

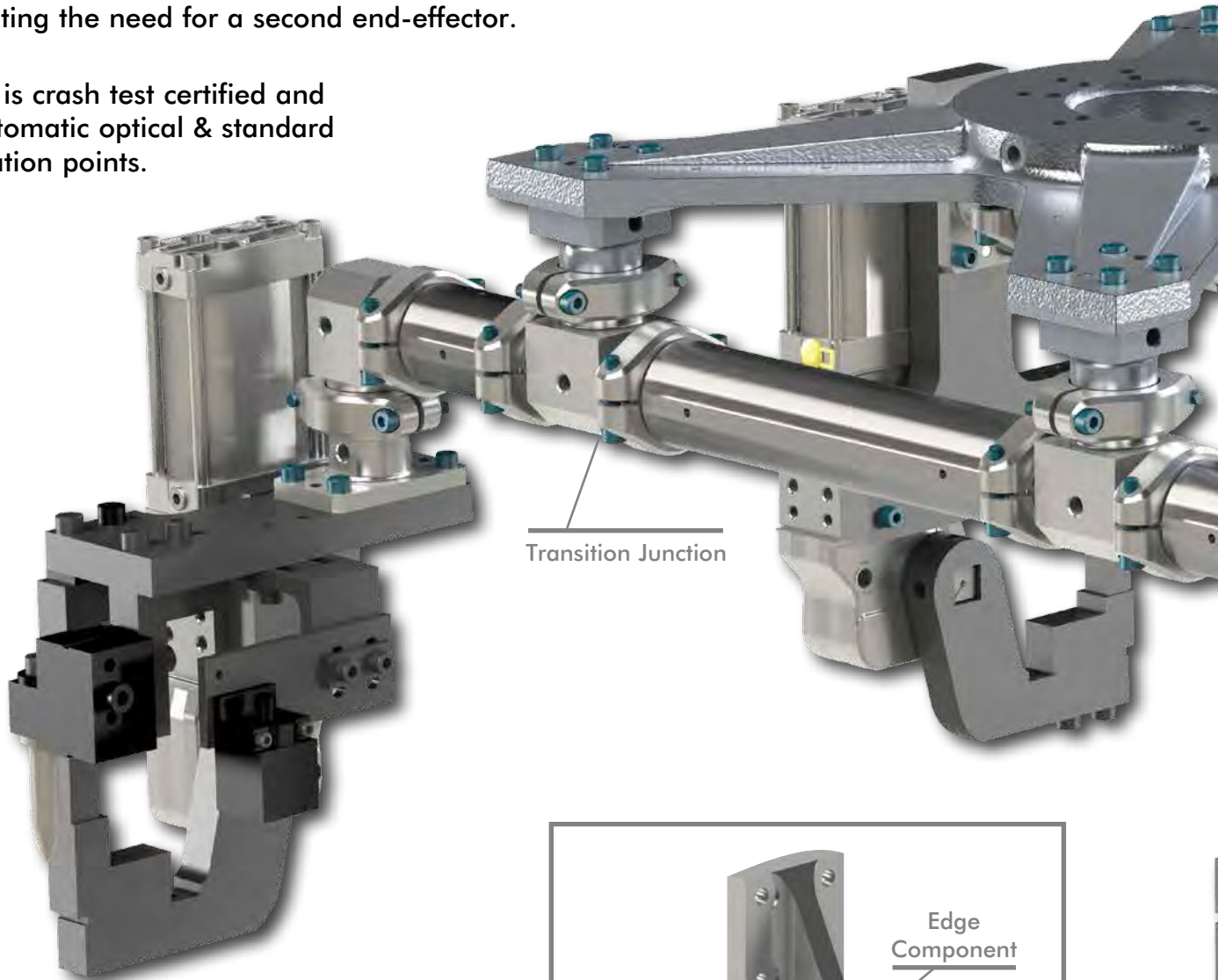
SPIDERGRIP GEOMETRIC END EFFECTOR SYSTEM



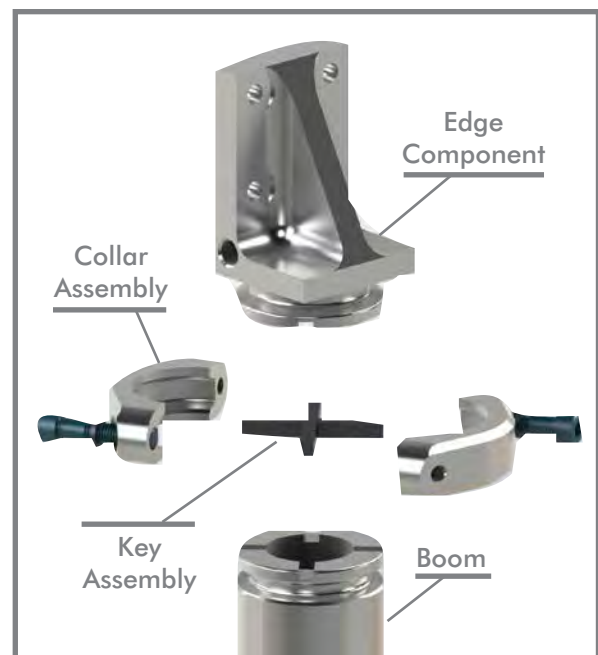
Product Overview

SpiderGrip Geometric End Effector Tooling System offers a standard cost effective solution by making it easy for each component to be replaced individually in the robotic cell, dramatically reducing production downtime and eliminating the need for a second end-effector.

This system is crash test certified and features automatic optical & standard CMM validation points.

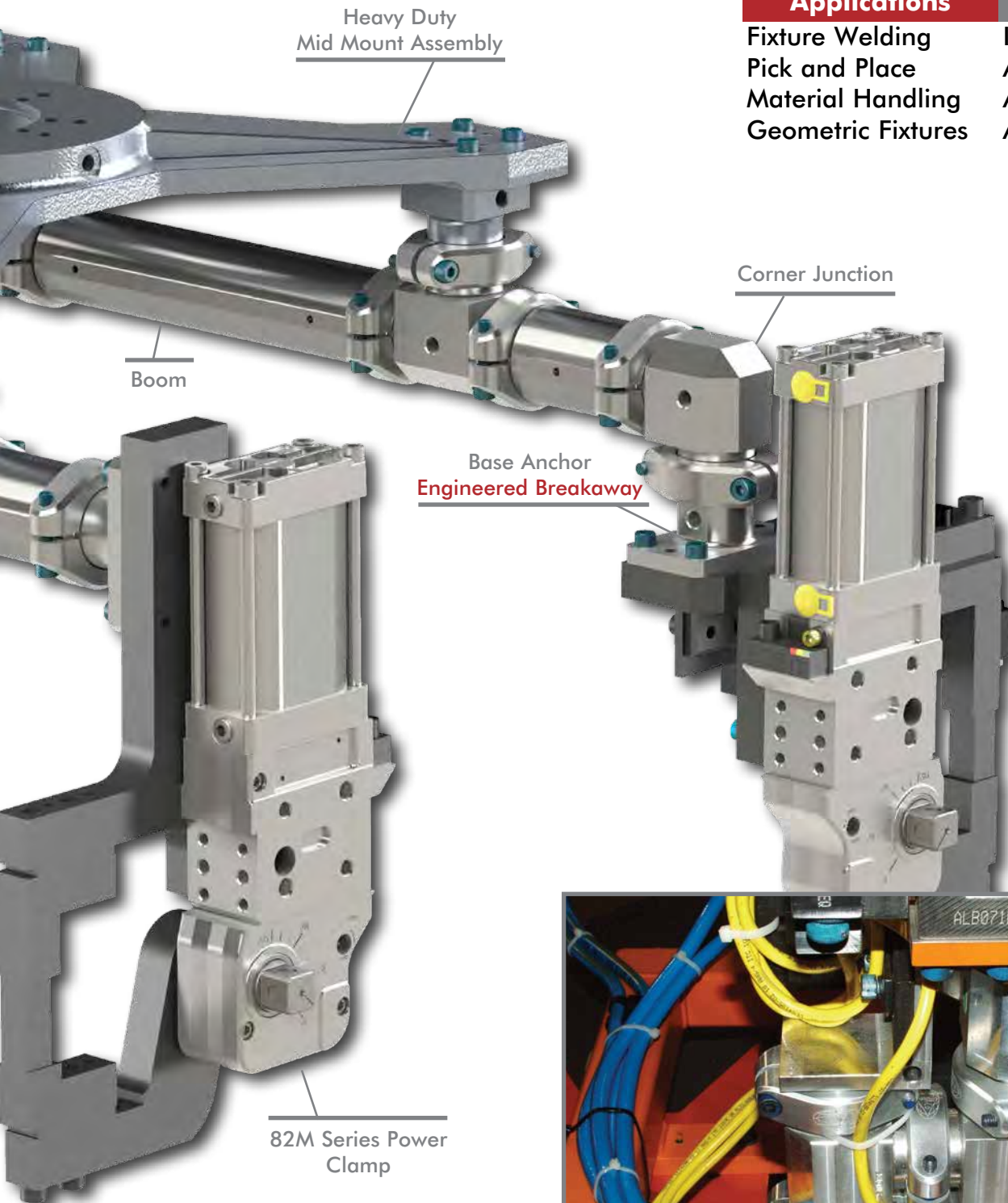


Spidergrip modular components are easily configurable and offer high strength to weight ratios while maintaining dimensional accuracy after continuous minor collisions. The patented collar/key design and engineered breakaway base anchor provides quick crash recovery.



SPIDERGRIP GEOMETRIC END EFFECTOR SYSTEM

Product Overview



Most commonly used in:

Applications

Fixture Welding
Pick and Place
Material Handling
Geometric Fixtures

Markets

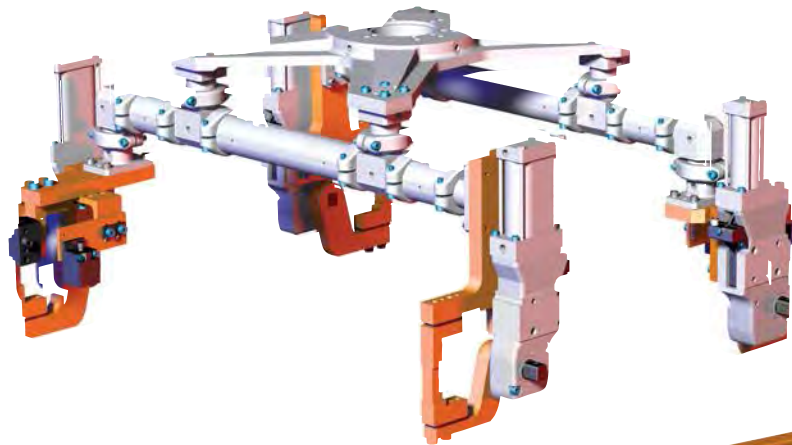
Industrial
Automotive
Aerospace
Appliance



SPIDERGRIP END EFFECTOR TOOLING SYSTEMS

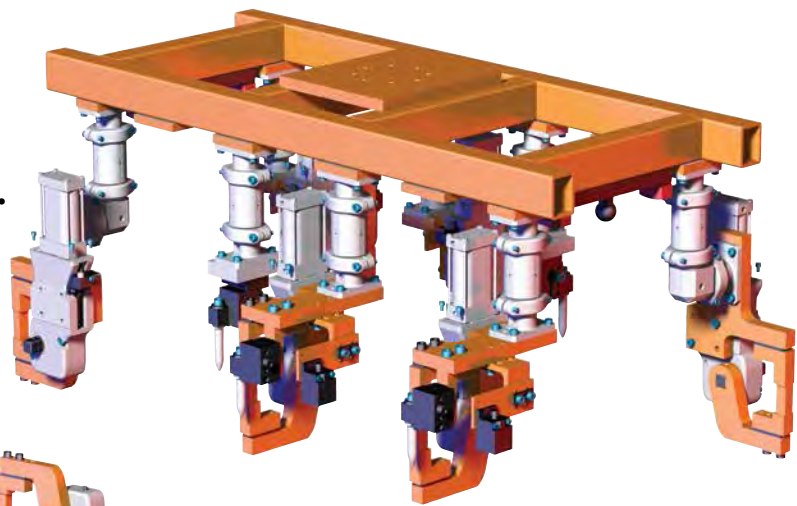


Spidergrip Tooling Components | Typical Application Build Examples

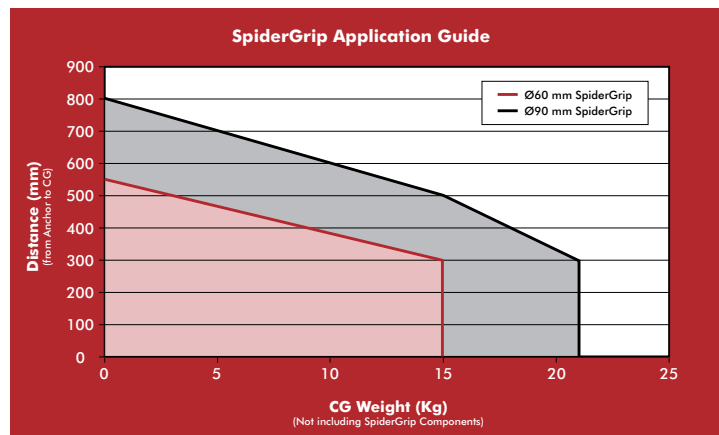
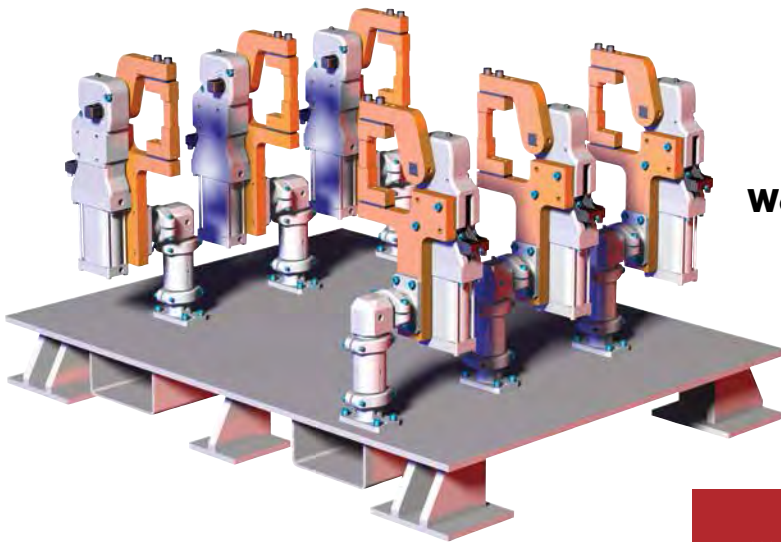


Materials Handling End Effector Tooling System with RM4 Heavy Duty Mid-Mount Assembly (RM4-ST5).

Geometric End Effector Tooling System with Steel Frame Backbone.



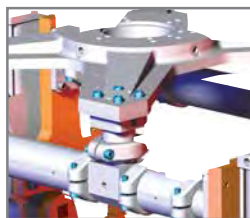
Weld Fixture Tooling System



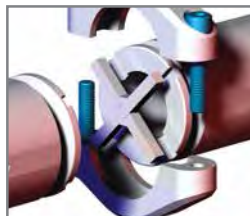


SPIDERGRIP GEOMETRIC END EFFECTOR SYSTEM

Table of Contents



SpiderGrip Heavy Duty Mid Mount..... 5



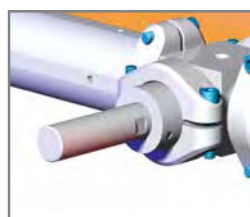
SpiderGrip Anchors and Collar Assemblies 10



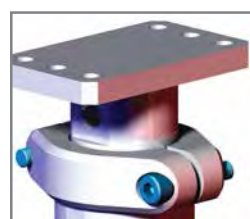
SpiderGrip Booms, Adaptors, and Spacers..... 17



SpiderGrip Junction Components 21



SpiderGrip Single End Extension Mount 26



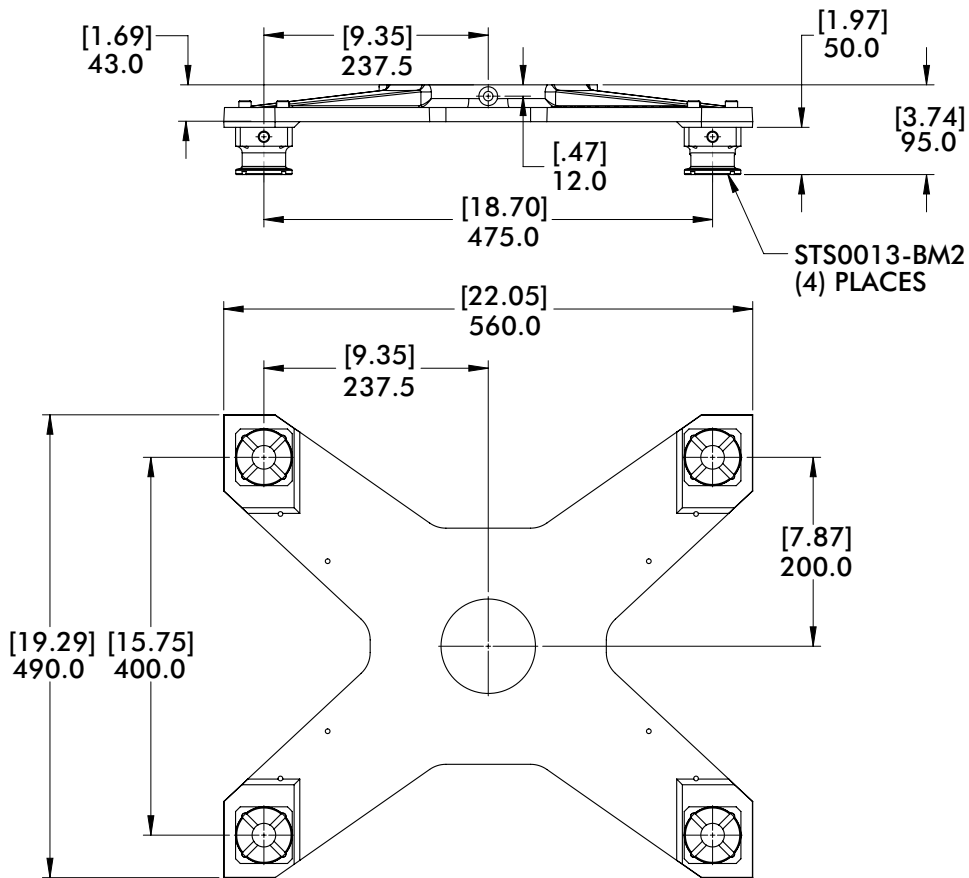
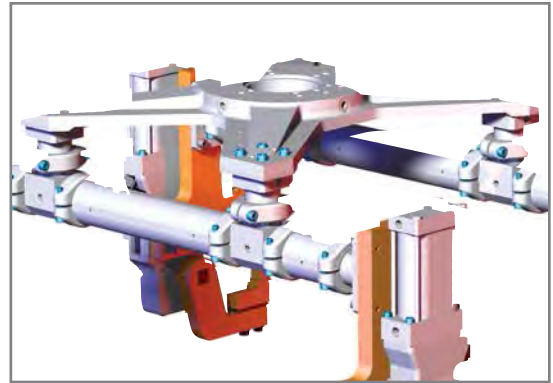
SpiderGrip Edge Mounting Components 27

SPIDERGRIP MID MOUNT ASSEMBLY



Spidergrip Tooling Components | Dimensions, How To Order

Heavy-Duty Mid Mount Assembly



RM4-STX — **RXX** — **XX**

Model **Robot Interface Pattern** **Accessory**
 (e.g. EPM-01)
 (Leave blank if NONE)

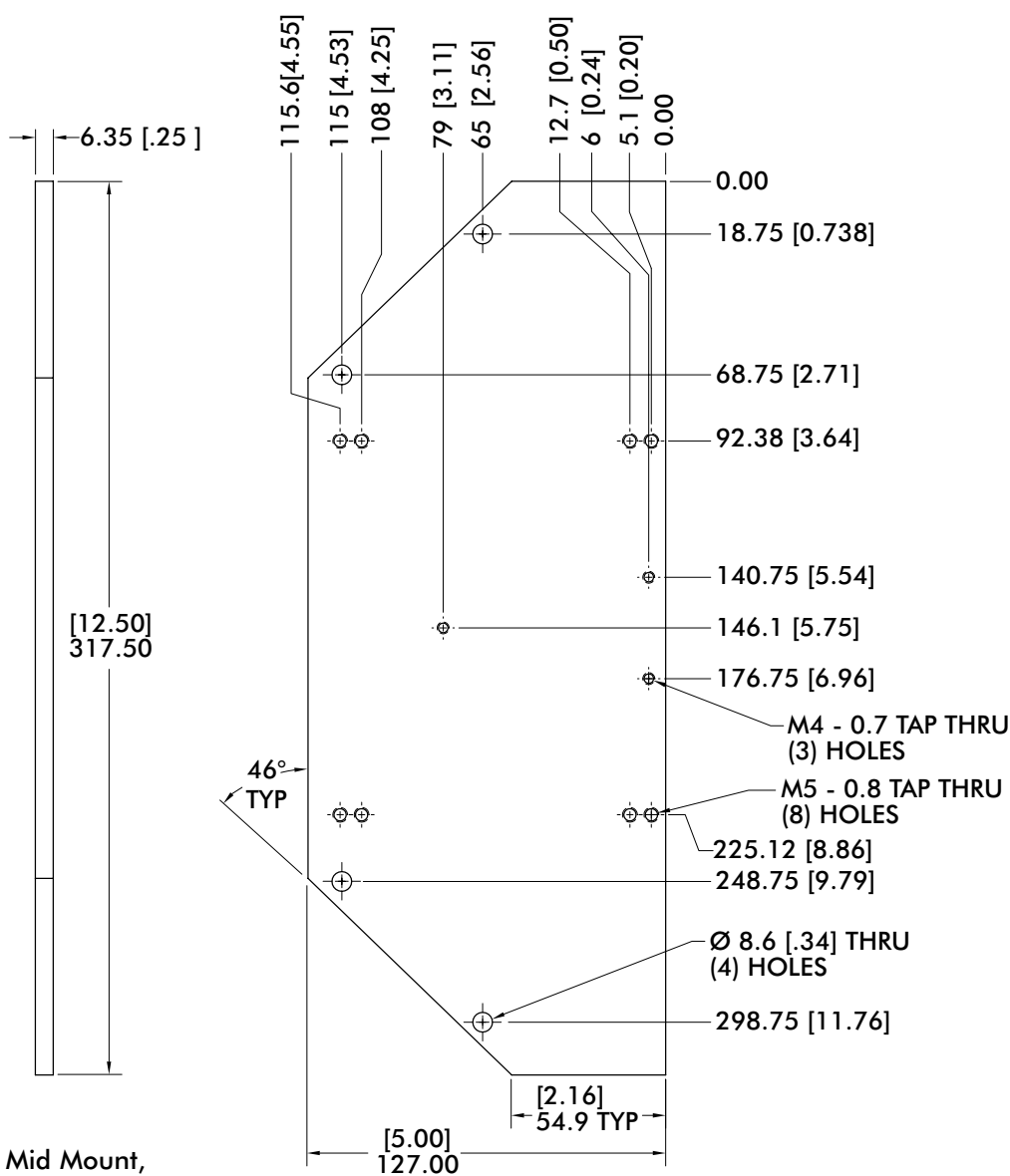
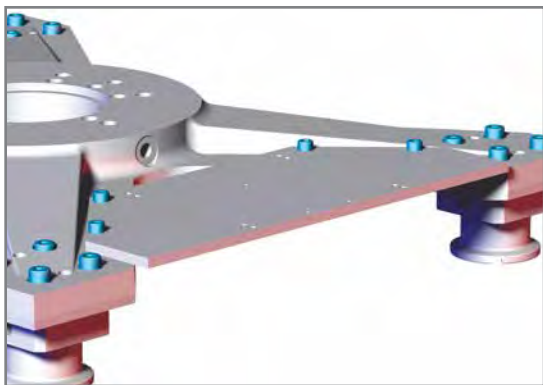
Weight
 10.4 kg [22.89 lb]



SPIDERGRIP MID MOUNT ACCESSORY PLATE

Spidergrip Tooling Components | Dimensions, How To Order

Accessory Mount Plate



When ordering with Heavy Duty Mid Mount, please add designation "EPM-01" as shown RM4-ST5-RXX-EPM-01 or add designation "EPM-BLK" to order blank RM4-ST5-RXX-EPM-BLK To order separately use Model Number

| Model Number | Weight |
|----------------|------------------|
| CPI-BM2-EPM-xx | .63 kg [1.39 lb] |

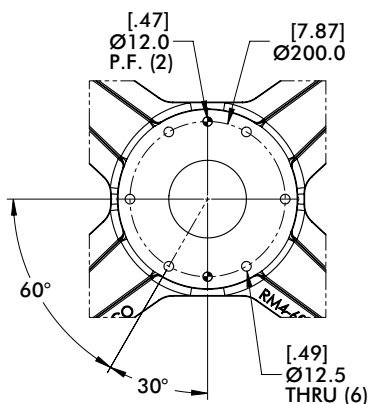
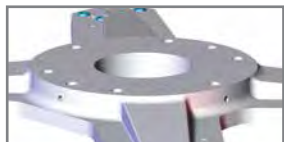
MID MOUNT BOLT PATTERN



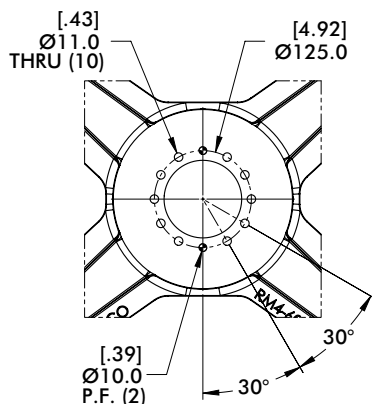
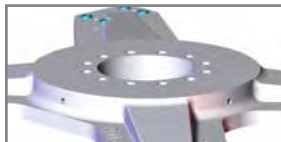
Robot Interface Bolt Patterns



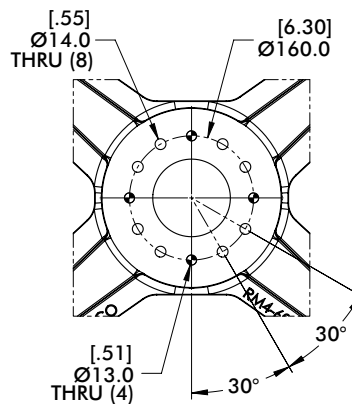
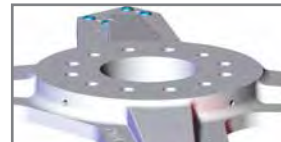
R01 (Ø200mm Bolt Circle)



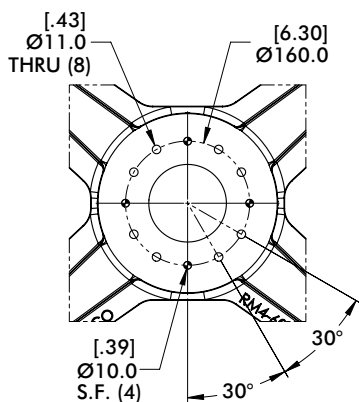
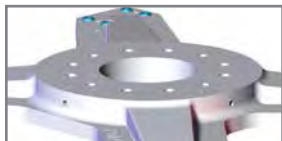
R02 (Ø125mm Bolt Circle)



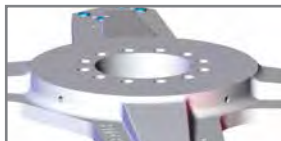
R03 (Ø160mm Bolt Circle)



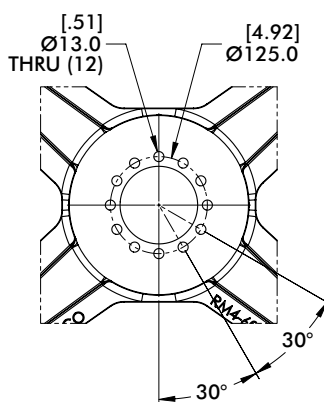
R04 (Ø160mm Bolt Circle)



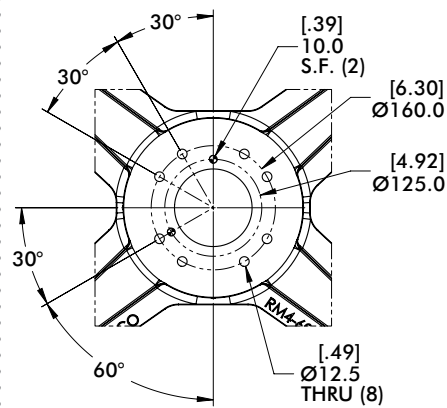
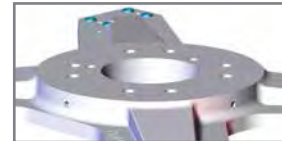
R05 (Ø125mm Bolt Circle)



Includes Insulation
Add 1.5mm to Height (95.0 [3.74])



R06 (Ø125/160mm Bolt Circle)



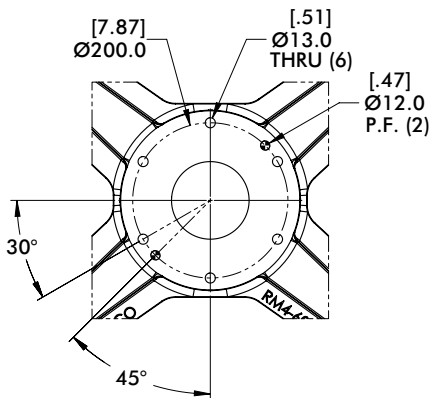
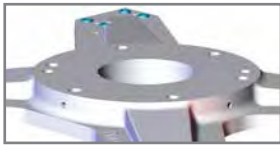


MID MOUNT BOLT PATTERN

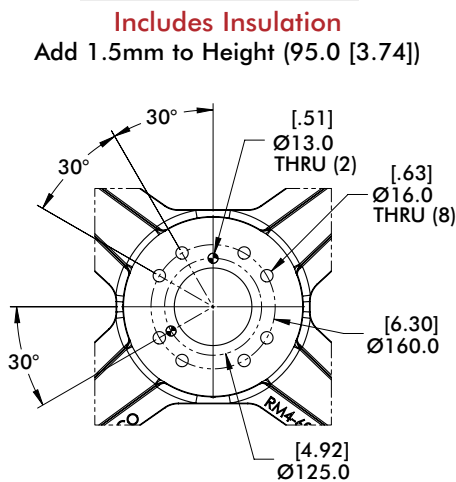
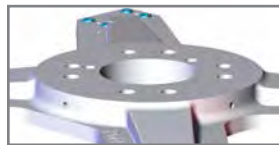
Robot Interface Bolt Patterns



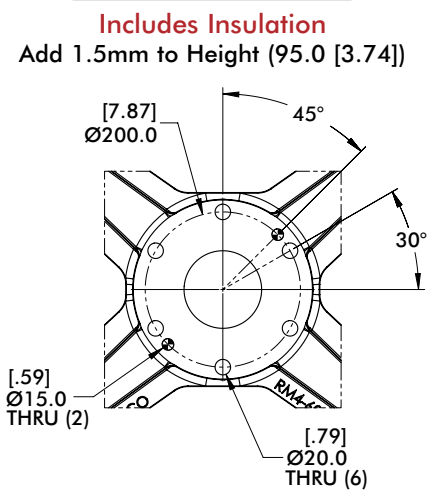
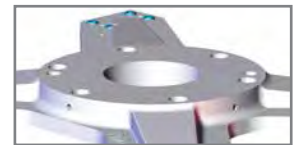
R07 (Ø200mm Bolt Circle)



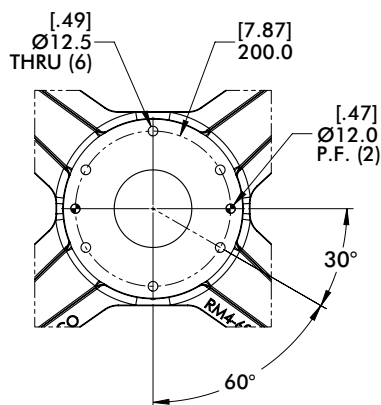
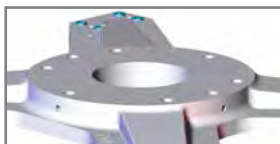
R08 (Ø125/160mm Bolt Circle)



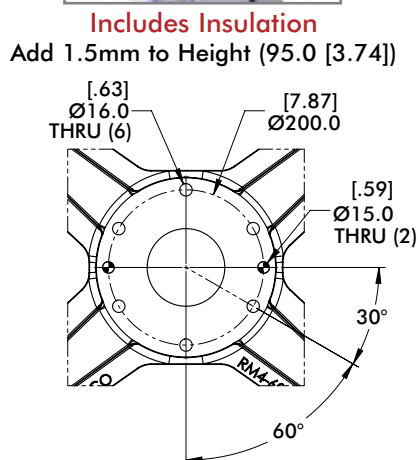
R09 (Ø200mm Bolt Circle)



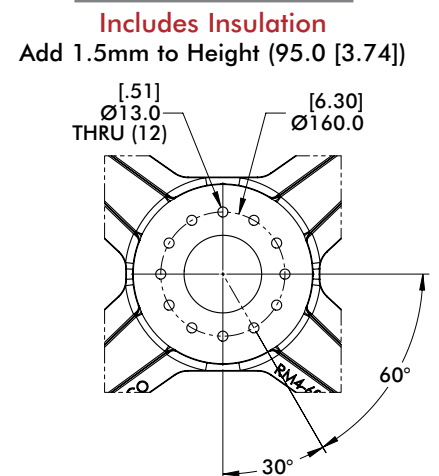
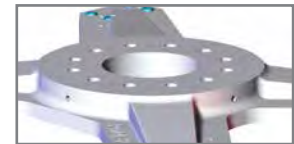
R10 (Ø200mm Bolt Circle)



R11 (Ø200mm Bolt Circle)



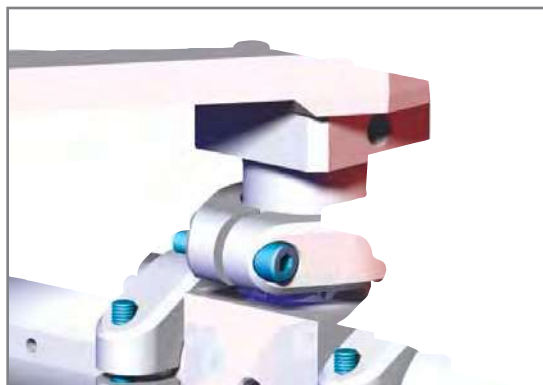
R12 (Ø160mm Bolt Circle)



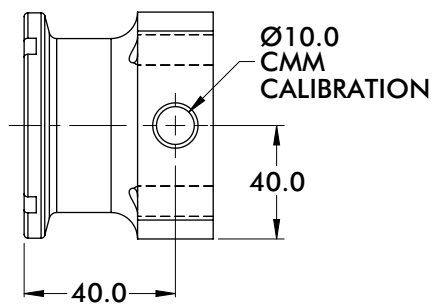
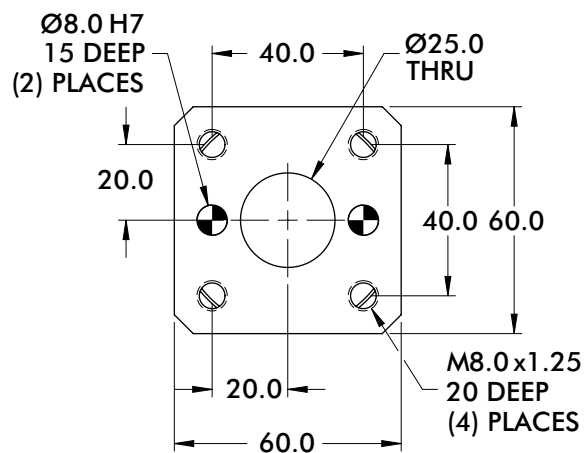
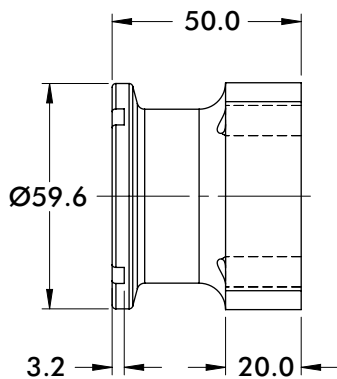
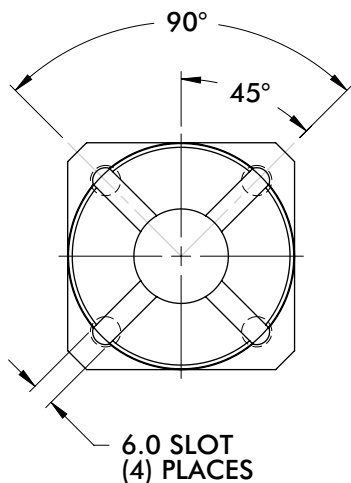


SPIDERGRIP MID MOUNT ANCHOR

Spidergrip Tooling Components | Technical Specifications, Dimensions



Ø60mm Mid Mount Anchor
40mm x 40mm Mounting Pattern - 50mm Face Offset



Model Number

Weight

STS0013-BM2

.25 kg [1.50 lb]

SPIDERGRIP MID MOUNT ANCHOR



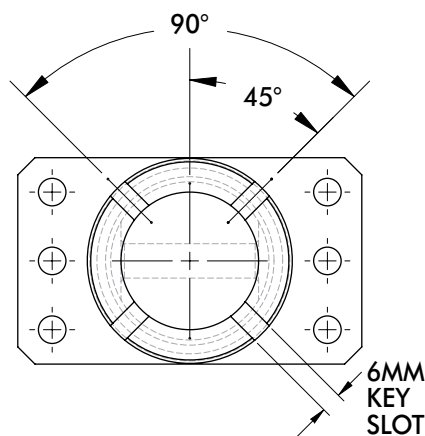
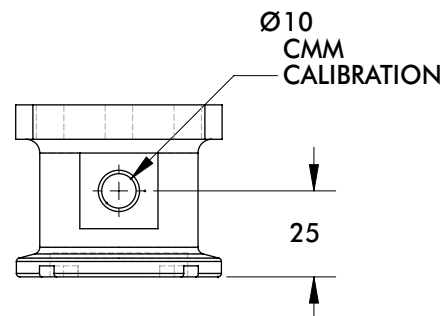
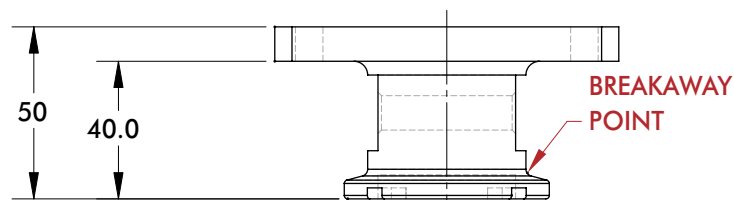
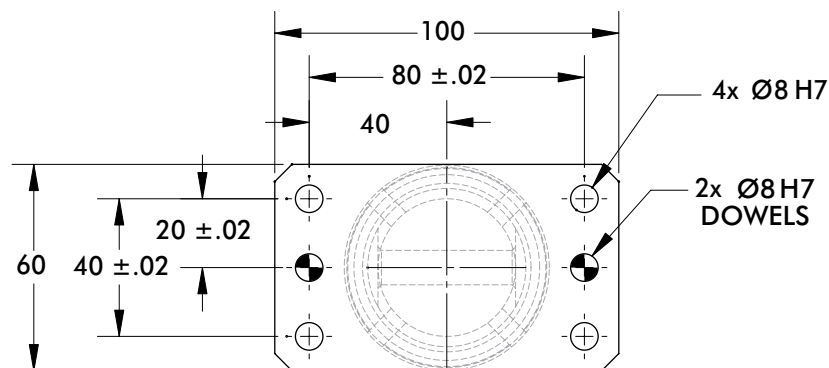
Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm Base Anchor with 50mm Face Offset
80mm x 40mm Mounting Pattern



US PATENT# 7,331,104
ALL OTHER PATENTS PENDING

Engineered Breakaway Part



This Product is designed to breakaway at 1627 N*m [1200 ft-lb]

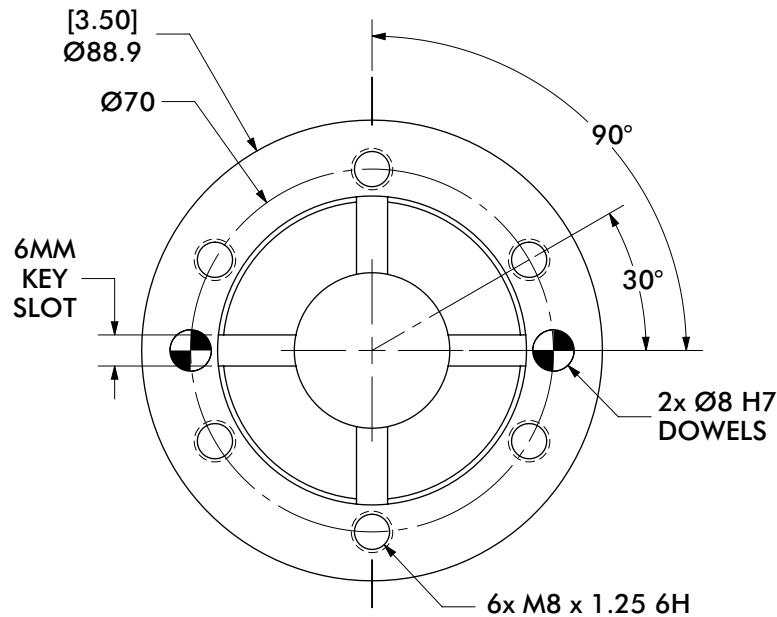
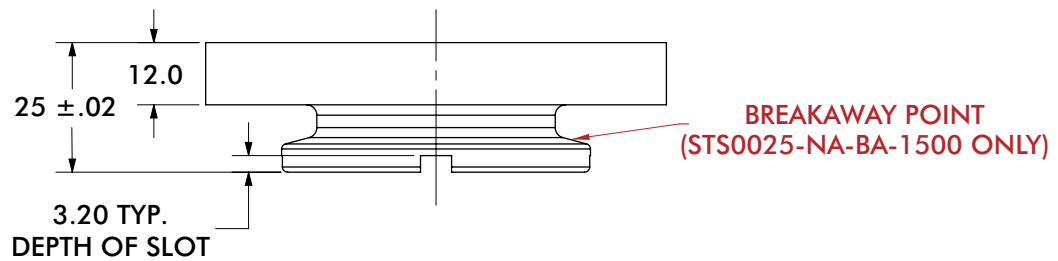
| Model Number | Weight |
|--------------|-----------------|
| STS0016-NA | .31 kg [.68 lb] |



SPIDERGRIP MID MOUNT ANCHOR

Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø70mm Base Anchor with 25mm Face Offset
(6) Hole Mounting Pattern



| Model Number | Weight |
|---------------------|---------------|
| STS0025-NA | 252g [0.6 lb] |
| STS0025-NA-BA-1500* | 242g [0.5 lb] |

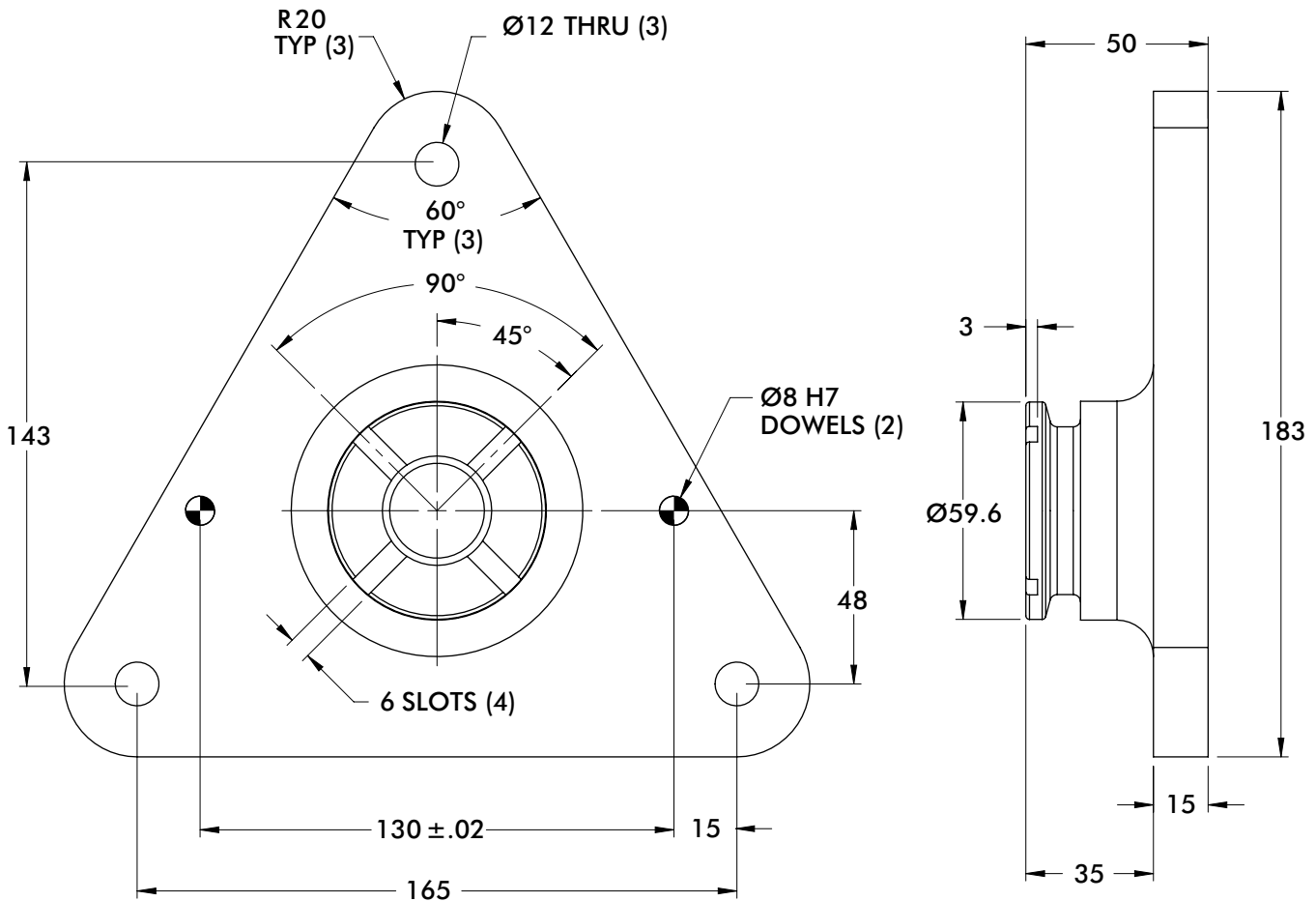
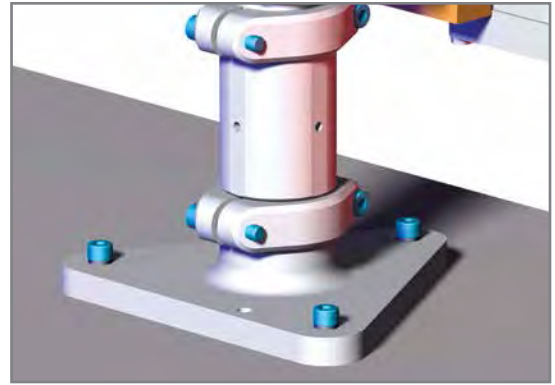
*This Product is designed to breakaway at 1500 N*m [1106 ft-lb]

SPIDERGRIP MID MOUNT ANCHOR



Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm HD Anchor Mount
(3) Hole Ø190mm Mount Pattern



Model Number

Weight

STP0001-NA

1.09 kg [2.40 lb]



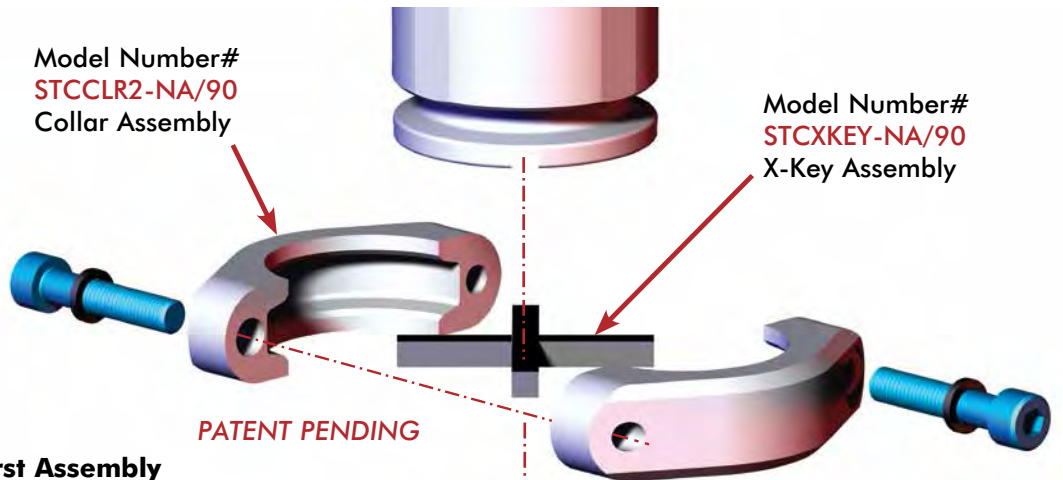
SPIDERGRIP END EFFECTOR TOOLING SYSTEMS

Spidergrip Tooling Components | Assembly Instructions

M8-1.25 x 40mm
Torque to
25 N*m [220 in-lb]
(for Ø60mm) or
30 N*m [265 in-lb]
(for Ø90mm)

Model Number#
STCCLR2-NA/90
Collar Assembly

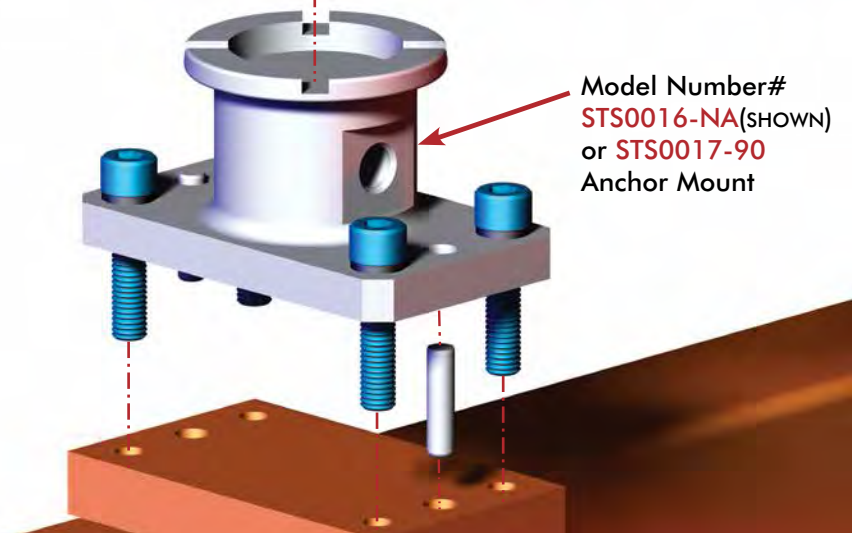
Model Number#
STCXKEY-NA/90
X-Key Assembly



Assembly Instructions – First Assembly

In many cases, it may be advantageous to assemble the appendage remotely and then once complete, mount the entire appendage assembly onto the mounting structure.

1. Clean/Wipe and inspect ALL mating faces of all components for burrs before assembly; if a part is damaged it will not correctly couple to mating piece.
2. Assemble *Breakaway Anchor*, *X-Key Assembly*, New *Collar Assembly* and remaining appendage (from step #3).
3. Gradually tighten bolts on *Collar Assembly*, while maintaining an equal gap on each side of the assembly. Torque collar bolts to 25 N*m [220 in-lb] for 60mm, or 30 N*m 265 [in-lb] for 90mm. Do not re-torque once desired torque is reached.
4. Mount appendage as assembled to steel backbone and insert new 8mm dowels into the dowel holes on the *Breakaway Anchor*.
5. Insert new M8-1.25 patchlock bolts into *Breakaway Anchor*, torque in a cross pattern following NAAMS recommended torque.
6. Attach steel tether (*STS-TETHER-08* or *STS-TETHER-16*) to appendage via one of the bolts located on the base of the *Breakaway Anchor*. The other loop will be attached to the first threaded M6 hole (located on the boom) or the M8 hole located on the edge part. The tether may also be wrapped around the appendage to reduce cable slack.



Note: Performance may vary if used with non-DESTACO components

SPIDERGRIP ANCHORS AND COLLAR ASSEMBLIES



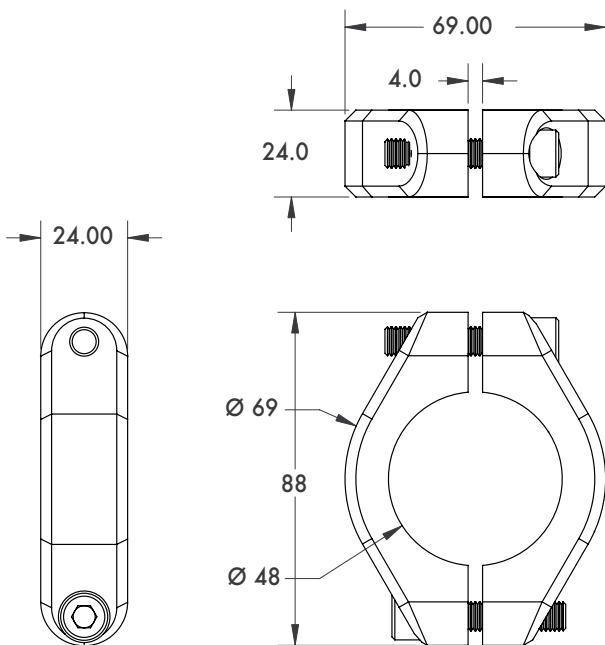
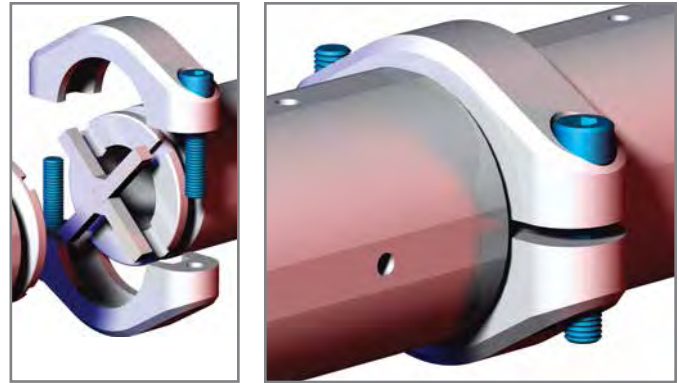
Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm Collar Components and Assembly

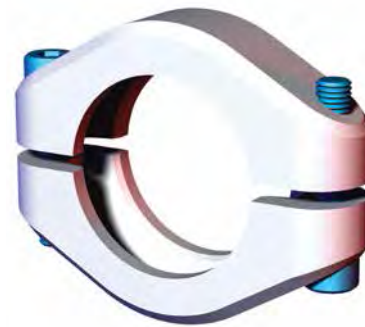
| Assembly Number | Weight |
|-----------------|-----------------|
| STCCLR2-NA | .19 kg [.42 lb] |

Includes (1) Collar Assembly (STCCLR2-NA) and (1) X-Key Assembly (STCXKEY-NA). Patch-lock fasteners included.

Max bolt torque when clamping to: 25 N*m [220 in-lbs]

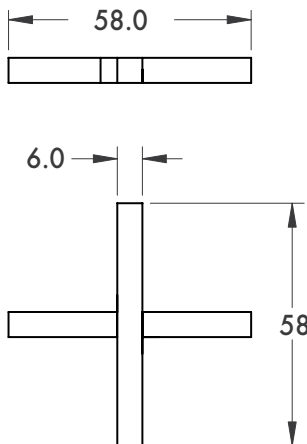


US PATENT# 7,331,104
ALL OTHER PATENTS PENDING



Patch-lock fasteners included.

| Model Number | Weight |
|--------------|-----------------|
| STCCLR2-NA | .16 kg [.35 lb] |



Material: Steel

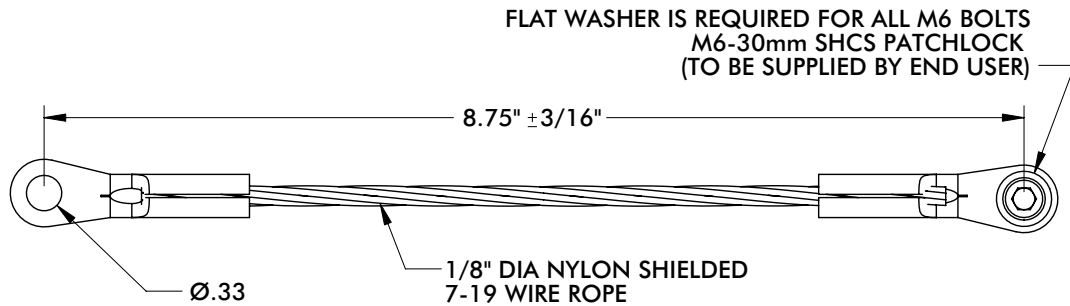
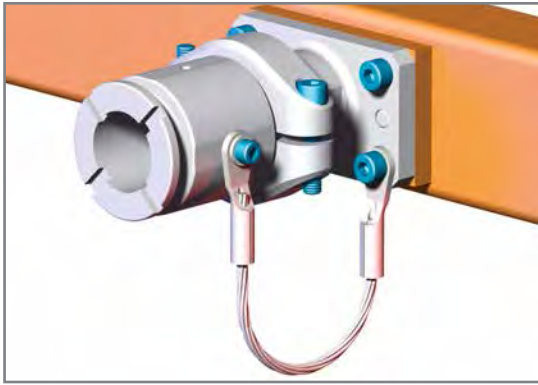
| Model Number | Weight |
|--------------|-----------------|
| STCXKEY-NA | .03 kg [.07 lb] |



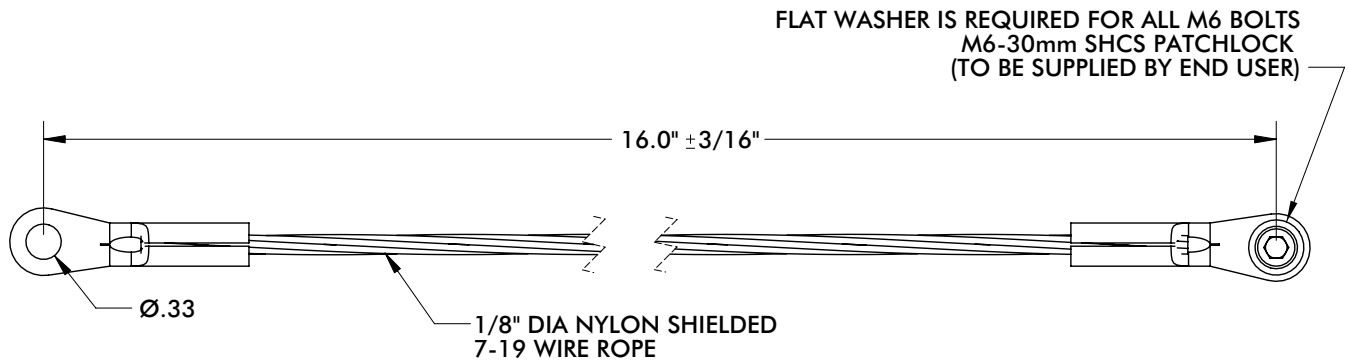
SPIDERGRIP TETHERS

Spidergrip Tooling Components | Technical Specifications, Dimensions

9 inch and 16 inch Tether Assemblies



| Model Number | Weight |
|---------------|-----------------|
| STS-TETHER-09 | .07 kg [.15 lb] |



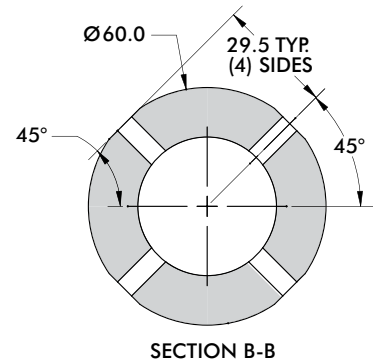
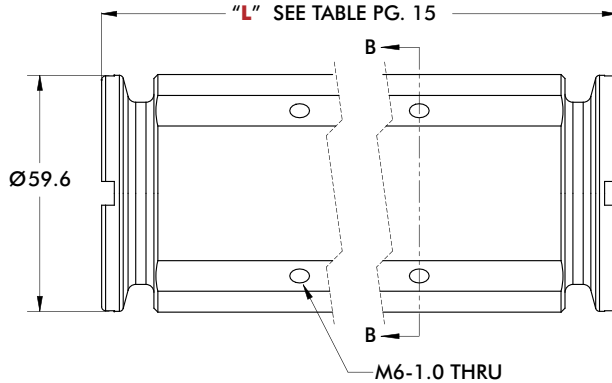
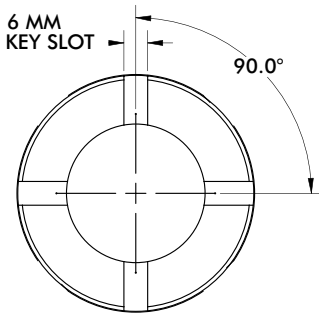
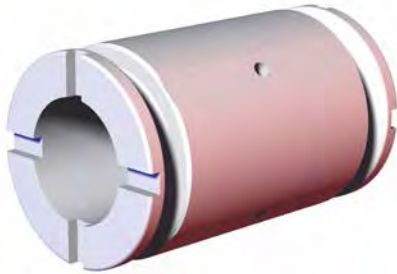
| Model Number | Weight |
|---------------|-----------------|
| STS-TETHER-16 | .09 kg [.19 lb] |

SPIDERGRIP BOOMS, ADAPTORS AND SPACERS



Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm Boom



M6 tap holes along the boom are used to mount accessories

| M6 Hole Spacing | Model Number | Length "L" | Weight |
|-----------------|-------------------|-------------|-------------------|
| | STB0050-NA | 50mm ±0.02 | .20 kg [.43 lb] |
| | STB0075-NA | 75mm ±0.02 | .32 kg [.71 lb] |
| | STB0100-NA | 100mm ±0.02 | .45 kg [.99 lb] |
| | STB0150-NA | 150mm ±0.02 | .70 kg [1.54 lb] |
| | STB0200-NA | 200mm ±0.02 | .95 kg [2.09 lb] |
| | STB0250-NA | 250mm ±0.02 | 1.20 kg [2.64 lb] |
| | STB0300-NA | 300mm ±0.02 | 1.44 kg [3.18 lb] |
| | STB0350-NA | 350mm ±0.02 | 1.74 kg [3.84 lb] |

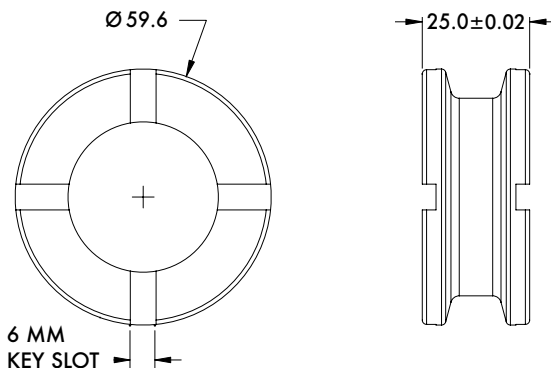
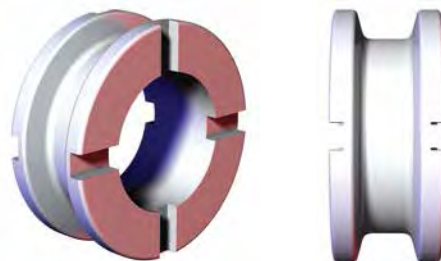


SPIDERGRIP BOOMS, ADAPTORS AND SPACERS

Spidergrip Tooling Components | Technical Specifications, Dimensions

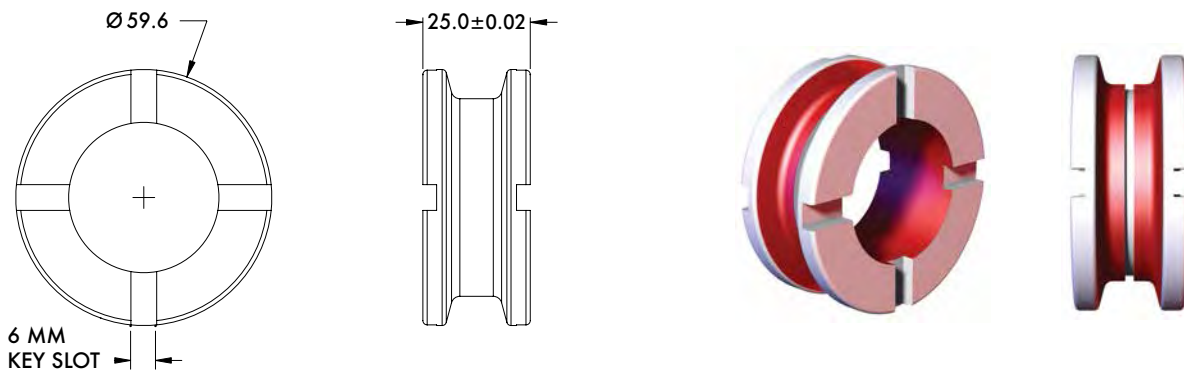


Ø60mm Breakaway and Non-Breakaway Boom Spacers



| Model Number | Weight |
|--------------|-----------------|
| STB0025-NA | .08 kg [.18 lb] |

Ø60mm 25mm Engineered Breakaway Boom Spacers



| Model Number | Weight |
|----------------|-----------------|
| STB0025-BA-800 | .08 kg [.18 lb] |

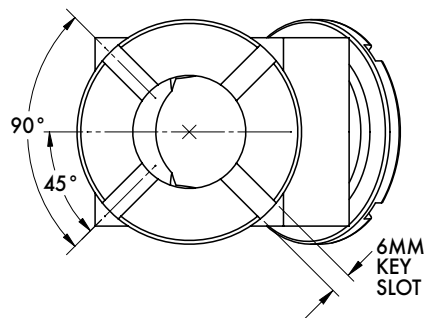
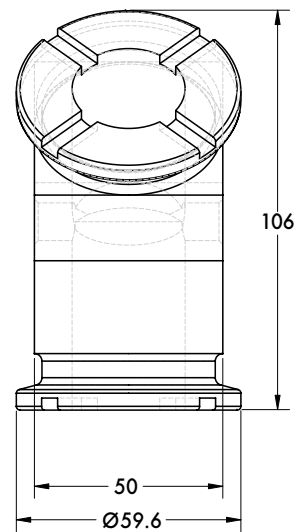
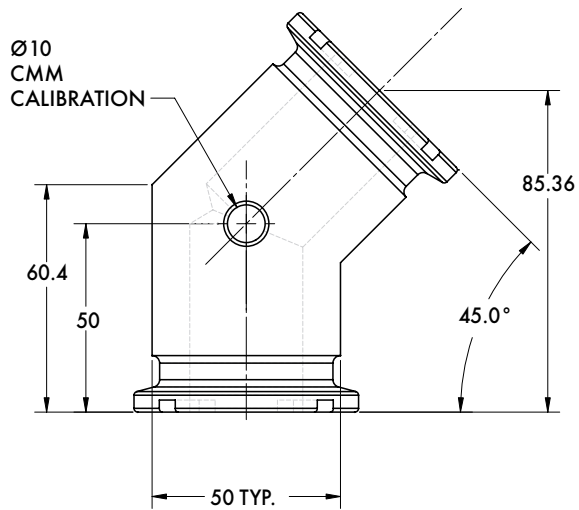
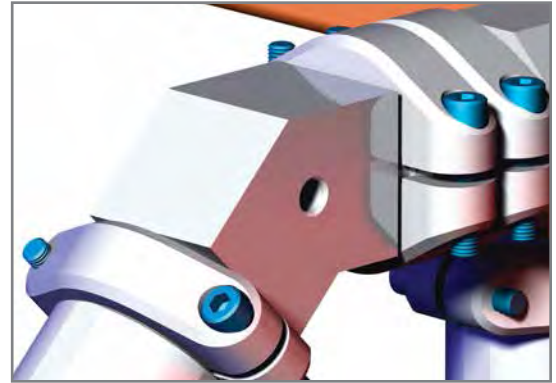
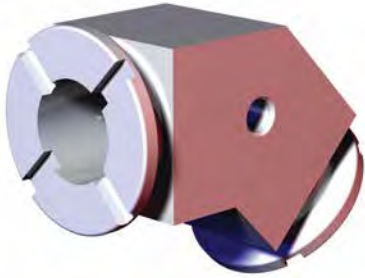
This Product is designed to breakaway at 800 N*m [590 ft-lb]

SPIDERGRIP BOOMS



Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm 2-Face 45° Junction



Model Number

Weight

STN0C45-NA

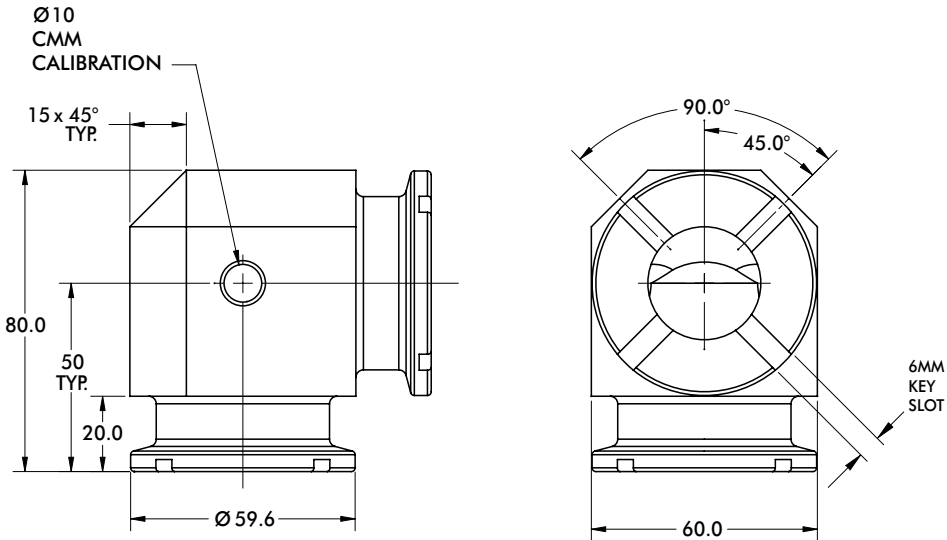
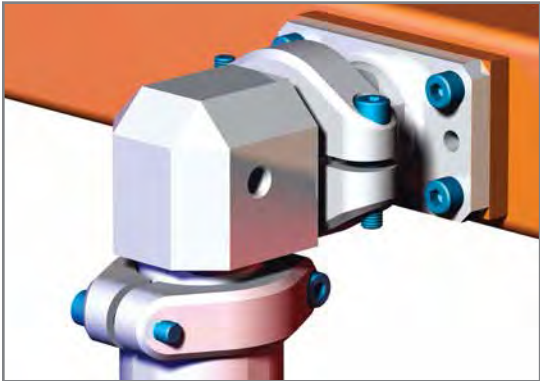
.42 kg [.93 lb]



SPIDERGRIP SPACERS

Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm 2-face 90° Junction



| Model Number | Weight |
|--------------|------------------|
| STN0C90-NA | .53 kg [1.16 lb] |

Dimensions and technical information are subject to change without notice

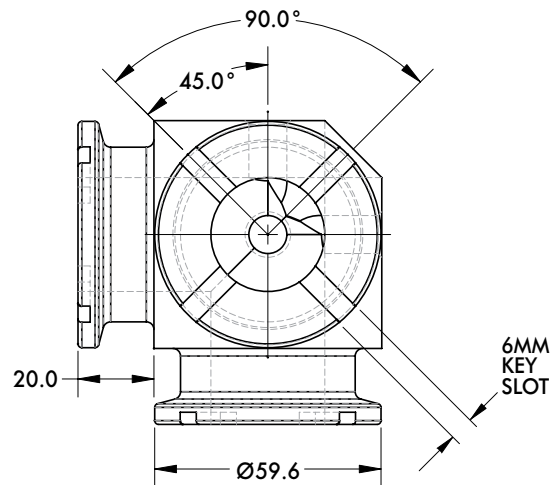
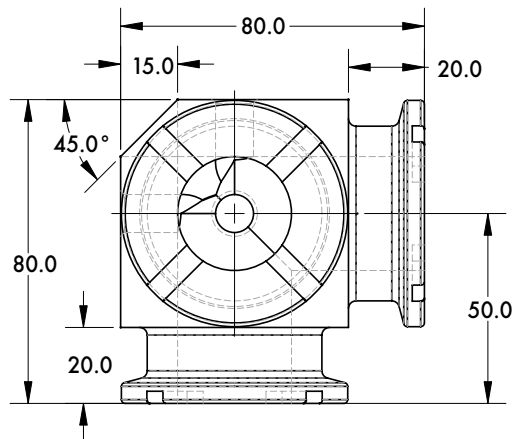
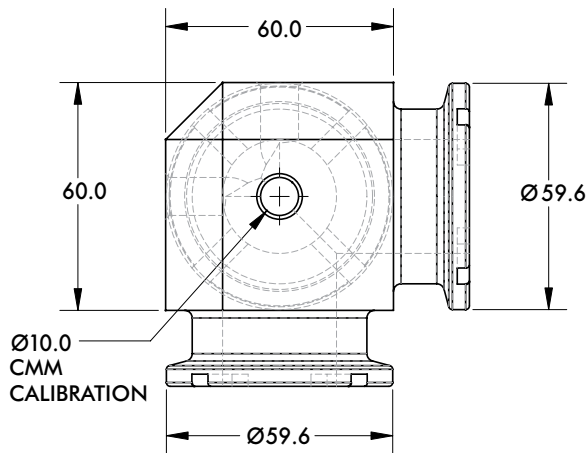
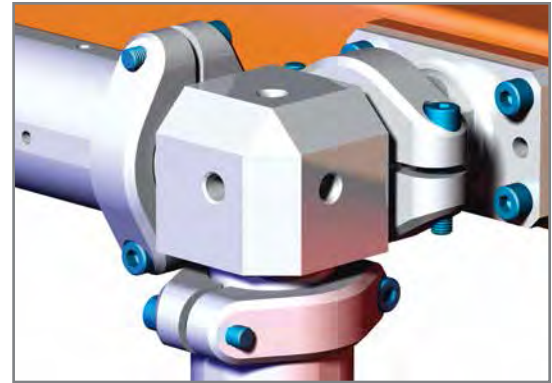
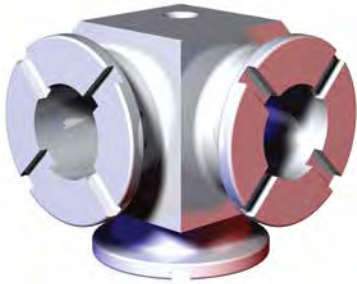


SPIDERGRIP JUNCTION COMPONENTS



Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm 3-Face Junction



Model Number

Weight

STN0C3F-NA

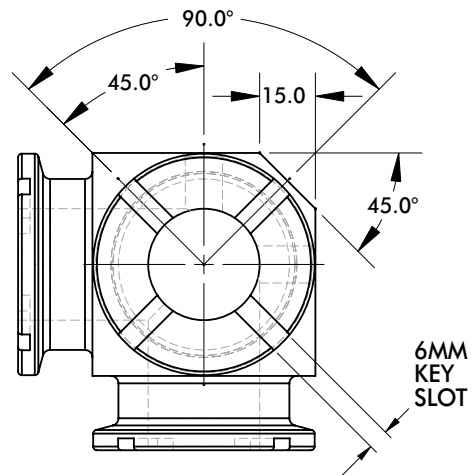
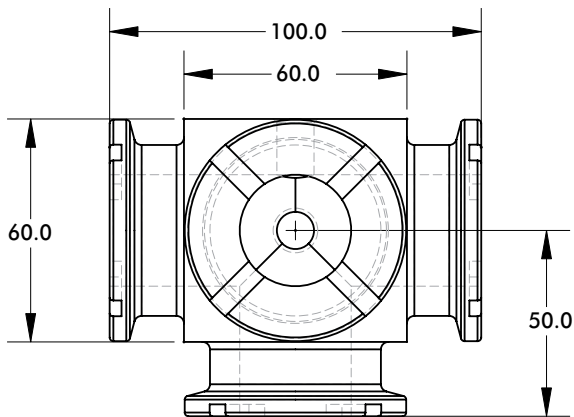
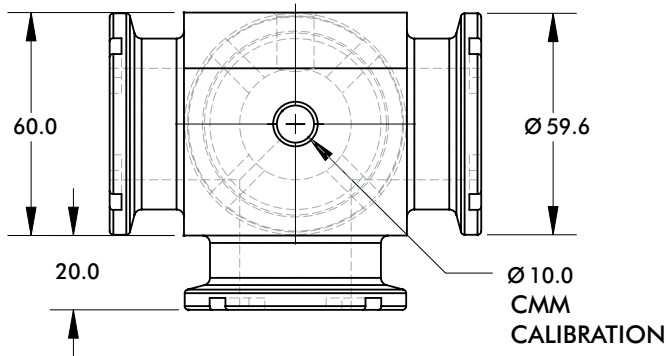
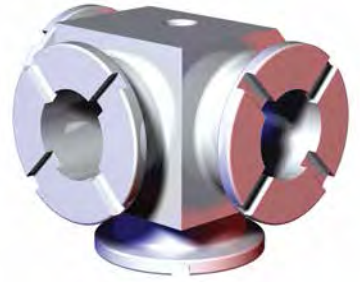
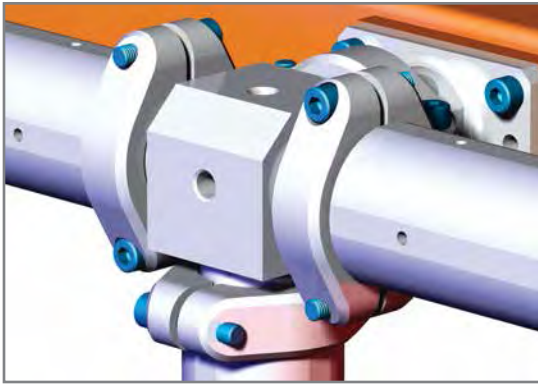
.58 kg [1.29 lb]



SPIDERGRIP JUNCTION COMPONENTS

Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm 4-Face Junction



Model Number

Weight

STN0C4F-NA

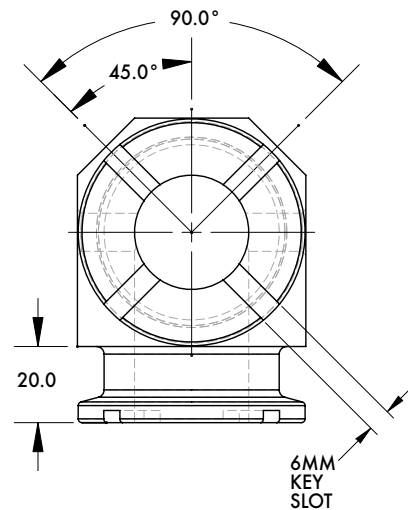
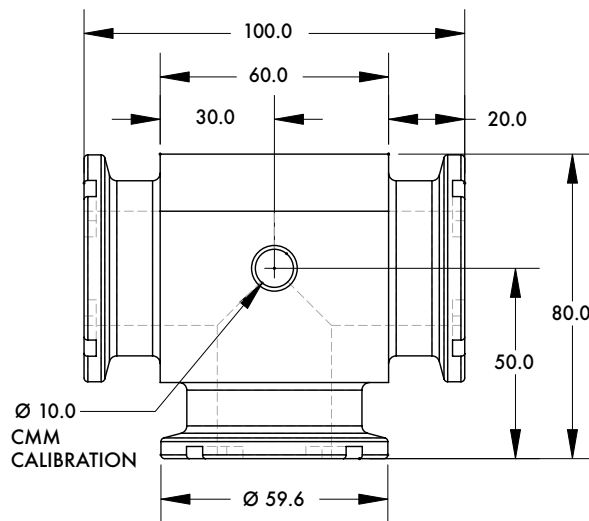
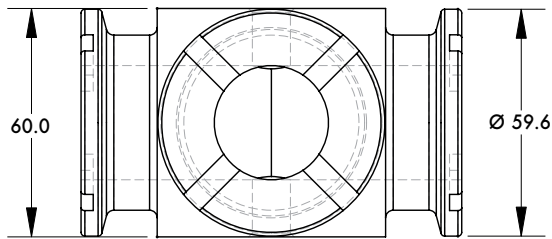
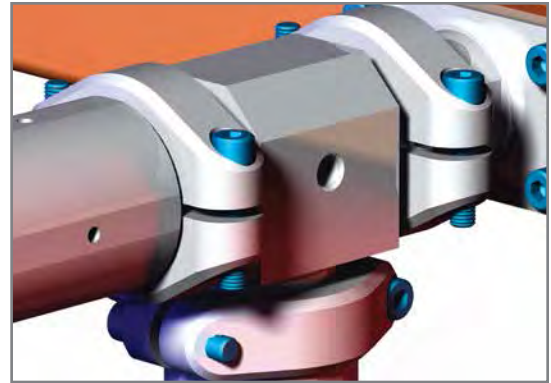
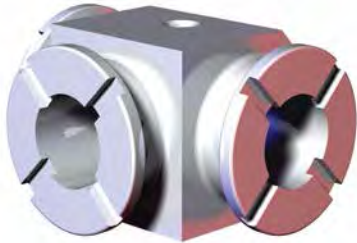
.65 kg [1.43 lb]

SPIDERGRIP JUNCTION COMPONENTS



Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm 3-Face Junction



Model Number

Weight

STN0T3F-NA

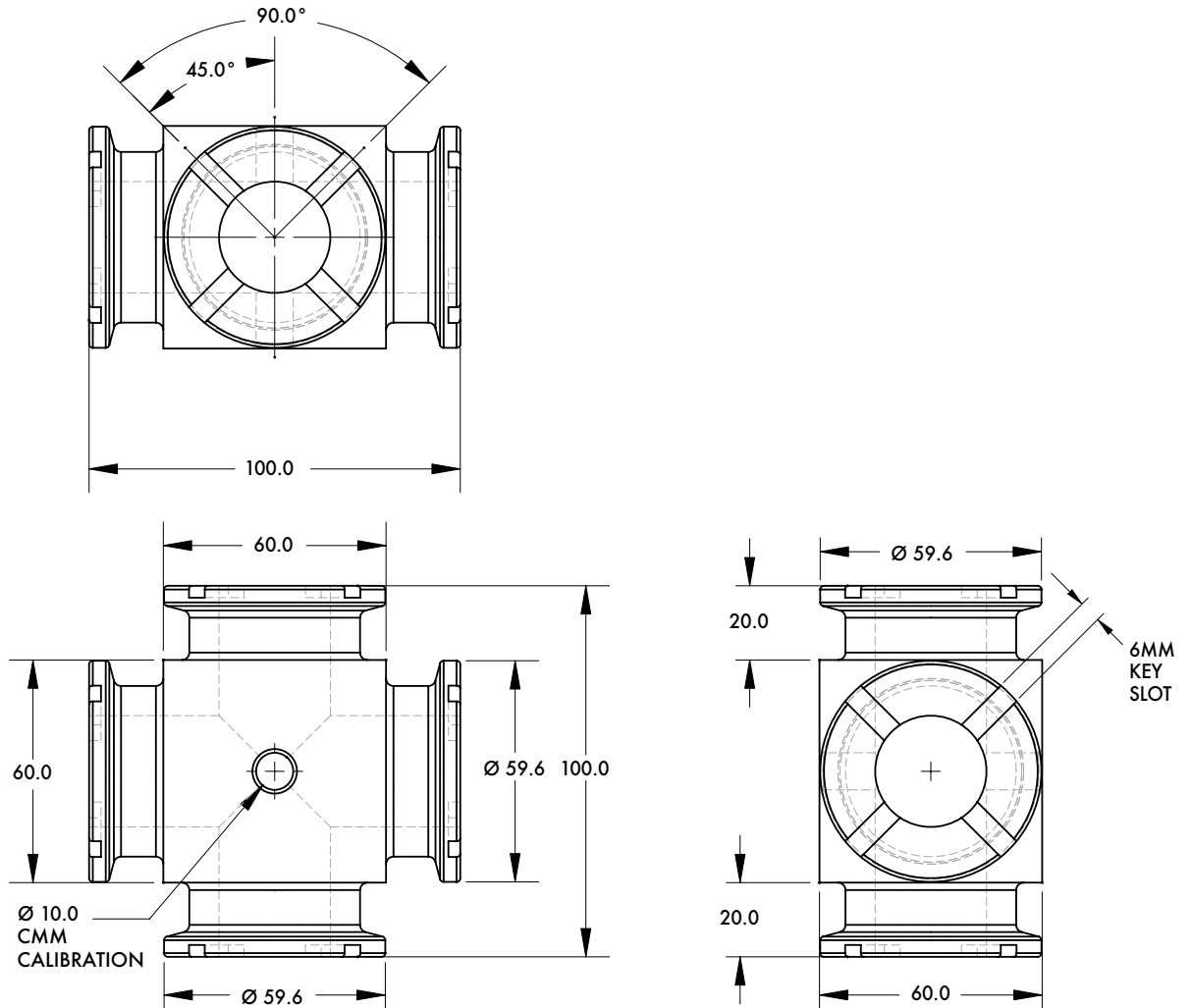
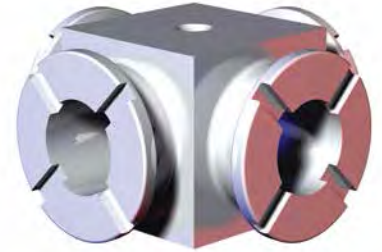
.60 kg [1.31 lb]



SPIDERGRIP JUNCTION COMPONENTS

Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm 4-Face Junction



| Model Number | Weight |
|--------------|------------------|
| STN0T4F-NA | .67 kg [1.47 lb] |

Dimensions and technical information are subject to change without notice

EE-SGP-24

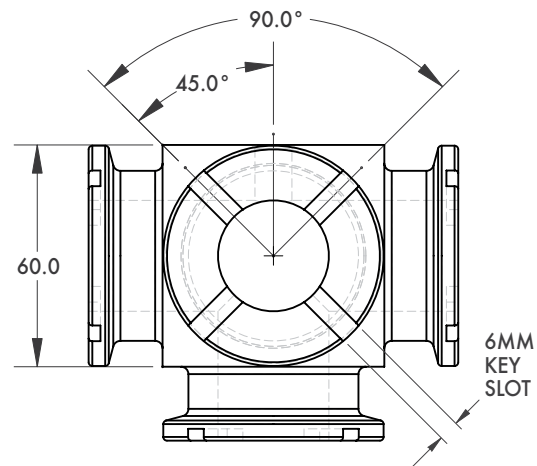
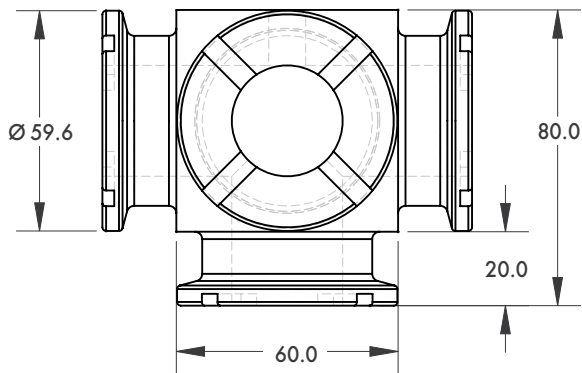
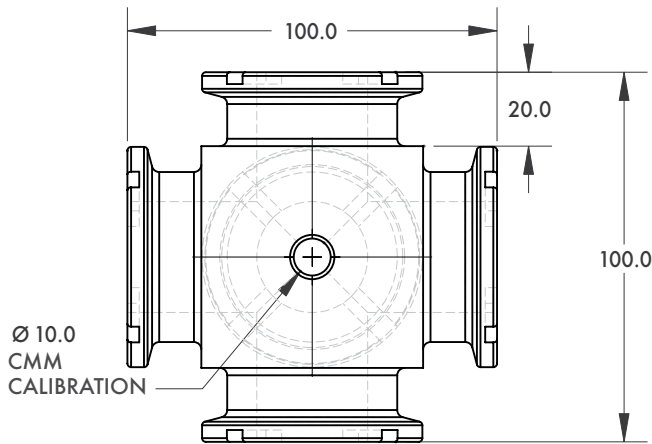
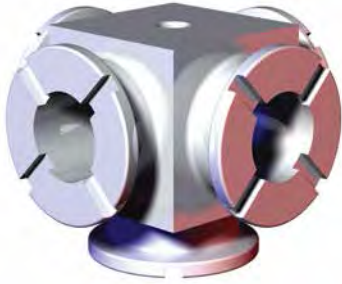


SPIDERGRIP JUNCTION COMPONENTS



Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm 5-Face Junction



Model Number

Weight

STN0T5F-NA

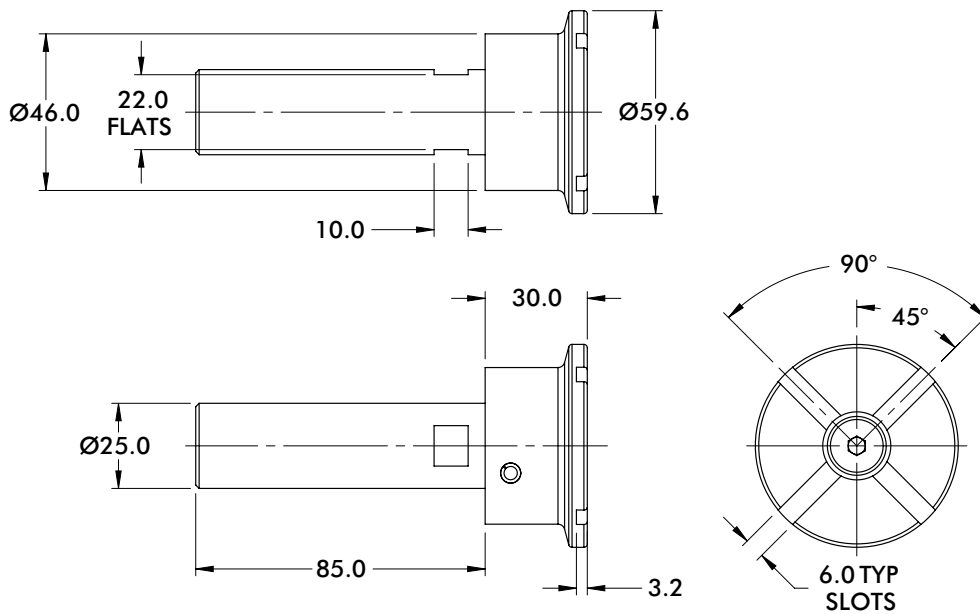
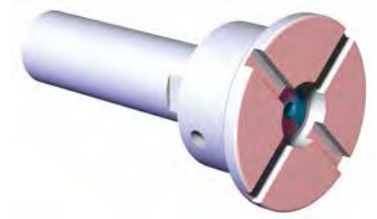
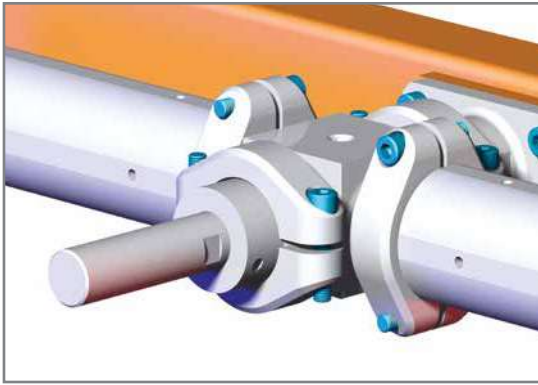
.71 kg [1.56 lb]



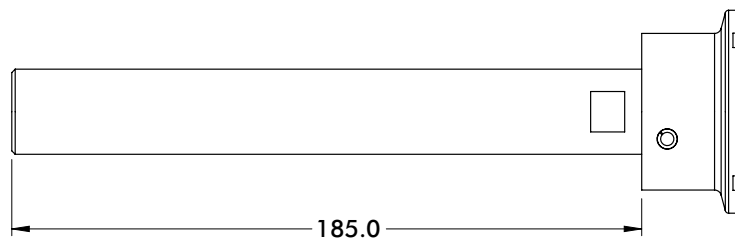
SPIDERGRIP SINGLE END EXTENSIONS

Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm to Ø25mm Single End Extension



| Model Number | Weight |
|--------------|-----------------|
| STV0100-NA | .26 kg [.58 lb] |



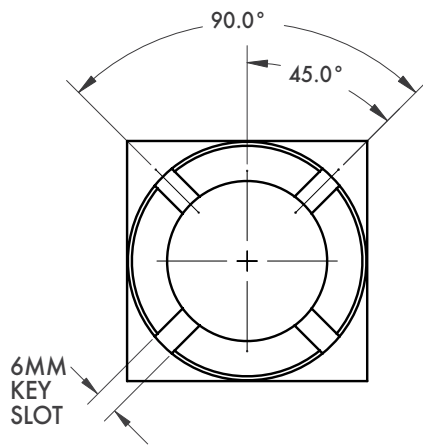
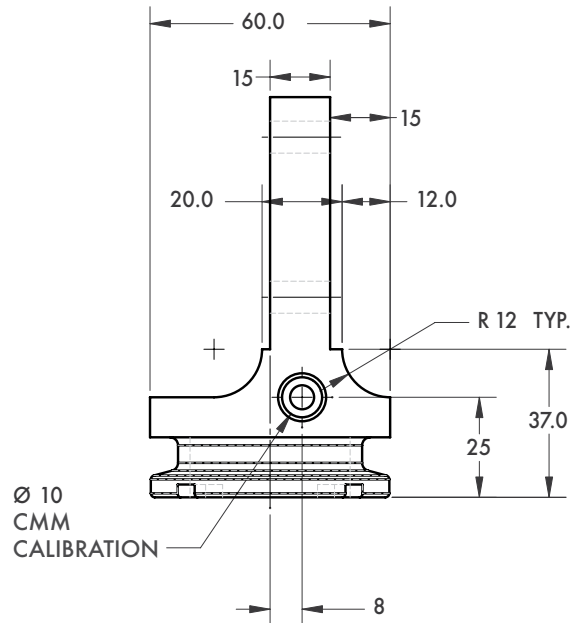
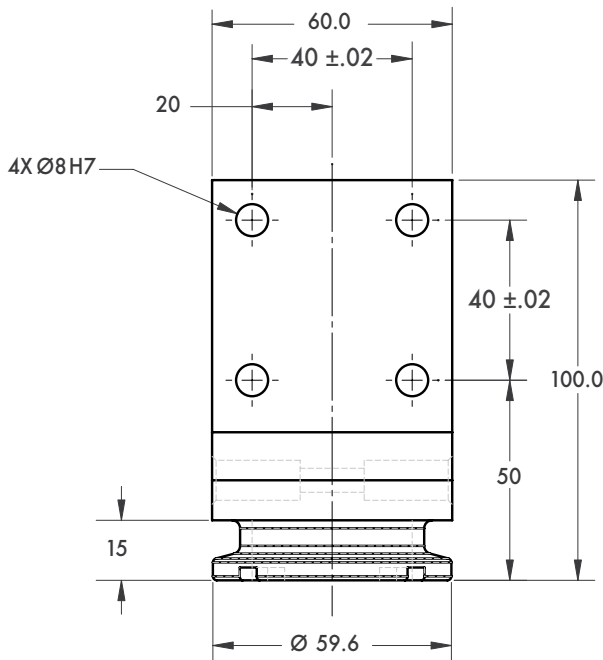
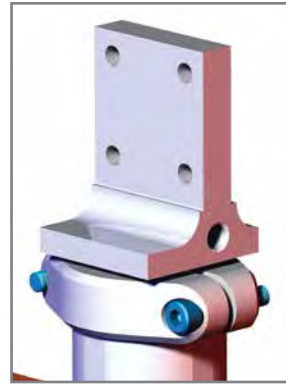
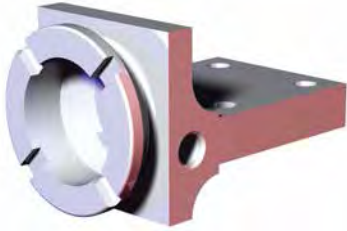
| Model Number | Weight |
|--------------|-----------------|
| STV0200-NA | .40 kg [.87 lb] |

SPIDERGRIP EDGE MOUNTING COMPONENTS



Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm 90° Edge Part with 15mm Center to Face Offset
40mm x 40mm Mounting Pattern



| Model Number | Weight |
|--------------|-----------------|
| STS0010-NA | .31 kg [.69 lb] |

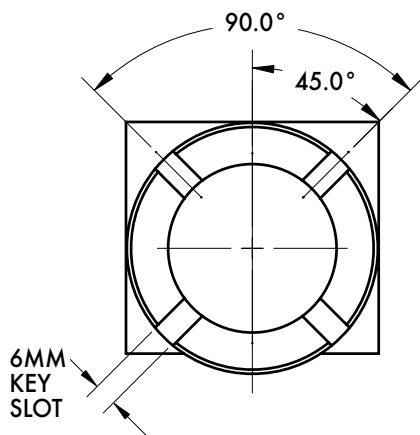
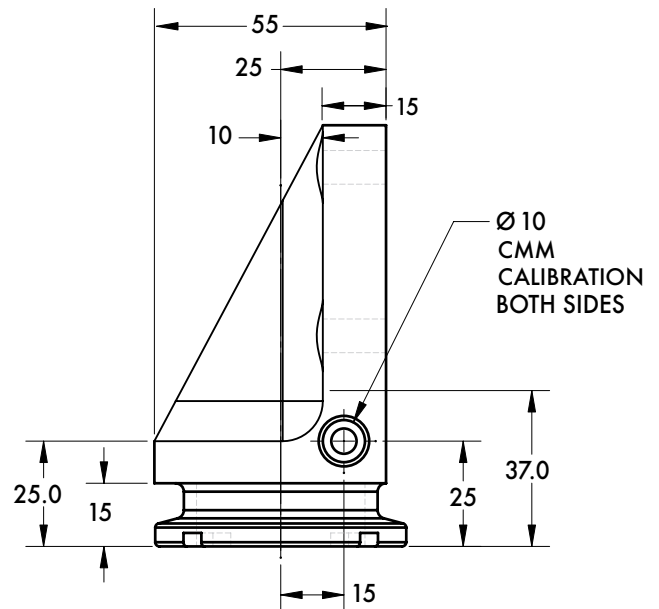
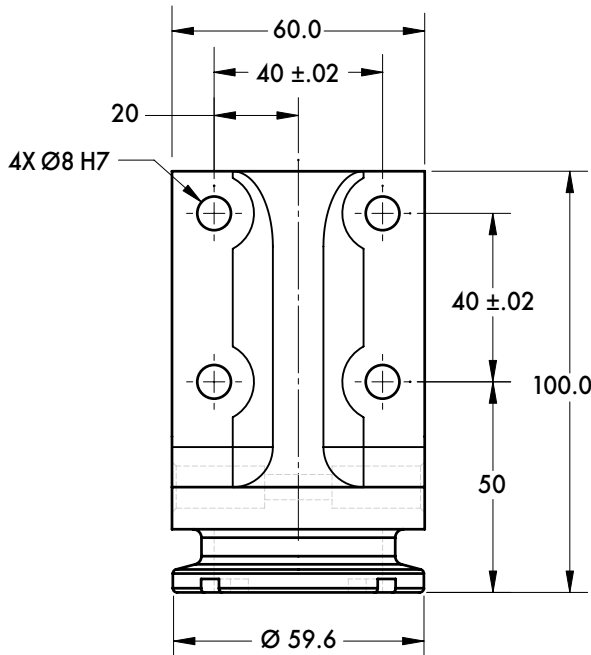
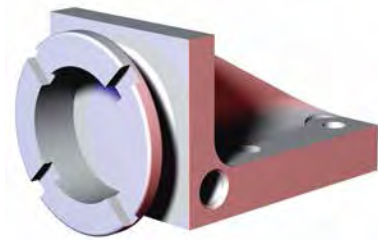


SPIDERGRIP EDGE MOUNTING COMPONENTS

Spidergrip Tooling Components | Technical Specifications, Dimensions



Ø60mm 90° Edge Part with 25mm Center to Face Offset
40mm x 40mm Mounting Pattern



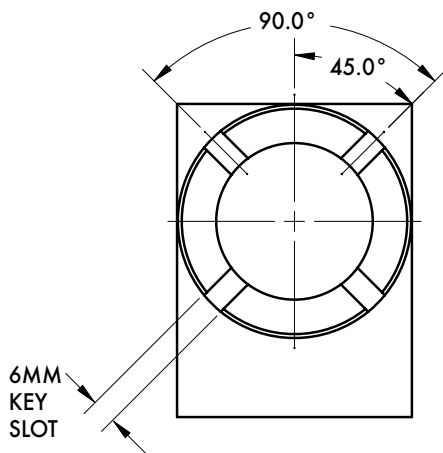
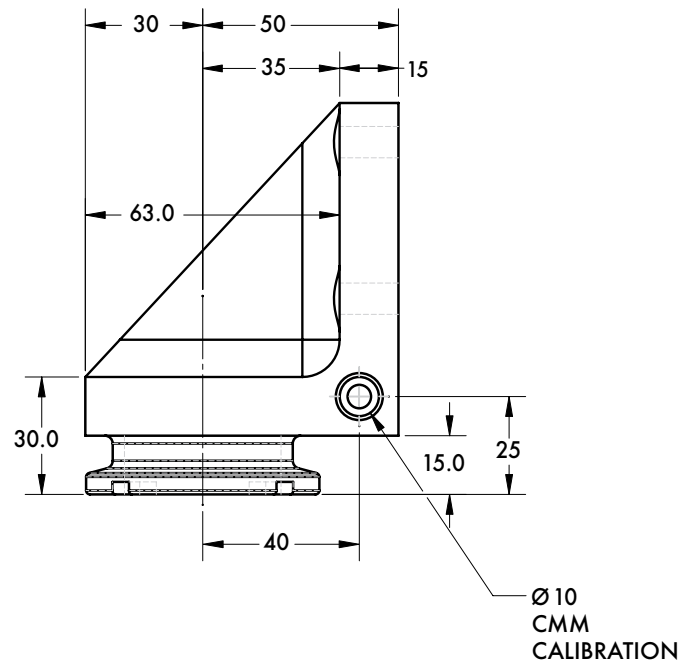
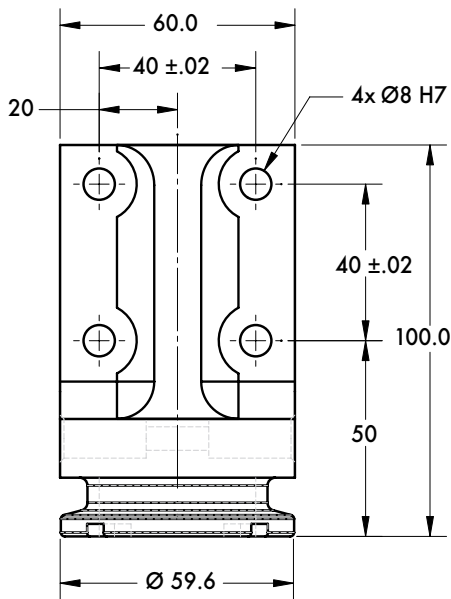
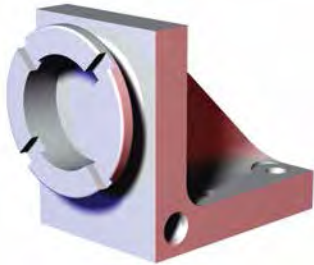
| Model Number | Weight |
|--------------|-----------------|
| STS0011-NA | .35 kg [.77 lb] |

SPIDERGRIP EDGE MOUNTING COMPONENTS



Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm 90° Edge Part with 50mm Center to Face Offset
40mm x 40mm Mounting Pattern



Model Number

Weight

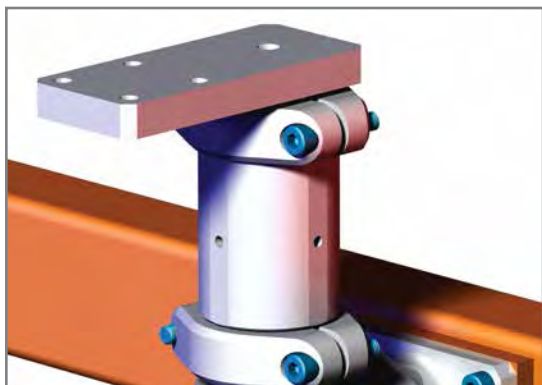
STS0012-NA

.47 kg [1.04 lb]

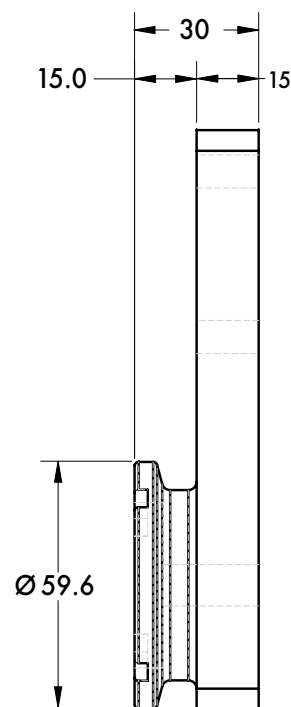
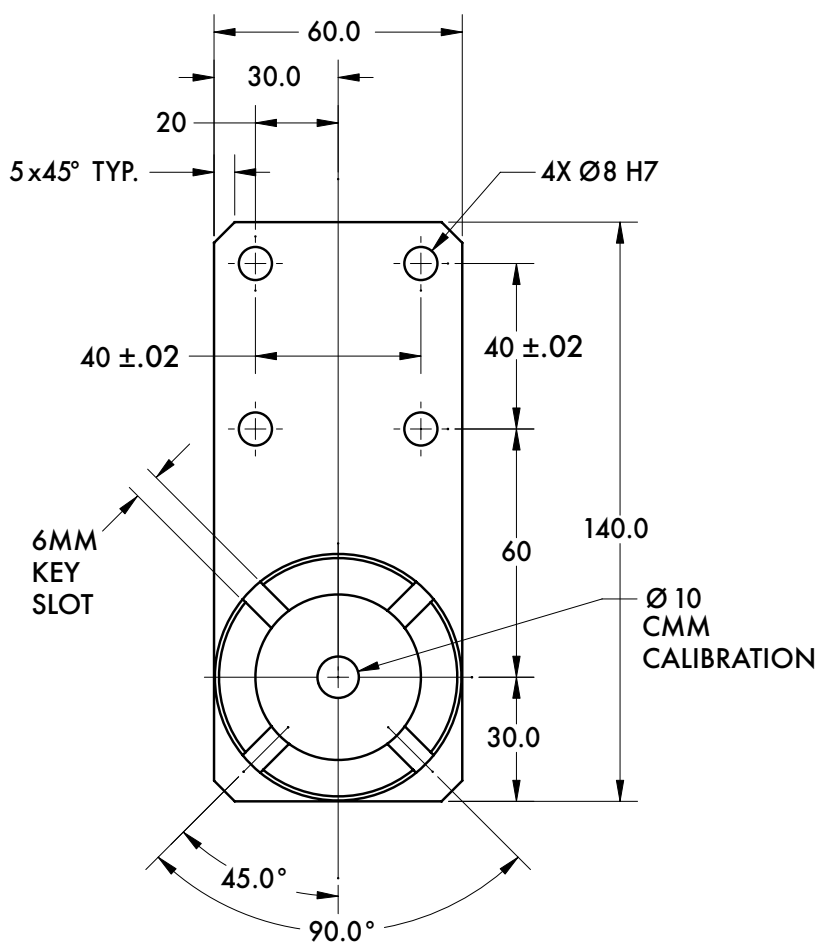


SPIDERGRIP EDGE MOUNTING COMPONENTS

Spidergrip Tooling Components | Technical Specifications, Dimensions



Ø60mm Offset Edge Part with 25mm Face Offset
40mm x 40mm Mounting Pattern



Model Number

Weight

STS0014-NA

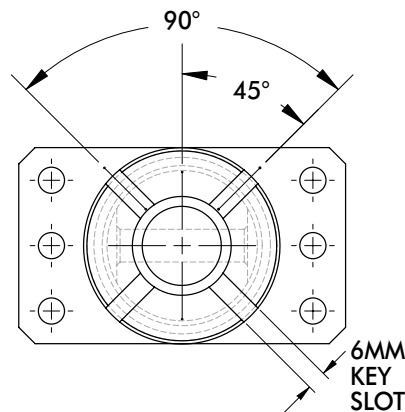
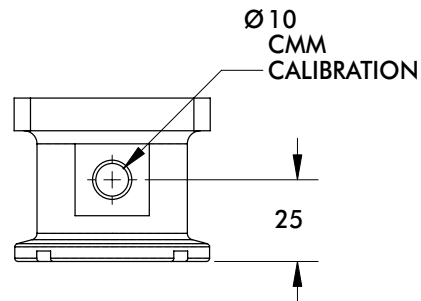
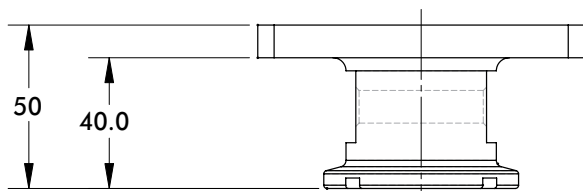
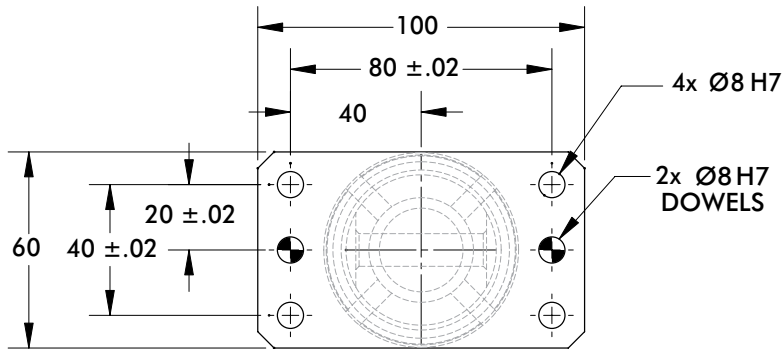
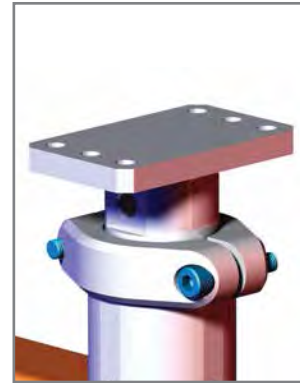
.39 kg [.85 lb]

SPIDERGRIP EDGE MOUNTING COMPONENTS



Spidergrip Tooling Components | Technical Specifications, Dimensions

Ø60mm In-line Edge Part with 50mm Face Offset
80mm x 40mm Mounting Pattern



Model Number

Weight

STS0019-NA

.32 kg [.71 lb]

