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Dimensions and technical information are subject to change without notice
Geometric End Effector Tooling System with Steel Frame Backbone.

Weld Fixture Tooling System

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

SpiderGrip Application Guide

Dimensions and technical information are subject to change without notice.
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.
### Product Overview

**SPIDERGRIP GEOMETRIC END EFFICTOR SYSTEM**

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<td>Appliance</td>
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- **Heavy Duty Mid Mount Assembly**
- **Corner Junction**
- **Base Anchor Engineered Breakaway**
- **Boom**
- **82M Series Power Clamp**

Dimensions and technical information are subject to change without notice.
Heavy-Duty Mid Mount Assembly

Dimensions and technical information are subject to change without notice.
When ordering with Heavy Duty Mid Mount, please add designation “EPM-01” as shown
RM4-STS-RXX-EPM-01 or
add designation “EPM-BLK” to order blank
RM4-STS-RXX-EPM-BLK
To order separately use Model Number

Spidergrip Tooling Components | Dimensions | How To Order

Accessory Mount Plate

Dimensions and technical information are subject to change without notice
MID MOUNT BOLT PATTERN

Robot Interface Bolt Patterns

R01 (Ø200mm Bolt Circle)

R02 (Ø125mm Bolt Circle)

R03 (Ø160mm Bolt Circle)

R04 (Ø160mm Bolt Circle)

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

R05 (Ø125mm Bolt Circle)

R06 (Ø125/160mm Bolt Circle)

Dimensions and technical information are subject to change without notice.
**Model Number**  STS0013-BM2

**Weight**  .25 kg [1.50 lb]

---

**Dimensions and technical information are subject to change without notice**

EE-SGP-10
**SPIDERGRIP MID MOUNT ANCHOR**

Spidergrip Tooling Components | Dimensions | Technical Specifications

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

**Engineered Breakaway Part**

![Diagram of Spidergrip Mid Mount Anchor]

Dimensions and technical information are subject to change without notice

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

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

**US PATENT# 7,331,104 ALL OTHER PATENTS PENDING**
**SPIDERGRIP MID MOUNT ANCHOR**

Spidergrip Tooling Components | Dimensions | Technical Specifications

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]

---

Dimensions and technical information are subject to change without notice

EE-SGP-12
Spidergrip Tooling Components | Dimensions | Technical Specifications

Ø60mm HD Anchor Mount
(3) Hole Ø190mm Mount Pattern

Dimensions and technical information are subject to change without notice.

Model Number | Weight
---|---
STP0001-NA | 1.09 kg [2.40 lb]
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

Dimensions and technical information are subject to change without notice

EE-SGP-14
**Ø60mm Collar Components and Assembly**

<table>
<thead>
<tr>
<th>Assembly Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>STCCLR2-NA</td>
<td>.16 kg [.35 lb]</td>
</tr>
<tr>
<td>STCCLRX-NA</td>
<td>.19 kg [.42 lb]</td>
</tr>
</tbody>
</table>

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]

Material: Steel

Model Number | Weight     |
-------------|------------|
STCCLR2-NA   | .16 kg [.35 lb] |
STCXKEY-NA   | .03 kg [.07 lb] |

US PATENT# 7,331,104
ALL OTHER PATENTS PENDING
Model Number | Weight
---|---
STS-TETHER-09 | .07 kg [.15 lb]

FLAT WASHER IS REQUIRED FOR ALL M6 BOLTS
M6-30mm SHCS PATCHLOCK
(TO BE SUPPLIED BY END USER)

1/8" DIA NYLON SHIELDED
7-19 WIRE ROPE

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

FLAT WASHER IS REQUIRED FOR ALL M6 BOLTS
M6-30mm SHCS PATCHLOCK
(TO BE SUPPLIED BY END USER)

1/8" DIA NYLON SHIELDED
7-19 WIRE ROPE

Dimensions and technical information are subject to change without notice.

EE-SGP-16
M6 tap holes along the boom are used to mount accessories.

**M6 Hole Spacing**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Length “L”</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>STB0050-NA</td>
<td>50mm ±0.02</td>
<td>0.20 kg [0.43 lb]</td>
</tr>
<tr>
<td>STB0075-NA</td>
<td>75mm ±0.02</td>
<td>0.32 kg [0.71 lb]</td>
</tr>
<tr>
<td>STB0100-NA</td>
<td>100mm ±0.02</td>
<td>0.45 kg [0.99 lb]</td>
</tr>
<tr>
<td>STB0150-NA</td>
<td>150mm ±0.02</td>
<td>0.70 kg [1.54 lb]</td>
</tr>
<tr>
<td>STB0200-NA</td>
<td>200mm ±0.02</td>
<td>0.95 kg [2.09 lb]</td>
</tr>
<tr>
<td>STB0250-NA</td>
<td>250mm ±0.02</td>
<td>1.20 kg [2.64 lb]</td>
</tr>
<tr>
<td>STB0300-NA</td>
<td>300mm ±0.02</td>
<td>1.44 kg [3.18 lb]</td>
</tr>
<tr>
<td>STB0350-NA</td>
<td>350mm ±0.02</td>
<td>1.74 kg [3.79 lb]</td>
</tr>
</tbody>
</table>
**Spidergrip Tooling Components | Dimensions | Technical Specifications**

**Ø60mm Breakaway and Non-Breakaway Boom Spacers**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>STB0025-NA</td>
<td>.08 kg [.18 lb]</td>
</tr>
</tbody>
</table>

**Ø60mm 25mm Engineered Breakaway Boom Spacers**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>STB0025-BA-800</td>
<td>.08 kg [.18 lb]</td>
</tr>
</tbody>
</table>

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

Dimensions and technical information are subject to change without notice
Spidergrip Tooling Components | Dimensions | Technical Specifications

Ø60mm 2-Face 45° Junction

Dimensions and technical information are subject to change without notice

Model Number | Weight
--- | ---
STN0C45-NA | .42 kg [.93 lb]
Spidergrip Tooling Components | Dimensions | Technical Specifications

Ø60mm 2-face 90° Junction

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>STN0C90-NA</td>
<td>.53 kg [1.16 lb]</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice.
Spidergrip Tooling Components | Dimensions | Technical Specifications

Ø60mm 3-Face Junction

Dimensions and technical information are subject to change without notice.

---

**Model Number** | **Weight**
--- | ---
STN0C3F-NA | 0.58 kg [1.29 lb]
### Spidergrip Junction Components

**Dimensions and Technical Specifications**

**Model Number**  
STN0C4F-NA

**Weight**  
0.65 kg [1.43 lb]

---

**Dimensions**

- Ø60mm 4-Face Junction
- Ø59.6
- Ø10.0
- CMM CALIBRATION
- 6MM KEY SLOT

---

Dimensions and technical information are subject to change without notice.
SPIDERGRIP JUNCTION COMPONENTS

Spidergrip Tooling Components | Dimensions | Technical Specifications

Ø60mm 3-Face Junction

Model Number | Weight
---|---
STN0T3F-NA | .60 kg [1.31 lb]

Dimensions and technical information are subject to change without notice.
Spidergrip Tooling Components | Dimensions | Technical Specifications

Dimensions and technical information are subject to change without notice.

Model Number: STN0T4F-NA
Weight: 0.67 kg [1.47 lb]
SPIDERGRIP JUNCTION COMPONENTS

Spidergrip Tooling Components | Dimensions | Technical Specifications

Ø60mm 5-Face Junction

Model Number | Weight
--- | ---
STN0T5F-NA | .71 kg [1.56 lb]

Dimensions and technical information are subject to change without notice.
SPIDERGRIP SINGLE END EXTENSIONS

Spidergrip Tooling Components | Dimensions | Technical Specifications

Ø60mm to Ø25mm Single End Extension

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>STV0100-NA</td>
<td>.26 kg [.58 lb]</td>
</tr>
<tr>
<td>STV0200-NA</td>
<td>.40 kg [.87 lb]</td>
</tr>
</tbody>
</table>

Dimensions and technical information are subject to change without notice

EE-SGP-26
Spidergrip Tooling Components | Dimensions | Technical Specifications

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

Dimensions and technical information are subject to change without notice.

SpiderGrip Edge Mounting Components

Model Number: STS0010-NA
Weight: 0.31 kg [0.69 lb]

Dimensions and technical information are subject to change without notice.
Spidergrip Tooling Components | Dimensions | Technical Specifications

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

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

Dimensions and technical information are subject to change without notice

SpiderGrip Edge Mounting Components

60.0
20
Ø 8 H7
40 ± .02
100.0
50
Ø 59.6

90.0°
45.0°

6MM KEY SLOT

Ø 10 CMM CALIBRATION BOTH SIDES

25.0
15

EE-SGP-28
**Model Number** | **Weight**
---|---
STS0012-NA | .47 kg [1.04 lb]

Dimensions and technical information are subject to change without notice.
**Spidergrip Edge Mounting Components**

Spidergrip Tooling Components | Dimensions | Technical Specifications

Model Number | Weight
---|---
STS0014-NA | .39 kg [.85 lb]

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

Dimensions and technical information are subject to change without notice
Spidergrip Tooling Components | Dimensions | Technical Specifications

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

Dimensions and technical information are subject to change without notice

Model Number | Weight
--- | ---
STS0019-NA | .32 kg (.71 lb)