate**

Our mount plate is a simple anodized aluminum machine plate with two M5 thru holes for mounting other pieces of EOAT. We use these with our swivel mounts and spacers to create a versatile mount utilizing a few, simple pieces.



Weight: 1.47 oz [41.5 g]



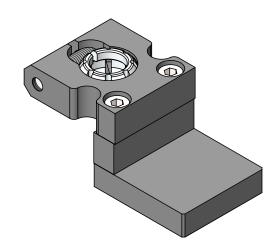


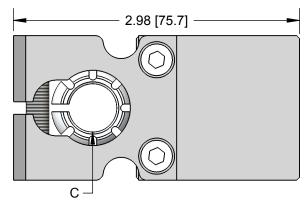


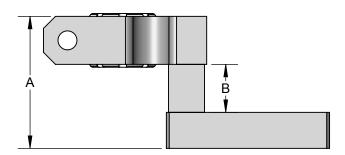
# **Swivel-Gripper Mounts**

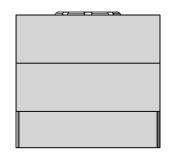
Swivel-Gripper Mounts combine the functionality of our Swivel-Ball Mounts and the flexibility of our Stand-Off Mounts with a Mount Plate for a complete assembly.

	-	Tube Size	Stand-Off		
SGM	75		75		
	50 Ø 1/2" Tube		(Blank)	None	
	<b>75</b> Ø 3/4" Tube		-50	1/2" Stand-Off	
		-125	1-1/4" Stand-Off		









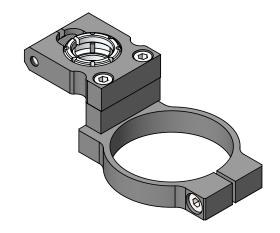
	A in [mm]	B in [mm]	C in [mm]	Weight oz [g]
SGM50	0.88 [22.2]	N/A	0.50 [12.8]	3.29 [93.2]
SGM50-50	1.38 [34.9]	0.50 [12.8]	0.50 [12.8]	3.79 [107.5]
SGM50-125	2.13 [54.0]	1.25 [31.8]	0.50 [12.8]	4.58 [130.0]
SGM75	0.88 [22.2]	N/A	0.75 [19.1]	3.44 [97.6]
SGM75-50	1.38 [34.9]	0.50 [12.8]	0.75 [19.1]	3.94 [111.8]
SGM75-125	4.74 [134.3]	1.25 [31.8]	0.75 [19.1]	4.74 [134.3]

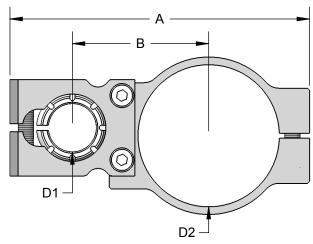


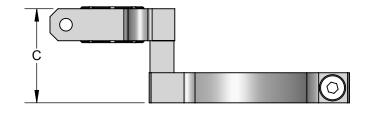
# **Swivel-Nipper Mounts**

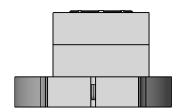
Swivel-Nripper Mounts combine the functionality of our Nipper Mounts and Swivel-Ball Mounts with the flexibility of our Stand-Off Mounts with a Mount Plate for a complete assembly.

	Tube Size		Nipper Size		Stand-Off	
SGM	75		75		75	
	50 Ø 1/2" Tube		50	NR20	(Blank)	None
	<b>75</b> Ø 3/4" Tube		75	NR30	-50	1/2" Stand-Off
					-125	1-1/4" Stand-Off









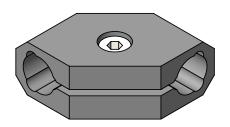
	A in [mm]	B in [mm]	C in [mm]	D1 in [mm]	D2 in [mm]	Weight oz [g]
SNM5020	4.02 [102.1]	1.82 [46.2]	0.97 [24.6]	0.50 [12.8]	1.77 [45.0]	3.34 [94.7]
SNM5020-50	4.02 [102.1]	1.82 [46.2]	1.47 [37.3]	0.50 [12.8]	1.77 [45.0]	3.84 [109.0]
SNM5020-125	4.02 [102.1]	1.82 [46.2]	2.22 [56.4]	0.50 [12.8]	1.77 [45.0]	4.64 [131.5]
SNM5030	4.42 [112.3]	2.02 [51.3]	0.97 [24.6]	0.50 [12.8]	2.21 [56.1]	3.54 [100.3]
SNM5030-50	4.42 [112.3]	2.02 [51.3]	1.47 [37.3]	0.50 [12.8]	2.21 [56.1]	4.04 [114.6]
SNM5030-125	4.42 [112.3]	2.02 [51.3]	2.22 [56.4]	0.50 [12.8]	2.21 [56.1]	4.83 [137.0]
SNM7520	4.28 [108.7]	1.93 [49.0]	0.97 [24.6]	0.75 [19.1]	1.77 [45.0]	3.49 [99.0]
SNM7520-50	4.28 [108.7]	1.93 [49.0]	1.47 [37.3]	0.75 [19.1]	1.77 [45.0]	4.00 [113.3]
SNM7520-125	4.28 [108.7]	1.93 [49.0]	2.22 [56.4]	0.75 [19.1]	1.77 [45.0]	4.79 [135.8]
SNM7530	4.68 [118.9]	2.13 [54.1]	0.97 [24.6]	0.75 [19.1]	2.21 [56.1]	3.69 [104.6]
SNM7530-50	4.68 [118.9]	2.13 [54.1]	1.47 [37.3]	0.75 [19.1]	2.21 [56.1]	4.19 [118.9]
SNM7530-125	4.68 [118.9]	2.13 [54.1]	2.22 [56.4]	0.75 [19.1]	2.21 [56.1]	4.99 [141.4]

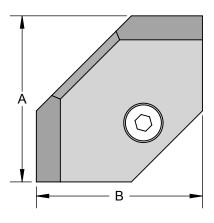


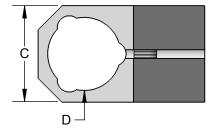
# **Wrist Clamps**

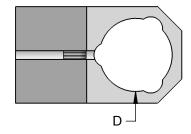
Made of anodized aluminum, Wrist Clamps are a great way to mount two pieces of tubing (same  $\varnothing$ ) at a 90° angle.

	Tube Size			
wc	5050			
	5050	Ø 1/2" Tube		
	7575	Ø 3/4" Tube		
	1010	Ø 1" Tube		









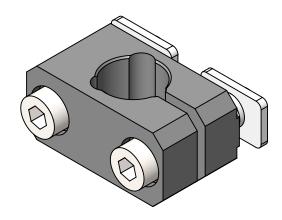
	A in [mm]	B in [mm]	C in [mm]	D in [mm]	Weight oz [g]
WC5050	1.63 [41.3]	1.63 [41.3]	0.75 [19.1]	0.51 [12.9]	1.50 [42.4]
WC7575	1.73 [43.9]	1.73 [43.9]	1.00 [25.4]	0.76 [19.3]	1.79 [50.7]
WC1010	1.98 [50.3]	1.98 [50.3]	1.25 [31.8]	1.01 [25.6]	2.52 [71.4]

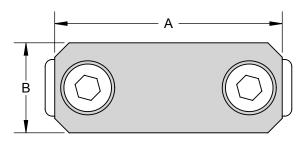


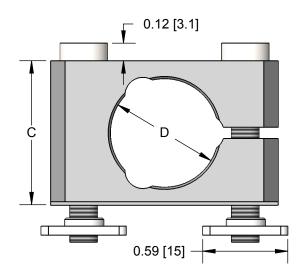
# **Extrusion Clamp Mounts**

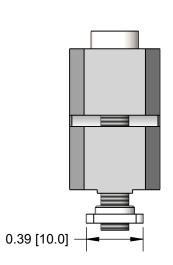
An anodized aluminum clamp with stainless steel fasteners is perfect for mounting tubing to an extrusion.

	Tube Size		
XCLM	50		
	50	Ø 1/2" Tube	
	75	Ø 3/4" Tube	









		A in [mm]	B in [mm]	C in [mm]	D in [mm]	Weight oz [g]
	XCLM50	1.34 [34.0]	0.63 [15.9]	0.75 [19.1]	0.50 [12.8]	1.01 [28.7]
	XCLM75	1.58 [40.1]	0.63 [15.9]	1.00 [25.4]	0.75 [19.1]	1.35 [38.3]