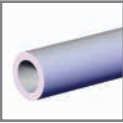


ROUND TOOLING SYSTEMS

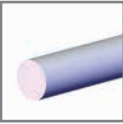
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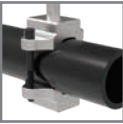
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Tubes and Rods 8



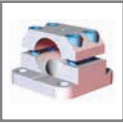
Single Mushroom Tool Holder..... 10



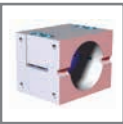
Double Mushroom Tool Holder 11



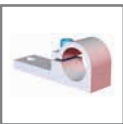
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Flange Mid Mount Brackets and Blocks 15



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Cross Transition Brackets and Blocks 21



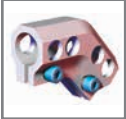
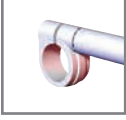
T-Clamp Transition Brackets and Blocks 26



Wrist Brackets and Blocks 30

ROUND TOOLING SYSTEMS

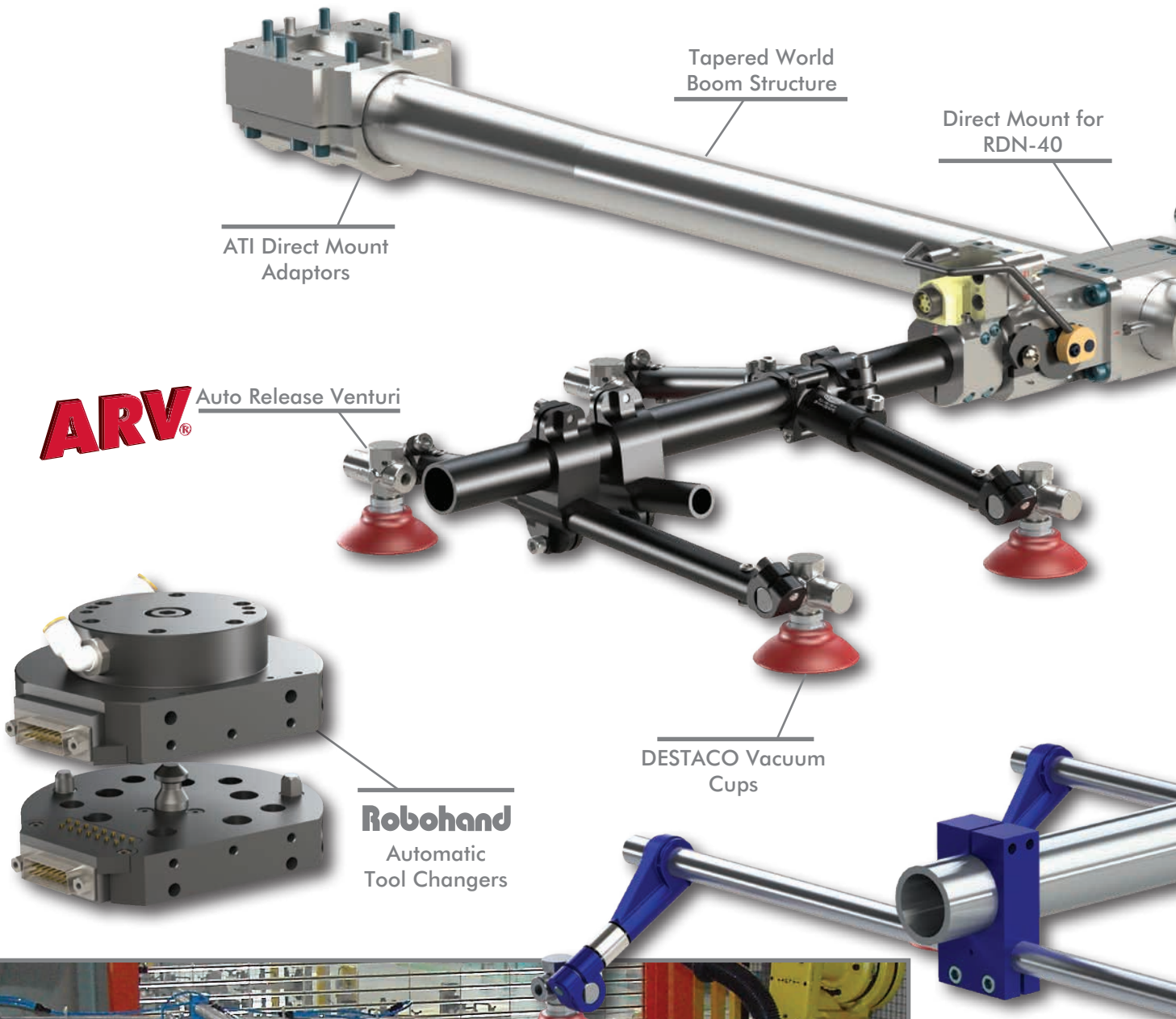
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ROUND TOOLING SYSTEMS

World Tool System Example with Accelerate® Lightweight Tooling Components

DESTACO's world tool components are configured to handle parts of any size and shape, and can be re-used for future applications.



ROUND TOOLING SYSTEMS

Traditional Round Tooling System Example

Round tooling components are used in combination with the Accelerate® Collection for lightweight tooling solutions



Most commonly used in:

Applications

Load/Unload
Pick and Place
Material Handling
Hot Forming

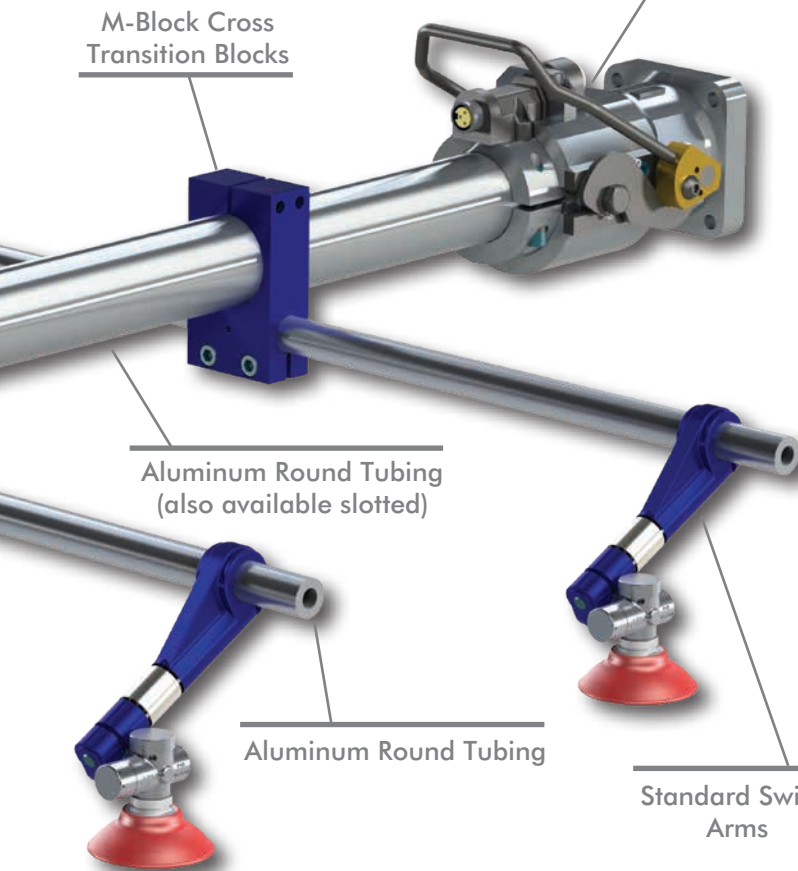
Markets

Automotive
Industrial
Appliance
Plastics



40mm/1.50"
Quick Disconnect

60mm/2.50" Quick Disconnect
with Electric Connection

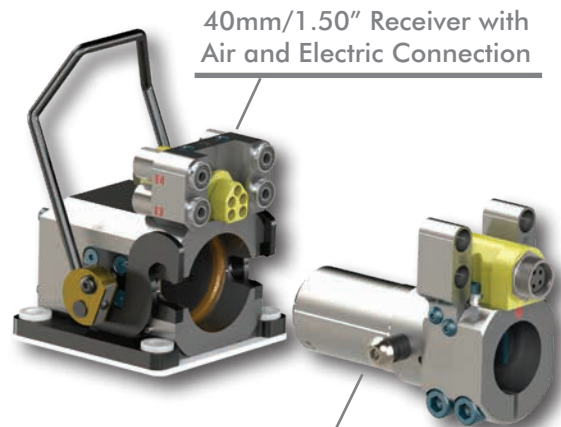


M-Block Cross
Transition Blocks

Aluminum Round Tubing
(also available slotted)

Aluminum Round Tubing

Standard Swivel
Arms



40mm/1.50" Receiver with
Air and Electric Connection

40mm/1.50" Receiver with
Air and Electric Connection

Hot Forming Solutions



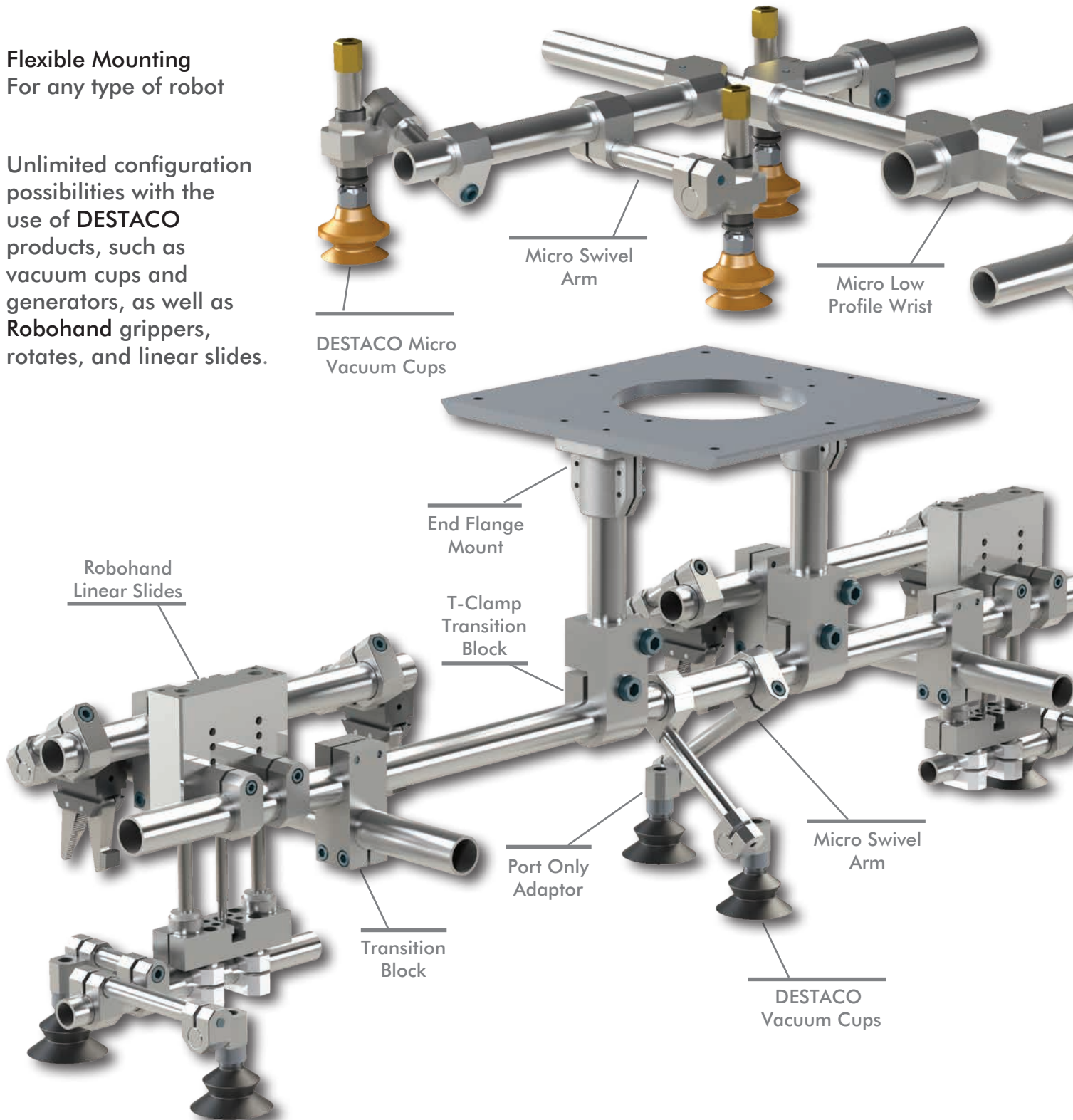
ROUND TOOLING SYSTEMS

Micro Round Tooling System Example

A family within the traditional round tooling system, micro tooling components are made from lightweight aluminum with thin wall tubing. This system is designed to handle small, lightweight parts, plastic injection mold unloading, and unusual shaped objects.

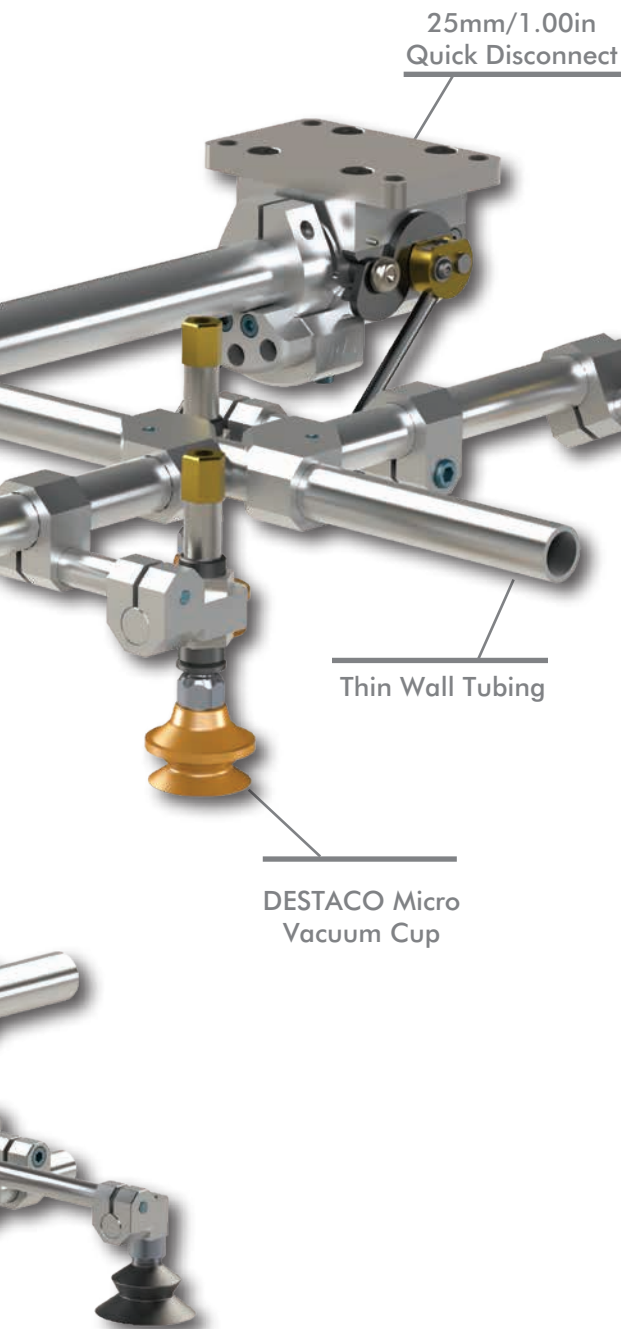
Flexible Mounting
For any type of robot

Unlimited configuration possibilities with the use of DESTACO products, such as vacuum cups and generators, as well as Robohand grippers, rotates, and linear slides.



ROUND TOOLING SYSTEMS

Micro Round Tooling System Example



Most commonly used in:

Applications

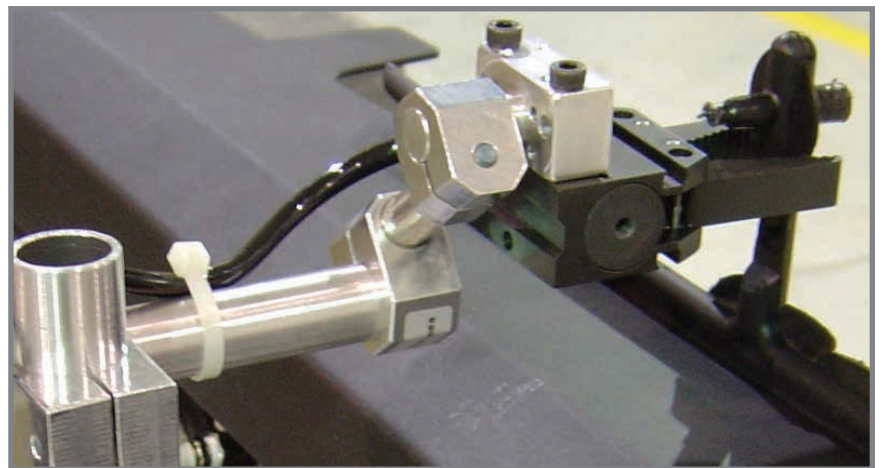
Pick and Place
Material Handling
Plastic Injection
Vision/Testing

Markets

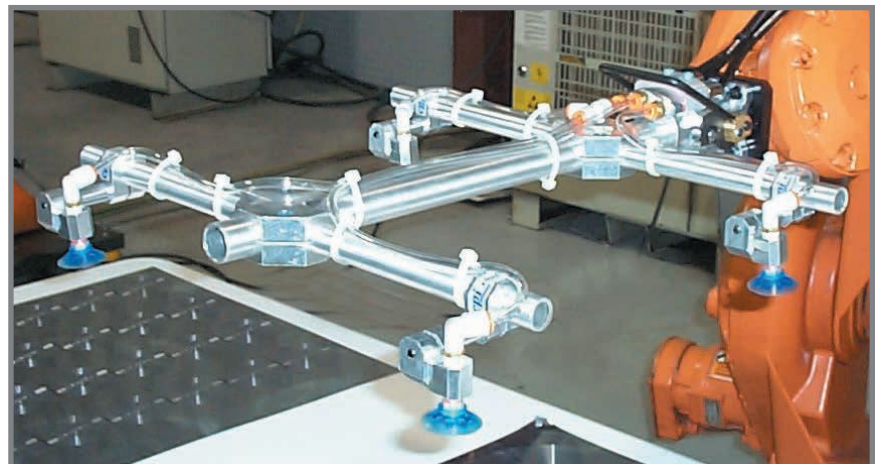
Medical
Industrial
Consumer
Food and Packaging

Level Compensator
and Mount

The micro tooling system can be used with DESTACO's award winning, world's first electric vacuum cup.



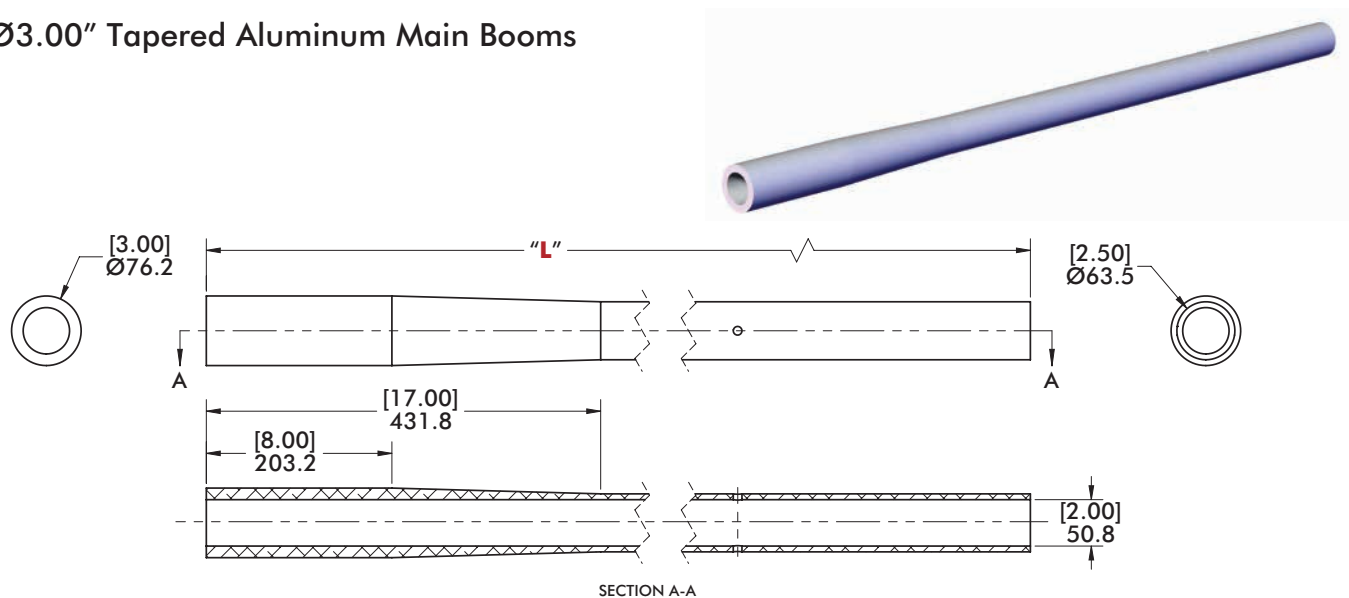
Micro round tooling systems can be permanently mounted to the robot with a direct mount or with manual or automatic tool changers. Optional quick disconnect air ports provides a simple connection point for air supply when changing between different tooling configurations.



WORLD TOOL BOOMS

Round Tooling | Dimensions | Technical Specifications

PAT Ø3.00" Tapered Aluminum Main Booms



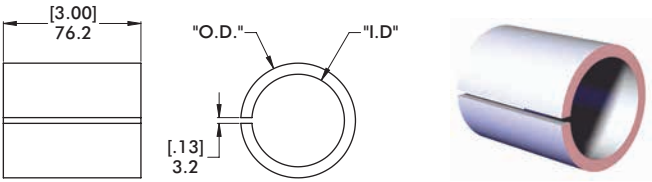
Model	"L"	Weight
CPI-PAT-30TP-0M-1600	[62.99] 1600.0	[13.43 lb] 6.09 kg
CPI-PAT-30TP-0M-30	[30.00] 762.0	[7.91 lb] 3.59 kg
CPI-PAT-30TP-0M-34	[34.00] 863.6	[8.58 lb] 3.89 kg
CPI-PAT-30TP-0M-36	[36.00] 914.4	[8.91 lb] 4.04 kg
CPI-PAT-30TP-0M-60	[60.00] 1524.0	[12.95 lb] 5.87 kg

Model	"L"	Weight
CPI-PAT-30TP-1M-55	[55.00] 1397.0	[12.08 lb] 5.48 kg
CPI-PAT-30TP-1M-60	[60.00] 1524.0	[12.95 lb] 5.87 kg
CPI-PAT-30TP-1M-64	[64.00] 1625.6	[13.60 lb] 6.17 kg
CPI-PAT-30TP-2M-55	[55.00] 1397.0	[12.08 lb] 5.48 kg

CB Aluminum Bushing

For use in cooperation with Clamp Blocks.

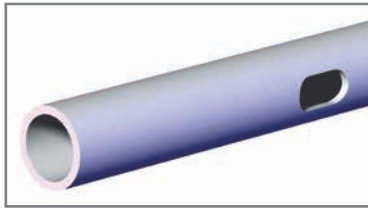
Model	(Ø)"O.D."	(Ø)"I.D."	Weight
CPI-CB-15-10	1.50"(in)	1.00"(in)	[.76 lb] .34 kg
CPI-CB-20-15	2.00"(in)	1.50"(in)	[.81 lb] .37 kg
CPI-CB-25-20	2.50"(in)	2.00"(in)	[.81 lb] .37 kg



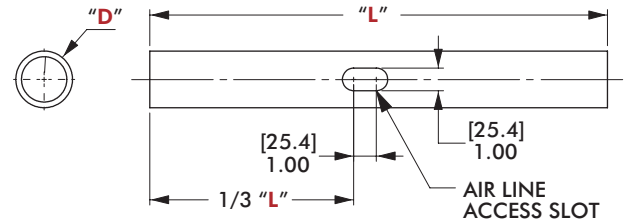
TUBES AND RODS

Round Tooling | Dimensions | Technical Specifications

BT1 Slotted Aluminum Boom/Tubing

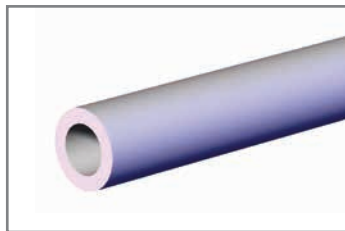


"L" = Specify Length
in 6.00" or 150mm Increments
English Example:
CPI-BT1-150-7S-06 (6.00")
Metric Example:
CPI-BT1-150-7S-150 (150mm)

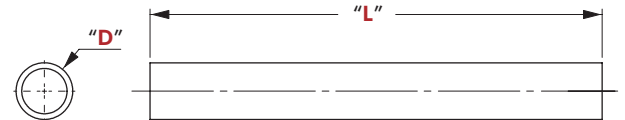


Model	(Ø) "D"	Wall Thickness	Weight	Linear Deflection	Torsional Twist
CPI-BT1-150-7S-"L"	1.50"(in)	[0.25"] 6.35mm	[1.2 lb/ft] 1.8 kg/m	5.6mm [0.22"] @ 100lb/24.00"	.3.1° @ 300ft-lbs
CPI-BT1-250-9S-"L"	2.50"(in)	[0.25"] 6.35mm	[2.1 lb/ft] 3.1 kg/m	12.7mm [0.50"] @ 150lb/48.00"	2.3° @ 600ft-lbs
CPI-BT1-2538-9S-"L"	2.50"(in)	[0.375"] 9.53mm	[2.9 lb/ft] 4.3 kg/m	10.2mm [0.40"] @ 150lb/48.00"	1.8° @ 600ft-lbs
CPI-BT1-60-9S-"L" (Metric)	60mm	[0.20"] 5mm	[1.6 lb/ft] 2.4 kg/m	17.8mm [0.70"] @ 150lb/48.00"	3.3° @ 600ft-lbs

PAT Aluminum Tubing



"L" = Specify Length
in 6.00" or 150mm Increments
English Example:
CPI-PAT-15-06 (6.00")
Metric Example:
CPI-PAT-40-150 (150mm)

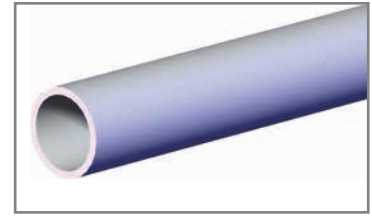
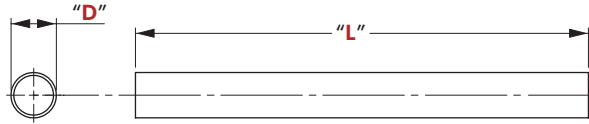


Model	(Ø) "D"	Wall Thickness	Weight	Linear Deflection	Torsional Twist
CPI-PAT-12-"L"	1.25"(in)	[0.25"] 6.35mm	[0.9 lb/ft] 1.37kg/m	3.3mm [0.13"] @ 75lb/18.00"	1.6° @ 100ft-lbs
CPI-PAT-15-"L"	1.50"(in)	[0.25"] 6.35mm	[1.2 lb/ft] 1.8 kg/m	5.6mm [0.22"] @ 100lb/24.00"	.3.1° @ 300ft-lbs
CPI-PAT-40-"L" (Metric)	40mm	[0.20"] 5mm	[1.2 lb/ft] 1.8 kg/m	5.6mm [0.22"] @ 100lb/24.00"	3.2° @ 300ft-lbs
CPI-PAT-25-"L"	2.50"(in)	[0.25"] 6.35mm	[2.1 lb/ft] 3.1 kg/m	12.7mm [0.50"] @ 150lb/48.00"	2.3° @ 600ft-lbs
CPI-PAT-60-"L" (Metric)	60mm	[0.20"] 5mm	[1.6 lb/ft] 2.4 kg/m	17.8mm [0.70"] @ 150lb/48.00"	3.3° @ 600ft-lbs
CPI-PAT-2538-"L"	2.50"(in)	[0.375"] 9.53mm	[2.9 lb/ft] 4.3 kg/m	10.2mm [0.40"] @ 150lb/48.00"	1.8° @ 600ft-lbs

TUBING, RODS AND BUSHINGS

Round Tooling | Dimensions | Technical Specifications

PAT Thin Wall Aluminum Tubing



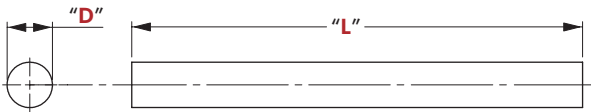
Model	(Ø) "O.D."	Wall Thickness	Weight
CPI-PAT-50T-"L"	0.50"(in)	[0.085"] 2.16mm	[0.13 lb/ft] 193.0 g/m
CPI-PAT-75T-"L"	0.75"(in)	[0.085"] 2.16mm	[0.20 lb/ft] 309.3 g/m
CPI-PAT-10T-"L"	1.00"(in)	[0.085"] 2.16mm	[0.28 lb/ft] 425.6 g/m

"L" = Specify Length

Standard Lengths

04 (4.00")
06 (6.00")
08 (8.00")
10 (10.00")
12 (12.00")
24 (24.00")
36 (36.00")

PAB Aluminum Rods



"L" = Specify Length

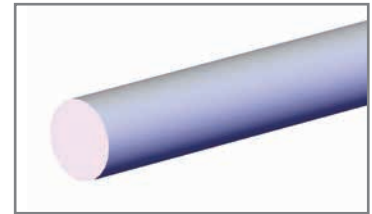
in 6.00" or 150mm Increments

English Example:

CPI-PAB-10-06 (6.00")

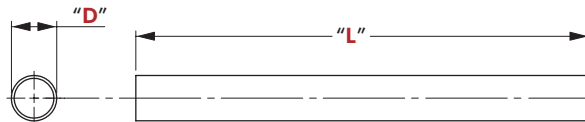
Metric Example:

CPI-PAB-25-150 (150mm)



Model	(Ø) "D"	Wall Thickness	Weight	Linear Deflection	Torsional Twist
CPI-PAB-10-"L"	1.00"(in)	SOLID BAR	[0.9 lb/ft] 1.4 kg/m	1.52mm [0.06"] @ 50lb/12.00"	.002° @ 100ft-lb
CPI-PAB-25-"L" (Metric)	25.0mm	SOLID BAR	[0.9 lb/ft] 1.4 kg/m	1.52mm [0.06"] @ 50lb/12.00"	.002° @ 100ft-lb

PST Steel Tubing



(L) = Specify Length

PST-10: 150, 200, 225, 250, 275, 300 [mm] (CPI-PST-10-150)

PST-1212: 6, 8, 10, 12, 14, 16, 18 [in] (CPI-PST-1212-6)

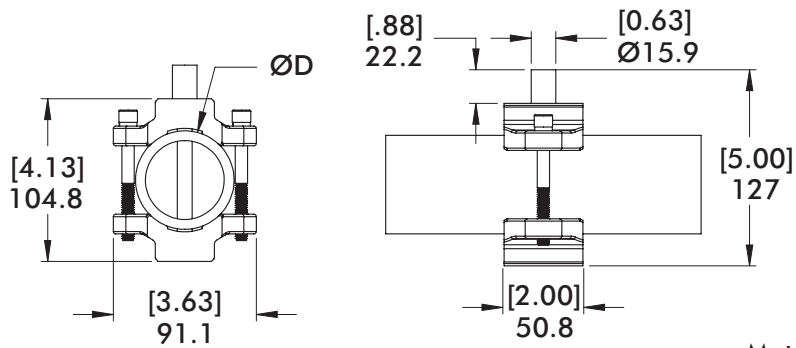
M1512: 125, 160, 300, 350, 350, 600, 900 [mm] (M1512-150)

Model	(Ø) "D"	Wall Thickness	Weight	Linear Deflection	Torsional Twist
CPI-PST-10-"L"	1.00"(in)	3.18mm [0.125"]	1.8 kg/m [1.2 lb/ft]	0.9mm [0.003"] @ 50lb/12.00"	.001° @ 100ft-lb
CPI-PST-1212-"L"	1.25"(in)	3.18mm [0.125"]	2.2 kg/m [1.5 lb/ft]	0.3mm [0.001"] @ 50lb/12.00"	.001° @ 100ft-lb

Model	(Ø) "O.D."	Wall Thickness	Weight
M1512-"L"	1.00"(in)	3.0mm [0.12"]	1.5 kg/m [1.03 lb/ft]

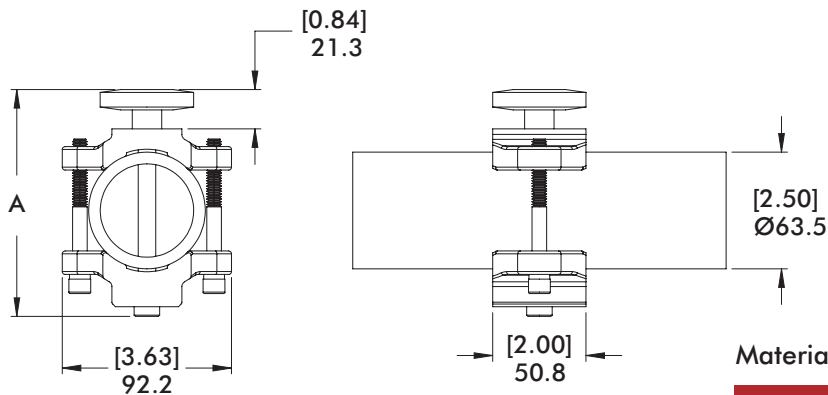
SINGLE MUSHROOM TOOL HOLDER

Round Tooling | Dimensions



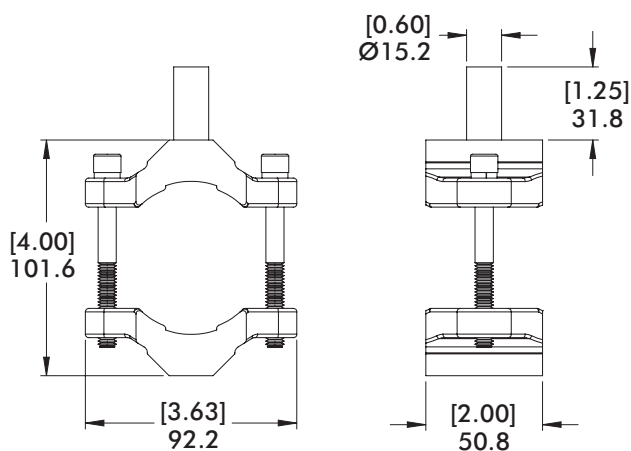
Material: Aluminum

Model Number	ØD	Weight
CPI-THM-250-POST	2.5 in	499g [1.10 lb]
CPI-THM-60-POST	60mm	499g [1.10 lb]



Material: Aluminum

Model Number	A	Weight
CPI-THM-250	122.7 [4.83]	635g [1.40 lb]
CPI-THM-250-WTTB	127 [5.00]	590g [1.30 lb]

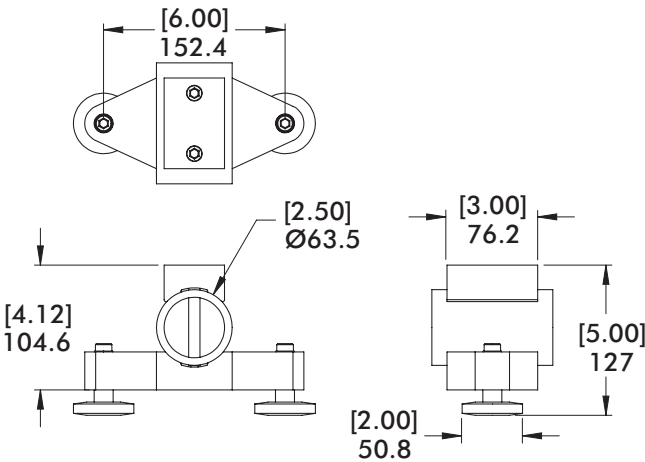
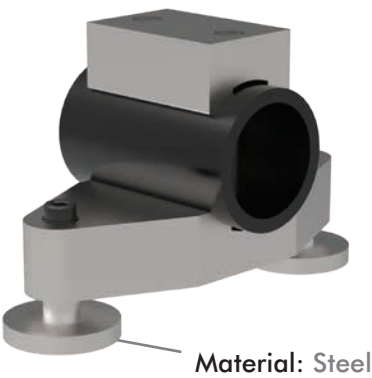


Material: Aluminum

Model Number	Weight
CPI-THM-250-SVP	408g [0.90 lb]

DOUBLE MUSHROOM TOOL HOLDER

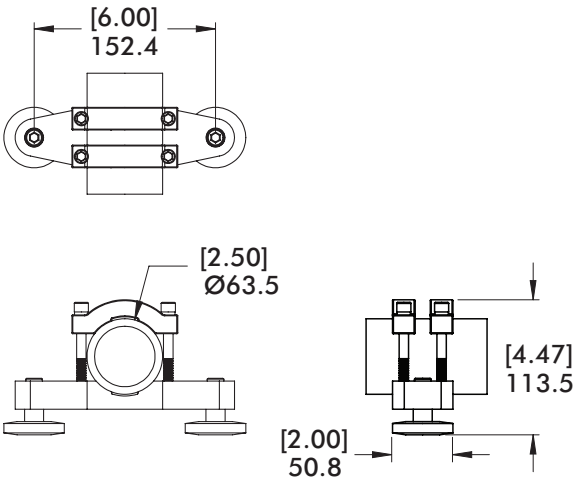
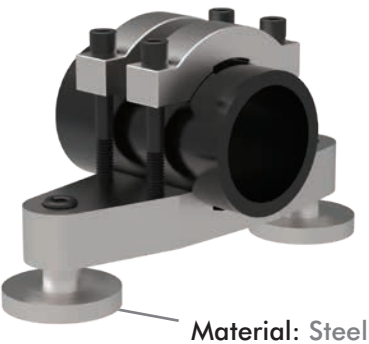
Round Tooling | Dimensions



Material: Aluminum

Model Number	Weight
CPI-THM-250-DBL	1.54g [3.40 lb]

.....



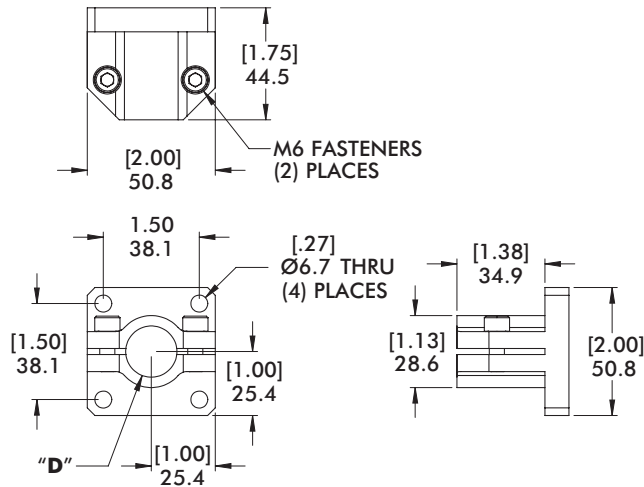
Material: Aluminum

Model Number	Weight
CPI-THM-250-DBL-WTTB	1.09g [2.40 lb]

FLANGE END MOUNT BRACKET AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

CLM-xxx-15F End Flange Mount for Ø20mm/0.75" Tube (Micro)

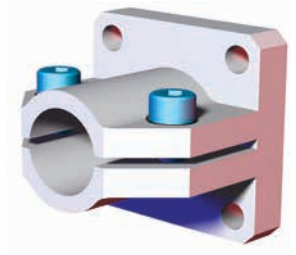


Specifications:

Max. Static Clamp Load:

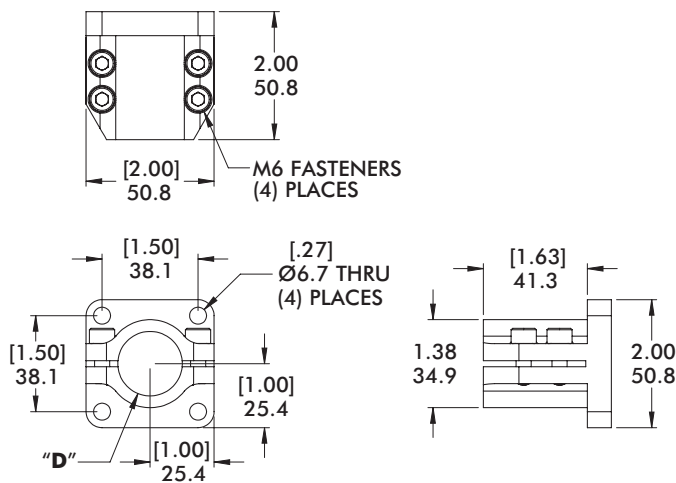
20.3 N*m [15 ft-lb]

Material: Aluminum



Model Number	(Ø)"D"	Weight
CPI-CLM-20M-15F	20mm	[.26 lb] .12 kg
CPI-CLM-75-15F-ATI	.75"(in)	[.32 lb] .14 kg

CLM-xxx-15F End Flange Mount for Ø25mm/1.00" Tube (Micro)

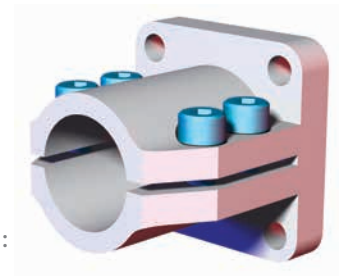


Specifications:

Max. Static Clamp Load:

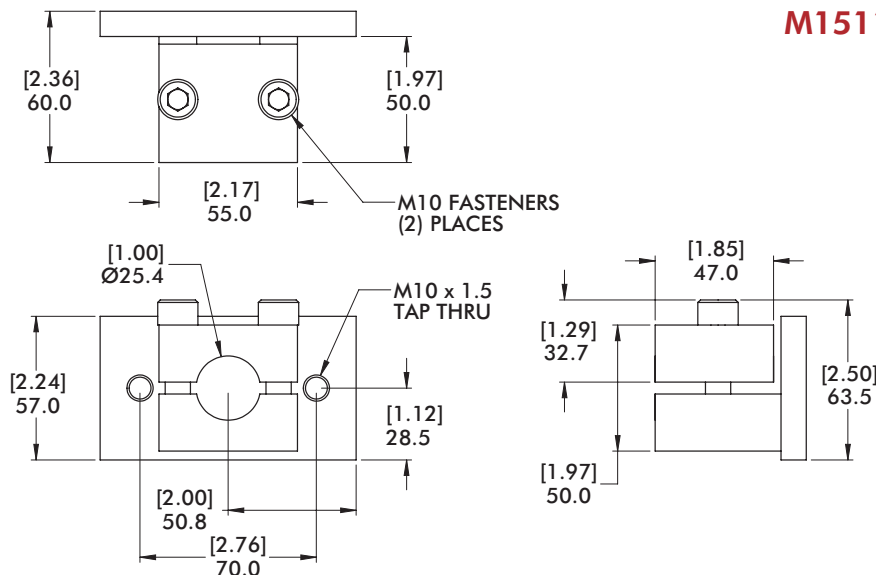
40.7 N*m [30 ft-lb]

Material: Aluminum



Model Number	(Ø)"D"	Weight
CPI-CLM-25M-15F	25mm	[.32 lb] .14 kg
CPI-CLM-10-15F	1.00"(in)	

M1511 End Flange Mount for Ø1.00" Tube

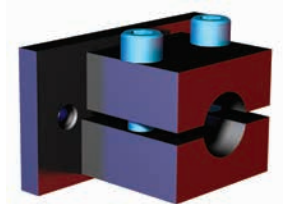


Specifications:

Max. Static Clamp Load:

203 N*m [150 ft-lb]

Material: Aluminum



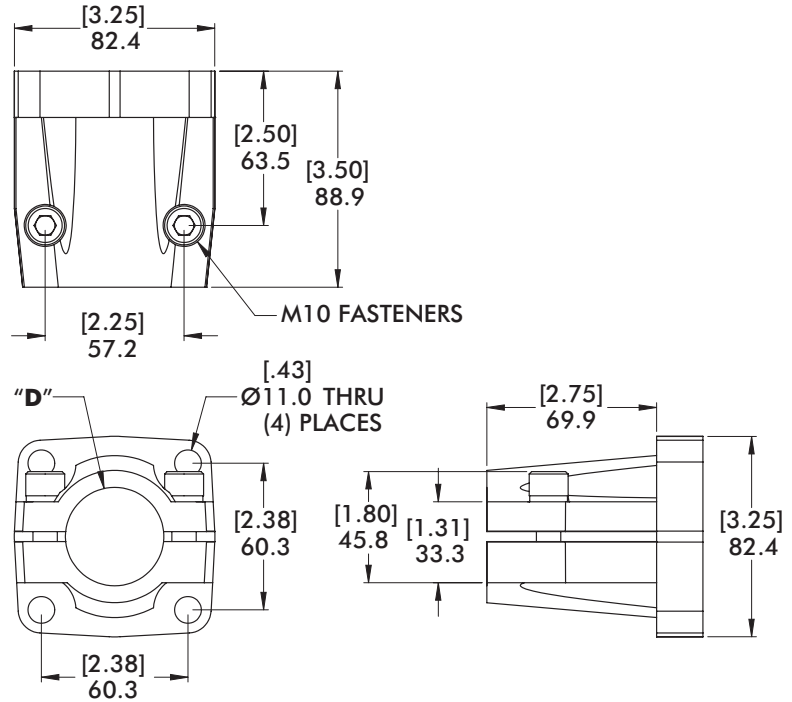
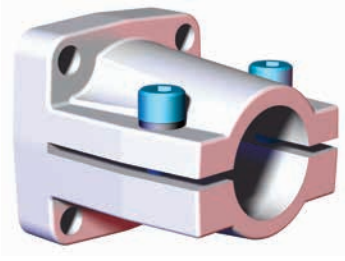
Model Number	Weight
M1511	[1.08 lb] .49 kg

FLANGE END MOUNT BRACKET AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

KL/CL End Flange Mount for Ø40mm/1.50" Tube



Specifications:

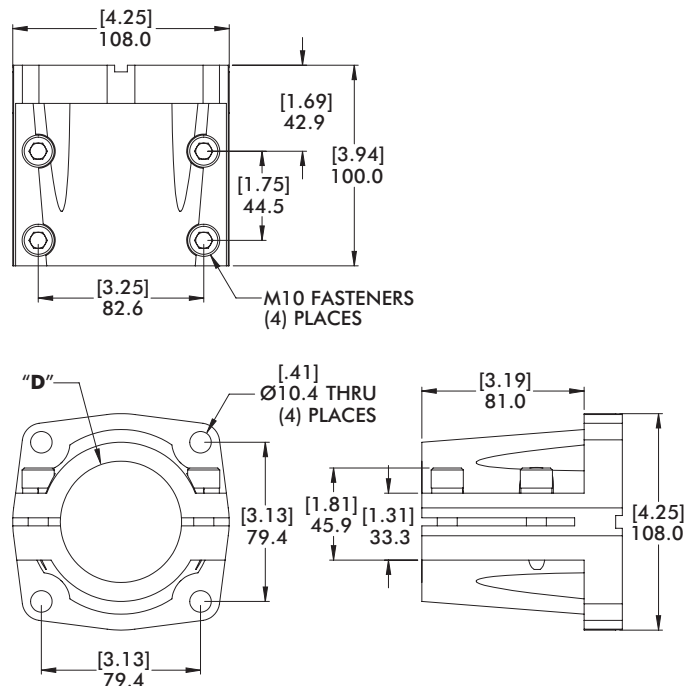
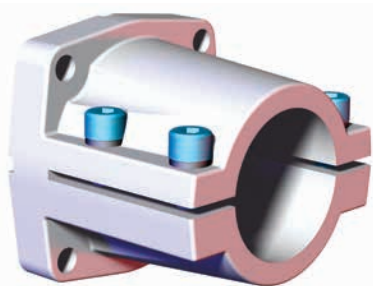
Max. Static Clamp Load:

203 N*m [150 ft-lb]

Material: Aluminum

Model Number	(Ø)"D"	Weight
CPI-KL-40-60F	40mm	[1.55 lb] .70 kg
CPI-CL-15-238F	1.50"(in)	[1.61 lb] .73 kg

KL/CL End Flange Mount for Ø60mm/2.50" Tube



Specifications:

Max. Static Clamp Load:

675 N*m [500 ft-lb]

Material: Aluminum

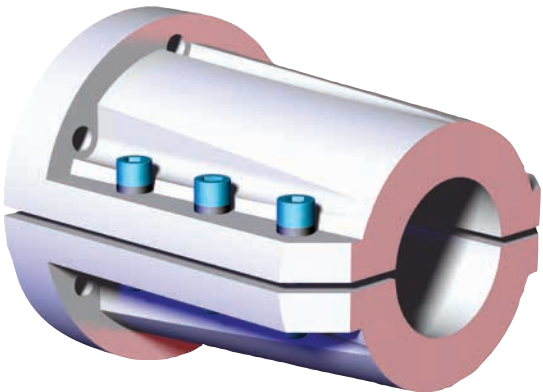
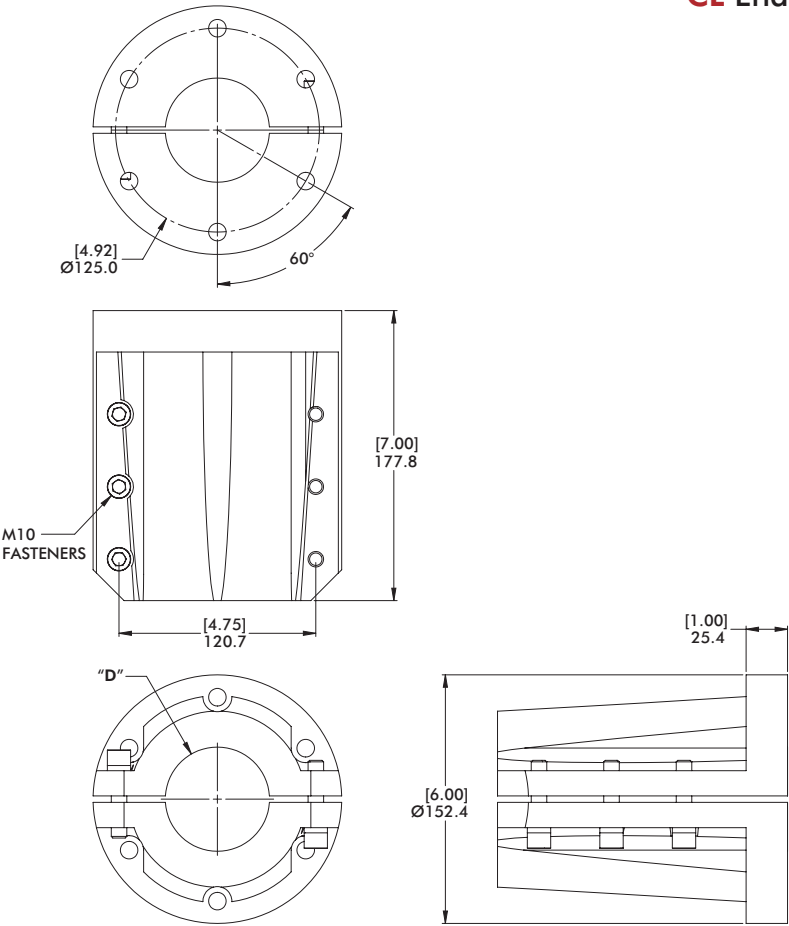
Model Number	(Ø)"D"	Weight
CPI-KL-60-78F	60mm	[2.73 lb] 1.24 kg
CPI-CL-25-312F	2.50"(in)	[2.52 lb] 1.14 kg

FLANGE END MOUNT BRACKET AND BLOCKS

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

Round Tooling | Dimensions | Technical Specifications

CL End Flange Mount with Ø125mm Bolt Pattern



Specifications:

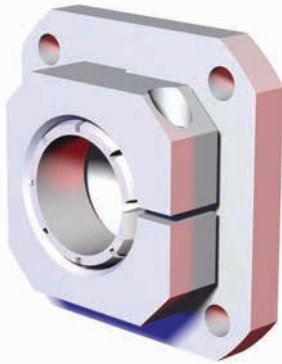
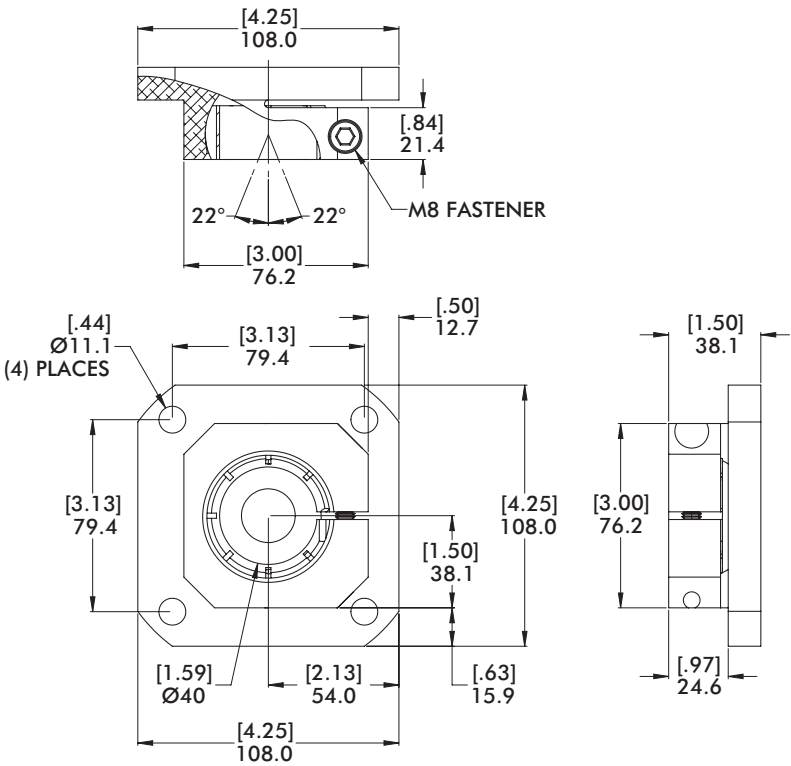
Max. Static Clamp Load:

746 N*m [550 ft-lb]

Material: Aluminum

Model Number	(Ø)"D"	Weight
CPI-CL-60-125F	60mm	[9.86 lb] 4.47 kg
CPI-CL-250-125F	2.50"(in)	[10.20 lb] 4.63 kg
CPI-CL-300-125F	3.00"(in)	[8.70 lb] 3.95 kg

RJM Ø40mm Spherical Flange End Mount



Specifications:

Max. Static Clamp Load:

203 N*m [150 ft-lb]

Material: Aluminum

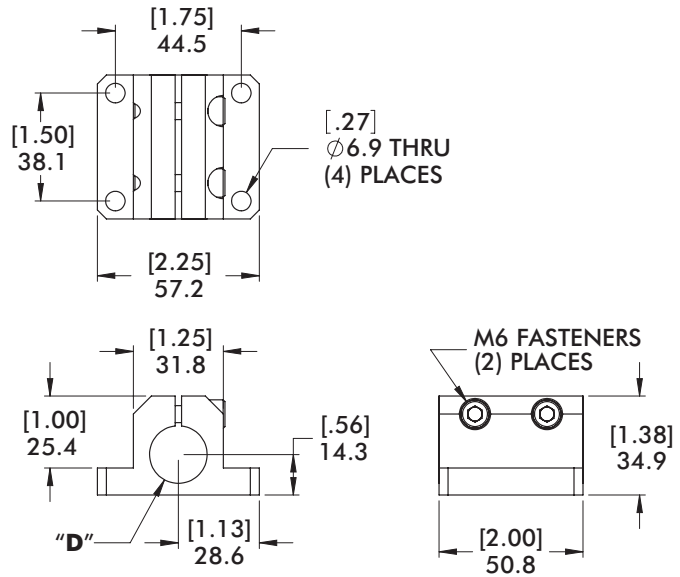
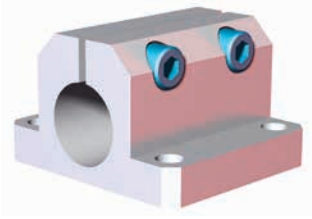
Model Number	Weight
CPI-RJM-78F-40S	[1.54 lb] .70 kg

FLANGE MID MOUNT BRACKETS AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

CLM-xxx-1517F-90 Mid Flange Mount for Ø20mm/0.75" Tube (Micro)



Specifications:

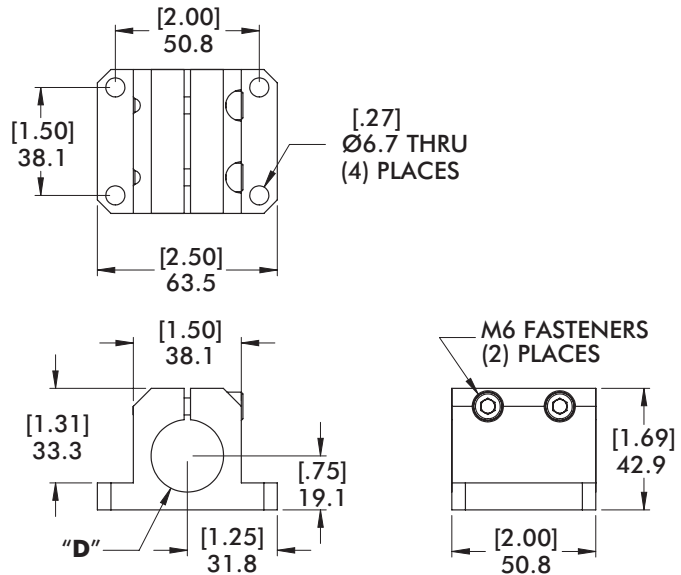
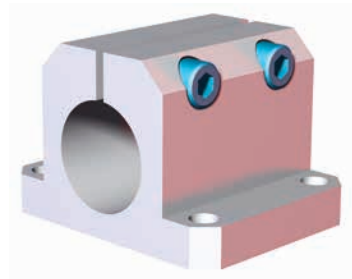
Max. Static Clamp Load:

47.5 N*m [35 ft-lb]

Material: Aluminum

Model Number	(Ø)"D"	Weight
CPI-CLM-20M-1517F-90	20mm	[.33 lb] .14 kg
CPI-CLM-75-1517F-90	.75"(in)	[.35 lb] .16 kg

CLM-xxx-152F-90 Mid Flange Mount for Ø25mm/1.00" Tube (Micro)



Specifications:

Max. Static Clamp Load:

81.4 N*m [60 ft-lb]

Material: Aluminum

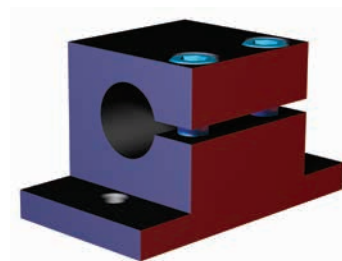
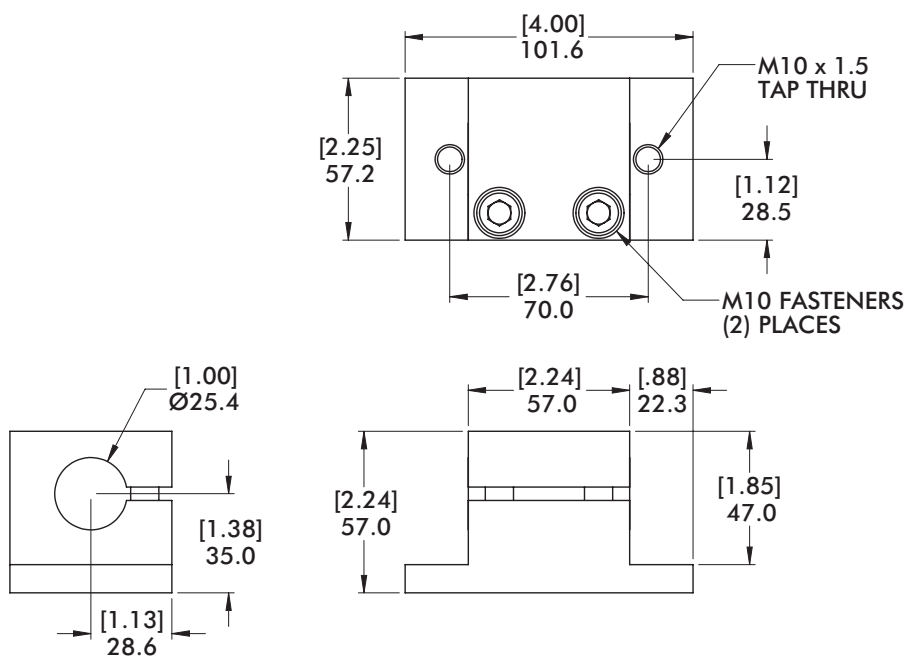
Model Number	(Ø)"D"	Weight
CPI-CLM-25M-152F-90	25mm	[.41 lb] .19 kg
CPI-CLM-10-152F-90	1.00"(in)	

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

FLANGE MID MOUNT BRACKETS AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

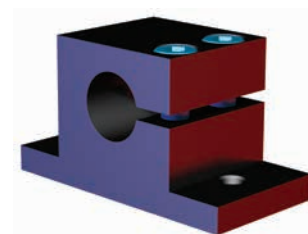
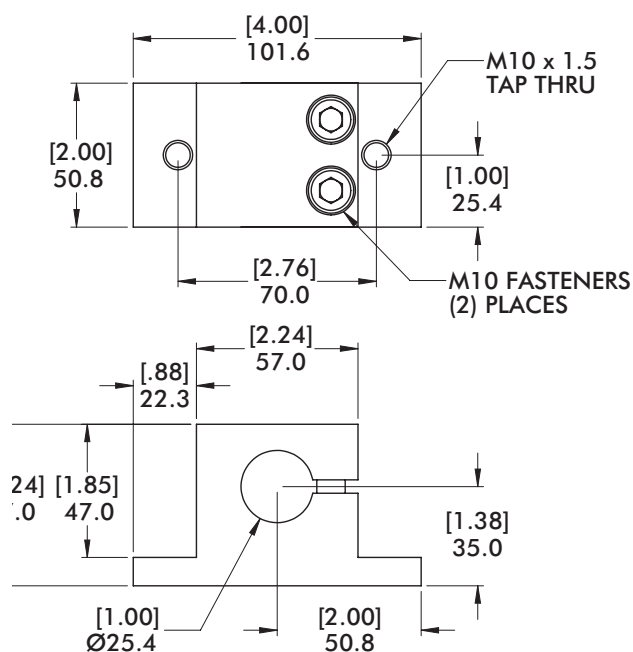
M-1509 Inline End Flange Mount for Ø1.00" Tube



Specifications:
Max. Static Clamp Load:
203 N*m [150 ft-lb]
Material: Aluminum

Model Number	Weight
M1509	[.99 lb] .45 kg

M-1510 End Flange Mount for Ø1.00" Tube



Specifications:
Max. Static Clamp Load:
203 N*m [150 ft-lb]
Material: Aluminum

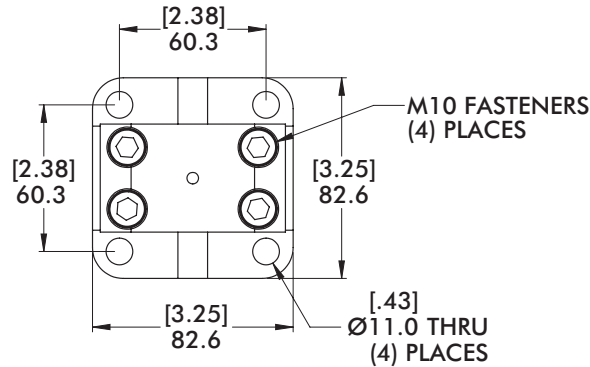
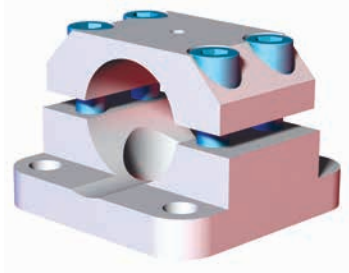
Model Number	Weight
M1510	[.87 lb] .39 kg

FLANGE MID MOUNT BRACKETS AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

CL-xx-xxxF-90 Mid Flange Mount for Ø40mm/1.50" Tube



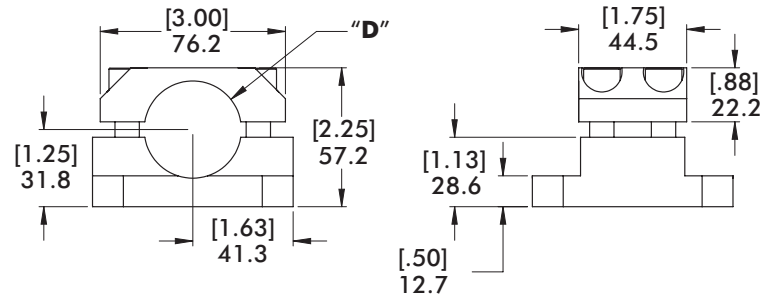
Specifications:

Max. Static Clamp Load:

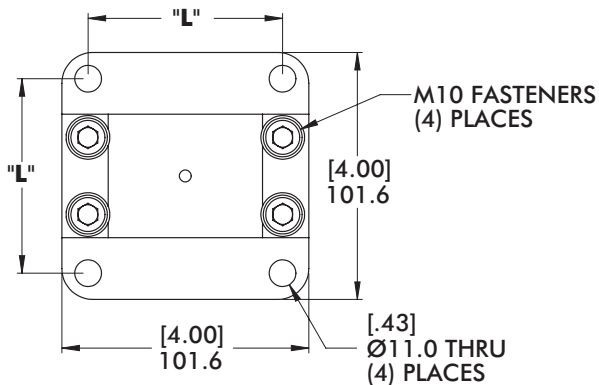
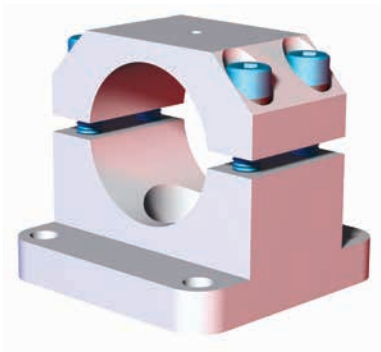
475 N*m [350 ft-lb]

Material: Aluminum

Model Number	(Ø)"D"	Weight
CPI-KL-40-60F-90	40mm	[1.09 lb] .49 kg
CPI-CL-15-238F-90	1.50"(in)	[1.11 lb] .50 kg



KL-60-xxxF-90 Mid Flange Mount for Ø60mm Tube



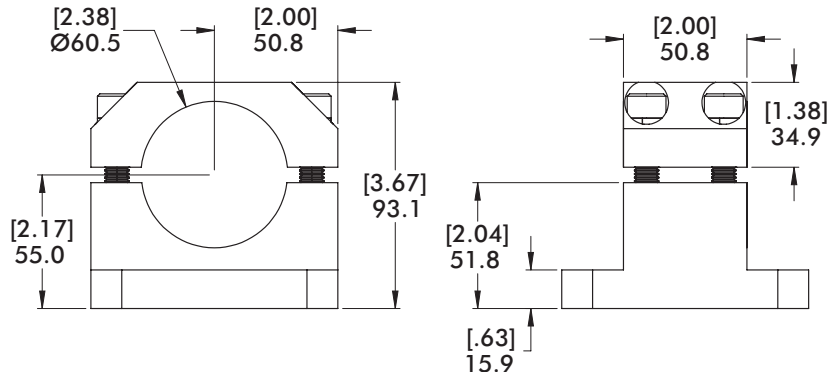
Specifications:

Max. Static Clamp Load:

675 N*m [500 ft-lb]

Material: Aluminum

Model Number	"L"	Weight
CPI-KL-60-78F-90	[3.07] 78	[2.24 lb] 1.02 kg
CPI-KL-60-80F-90	[3.15] 80	

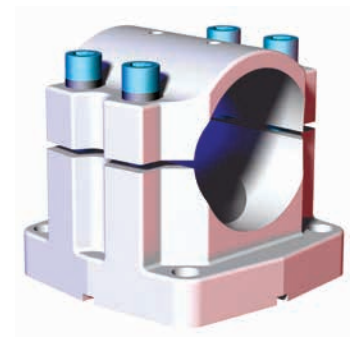
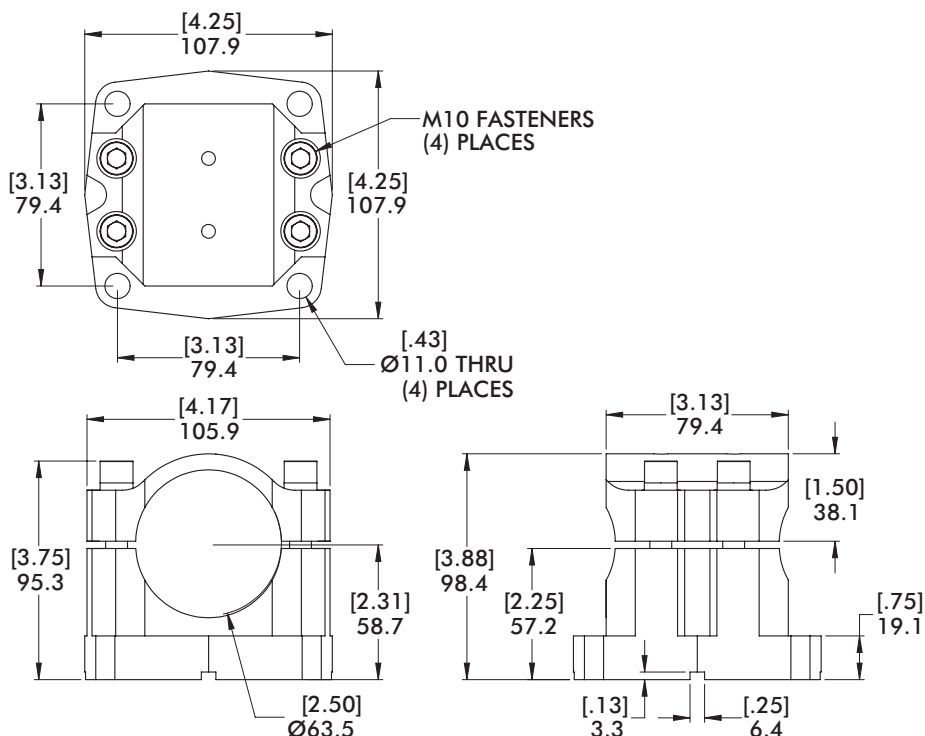


Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

FLANGE MID MOUNT BRACKETS AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

CL-25-312F-90 Mid Flange Mount for Ø2.50" Tube



Specifications:

Max. Static Clamp Load:

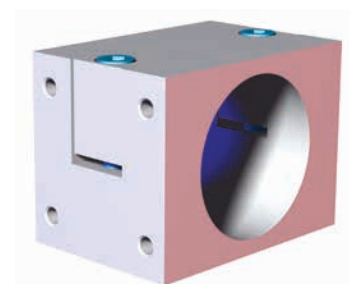
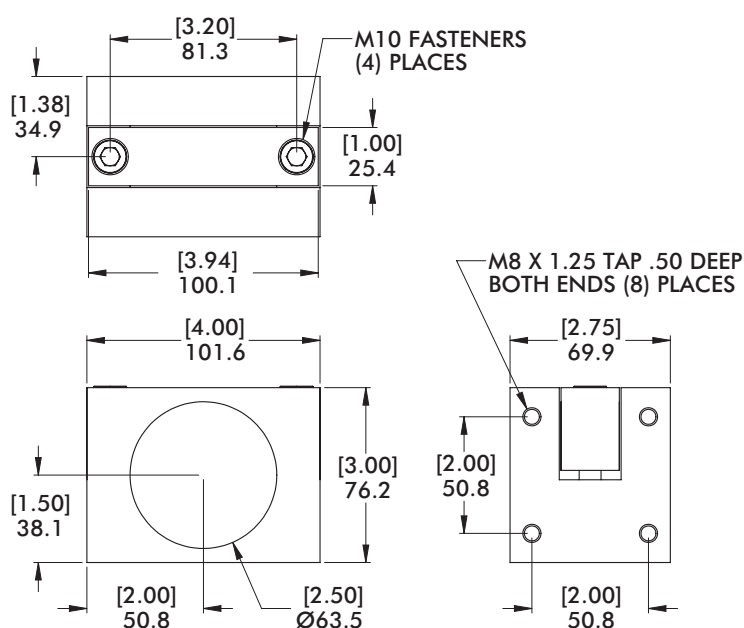
675 N*m [500 ft-lb]

Material: Aluminum

Model Number	Weight
CPI-CL-25-312F-90	[2.51 lb] 1.14 kg

World Tool Direct Mounts

CL-xx-DM-10F Direct Mount Bracket for 2.50" Tube



Material: Aluminum

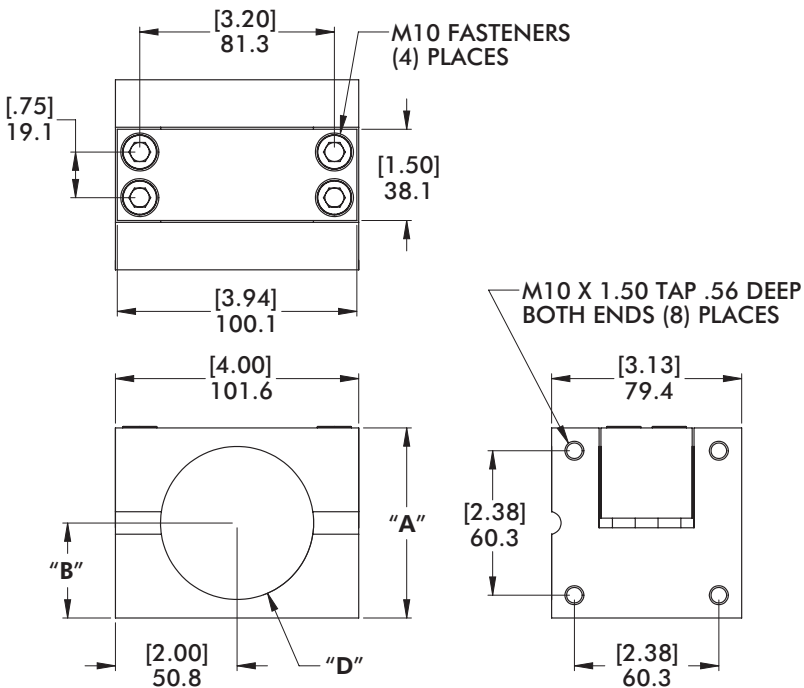
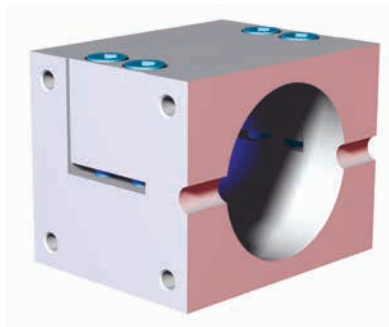
Model Number	Weight
CPI-CL-25-DM-10F	[1.89 lb] .86 kg

WORLD TOOL DIRECT MOUNTS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

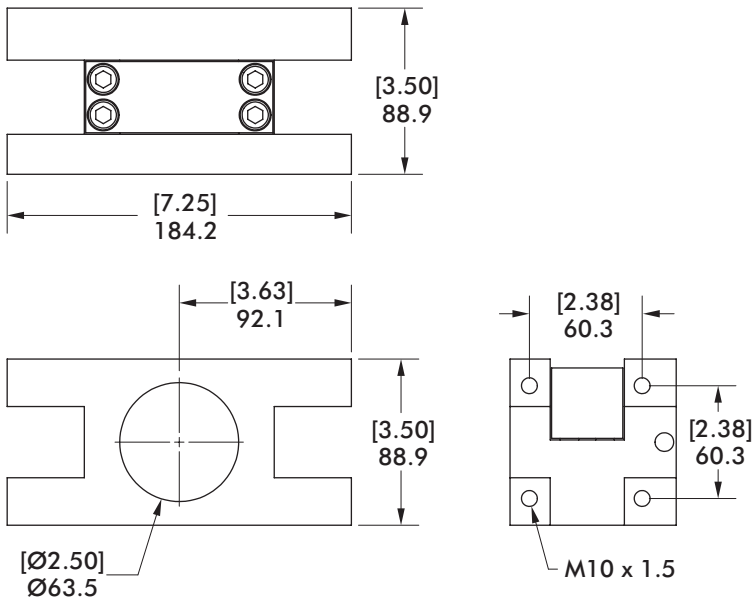
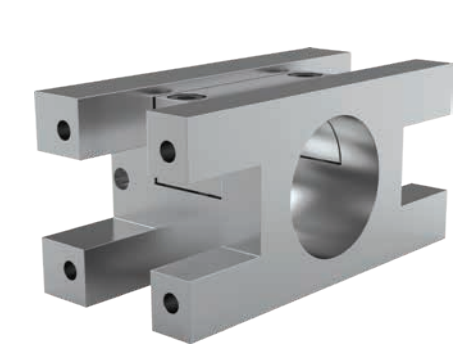
CL-xx-DM-xxF Direct Mount Bracket for Ø60mm/2.50" Tube



Material: Aluminum

Model Number	(Ø)"D"	A	B	Weight
CPI-CL-60-DM-40F	60mm	[3.25] 82.6	[1.63] 41.3	[2.49 lb] 1.13 kg
CPI-CL-25-DM-15F	2.50"(in)	[3.13] 79.4	[1.58] 39.7	[2.36 lb] 1.07 kg

CL-25-DM-15F-EXT Direct Mount Bracket for Ø2.50" Tube



Material: Aluminum

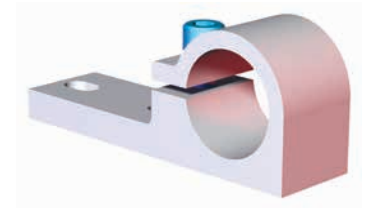
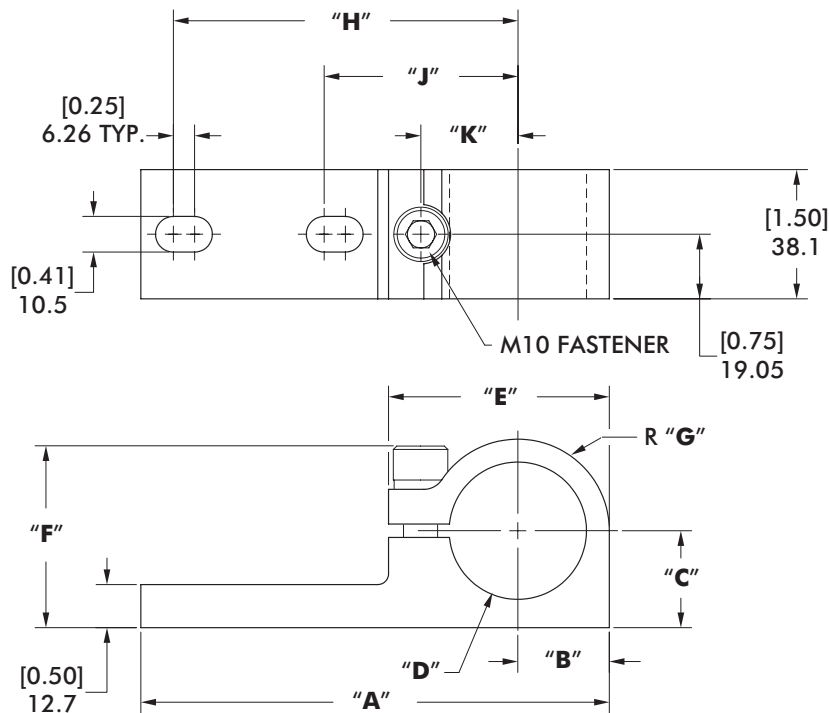
Model Number	Weight
CPI-CL-25-DM-15F-EXT	[4.23 lb] 1.92 kg

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

BASE MOUNT BLOCK

Round Tooling | Dimensions | Technical Specifications

BC-00-xxx Ø25mm/1.00" Tube/Ø40mm/1.50" Tube



Specifications:

Max. Static Clamp Load:
13.6 N*m [10 ft-lb]

Material: Aluminum

Model Number	(Ø)"D"	"A"	"B"	"C"	"E"	"F"	"G"	"H"	"J"	"K"	Weight
CPI-BC-00-25	25mm	[4.88]	[0.75]	[0.88]	[2.05]	[1.87]	[0.75]	[3.75]	[2.00]	[0.88]	[0.55 lb]
CPI-BC-00-100	1.00"(in)	123.8	19.0	22.2	52.1	47.4	19.0	95.3	50.8	22.3	0.25 kg
CPI-BC-00-40	40mm	[5.44]	[1.06]	[1.13]	[2.56]	[2.18]	[1.06]	[4.00]	[2.25]	[1.13]	[0.68 lb]
CPI-BC-00-150	1.50"(in)	138.1	26.9	28.6	65.1	55.4	26.9	101.6	57.2	28.6	0.31 kg

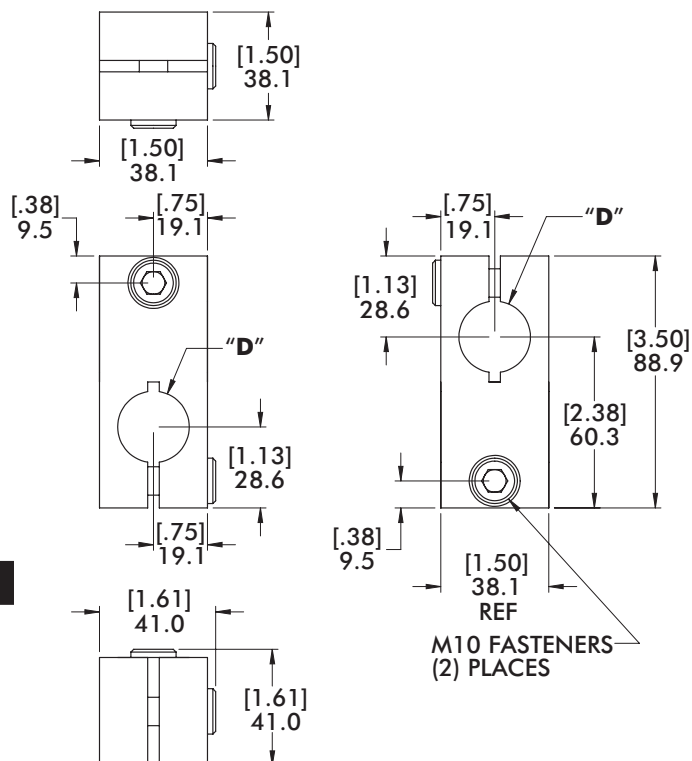
Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

SC-xx-xx Ø25mm/1.00" to Ø25mm/1.00" (Single Bolt)

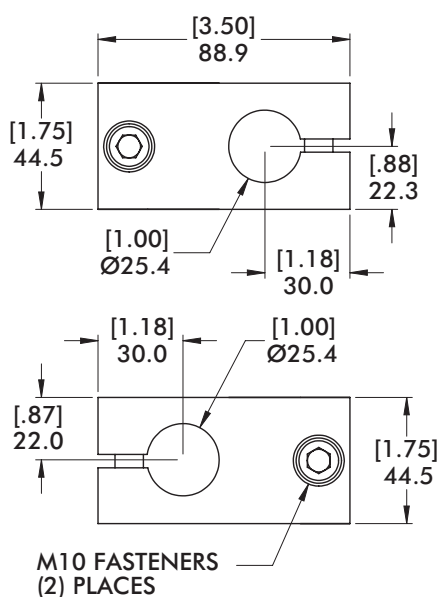


Max. Static Clamp Load:
162 N*m [120 ft-lb]
Material: Aluminum

Model Number	(Ø)“D”	Weight	Finish
CPI-SC-25-25	25mm		SILVER
CPI-SC-25-25-BL	25mm	[.60 lb] .27 kg	BLUE
CPI-SC-1010	1.00”(in)		SILVER

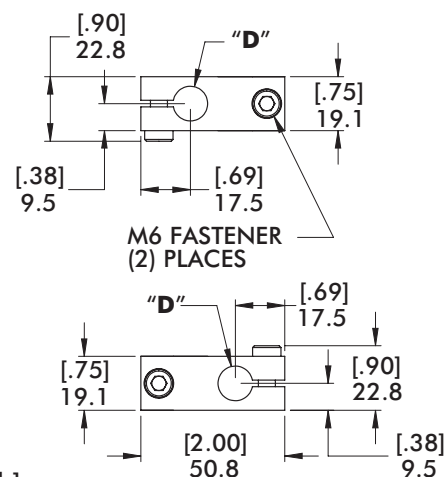


CLM Ø12mm/.50" to Ø12mm/.50"



Max. Static
Clamp Load:
203 N*m [150 ft-lb]
Material: Aluminum

Model Number	Weight
M1513	[.82 lb] .37 kg



Max. Static
Clamp Load:
13.6 N*m [10 ft-lb]
Material: Aluminum

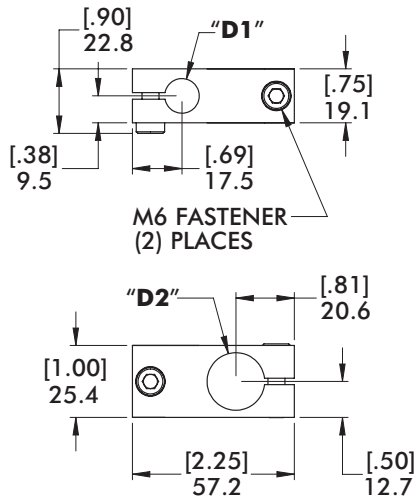
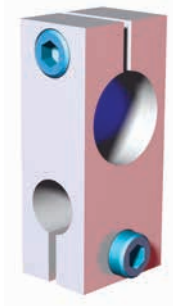
Model Number	(Ø)"D"	Weight
CPI-CLM-12M-12M	12mm	[.10 lb]
CPI-CLM-50-50	.50"(in)	.05 kg

CROSS TRANSITION BRACKETS AND BLOCKS

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

Round Tooling | Dimensions | Technical Specifications

CLM Ø20mm/.75" to Ø12mm/.50"

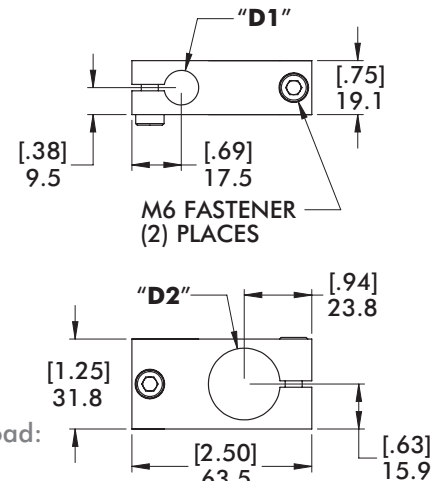


Specifications:

Max. Static
Clamp Load:
Ø20mm/.75":
20.3 N*m [15 ft-lb]
Ø12mm/.50":
13.6 N*m [10 ft-lb]
Material: Aluminum

Model Number	(Ø)"D1"	(Ø)"D2"	Weight
CPI-CLM-20M-12M	12mm	20mm	[13 lb] .06 kg
CPI-CLM-75-50	.50"(in)	.75 in	

CLM Ø25mm/1.00" to Ø12mm/.50"

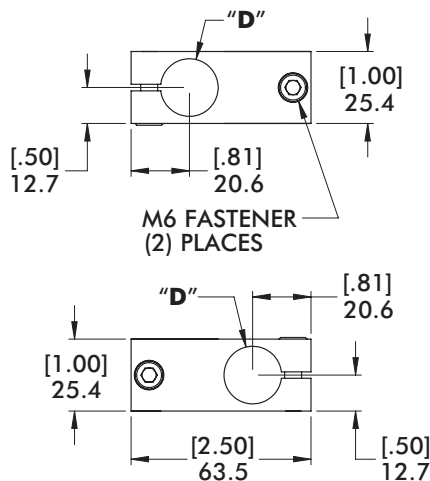
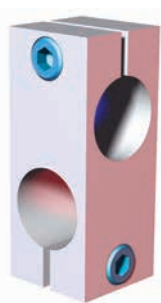


Specifications:

Max. Static Clamp Load:
Ø25mm/1.00":
67.8 N*m [50 ft-lb]
Ø12mm/.50":
13.6 N*m [10 ft-lb]
Material: Aluminum

Model Number	(Ø)"D1"	(Ø)"D2"	Weight
CPI-CLM-25M-12M	12mm	25mm	[.08 lb] .17 kg
CPI-CLM-10-50	.50"(in)	1.00"(in)	

CLM Ø20mm/.75" to Ø20mm/.75"

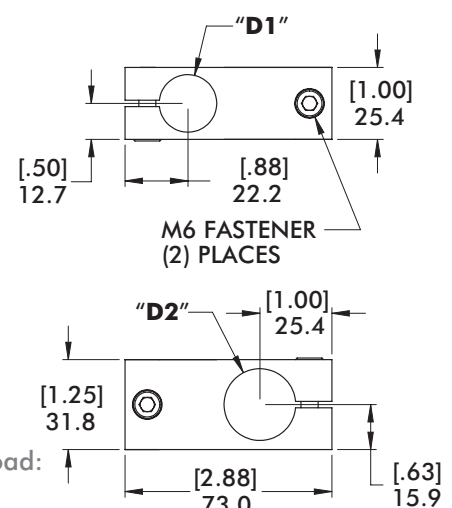


Specifications:

Max. Static
Clamp Load:
20.3 N*m
[15 ft-lb]

Model Number	(Ø)"D"	Weight
CPI-CLM-20M-20M	20mm	[.16 lb] .07 kg
CPI-CLM-20M-20M-ST	20mm	[.40 lb] .18 kg
CPI-CLM-75-75	.75"(in)	[.17 lb] .08 kg

CLM Ø25mm/1.00" to Ø20mm/.75"



Specifications:

Max. Static Clamp Load:
Ø25mm/1.00":
67.8 N*m [50 ft-lb]
Ø20mm/.75":
20.3 N*m [15 ft-lb]
Material: Aluminum

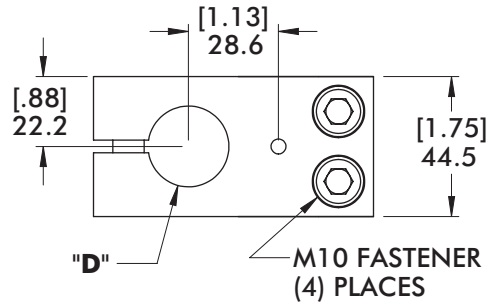
Model Number	(Ø)"D1"	(Ø)"D2"	Weight
CPI-CLM-25M-20M	20mm	25mm	[.23 lb] .11 kg
CPI-CLM-10-75	.75"(in)	1.00"(in)	

CROSS TRANSITION BRACKETS AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

M-xxx-xxx-M Ø25mm/1.00" to Ø25mm/1.00" (Double Bolt)



Specifications:

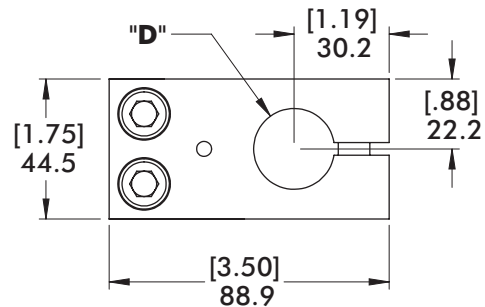
Max. Static Clamp Load:

Ø25mm/1.00":

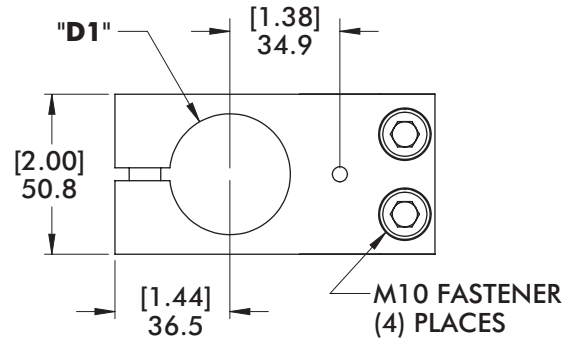
434 N*m [320 ft-lb]

Material: Aluminum

Model Number	(Ø)"D"	Weight	Finish
M-25M-25M-M	25mm	[.93 lb] .42 kg	BLUE
M-10E-10E-M	1.00"(in)		BLACK



M-xxx-xxx-M Ø40mm/1.25"/1.50" to Ø25mm/1.00" (Double Bolt)



Specifications:

Max. Static Clamp Load:

Ø25mm/1.00":

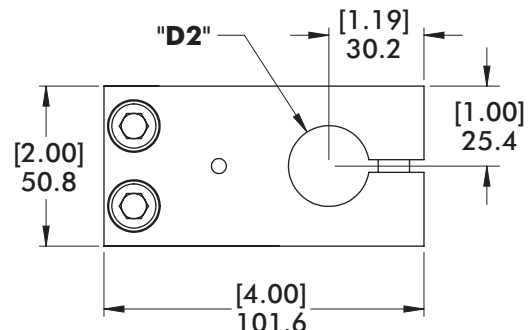
434 N*m [320 ft-lb]

Ø40mm/1.50":

624 N*m [460 ft-lb]

Material: Aluminum

Model Number	(Ø)"D1"	(Ø)"D2"	Weight	Finish
M-10E-12E-M	1.25"(in)	1.00"(in)	[1.29 lb] .58 kg	BLACK
M-10E-15E-M	1.50"(in)	1.00"(in)	[1.18 lb] .54 kg	BLACK
M-25M-40M-M	40mm	25mm		BLUE

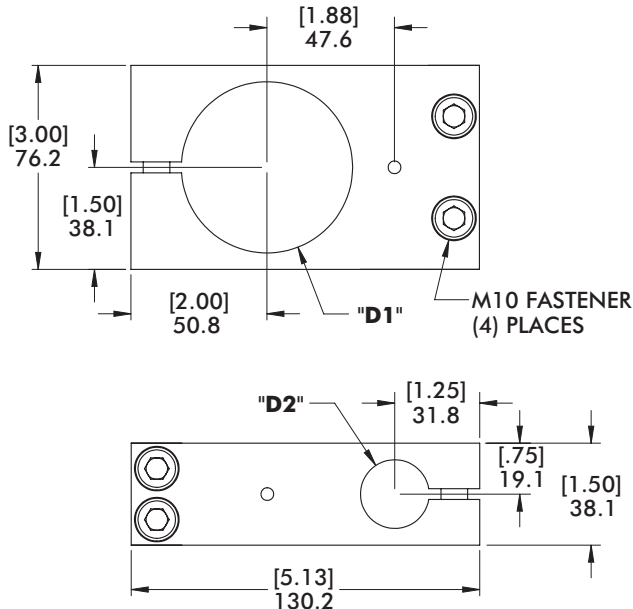


CROSS TRANSITION BRACKETS AND BLOCKS

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

Round Tooling | Dimensions | Technical Specifications

M-xxx-xxx-M Ø60mm/2.50" to Ø25mm/1.00" (Double Bolt)



Specifications:

Max. Static Clamp Load:

Ø25mm/1.00":

434 N*m [320 ft-lb]

Ø60mm/2.50":

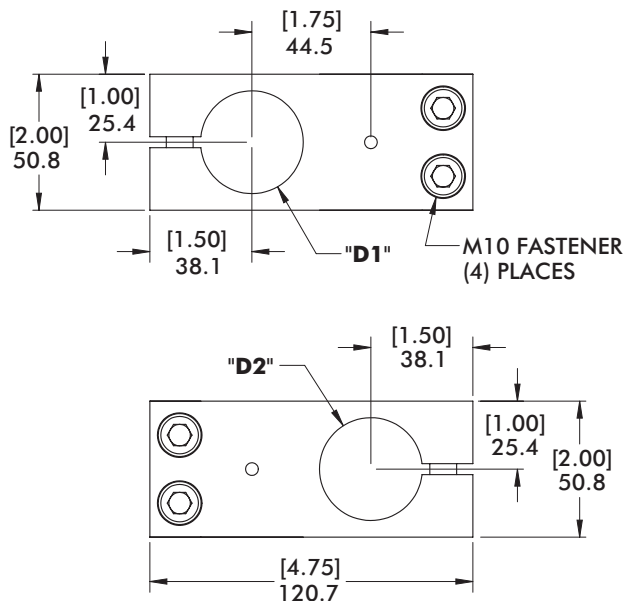
813 N*m [600 ft-lb]

Material: Aluminum



Model Number	(Ø)"D1"	(Ø)"D2"	Weight	Finish
M-25M-60M-M	60mm	25mm	[1.52 lb] .69 kg	BLUE
M-10E-25E-M	2.50"(in)	1.00"(in)	[1.44 lb] .65 kg	BLACK

M-xxx-xxx-M Ø40mm/1.25"/1.50" to Ø40mm/1.25"/1.50" (Double Bolt)



Specifications:

Max. Static Clamp Load:

Ø1.25":

515 N*m [380 ft-lb]

Ø40mm/1.50":

624 N*m [460 ft-lb]

Material: Aluminum



Model Number	(Ø)"D1"	(Ø)"D2"	Weight	Finish
M-12E-12E-M	1.25"(in)	1.25"(in)	[1.51 lb] .69 kg	BLACK
M-12E-15E-M	1.25"(in)	1.50"(in)	[1.41 lb] .64 kg	BLACK
M-15E-15E-M	1.50"(in)	1.50"(in)	[1.31 lb] .59 kg	BLACK
M-40M-40M-M	40mm	40mm	[1.23 lb] .56 kg	BLUE

CROSS TRANSITION BRACKETS AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

M-xxx-xxx-M Ø60mm/2.50 to Ø40mm/1.50" (Double Bolt)



Specifications:

Max. Static Clamp Load:

Ø40mm/1.50":

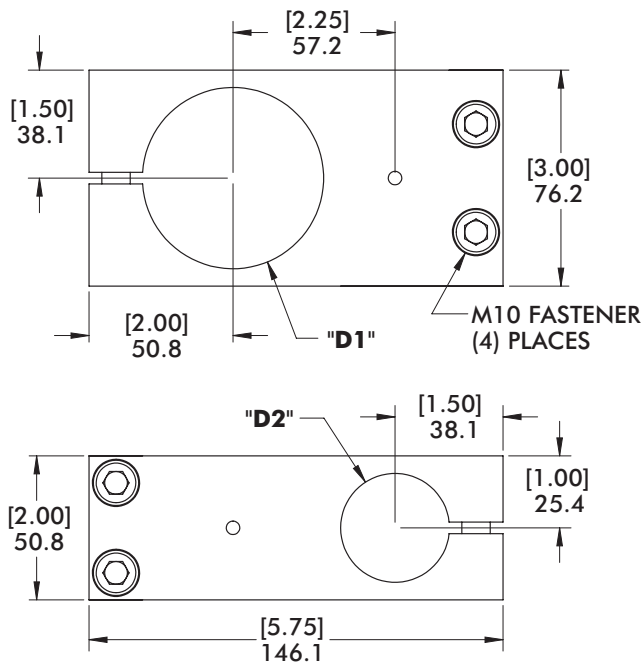
624 N*m [460 ft-lb]

Ø60mm/2.50":

813 N*m [600 ft-lb]

Material: Aluminum

Model Number	(Ø)"D1"	(Ø)"D2"	Weight	Finish
M-40M-60M-M	60mm	40mm	[2.08 lb]	BLUE
M-15E-25E-M	2.50"(in)	1.50"(in)	.95 kg	BLACK



M-xxx-xxx-M Ø60mm/2.50" to Ø60mm/2.50" (Double Bolt)



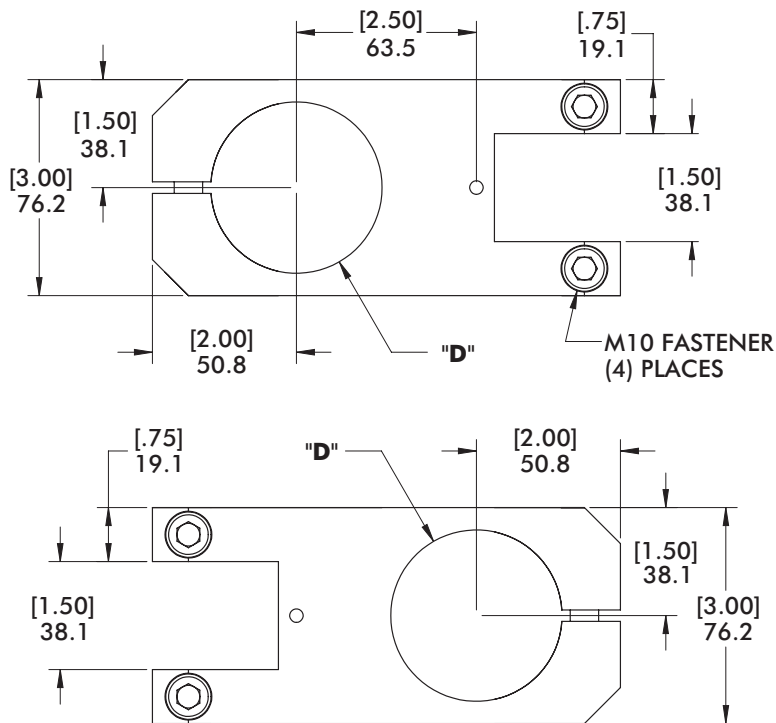
Specifications:

Max. Static Clamp Load:

813 N*m [600 ft-lb]

Material: Aluminum

Model Number	(Ø)"D"	Weight	FINISH
M-60M-60M-M	60mm	[2.07 lb] .94 kg	BLUE
M-25E-25E-M	2.50"(in)	[2.03 lb] .92 kg	BLACK

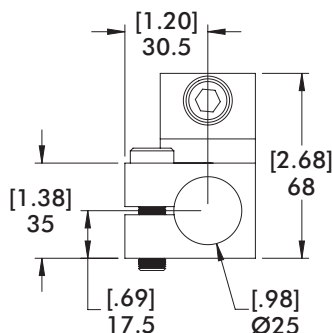
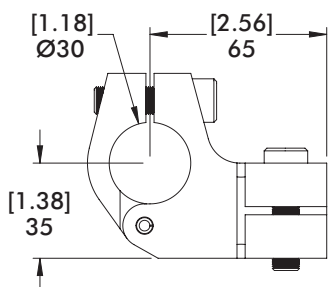
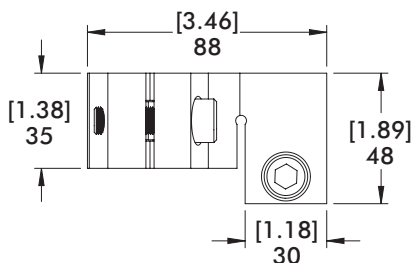


Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

T-CLAMP TRANSITION BRACKETS AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

TCAH Ø30mm to Ø25mm



Specifications:

Max. Static Clamp Load:

Ø30mm:

237 N*m [175 ft-lb]

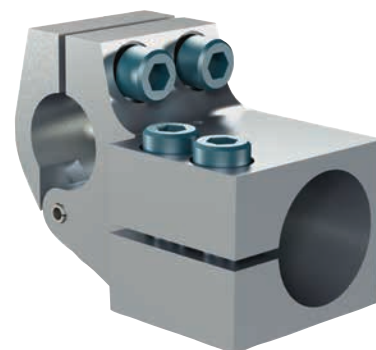
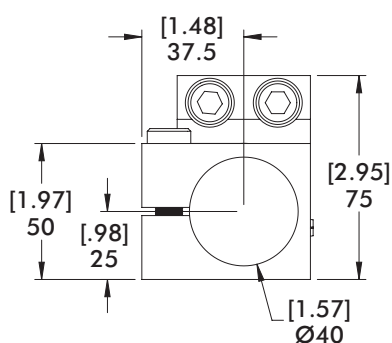
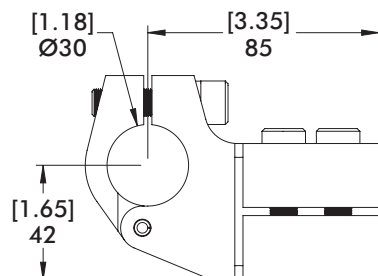
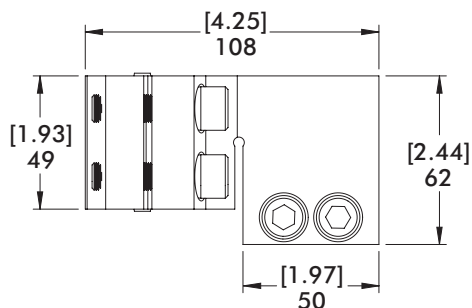
Ø25mm/1.00":

200 N*m [150 ft-lb]

Material: Aluminum

Model Number	Weight
CPI-TCAH30M-25M	[0.72 lb] 325g

TCAH Ø30mm to Ø40mm



Specifications:

Max. Static Clamp Load:

Ø30mm:

237 N*m [175 ft-lb]

Ø40mm:

271 N*m [200 ft-lb]

Material: Aluminum

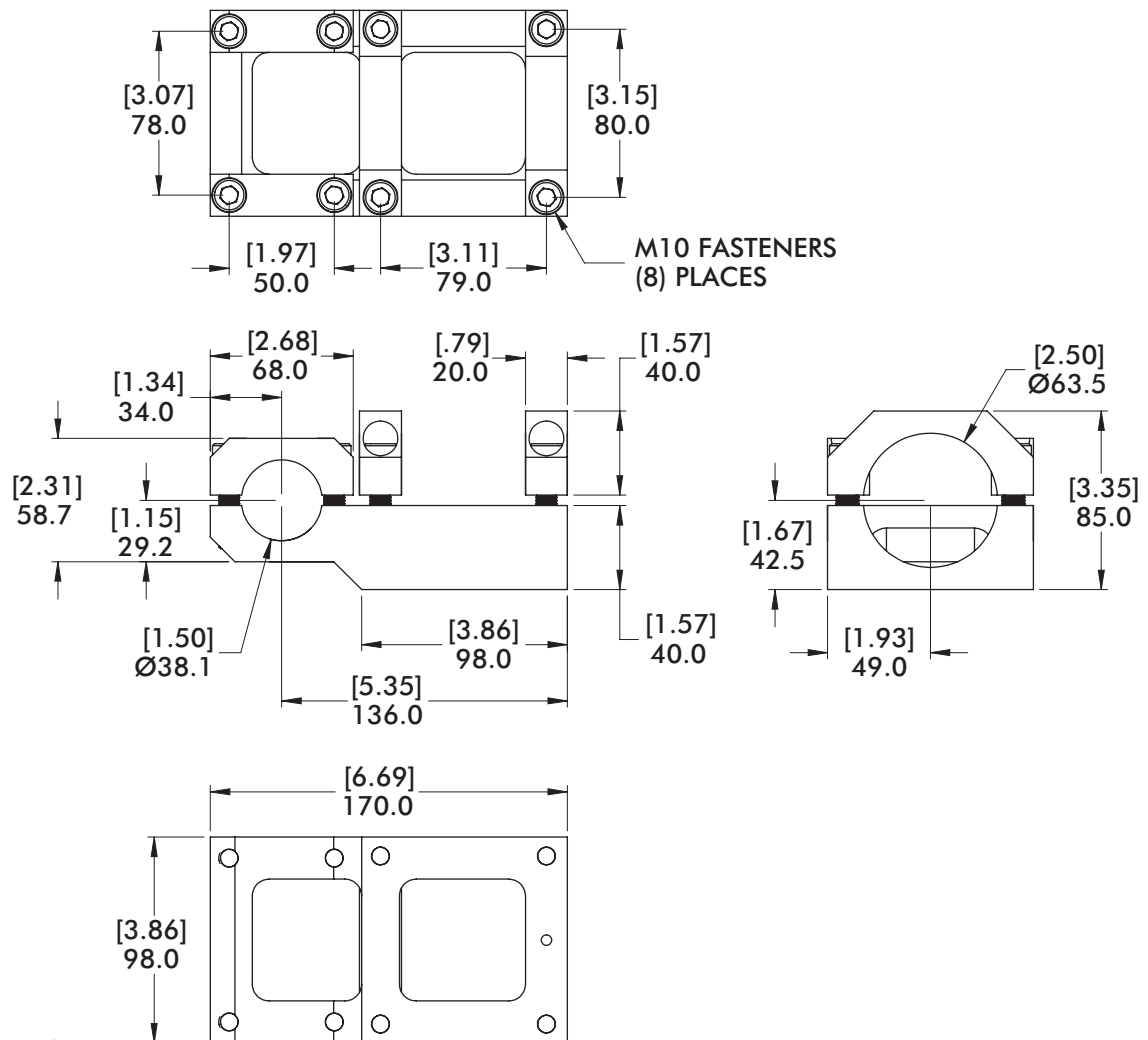
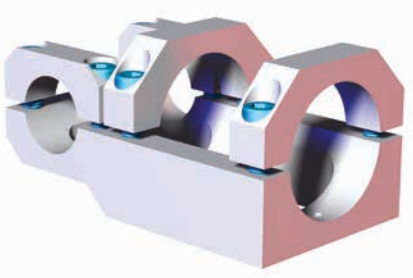
Model Number	Weight
CPI-TCAH30M-40M	[1.40 lb] 634g

T-CLAMP TRANSITION BRACKETS AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

TCA Ø2.50" to Ø1.50" T-Clamp Bracket Assembly



Specifications:

Max. Static Clamp Load:

Ø1.50":

271 N*m [200 ft-lb]

Ø2.50":

677 N*m [500 ft-lb]

Material: Aluminum

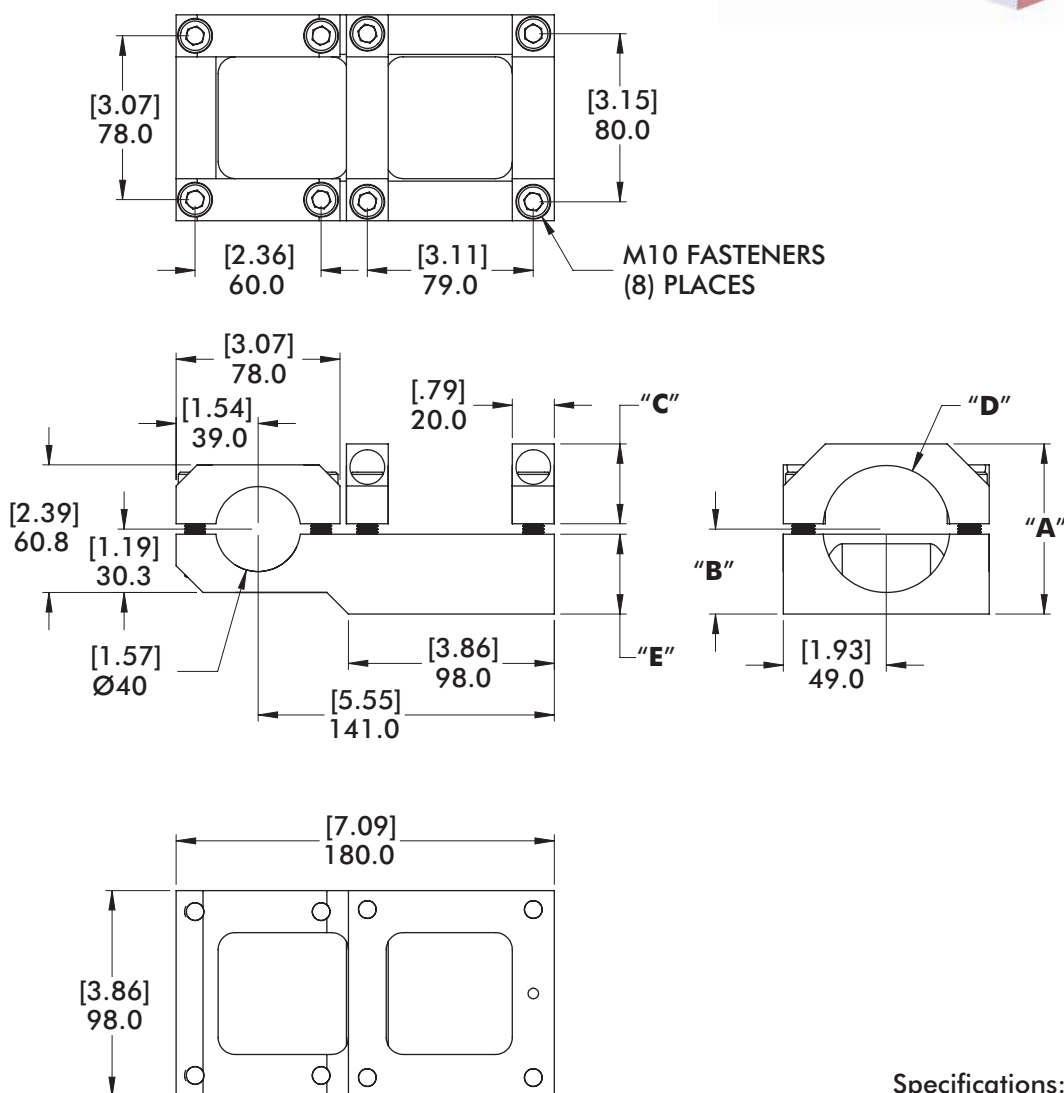
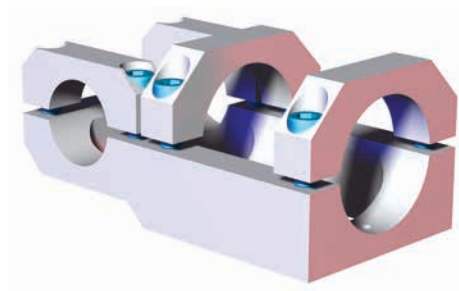
Model Number	Weight
CPI-TCA-250-150	[2.76 lb] 1.25 kg

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

T-CLAMP TRANSITION BRACKETS AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

TCA Ø60mm/2.50" to Ø40mm T-Clamp Bracket Assembly



Specifications:
Max. Static Clamp Load:
Ø40mm:
271 N*m [200 ft-lb]
Ø60mm/2.50":
677 N*m [500 ft-lb]
Material: Aluminum

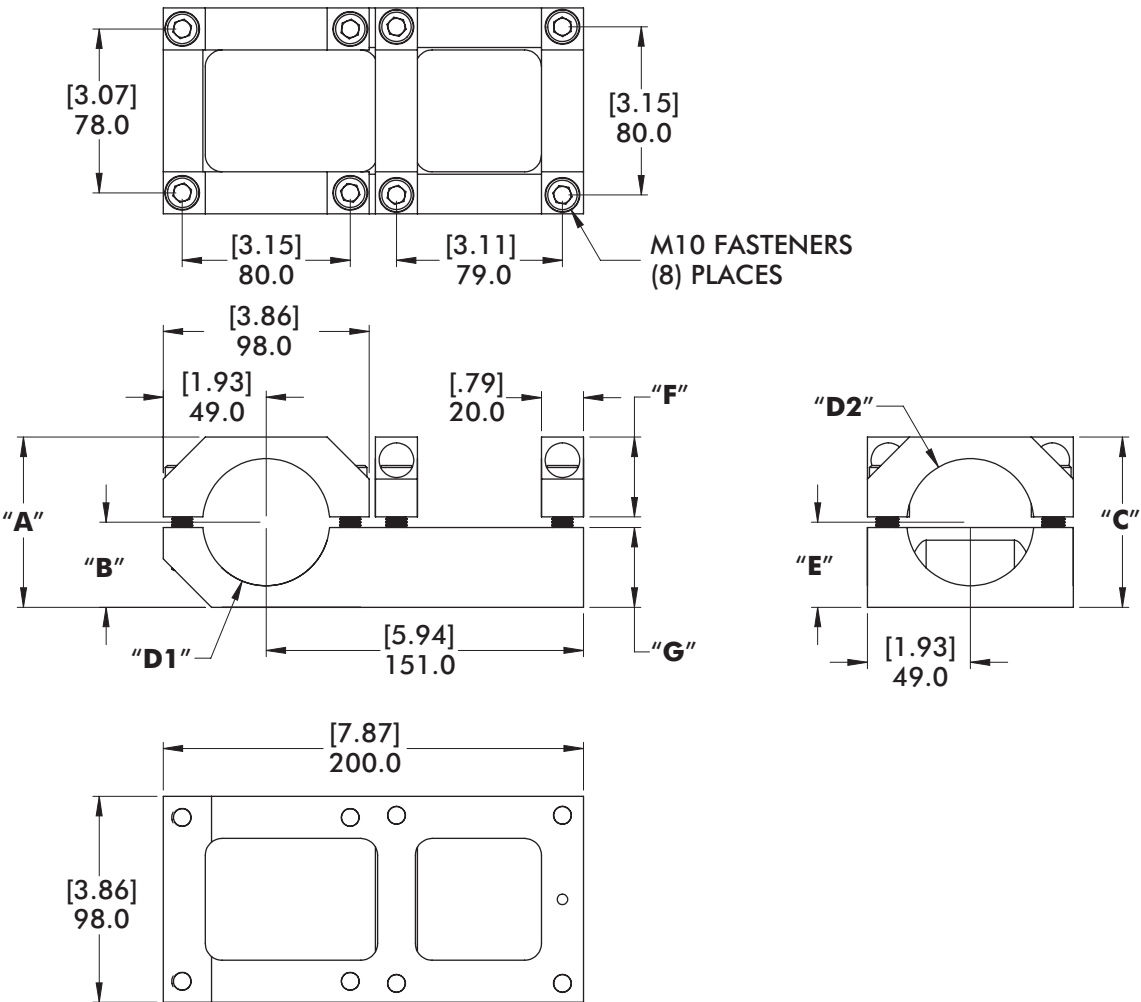
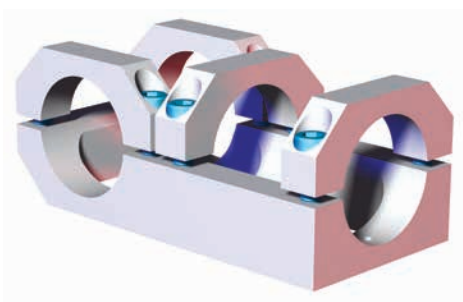
Model Number	(Ø)"D"	"A"	"B"	"C"	"E"	Weight
CPI-TCA-60M-40M	60mm	[3.19] 81.0	[1.59] 40.5	[1.50] 38.0	[1.50] 38.0	[2.89 lb] 1.31 kg

T-CLAMP TRANSITION BRACKETS AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

TCA Ø60mm/2.50" to Ø60mm/2.50" T-Clamp Bracket Assembly



Specifications:
Max. Static Clamp Load:
813 N*m [600 ft-lb]
Material: Aluminum

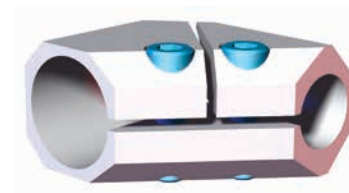
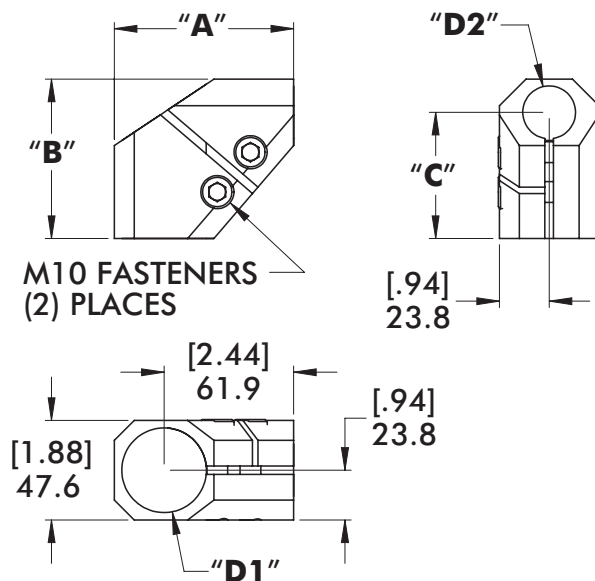
Model Number	(Ø)"D1"	(Ø)"D2"	"A"	"B"	"C"	"E"	"F"	"G"	Weight
CPI-TCA-60M-60M	60mm	60mm	[3.19] 81.0	[1.59] 40.5	[3.19] 81.0	[1.59] 40.5	[1.50] 38.0	[1.50] 38.0	[3.15 lb] 1.43 kg
CPI-TCA-250-250	2.50"(in)	2.50"(in)	[3.35] 85.0	[1.67] 42.5	[3.35] 85.0	[4.67] 42.5	[1.57] 40.0	[1.57] 40.0	

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

WRIST CLAMPS

Round Tooling | Dimensions | Technical Specifications

SEC/SLK Ø40mm/1.50" to Ø25mm/1.00"



Specifications:
Max. Static Clamp Load:
Ø40mm/1.50":
271 N*m [200 ft-lb]
Ø25mm/1.00":
203 N*m [150 ft-lb]
Material: Aluminum

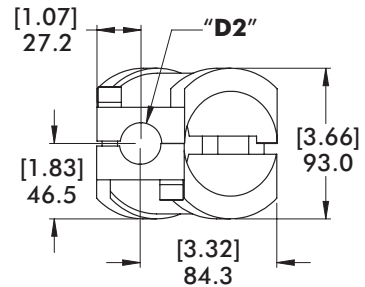
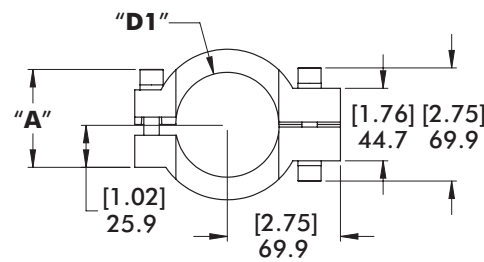
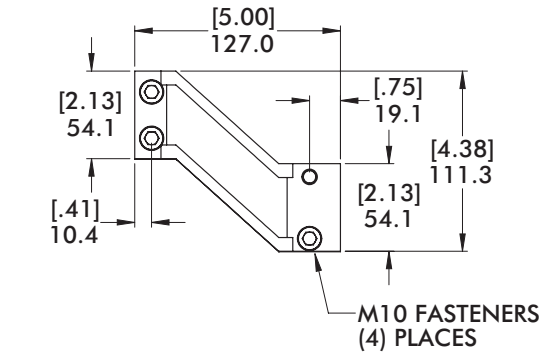
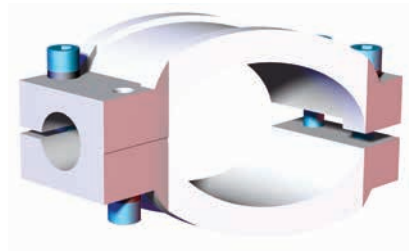
Model Number	(Ø)"D1"	(Ø)"D2"	"A"	"B"	"C"	"E"	Weight
CPI-SEC-1510	1.50"(in)	1.00"(in)	[3.25] 82.6	[2.38] 60.3	[1.75] 44.5	[.88] 22.2	[.67 lb] .31 kg
CPI-SLK-4025	40mm	25mm	[3.38] 85.7	[2.44] 61.9	[1.88] 47.6	[.94] 23.8	[.77 lb] .35 kg

OFFSET WRIST BRACKETS AND BLOCKS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

SEC/SLK Ø60mm/2.50" to Ø25mm/1.00" Wrist Bracket



Specifications:

Max. Static Clamp Load:

Ø25mm/1.00":

149 N*m [110 ft-lb]

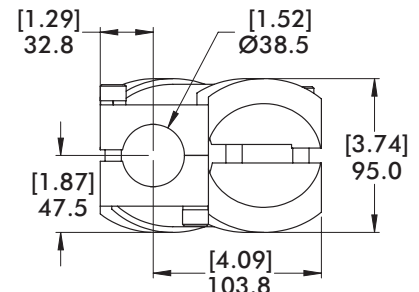
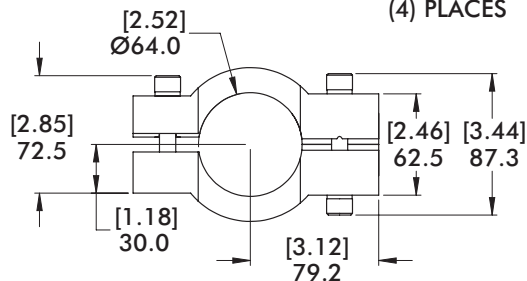
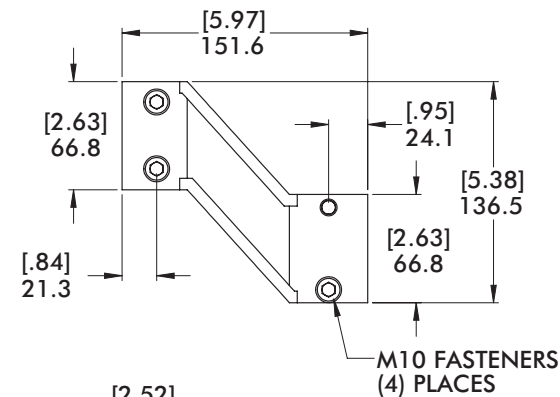
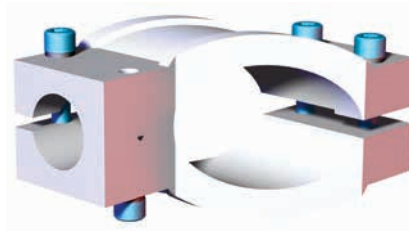
Ø60mm/2.50":

677 N*m [500 ft-lb]

Material: Aluminum

Model Number	(Ø)"D1"	(Ø)"D2"	"A"	Weight
CPI-SLK-6025	60mm	25mm	[2.25] 57.1	[1.72 lb] .78 kg
CPI-SEC-2510	2.50"(in)	1.00"(in)	[2.38] 60.5	[1.61 lb] .73 kg

SEC Ø2.50" to Ø1.50" Wrist Bracket



Specifications:

Max. Static Clamp Load:

Ø40mm/1.50":

271 N*m [200 ft-lb]

Ø60mm/2.50":

677 N*m [500 ft-lb]

Material: Aluminum

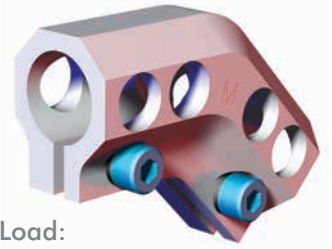
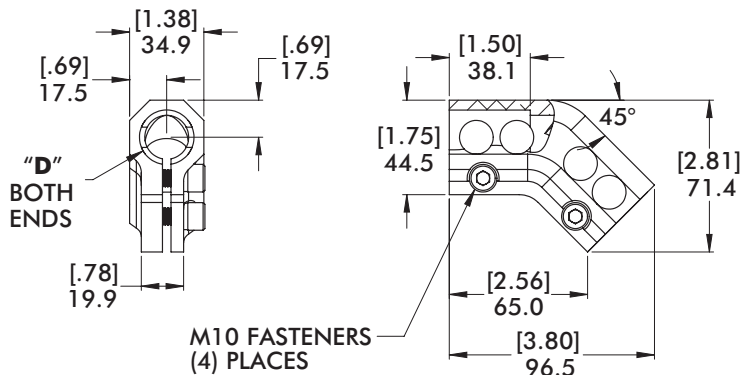
Model Number	Weight
CPI-SEC-2515	[2.72 lb] 1.23 kg

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

ELBOW AND STRAIGHT BRACKETS

Round Tooling | Dimensions | Technical Specifications

DC Ø25mm/1.00" to Ø25mm/1.00" 45° Elbow



Specifications:

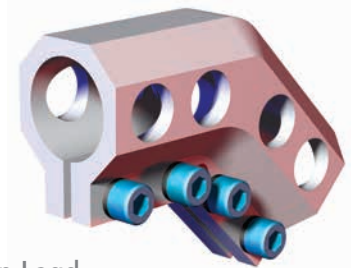
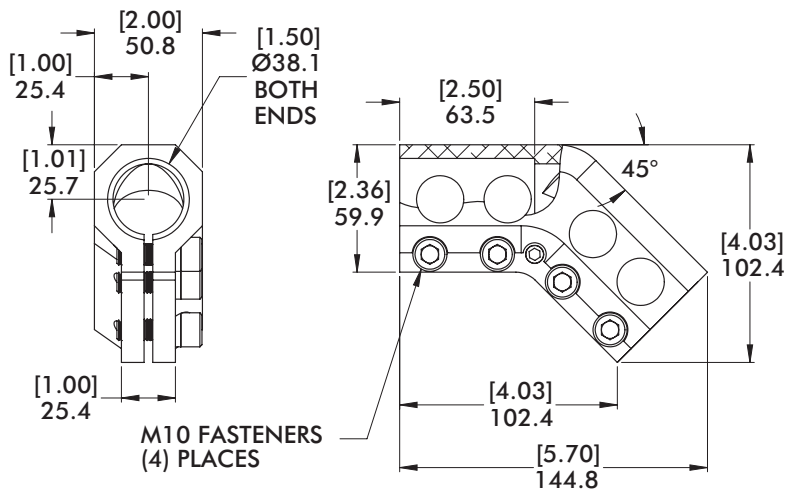
Max. Static Clamp Load:

203 N*m [150 ft-lb]

Material: Aluminum

Model Number	(Ø)"D"	Weight
CPI-DC-2525M-45	25mm	[.35 lb]
CPI-DC-1010-45	1.00"(in)	.16 kg

DC Ø1.50" to Ø1.50" 45° Elbow



Specifications:

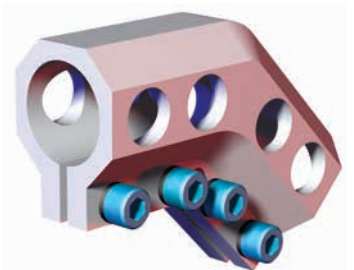
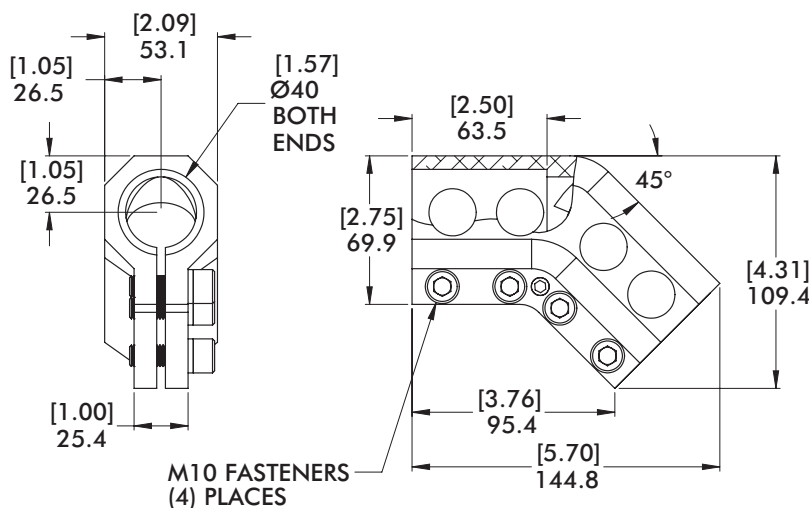
Max. Static Clamp Load:

271 N*m [200 ft-lb]

Material: Aluminum

Model Number	Weight
CPI-DC-1515-45	[1.41 lb] .64 kg

DC Ø40mm to Ø40mm 45° Elbow



Specifications:

Max. Static Clamp Load:

271 N*m [200 ft-lb]

Material: Aluminum

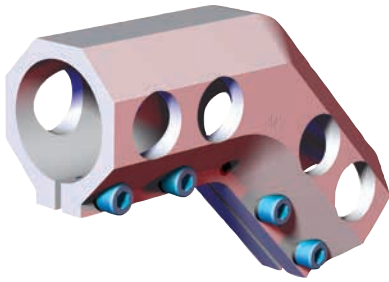
Model Number	Weight
CPI-DC-40-40-45	[1.41 lb] .64 kg

ELBOW AND STRAIGHT BRACKETS

Round Tooling | Dimensions | Technical Specifications

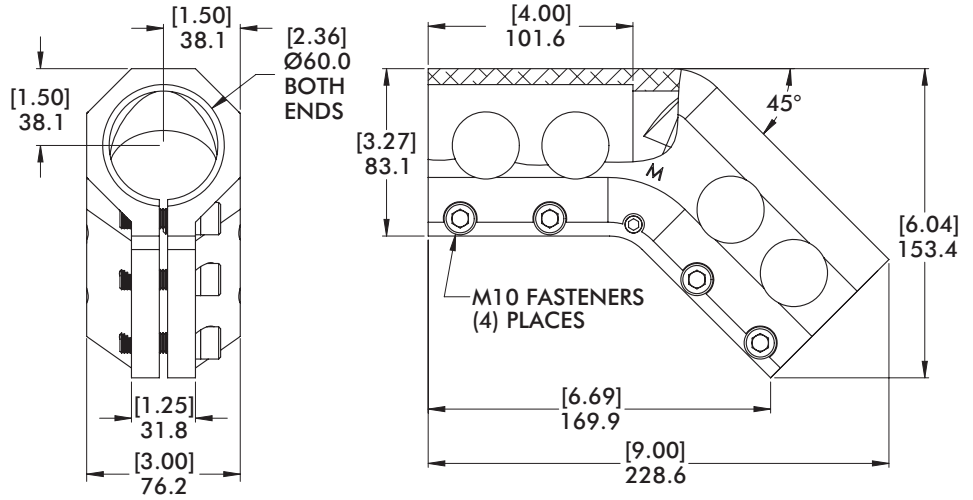
Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

DC Ø60mm to Ø60mm 45° Elbow

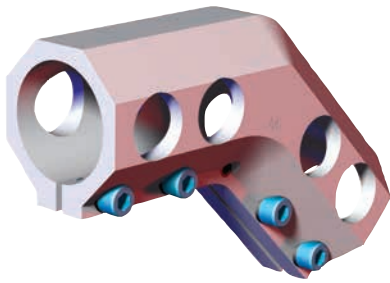


Specifications:
Max. Static Clamp Load:
677N*m [500 ft-lb]
Material: Aluminum

Model Number	Weight
CPI-DC-6060M-45	[2.94 lb] 1.33 kg

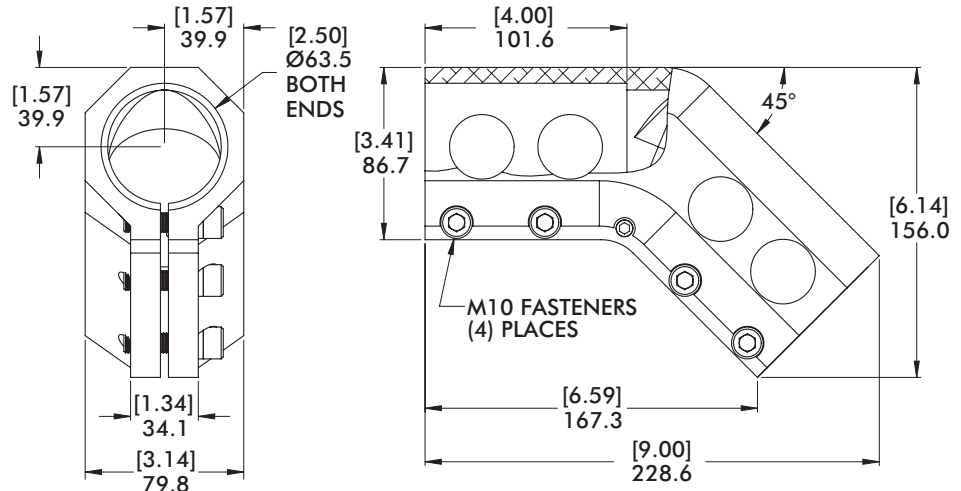


DC Ø2.50" to Ø2.50" 45° Elbow



Specifications:
Max. Static Clamp Load:
677 N*m [500 ft-lb]
Material: Aluminum

Model Number	Weight
CPI-DC-2525-45	[3.19 lb] 1.46 kg

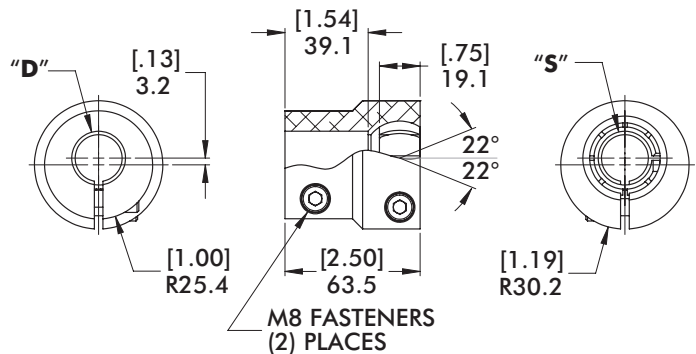


DC Ø25mm/1.00" to Ø25mm/1.00" Straight with Swivel



Specifications:
Max. Static Clamp Load:
203 N*m [150 ft-lb]
Material: Aluminum

Model Number	(Ø)"D"	(Ø)"S"	Weight
CPI-DC-2525S-8	25mm	25mm	[.80 lb] .36 kg
CPI-DC-1010S-8	1.00"(in)	1.00"(in)	



SWIVEL ARMS

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

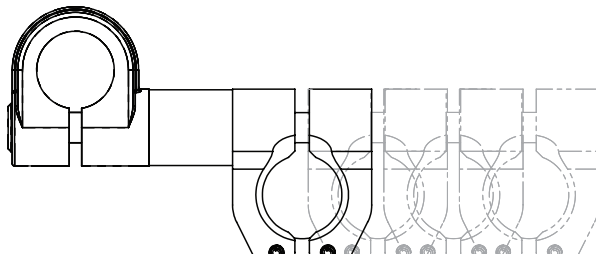
Round Tooling | Features and Benefits

AC-SA Series Accessory Mount Swivel Arms



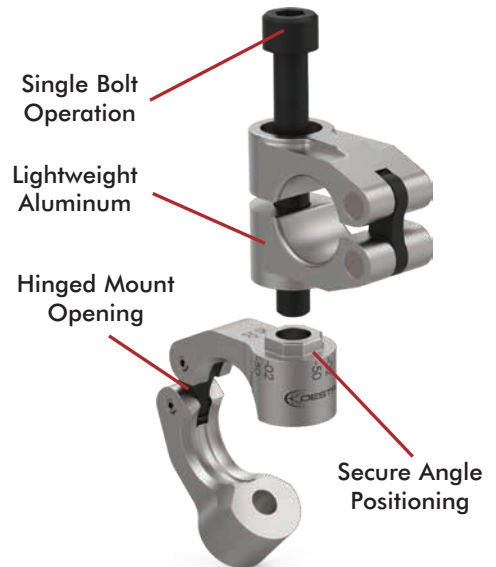
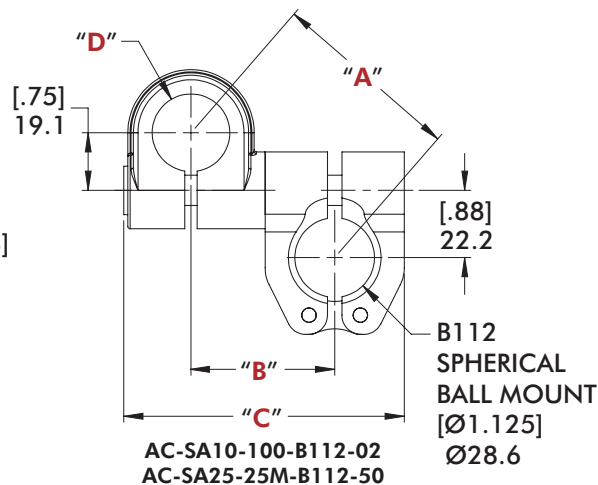
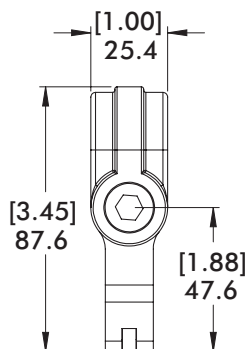
Features:

- Fixed adjustment every 90 degrees
- Mounts to a 1 inch or 25mm tube
- Clamps to a Ø28.6mm [1.125"] (B112) Spherical Ball



AC-SA10-100-B112-03
AC-SA25-25M-B112-75
AC-SA10-100-B112-04
AC-SA25-25M-B112-100

AC-SA10-100-B112-06
AC-SA25-25M-B112-150
AC-SA10-100-B112-05
AC-SA25-25M-B112-125



AC-SA10-100-B112-02
AC-SA25-25M-B112-50



0 degree



90 degree



180 degree



270 degree

Specifications:

Maximum Clamp Load:
111 ft-lb [150 Nm]

Material:
Aluminum

Model Number	"A"	"B"	"C"	(Ø)"D"	Weight
AC-SA10-100-B112-02	[2.48]	[1.87]	[3.65]	1.00"(in)	[0.53 lb]
AC-SA25-25M-B112-50	63	47.5	92.8	25mm	0.24kg
AC-SA10-100-B112-03	[3.37]	[2.95]	[4.74]	1.00"(in)	[0.64 lb]
AC-SA25-25M-B112-75	85.6	75.0	120.3	25mm	0.29kg
AC-SA10-100-B112-04	[4.26]	[3.94]	[5.72]	1.00"(in)	[0.73 lb]
AC-SA25-25M-B112-100	108.2	100.0	145.3	25mm	0.33kg
AC-SA10-100-B112-05	[5.18]	[4.92]	[6.70]	1.00"(in)	[0.82 lb]
AC-SA25-25M-B112-125	131.6	125.0	170.3	25mm	0.37 kg
AC-SA10-100-B112-06	[6.12]	[5.90]	[7.69]	1.00"(in)	[0.93 lb]
AC-SA25-25M-B112-150	155.4	150.0	195.5	25mm	0.42kg

MICRO TOOLING SWIVEL ARMS

Round Tooling | Dimensions | Technical Specifications

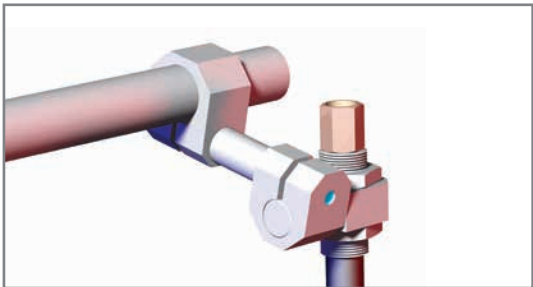
Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

Features:

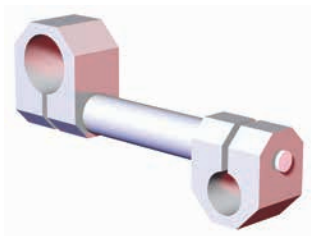
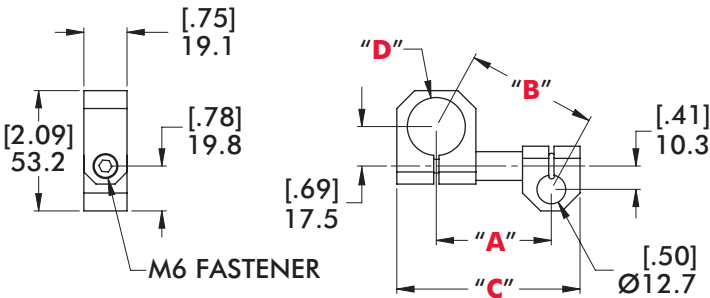
- Mounts micro apple core accessories to Ø20mm/.75" Round tube.
- Provides 360° of rotational adjustments along (3) axes.
- Used to mount venturi, bumpers, round locators, and proximity switches.

Specifications:

Maximum Clamp Load:
120 ft-lb [163 Nm]
Material:
Body and Spacer:
Machined Aluminum



MSA Ø20mm/.75" for Ø12.7mm [.50"] Apple Core (Micro)



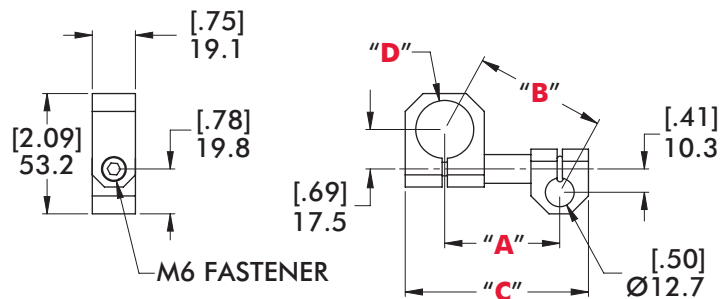
Model Number	(Ø)"D"	"A"	"B"	"C"	Weight
CPI-200-7550-MSA	.75"(in)	[2.00]	[2.28]	[3.19]	[0.16 lb]
CPI-200-20M50-MSA	20mm	50.8	57.9	81.0	0.07kg
CPI-300-7550-MSA	.75"(in)	[3.00]	[3.19]	[4.19]	[0.19 lb]
CPI-300-20M50-MSA	20mm	76.2	81.1	106.4	0.08kg
CPI-400-7550-MSA	.75"(in)	[4.00]	[4.15]	[5.19]	[0.21 lb]
CPI-400-20M50-MSA	20mm	101.7	105.4	131.9	0.09kg
CPI-500-7550-MSA	.75"(in)	[5.00]	[5.12]	[6.19]	[0.23 lb]
CPI-500-20M50-MSA	20mm	127.1	130.1	157.3	0.11kg
CPI-600-7550-MSA	.75"(in)	[6.00]	[6.10]	[7.19]	[0.26 lb]
CPI-600-20M50-MSA	20mm	152.5	155.0	182.7	0.12kg

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

A 3D CAD model of a mechanical assembly. It consists of a red cylindrical component on the left, connected to a silver connecting rod. The rod is attached to a red T-junction fitting on the right, which has a copper-colored threaded port extending upwards.

Machined Aluminum

A 3D CAD model of a bolt and nut assembly. The bolt is a long, cylindrical metal fastener with a hexagonal head on the left and a hexagonal nut on the right. The nut is threaded onto the bolt. The model is rendered in a light blue color with a metallic texture.



Model Number	(Ø) "D"	"A"	"B"	"C"	Weight
CPI-200-1050-MSA	1.00"(in)	[2.00]	[2.23]	[3.06]	[0.18 lb]
CPI-200-25M50-MSA	25mm	50.7	56.6	77.7	0.08kg
CPI-300-1050-MSA	1.00"(in)	[3.00]	[3.16]	[4.11]	[0.21 lb]
CPI-300-25M50-MSA	25mm	76.1	80.2	104.4	0.09kg
CPI-400-1050-MSA	1.00"(in)	[4.00]	[4.12]	[5.08]	[0.23 lb]
CPI-400-25M50-MSA	25mm	101.6	104.7	129.0	0.10kg
CPI-500-1050-MSA	1.00"(in)	[5.00]	[5.10]	[6.14]	[0.25 lb]
CPI-500-25M50-MSA	25mm	127.0	129.5	156.0	0.11kg
CPI-600-1050-MSA	1.00"(in)	[6.00]	[6.08]	[7.09]	[0.27 lb]
CPI-600-25M50-MSA	25mm	152.4	154.4	180.0	0.13kg

STANDARD SWIVEL ARMS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size



- Features:
- Mounts apple core accessories to Ø25mm/1.00" round tube
 - Provides 360° of rotational adjustments along (3) axes
 - Used to mount venturi, bumpers, round locators, and proximity switches

Specifications:

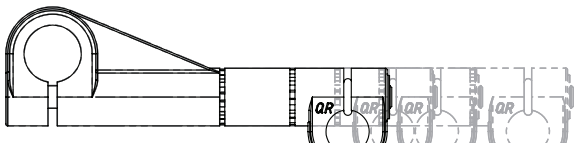
Maximum Clamp Load:
200 ft-lb [271 Nm]

Material:

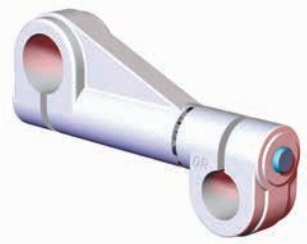
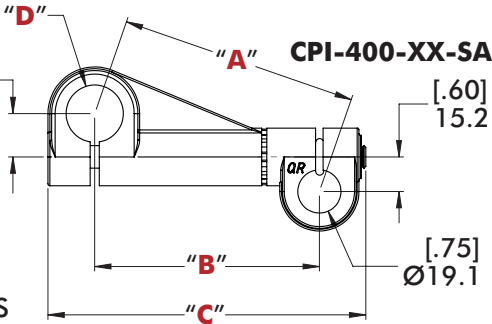
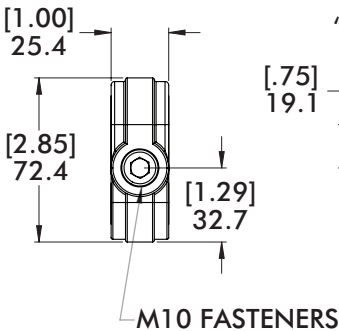
Body:
Cast Aluminum

Spacer:
Machined Aluminum

SA Ø25mm/1.00" for Ø19.1mm [.75"] Apple Core



CPI-500-XX-SA
CPI-600-XX-SA
CPI-700-XX-SA
CPI-800-XX-SA



Model Number	(Ø)"D"	"A"	"B"	"C"	Weight	FINISH
CPI-400-1-SA	1.00"(in)	[4.13]	[3.90]	[5.52]	[0.70 lb]	SILVER
CPI-100-25-SA	25mm	104.9	99.1	140.2	0.31 kg	BLUE
CPI-500-1-SA	1.00"(in)	[5.30]	[5.12]	[6.70]	[0.82 lb]	SILVER
CPI-140-25-SA	25mm	134.5	130.1	170.2	0.37 kg	BLUE
CPI-600-1-SA	1.00"(in)	[6.05]	[5.90]	[7.49]	[0.90 lb]	SILVER
CPI-160-25-SA	25mm	153.8	149.9	190.2	0.41 kg	BLUE
CPI-700-1-SA	1.00"(in)	[6.81]	[6.67]	[8.27]	[0.97 lb]	SILVER
CPI-180-25-SA	25mm	172.9	169.4	210.2	0.44 kg	BLUE
CPI-800-1-SA	1.00"(in)	[8.36]	[8.25]	[9.85]	[1.13 lb]	SILVER
CPI-200-25-SA	25mm	212.4	209.6	250.2	0.51 kg	BLUE

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

STANDARD SWIVEL ARMS

Round Tooling | Dimensions | Technical Specifications

Features:

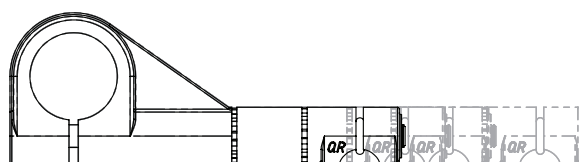
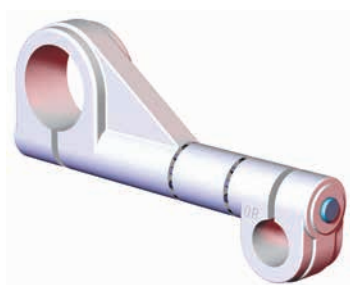
- Mounts apple core accessories to Ø40mm/1.50" round tube
- Provides 360° of rotational adjustments along (3) axes
- Used to mount venturi, bumpers, round locators, and proximity switches

Specifications:

Maximum Clamp Load:
200 ft-lb [271 Nm]
Material:
Body:
Cast Aluminum
Spacer:
Machined Aluminum



SA Ø40mm/1.50" for Ø19.1mm [.75"] Apple Core

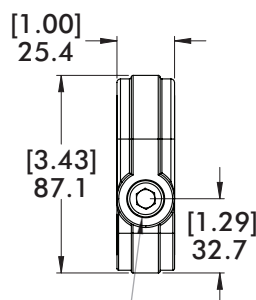


CPI-500-XX-SA

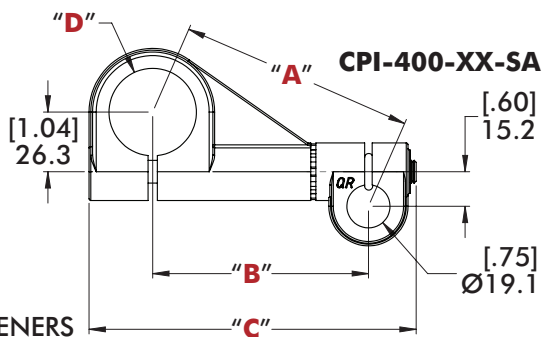
CPI-800-XX-SA

CPI-600-XX-SA

CPI-700-XX-SA



M10 FASTENERS

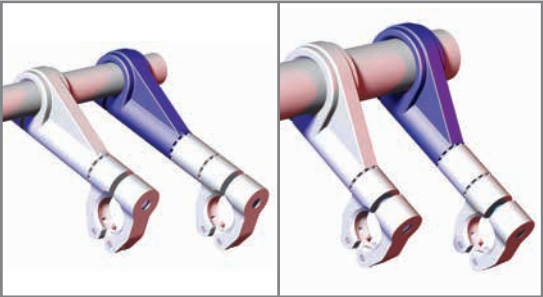


Model Number	(Ø)"D"	"A"	"B"	"C"	Weight	FINISH
CPI-400-15-SA	1.50"(in)	[4.09]	[3.75]	[5.68]	[0.78 lb]	SILVER
CPI-100-40-SA	40mm	103.8	95.2	144.3	0.35 kg	BLUE
CPI-500-15-SA	1.50"(in)	[5.23]	[4.97]	[6.86]	[0.89 lb]	SILVER
CPI-140-40-SA	40mm	132.8	126.1	174.3	0.41 kg	BLUE
CPI-600-15-SA	1.50"(in)	[5.97]	[5.75]	[7.65]	[0.97 lb]	SILVER
CPI-160-40-SA	40mm	151.8	146.0	194.3	0.44 kg	BLUE
CPI-700-15-SA	1.50"(in)	[6.72]	[6.52]	[8.44]	[1.05 lb]	SILVER
CPI-180-40-SA-SA	40mm	170.7	165.5	214.3	0.54 kg	BLUE
CPI-800-15-SA	1.50"(in)	[8.26]	[8.10]	[10.01]	[1.20 lb]	SILVER
CPI-200-40-SA	40mm	209.8	205.6	2.54	0.55 kg	BLUE

STANDARD SWIVEL ARMS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size



- Features:
- Mounts swivel ball accessories to round tube
 - Provides 360° of rotational adjustments along (3) axes
 - Used to mount venturi, bumpers, round locators, and proximity switches

Specifications:

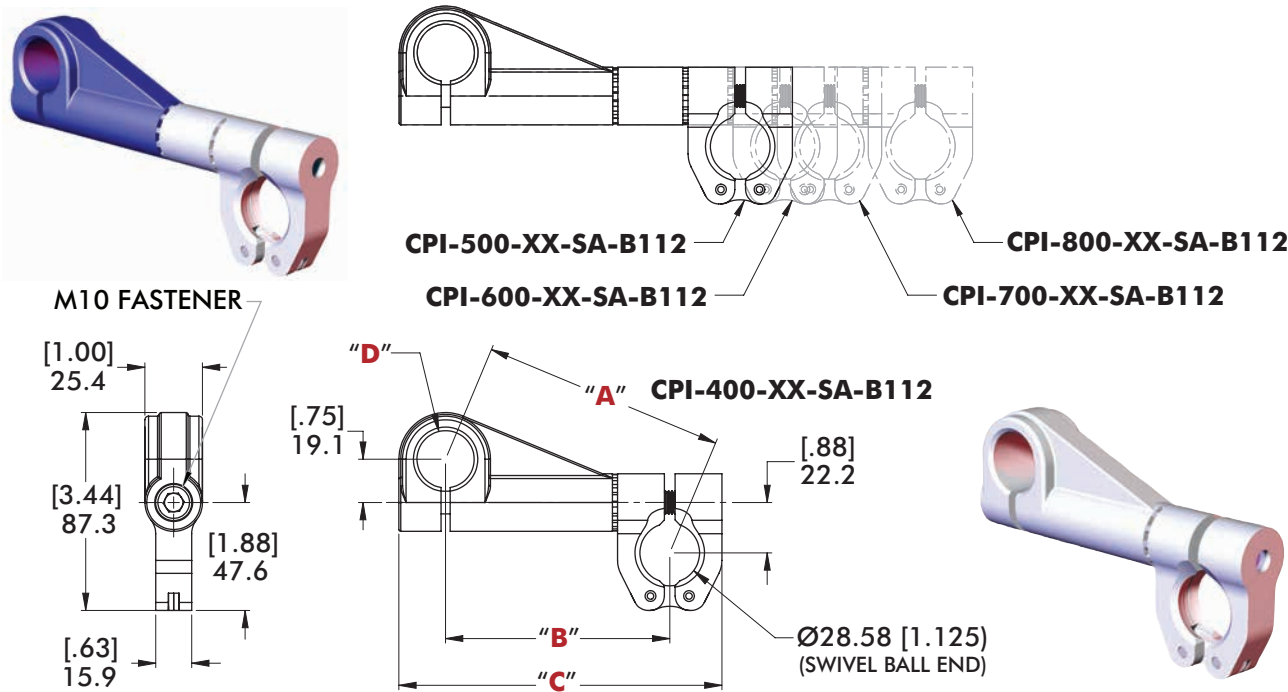
Maximum Clamp Load:
200 ft-lb [271 Nm]

Material:

Body:
Cast Aluminum

Spacer:
Machined Aluminum

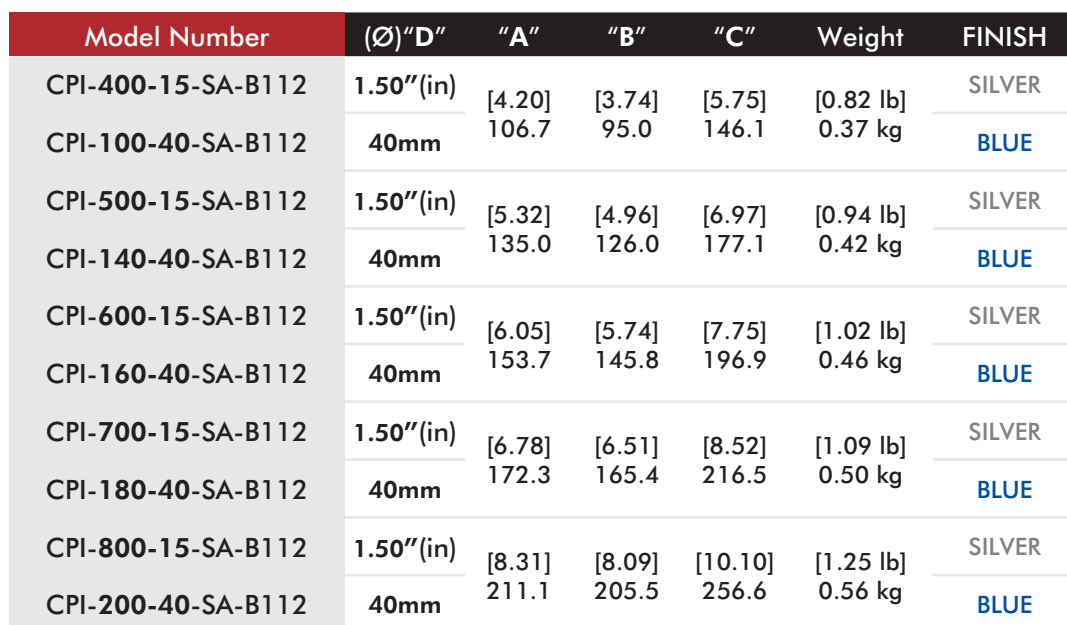
SA-B112 Ø25mm/1.00" for Ø28.6mm [1.125"] Spherical Swivel Ball



Model Number	(Ø) "D"	"A"	"B"	"C"	Weight	FINISH
CPI-400-1-SA-B112	1.00"(in)	[4.22]	[3.90]	[5.61]	[0.74 lb]	SILVER
CPI-100-25-SA-B112	25mm	107.2	98.9	142.6	0.34 kg	BLUE
CPI-500-1-SA-B112	1.00"(in)	[5.37]	[5.12]	[6.83]	[0.86 lb]	SILVER
CPI-140-25-SA-B112	25mm	136.3	129.9	173.5	0.39 kg	BLUE
CPI-600-1-SA-B112	1.00"(in)	[6.12]	[5.90]	[7.61]	[0.94 lb]	SILVER
CPI-160-25-SA-B112	25mm	155.3	149.7	193.4	0.43 kg	BLUE
CPI-700-1-SA-B112	1.00"(in)	[6.86]	[6.67]	[8.38]	[1.02 lb]	SILVER
CPI-180-25-SA-B112	25mm	174.3	169.3	212.9	0.46 kg	BLUE
CPI-800-1-SA-B112	1.00"(in)	[8.40]	[8.25]	[9.96]	[1.17 lb]	SILVER
CPI-200-25-SA-B112	25mm	213.5	209.4	253.0	0.53 kg	BLUE

STANDARD SWIVEL ARMS

SA-B112 Ø40mm/1.50" for Ø28.6mm [1.125"] Spherical Swivel Ball



STANDARD SWIVEL ARMS

Round Tooling | Dimensions | Technical Specifications

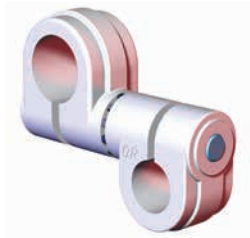
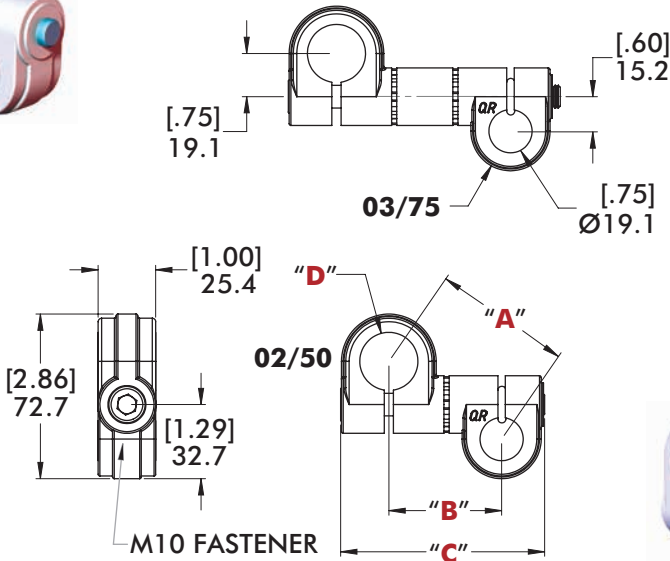
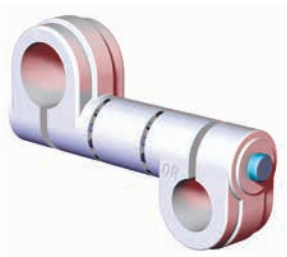
Nominal (Ø) given
See chart on Page 72
for actual (Ø) size



- Features:
- Mounts apple core accessories to Ø25mm/1.00" round tube
 - Provides 360° of rotational adjustments along (3) axes
 - Used to mount venturi, bumpers, round locators, and proximity switches

Specifications:
Maximum Clamp Load:
200 ft-lb [271 Nm]
Material:
Body:
Cast Aluminum
Spacer:
Machined Aluminum

SAxx Single-Bolt Ø25mm/1.00" for Ø19.1mm [.75"] Apple Core



Model Number	(Ø)"D"	"A"	"B"	"C"	Weight	FINISH
CPI-SA10-100-075-02	1.00"(in)	[2.38]	[1.96]	[3.54]	[0.46 lb]	SILVER
CPI-SA25-25-19-50	25mm	60.4	49.8	90.0	0.21 kg	BLUE
CPI-SA10-100-075-03	1.00"(in)	[3.31]	[3.02]	[4.72]	[0.57 lb]	SILVER
CPI-SA25-25-19-75	25mm	84.1	76.8	120.0	0.26 kg	BLUE

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

STANDARD SWIVEL ARMS

Round Tooling | Dimensions | Technical Specifications



Features:

- Mounts apple core accessories to Ø40mm/1.50" round tube
- Provides 360° of rotational adjustments along (3) axes
- Used to mount venturi, bumpers, round locators, and proximity switches

Specifications:

Maximum Clamp Load:
200 ft-lb [271 Nm]

Material:

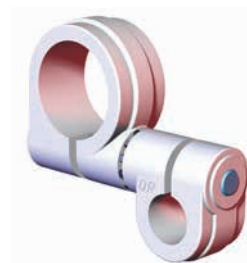
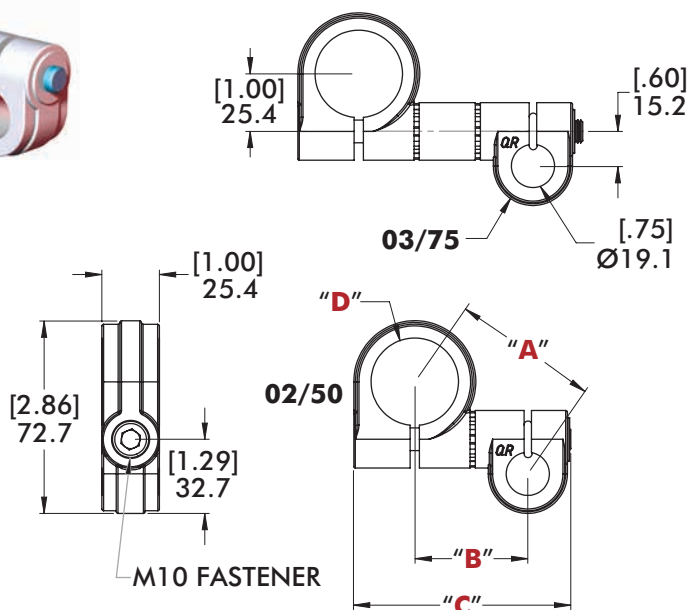
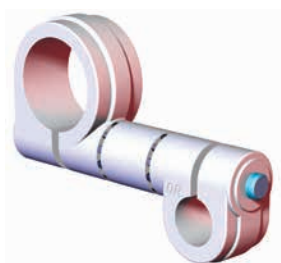
Body:

Cast Aluminum

Spacer:

Machined Aluminum

SAxx Single-Bolt Ø40mm/1.50" for Ø19.1mm [.75"] Apple Core



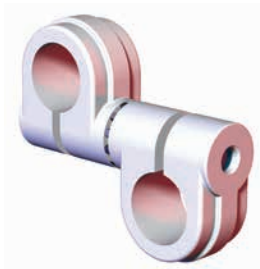
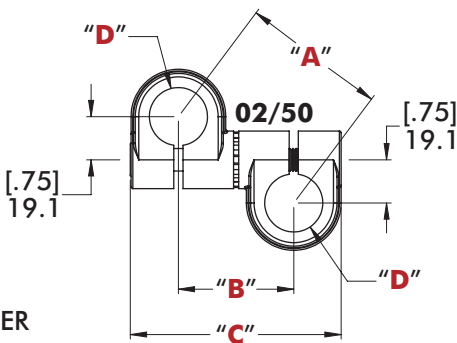
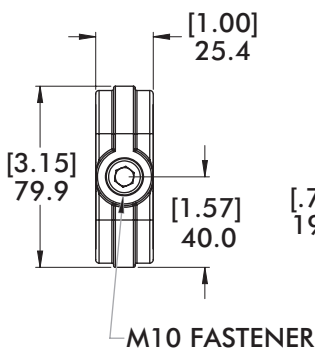
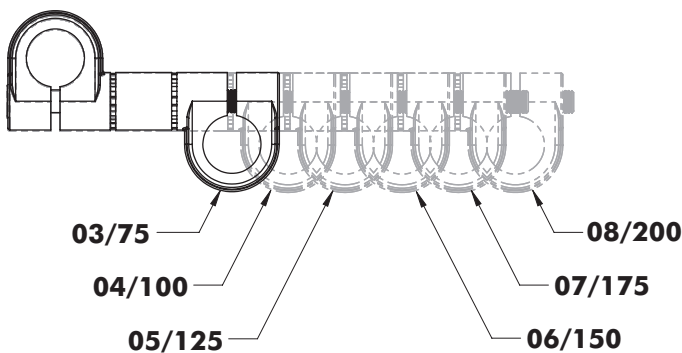
Model Number	(Ø)"D"	"A"	"B"	"C"	Weight	FINISH
CPI-SA10-150-075-02	1.50"(in)	[2.53]	[1.96]	[3.77]	[0.50 lb]	SILVER
CPI-SA25-40-19-50	40mm	64.3	49.8	95.9	0.23 kg	BLUE
CPI-SA10-150-075-03	1.50"(in)	[3.42]	[3.03]	[4.95]	[0.62 lb]	SILVER
CPI-SA25-40-19-75	40mm	87.0	76.9	125.9	0.28 kg	BLUE

TRANSITION SWIVEL ARMS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

SAxx Single-Bolt Ø25mm/1.00" to 25mm/Ø1.00"



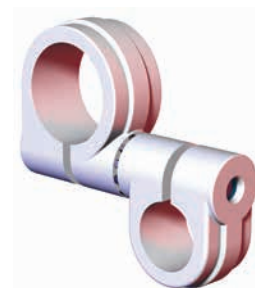
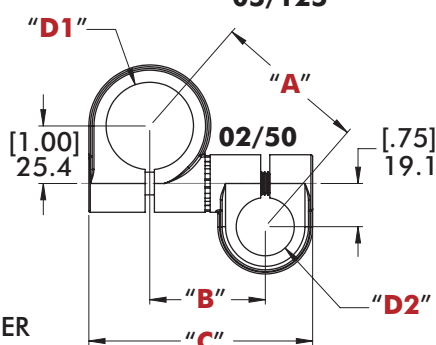
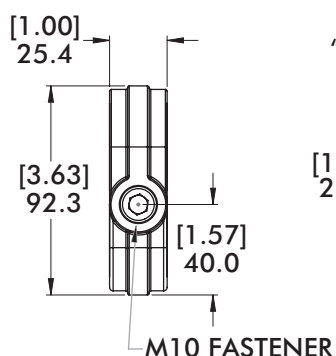
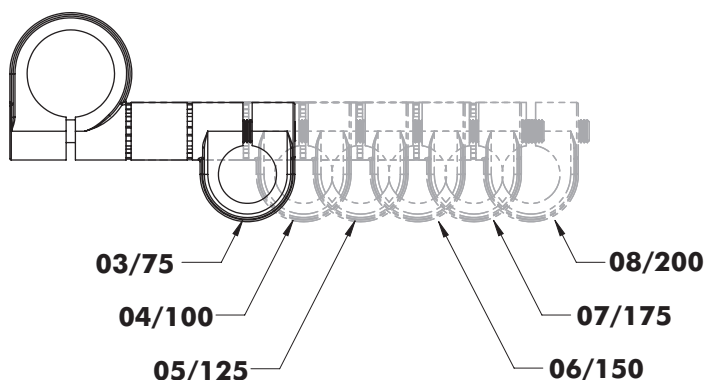
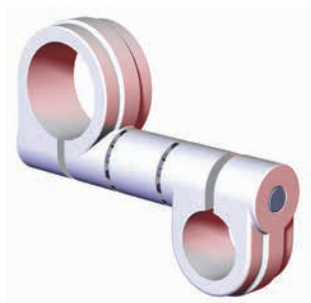
Model Number	(Ø)"D"	"A"	"B"	"C"	Weight	FINISH
CPI-SA10-100-100-02	1.00"(in)	[2.50]	[2.00]	[3.66]	[0.49 lb]	SILVER
CPI-SA25-25-25-50	25mm	63.6	50.9	93.1	0.22 kg	BLUE
CPI-SA10-100-100-03	1.00"(in)	[3.42]	[3.07]	[4.73]	[0.60 lb]	SILVER
CPI-SA25-25-25-75	25mm	86.7	77.9	120.1	0.27 kg	BLUE
CPI-SA10-100-100-04	1.00"(in)	[4.31]	[4.04]	[5.70]	[0.69 lb]	SILVER
CPI-SA25-25-25-100	25mm	109.6	102.7	144.9	0.31 kg	BLUE
CPI-SA10-100-100-05	1.00"(in)	[5.25]	[5.03]	[6.69]	[0.79 lb]	SILVER
CPI-SA25-25-25-125	25mm	133.4	127.9	170.0	0.36 kg	BLUE
CPI-SA10-100-100-06	1.00"(in)	[6.21]	[6.02]	[7.68]	[0.88 lb]	SILVER
CPI-SA25-25-25-150	25mm	157.7	153.0	195.2	0.40 kg	BLUE
CPI-SA10-100-100-07	1.00"(in)	[7.16]	[7.00]	[9.06]	[1.00 lb]	SILVER
CPI-SA25-25-25-175	25mm	181.9	177.9	230.0	0.45 kg	BLUE
CPI-SA10-100-100-08	1.00"(in)	[8.13]	[7.99]	[9.84]	[1.09 lb]	SILVER
CPI-SA25-25-25-200	25mm	206.6	203.0	250.0	0.50 kg	BLUE

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

TRANSITION SWIVEL ARMS

Round Tooling | Dimensions | Technical Specifications

SAxx Single-Bolt Ø40mm/1.50" to Ø25mm/1.00"



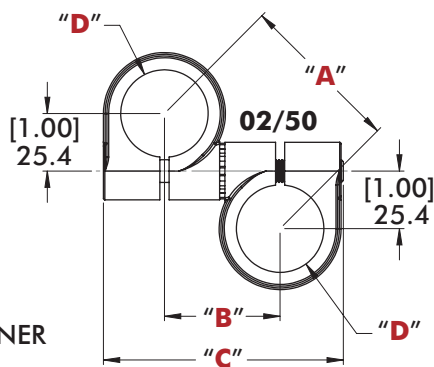
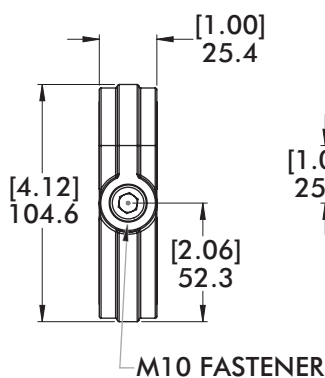
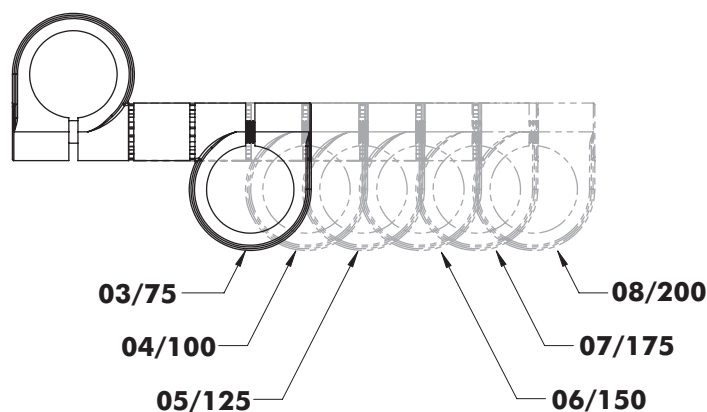
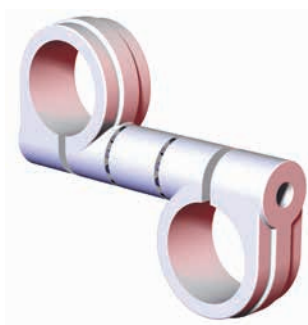
Model Number	(Ø)"D1"	(Ø)"D2"	"A"	"B"	"C"	Weight	FINISH
CPI-SA10-150-100-02	1.50"(in)	1.00"(in)	[2.66]	[2.01]	[3.89]	[0.53 lb]	SILVER
CPI-SA25-40-25-50	40mm	25mm	67.6	51.0	98.8	0.24 kg	BLUE
CPI-SA10-150-100-03	1.50"(in)	1.00"(in)	[3.53]	[3.07]	[4.95]	[0.64 lb]	SILVER
CPI-SA25-40-25-75	40mm	25mm	89.8	78.0	125.7	0.29 kg	BLUE
CPI-SA10-150-100-04	1.50"(in)	1.00"(in)	[4.41]	[4.05]	[5.93]	[0.73 lb]	SILVER
CPI-SA25-40-25-100	40mm	25mm	112.0	102.8	150.6	0.33 kg	BLUE
CPI-SA10-150-100-05	1.50"(in)	1.00"(in)	[5.33]	[5.04]	[6.92]	[0.83 lb]	SILVER
CPI-SA25-40-25-125	40mm	25mm	135.4	127.9	175.8	0.38 kg	BLUE
CPI-SA10-150-100-06	1.50"(in)	1.00"(in)	[6.28]	[6.03]	[7.91]	[0.93 lb]	SILVER
CPI-SA25-40-25-150	40mm	25mm	159.4	153.1	200.9	0.42 kg	BLUE
CPI-SA10-150-100-07	1.50"(in)	1.00"(in)	[7.22]	[7.01]	[8.89]	[1.04 lb]	SILVER
CPI-SA25-40-25-175	40mm	25mm	183.4	178.0	225.8	0.47 kg	BLUE
CPI-SA10-150-100-08	1.50"(in)	1.00"(in)	[8.19]	[8.00]	[9.88]	[1.13 lb]	SILVER
CPI-SA25-40-25-200	40mm	25mm	207.9	203.1	251.0	0.51 kg	BLUE

TRANSITION SWIVEL ARMS

Round Tooling | Dimensions | Technical Specifications

Nominal (Ø) given
See chart on Page 72
for actual (Ø) size

SAxx Single-Bolt Ø40mm/1.50" to Ø40mm/1.50"



Model Number	(Ø)"D"	"A"	"B"	"C"	Weight	FINISH
CPI-SA10-150-150-02	1.50"(in)					SILVER
CPI-SA25-40-40-50	40mm	[2.84] 72.0	[2.01] 51.1	[4.17] 105.9	[0.59 lb] 0.27 kg	BLUE
CPI-SA10-150-150-03	1.50"(in)					SILVER
CPI-SA25-40-40-75	40mm	[3.67] 93.2	[3.07] 78.1	[5.19] 131.9	[0.69 lb] 0.31 kg	BLUE
CPI-SA10-150-150-04	1.50"(in)					SILVER
CPI-SA25-40-40-100	40mm	[4.52] 114.7	[4.05] 102.9	[6.17] 156.7	[0.79 lb] 0.36 kg	BLUE
CPI-SA10-150-150-05	1.50"(in)					SILVER
CPI-SA25-40-40-125	40mm	[5.42] 137.7	[5.04] 128.0	[7.16] 181.9	[0.88 lb] 0.40 kg	BLUE
CPI-SA10-150-150-06	1.50"(in)					SILVER
CPI-SA25-40-40-150	40mm	[6.35] 161.4	[6.03] 153.2	[8.15] 207.0	[0.97 lb] 0.44 kg	BLUE
CPI-SA10-150-150-07	1.50"(in)					SILVER
CPI-SA25-40-40-175	40mm	[7.29] 185.2	[7.01] 178.1	[9.13] 231.9	[1.09 lb] 0.49 kg	BLUE
CPI-SA10-150-150-08	1.50"(in)					SILVER
CPI-SA25-40-40-200	40mm	[8.25] 209.5	[8.00] 203.2	[10.12] 257.0	[0.54 lb] 1.18 kg	BLUE

SINGLE END EXTENSIONS

ES Rod End and Mounting Extensions

- Mounts to round tube for extended mounting options
- Provides 360° of rotational adjustments along a single axis

Maximum Clamp Load:
200 ft-lb [271 Nm]
Material:
Body:
Cast Aluminum
Extension:
Machined Aluminum



ES Ø25mm/1.00" Rod End Extensions

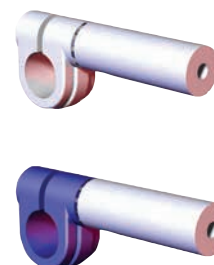


From **03**(3.00") to **28**(28.00")
in 1.00" Increments

CPI-ES10-100-06 (6.00" Length)

From 50(50mm) to 400(400mm)
in 50mm Increments

CPI-ES25-25-250 (250mm Length)



ES Ø40mm/1.50" Rod End Extensions

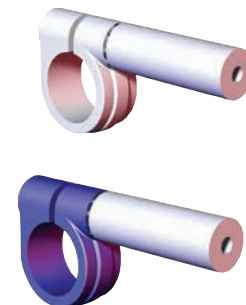


From 03(3.00") to 28(28.00")
in 1.00" Increments

CPI-ES10-150-06 (6.00" Length)

From 50(50mm) to 400(400mm)
in 50mm Increments

CPI-ES25-40-250 (250mm Length)

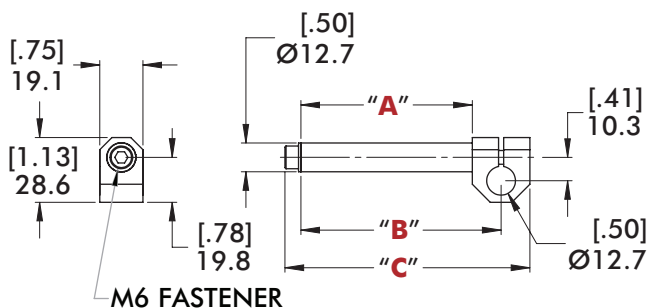
EE-RND | 46

Round Tooling | Dimensions | Technical Specifications

MSE Ø12.7mm [.50"] Extension (Micro)



Mounting End
Extensions
CPI-ES10-075-06
(Shown Above)



Model Number	"A"	"B"	"C"	Weight
CPI-MSE-50-50-03	[2.98]	[3.48]	[4.25]	[0.14 lb]
	75.6	88.3	108.1	0.06 kg
CPI-MSE-50-50-06	[5.73]	[6.23]	[7.00]	[0.20 lb]
	145.5	158.2	177.9	0.09 kg

"L" = Specify Length from Below

English Lengths:

From **03**(3.00") to **28**(28.00")
in 1.00" Increments

Order Example

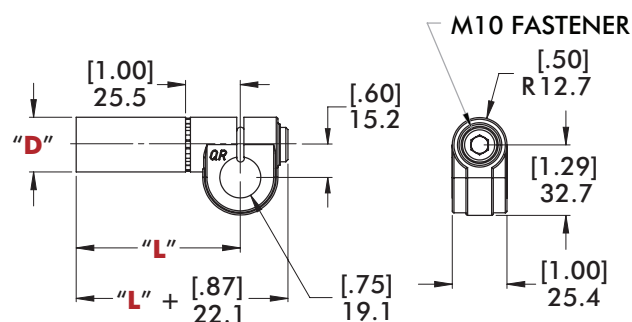
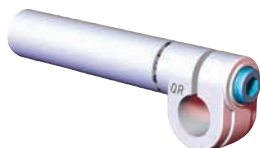
CPI-ES10-075-06 (6.00" Length)

Metric Lengths:

From 50(50mm) to 400(400mm)
in 50mm Increments

Order Example

CPI-ES25-19-250 (250mm Length)



Model Number	(Ø)"D"	Weight (Base + Additional Increments)	FINISH
CPI-ES10-075-"L"	1.00"(in)	Base Length "L" 03 = 0.17 kg [0.38 lb] Add .031 kg [.068 lb] per additional increment	SILVER
CPI-ES25-19-"L"	25mm	Base Length "L" 100 = 0.22 kg [0.49 lb] Add .031 kg [.068 lb] per additional increment	BLUE

"L" = Specify Length from Below

English Lengths:

From **03**(3.00") to **18**(18.00")
in 1.00" Increments

Order Example

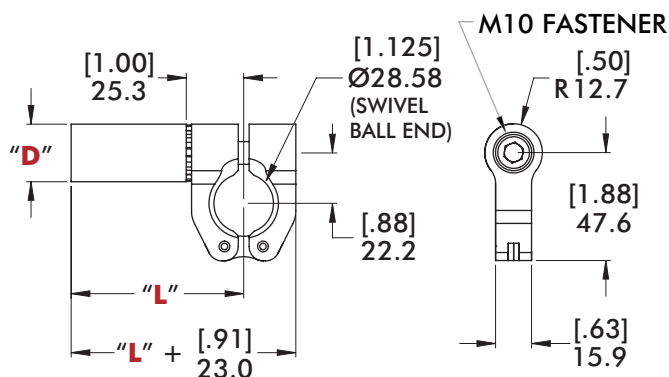
CPI-ES10-B112-06 (6.00" Length)

Metric Lengths

From 50 (50mm) to 400(400mm)
in 25mm Increments

Order Example

CPI-ES25-B112-75 (75mm Length)

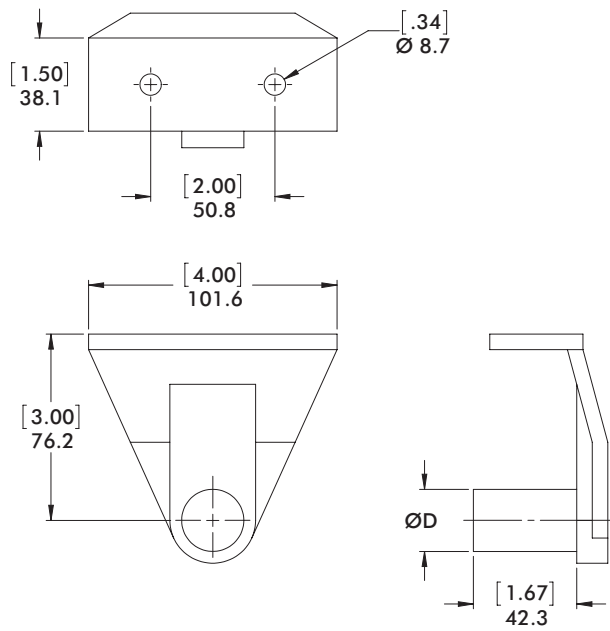


Model Number	(Ø)"D"	Weight (Base + Additional Increments)	FINISH
CPI-ES10-B112-"L"	1.00"(in)	Base Length "L" 03 = 0.23 kg [0.51 lb] Add .031 kg [.068 lb] per additional increment	SILVER
CPI-ES25-B112-"L"	25mm	Base Length "L" 100 = 0.23 kg [0.51 lb] Add .029 kg [.064 lb] per additional increment	BLUE

NEST PAD BRACKETS

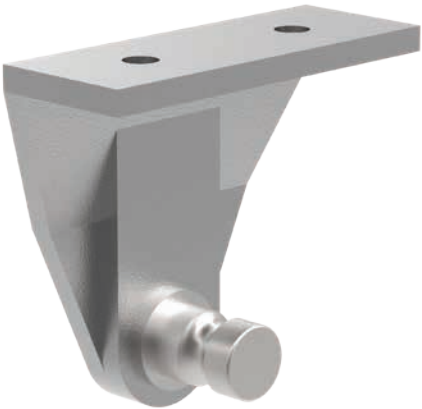
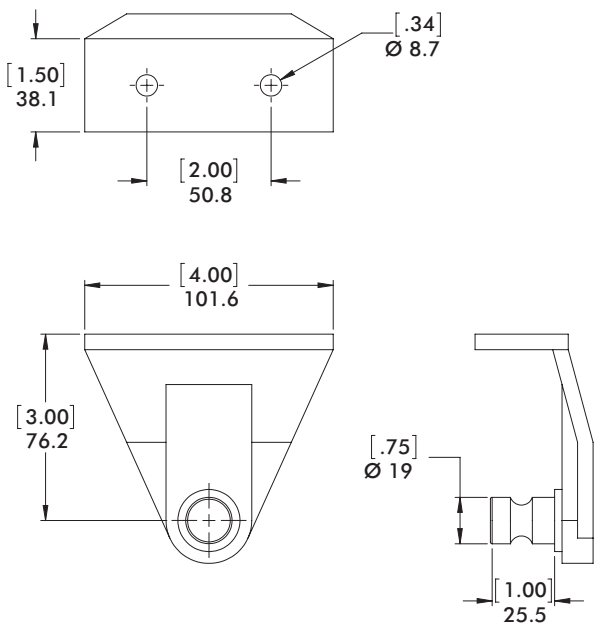
Round Tooling | Dimensions | Technical Specifications

EST



Model Number	$\varnothing D$	Weight
CPI-EST-00-1E-24	1 in	142 g [5 oz.]
CPI-EST-00-25-410	25mm	142 g [5 oz.]

EST Apple Core Version

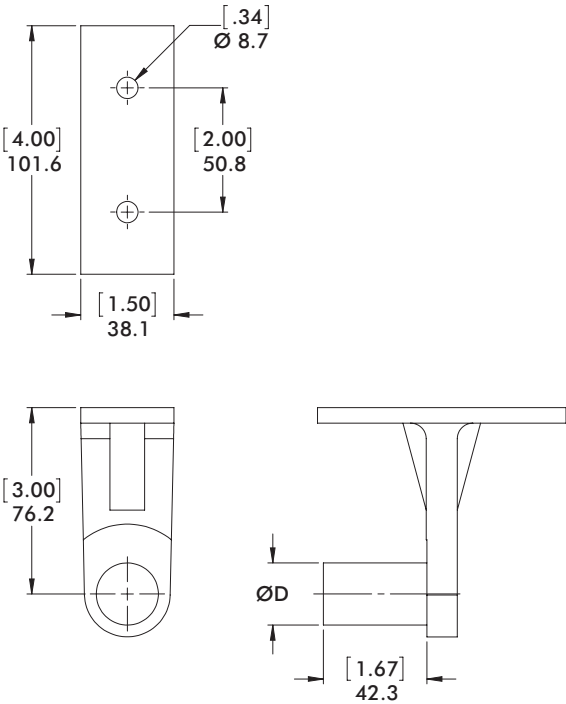


Model Number	Weight
CPI-EST-00-075-24	142 g [5 oz.]
CPI-EST-00-19-410	142 g [5 oz.]

NEST PAD BRACKETS

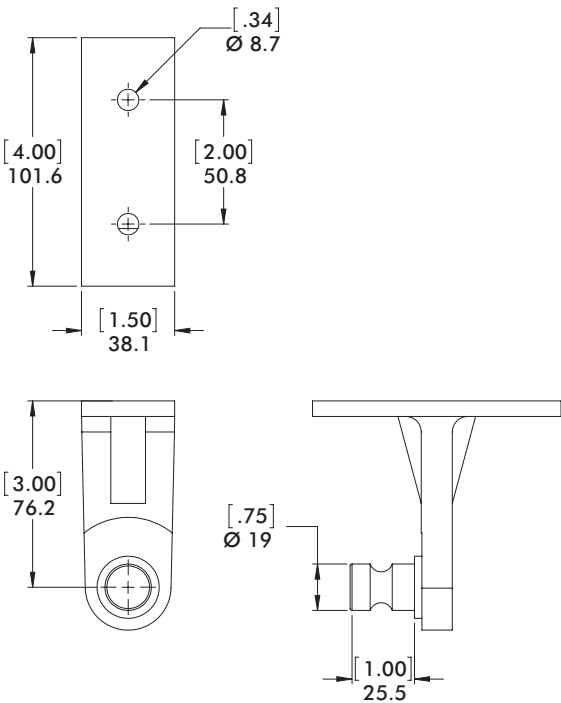
Round Tooling | Dimensions | Technical Specifications

EST 90° Version



Model Number	ØD	Weight
CPI-EST-90-1E-24	1 in	142 g [5 oz.]
CPI-EST-90-25E-410	25mm	142 g [5 oz.]

EST Apple Core 90° Version

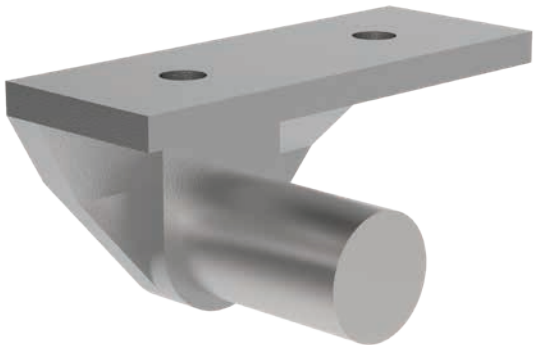
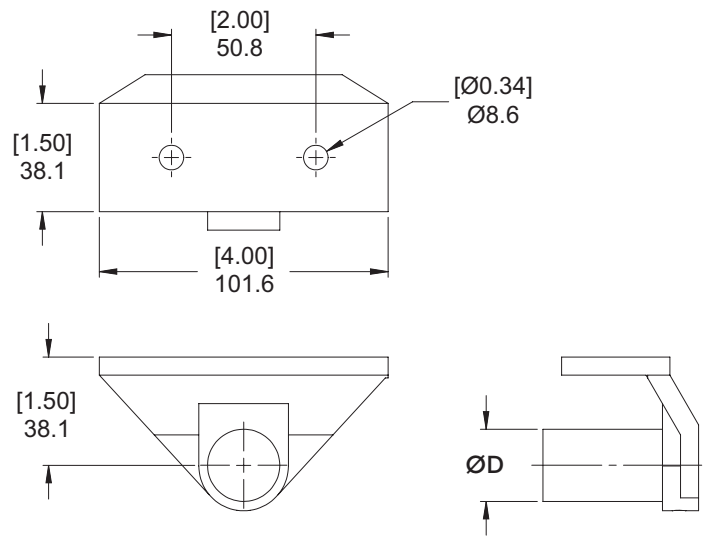


Model Number	Weight
CPI-EST-90-075-24	142 g [5 oz.]
CPI-EST-90-19-410	142 g [5 oz.]

NEST PAD BRACKETS

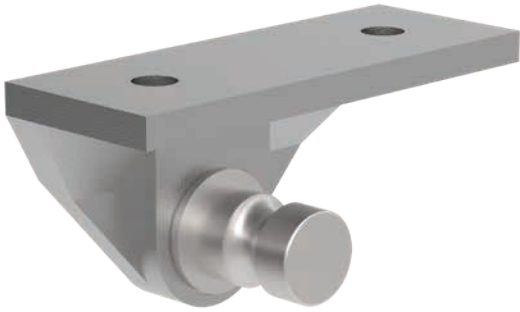
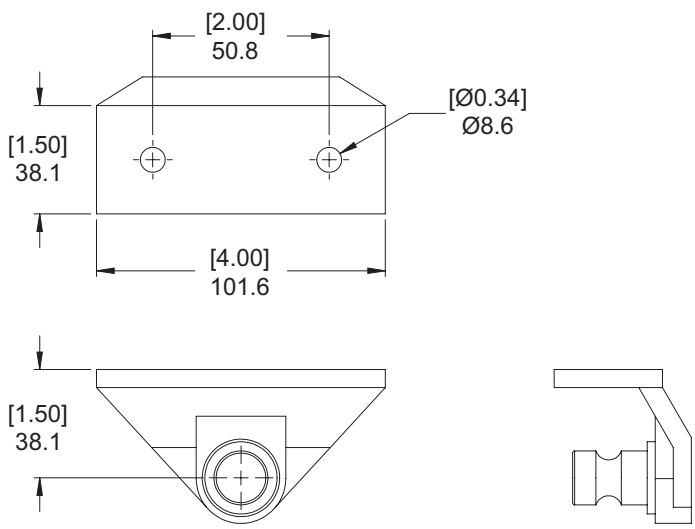
Round Tooling | Dimensions | Technical Specifications

AB Version



Model Number	ØD	Weight
CPI-AB-00-1E-24	1 in	142 g [5 oz.]
CPI-AB-25-410	25mm	142 g [5 oz.]

AB Apple Core Version

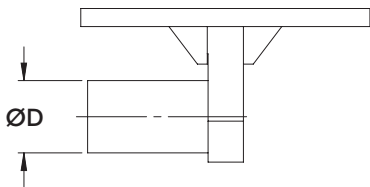
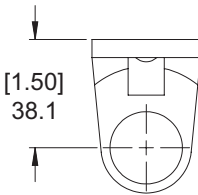
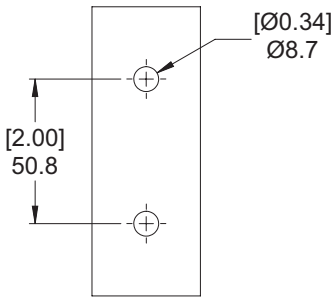


Model Number	Weight
CPI-AB-750-24	142 g [5 oz.]
CPI-AB-19-410	142 g [5 oz.]

NEST PAD BRACKETS

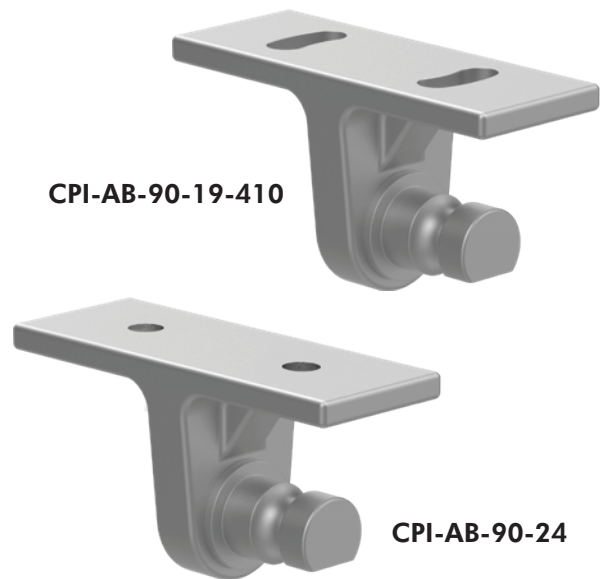
Round Tooling | Dimensions | Technical Specifications

AB 90° Version

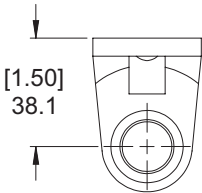
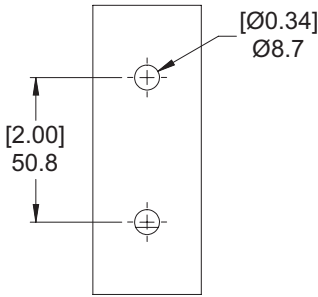


Model Number	ØD	Weight
CPI-AB-90-1E-24	1 in	142 g [5 oz.]
CPI-AB-90-25-410	25mm	142 g [5 oz.]

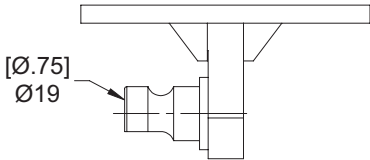
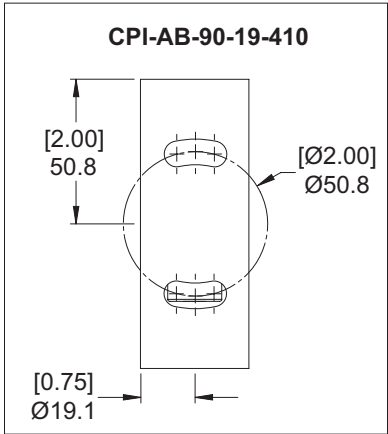
AB Apple Core 90° Version



CPI-AB-90-24



CPI-AB-90-19-410

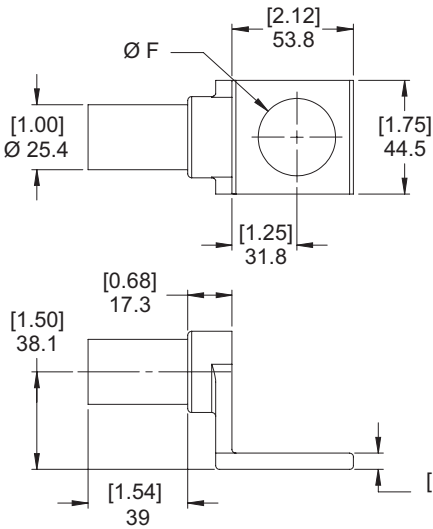


Model Number	Weight
CPI-AB-90-24	142 g [5 oz.]
CPI-AB-90-19-410	142 g [5 oz.]

PROXIMITY SWITCH MOUNT

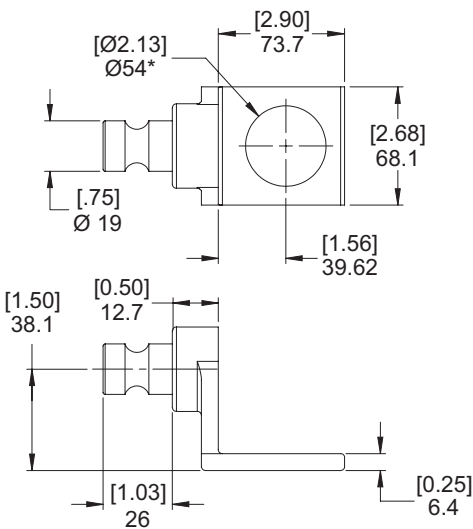
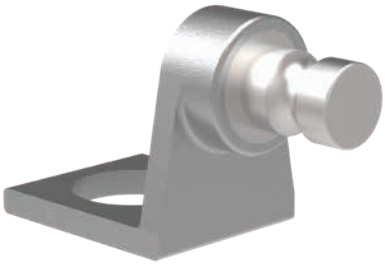
Round Tooling | Dimensions | Technical Specifications

SAP Series with 1" Extension



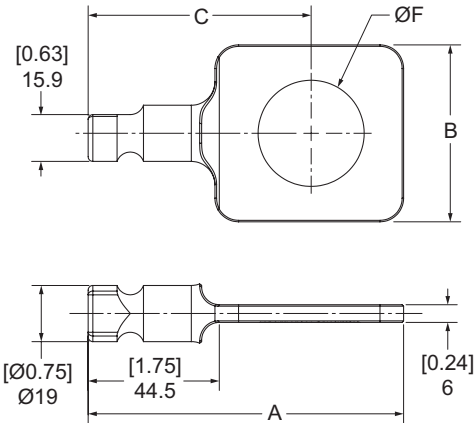
Model Number	(Ø)"F"*	Weight
CPI-SAP-18-1E	[0.71] 18	[0.2 lb] 91 g
CPI-SAP-30-1E	[1.18] 30	[0.2 lb] 91 g

SAP Series with Apple Core



Model Number	Weight
CPI-SAP-54	[0.3 lb] 136 g

BGA Series with Apple Core



Model Number	A	B	C	(Ø)"F"*	Weight
GT-BGA-750-10M				[0.39] 10	[0.13 lb] 57.5 g
GT-BGA-750-18M	[3.58] 91	[1.57] 40	[2.66] 67.6	[0.71] 18	[0.12 lb] 54.7 g
GT-BGA-750-30M				[1.18] 30	[0.10 lb] 47.2 g
GT-BGA-750-36M	[4.21] 107	[2.36] 60	[2.98] 75.6	[1.42] 36	[0.16 lb] 73.2 g
GT-BGA-750-42M				[1.65] 42	[0.15 lb] 67.3 g
GT-BGA-750-47M	[4.37] 111	[2.68] 68	[3.06] 77.6	[1.85] 47	[0.16 lb] 74.3 g

*Nominal Sensor Diameter

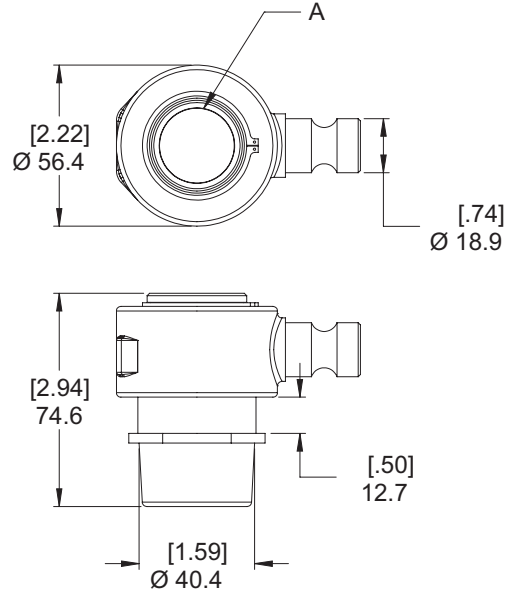
PROXIMITY SWITCH BUMPER

Round Tooling | Dimensions | Technical Specifications

PSM Spring Loaded Bumper



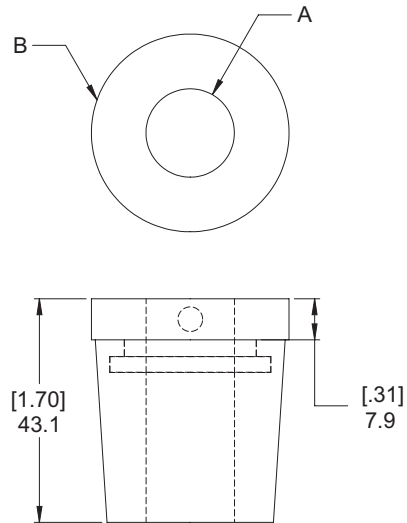
Model Number	(Ø)"A"	Weight
CPI-PSM-18-75	[18] 0.71"	[7 oz.] 198 g
CPI-PSM-30-75	[30] 1.18"	[7 oz.] 198 g



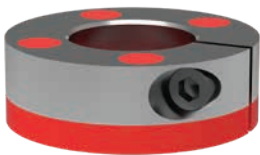
PB Friction Style Bumper



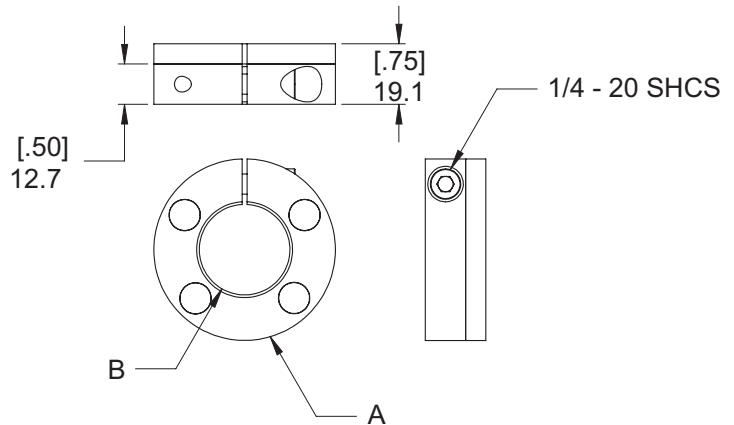
Model Number	(Ø)"A"	(Ø)"B"	Weight
CPI-PB-18-I	[18] 0.71	[38.1] 1.50	[2 oz.] 57 g
CPI-PB-30-I	[30] 1.18	[50.8] 2.00	[3 oz.] 85 g



PB Locking Collar Style Bumper



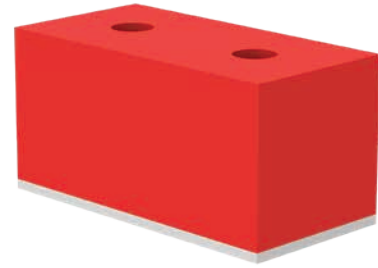
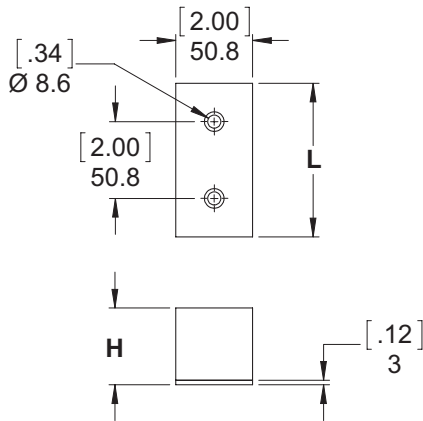
Model Number	(Ø)"A"	(Ø)"B"	Weight
CPI-PB-30M	[57.2] 2.25	[30] 1.18	[3 oz.] 85 g
CPI-PB-36M	[63.5] 2.50	[36] 1.42	[3 oz.] 85 g
CPI-PB-42M	[69.9] 2.75	[42] 1.65	[4 oz.] 113 g
CPI-PB-47M	[76.2] 3.00	[47] 1.85	[5 oz.] 141 g
CPI-PB-54M	[85.9] 3.38	[54] 2.13	[5 oz.] 141 g



NEST PAD BLOCKS

Round Tooling | Dimensions | Technical Specifications

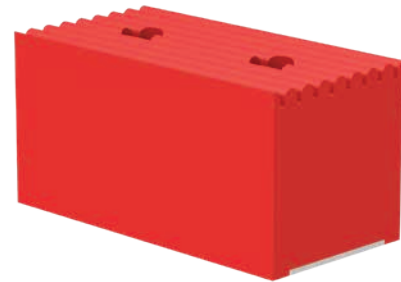
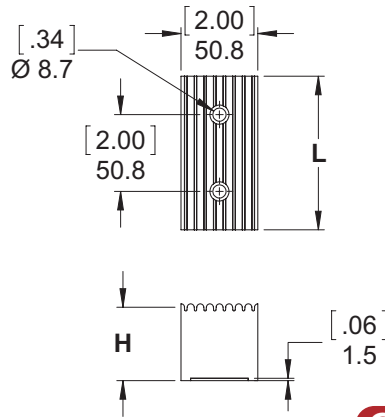
Urethane Pads



85 Durometer (Shore A) Urethane

Model	"H"	"L"	Weight
CPI-UT-1-4-85	1.00"(in)	4.00"(in)	9oz. [255g]
CPI-UT-2-4-85	2.00"(in)	4.00"(in)	14oz. [397g]
CPI-UT-2-6-85	2.00"(in)	6.00"(in)	19oz. [539g]

Ribbed Pads Neoprene



CPI - RT - [] - [] - []

Base Model	RT	Overall Height	H	Length	L	Durometer	(Shore A)
Ribbed Pads	1/2	0.50"	12.7 mm	4	4.00"	101.6 mm	15 Tan
Neoprene	1	1.00"	25.4 mm	6	6.00"	152.4 mm	30 Teal
	2	2.00"	50.8 mm	8	8.00"	203.2 mm	45 Red
	3	3.00"	76.2 mm	12	12.00"	304.8 mm	60 Black
	4	4.00"	101.6 mm				

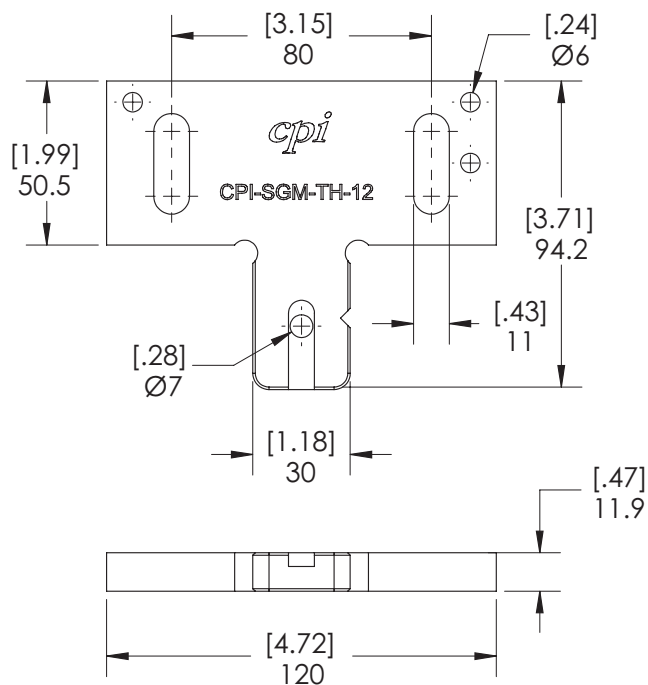
		Length															
		4				6				8				12			
Durometer >		15	30	45	60	15	30	45	60	15	30	45	60	15	30	45	60
Overall Height	1/2																
	1																
	2																
	3																
	4																

PLASTICS - BLUE SLICE

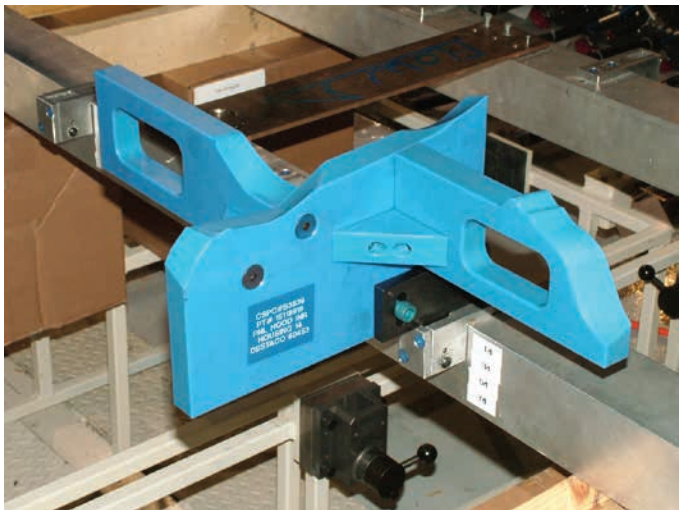
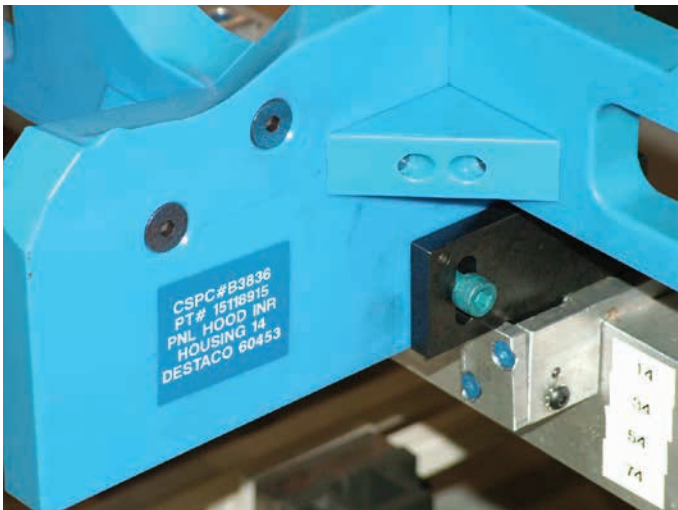
Round Tooling | Dimensions | Technical Specifications



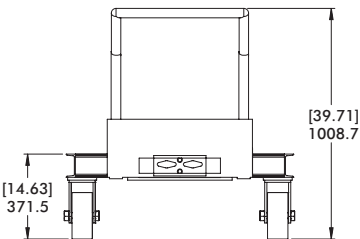
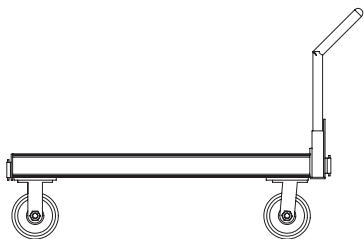
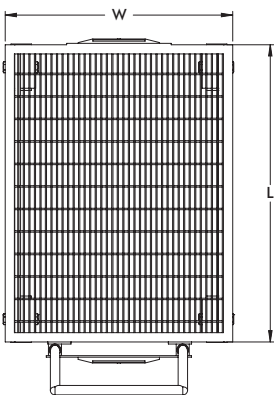
Model Number	Material	Weight
CPI-SGM-TH-12	Steel	604g [1.33 lb]



Name: Blue Slice Nest Tooling
Material: Blue Nylon, 1" (25.4mm) thickness
Benefits: Lightweight, durable, machinable material
Process: Machined from 3D CAD

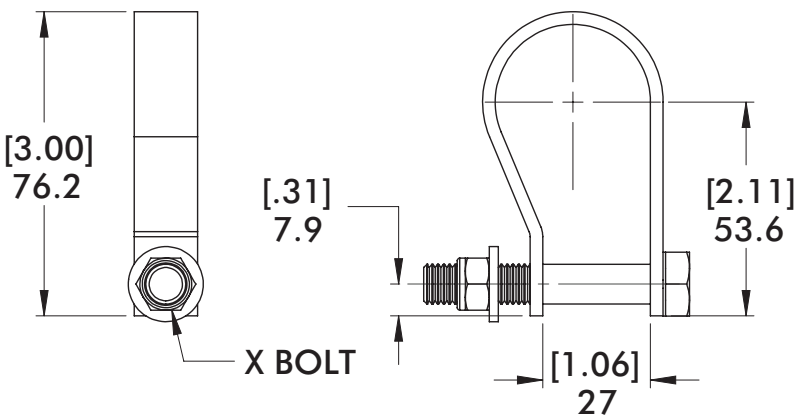


Tool Storage Cart



Base Model	Width			Length		
TC	36	36.00"	0.9 m	48	48.00"	1.2 m
Tool Storage Carts	48	48.00"	1.2 m	60	60.00"	1.5 m
				72	72.00"	1.8 m
				84	84.00"	2.1 m
				96	96.00"	2.4 m

Tool Hanger



Material: Steel

Model Number	Weight
CPI-THR-516	91g [0.20 lb]

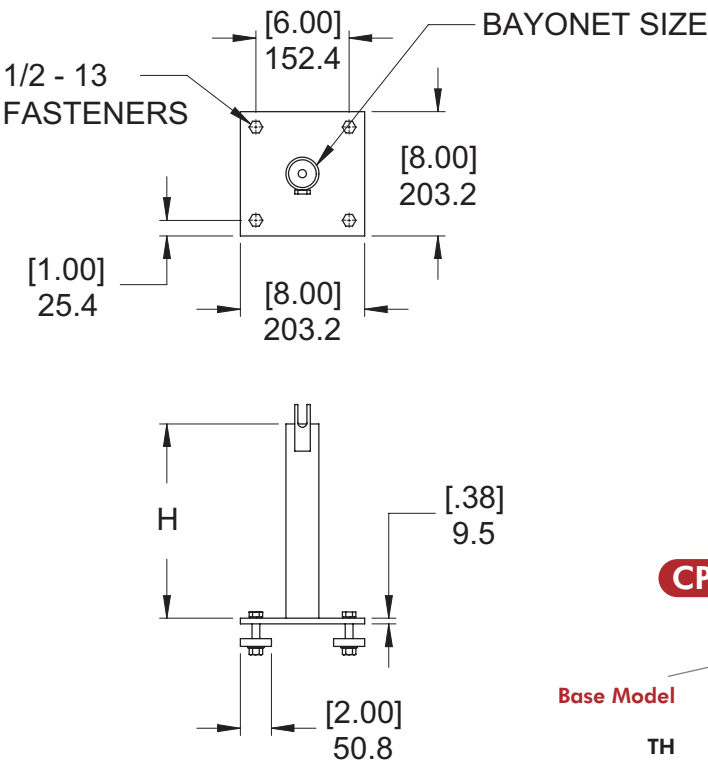
TOOL STORAGE

Round Tooling | Dimensions | How To Order

Tool Holder Strap



Tool Storage Can



Material: Steel

CPI - TH - [] - [] - BF						
Base Model	Bayonet Size		Height			
TH	150	1.5"	40 mm	6.5	6.5"	165 mm
Tool Holder	250	2.5"	60 mm	12.5	12.5"	318 mm
				18.5	18.5"	470 mm

ROUND TOOLING SYSTEMS

Notes

[illegible]

Tolerance Specifications

(Ø) "D" vs. Actual (Ø) Bore Sizes (Micro)				(Ø) "D" vs. Actual (Ø) Bore Sizes (Typical)					
(Ø) "D"	Tolerance	(Ø) "D"	Tolerance	(Ø) "D"	Tolerance	(Ø) "D"	Tolerance	(Ø) "D"	Tolerance
.50"(in)	±.002	12mm	±.13	1.00"(in)	±.002	25mm	±.13	1.25"(in)	±.002
.75"(in)	±.002	20mm	±.13	1.50"(in)	±.006	40mm	±.15	3.00"(in)	±.006
1.00"(in)	±.002	25mm	±.13 ¹	2.50"(in)	±.006	60mm	±.15	30mm	±.13