

Manual Tooling Catalog

A comprehensive guide to ordering Haeger® tooling
for the manual installation of self-clinching fasteners

January 2024

For more information, or to place an order, go to www.haeger.com.

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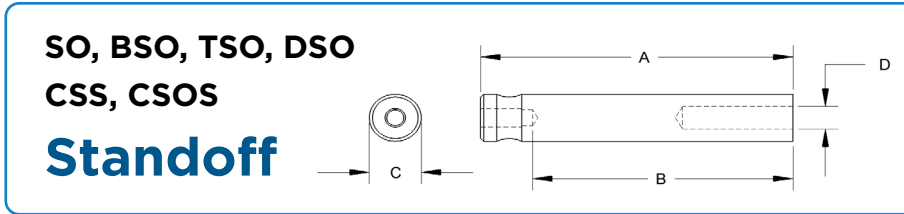
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Basic Tooling



Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D in |
|----------------|---------------------|-----------|-----------|-----------|-----------|
| H-109-4/M3S | 4-40 | 1.5 | 1.0 | .50 | .168 |
| H-109-6/M3.5S | 64-40 & 6-32 | 1.5 | 1.0 | .50 | .215 |
| H-109-8-10/M5S | 86-32, 8-32 & 10-32 | 1.5 | 1.0 | .50 | .283 |
| H-109-4/M3L | 4-40 | 3.0 | 2.5 | .50 | .168 |
| H-109-6/M3.5L | 64-40 & 6-32 | 3.0 | 2.5 | .50 | .215 |
| H-109-8-10M5L | 86-32, 8-32 & 10-32 | 3.0 | 2.5 | .50 | .283 |

Notes:

Maximum length inch standoff for H-109___S is 1 in

Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D mm |
|----------------|---------------|-----------|-----------|-----------|-----------|
| H-109-4/M3S | M3 | 38.1 | 25.4 | 12.7 | 4.26 |
| H-109-6/M3.5S | 3.5M3 | 38.1 | 25.4 | 12.7 | 5.46 |
| H-109-8-10/M5S | M4 & M5 | 38.1 | 25.4 | 12.7 | 7.18 |
| H-109-4/M3L | M3 | 76.2 | 63.5 | 12.7 | 4.26 |
| H-109-6/M3.5L | 3.5M3 | 76.2 | 63.5 | 12.7 | 5.46 |
| H-109-8-10/M5L | M4 & M5 | 76.2 | 63.5 | 12.7 | 7.18 |

Notes:

Maximum length metric standoff is 27 mm.

Caution:

When using short tooling (H-109-__S) and bottom screw to secure, ensure the screw allows adequate clearance for the standoff.

Basic Tooling

**FH, FHL, TFH, HFH,
HFE, CHA, CHC
Stud Inch**

The diagram shows a technical drawing of a stud inch fastener. On the left is a cross-sectional view showing a central hole with diameter 'C' and an outer diameter of '.50'. On the right is a side view showing a cylindrical body with a threaded section on the left and a smooth section on the right. Dimension 'A' is the total length, 'B' is the length of the smooth section, and 'D' is the diameter of the smooth section.

Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D in |
|-----------|---------------|-----------|-----------|-----------|-----------|
| H-103-2S | 2-56 | 1.50 | 1.00 | .500 | .087 |
| H-103-4S | 4-40 | 1.50 | 1.00 | .500 | .113 |
| H-103-6S | 6-32 | 1.50 | 1.00 | .500 | .140 |
| H-103-8S | 8-32 | 1.50 | 1.00 | .500 | .166 |
| H-103-10S | 10-32 | 1.50 | 1.00 | .500 | .193 |
| H-103-04S | 1/4-20 | 1.50 | 1.00 | .500 | .250 |
| H-103-05S | 5/16-18 | 2.25 | 1.75 | .750 | .313 |
| H-103-06S | 3/8-16 | 2.25 | 1.75 | .750 | .377 |
| H-103-2L | 2-56 | 3.00 | 2.50 | .500 | .087 |
| H-103-4L | 4-40 | 3.00 | 2.50 | .500 | .113 |
| H-103-6L | 6-32 | 3.00 | 2.50 | .500 | .140 |
| H-103-8L | 8-32 | 3.00 | 2.50 | .500 | .166 |
| H-103-10L | 10-32 | 3.00 | 2.50 | .500 | .193 |
| H-103-04L | 1/4-20 | 3.00 | 2.50 | .500 | .250 |
| H-103-05L | 5/16-18 | 3.00 | 2.50 | .750 | .313 |
| H-103-06L | 3/8-16 | 3.00 | 2.50 | .750 | .377 |

Basic Tooling

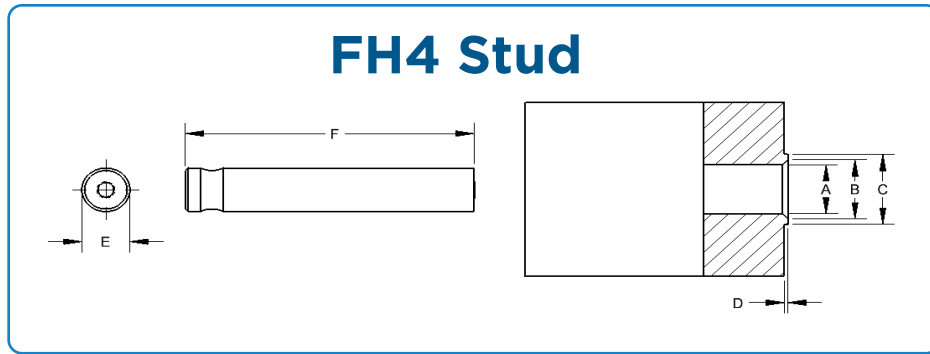
**FH, FHL, TFH, HFH,
HFE, CHA, CHC**

Stud Metric

Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D mm |
|-------------|---------------|-----------|-----------|-----------|-----------|
| H-103-M2.5S | M2.5 | 38.1 | 25.4 | 12.7 | 2.56 |
| H-103-M3S | M3 | 38.1 | 25.4 | 12.7 | 3.07 |
| H-103-M3.5S | M3.5 | 38.1 | 25.4 | 12.7 | 3.55 |
| H-103-M4S | M4 | 38.1 | 25.4 | 12.7 | 4.06 |
| H-103-M5S | M5 | 38.1 | 25.4 | 12.7 | 5.05 |
| H-103-M6S | M6 | 38.1 | 25.4 | 12.7 | 6.04 |
| H-103-M8S | M8 | 57.2 | 44.5 | 19.1 | 8.02 |
| H-103-M10S | M10 | 57.2 | 44.5 | 19.1 | 10.03 |
| | | | | | |
| H-103-M2.5L | M2.5 | 80.0 | 63.5 | 12.7 | 2.56 |
| H-103-M3L | M3 | 80.0 | 63.5 | 12.7 | 3.07 |
| H-103-M3.5L | M3.5 | 80.0 | 63.5 | 12.7 | 3.55 |
| H-103-M4L | M4 | 80.0 | 63.5 | 12.7 | 4.06 |
| H-103-M5L | M5 | 80.0 | 63.5 | 12.7 | 5.05 |
| H-103-M6L | M6 | 80.0 | 63.5 | 12.7 | 6.04 |
| H-103-M8L | M8 | 80.0 | 63.5 | 19.1 | 8.02 |
| H-103-M10L | M10 | 80.0 | 63.5 | 19.1 | 10.03 |
| H-103-00L | Blank | 76.2 | 63.5 | 12.7 | |
| H-103-062L | Blank | 76.2 | 63.5 | 15.9 | |
| H-103-075L | Blank | 76.2 | 63.5 | 19.1 | |

Basic Tooling



Inch

| Part # | Fastener Size | Dia. A in | Dia. B in | Dia. C in | Dim. D in | Dia. E in | Dim. F in |
|------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|
| H-181-4S | FH4 4-40 | .113 | .144 | .174 | .010 | .500 | 1.50 |
| H-181-6S | FH4 6-32 | .140 | .170 | .200 | .010 | .500 | 1.50 |
| H-181-8S | FH4 8-32 | .166 | .202 | .236 | .010 | .500 | 1.50 |
| H-181-10S | FH4 10-32 | .191 | .235 | .275 | .010 | .500 | 1.50 |
| H-181-04S* | FH4 1/4-20 | .252 | .324 | .360 | .020 | .750 | 1.50 |
| | | | | | | | |
| H-181-4L | FH4 4-40 | .113 | .144 | .174 | .010 | .500 | 3.00 |
| H-181-6L | FH4 6-32 | .140 | .170 | .200 | .010 | .500 | 3.00 |
| H-181-8L | FH4 8-32 | .166 | .202 | .236 | .010 | .500 | 3.00 |
| H-181-10L | FH4 10-32 | .191 | .235 | .275 | .010 | .500 | 3.00 |
| H-181-04L* | FH4 1/4-20 | .252 | .324 | .360 | .020 | .750 | 3.00 |

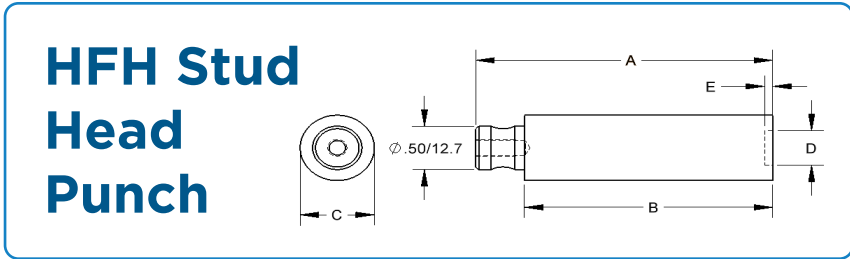
Metric

| Part # | Fastener Size | Dia. A mm | Dia. B mm | Dia. C mm | Dim. D mm | Dia. E mm | Dim. F mm |
|------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|
| H-181-M3S | FH4 M3 | 3.04 | 3.81 | 4.57 | 2.54 | 12.7 | 38.1 |
| H-181-M4S | FH4 M4 | 4.03 | 4.95 | 5.81 | 2.54 | 12.7 | 38.1 |
| H-181-M5S | FH4 M5 | 5.08 | 6.14 | 7.16 | 2.54 | 12.7 | 38.1 |
| H-181-M6S* | FH4 M6 | 6.04 | 7.87 | 8.78 | 5.08 | 19.05 | 38.1 |
| | | | | | | | |
| H-181-M3L | FH4 M3 | 3.04 | 3.81 | 4.57 | 2.54 | 12.7 | 76.2 |
| H-181-M4L | FH4 M4 | 4.03 | 4.95 | 5.81 | 2.54 | 12.7 | 76.2 |
| H-181-M5L | FH4 M5 | 5.08 | 6.14 | 7.16 | 2.54 | 12.7 | 76.2 |
| H-181-M6L* | FH4 M6 | 6.04 | 7.87 | 8.78 | 5.08 | 19.05 | 76.2 |

Notes:

* 1/4-20 and M6 fasteners require 23,000 lbs of force for proper installation. These tools will not fit into the standard lower tool holder. H-147-2 or 15-03905 will be needed.

Basic Tooling



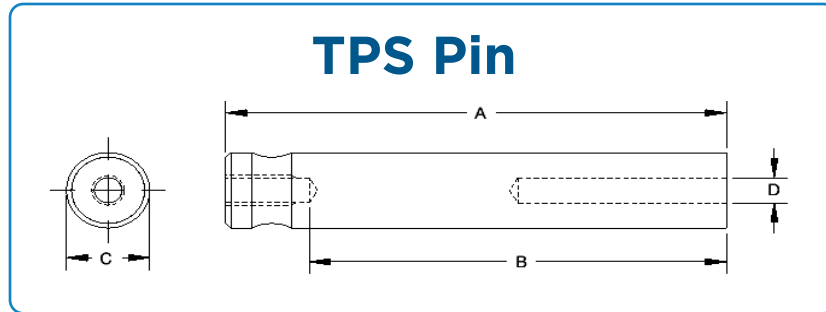
Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D in | Dim. E in |
|-----------|---------------|-----------|-----------|-----------|-----------|-----------|
| H-184-10S | 10-32 | 1.50 | 1.00 | .500 | .323 | .036 |
| H-184-04S | 1/4-20 | 1.50 | 1.00 | .500 | .394 | .045 |
| H-184-05S | 5/16-18 | 1.50 | 1.00 | .750 | .505 | .063 |
| H-184-06S | 3/8-16 | 1.50 | 1.00 | .750 | .595 | .077 |
| H-184-10L | 10-32 | 3.00 | 2.51 | .500 | .323 | .036 |
| H-184-04L | 1/4-20 | 3.00 | 2.51 | .500 | .394 | .045 |
| H-184-05L | 5/16-18 | 3.00 | 2.51 | .750 | .505 | .063 |
| H-184-06L | 3/8-16 | 3.00 | 2.51 | .750 | .595 | .077 |

Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D mm | Dim. E mm |
|------------|---------------|-----------|-----------|-----------|-----------|-----------|
| H-184-10S | M5 | 38.1 | 25.4 | 12.7 | 8.2 | 0.91 |
| H-184-04S | M6 | 38.1 | 25.4 | 12.7 | 10.0 | 1.14 |
| H-184-05S | M8 | 38.1 | 25.4 | 19.0 | 12.8 | 1.60 |
| H-184-M10S | M10 | 38.1 | 25.4 | 19.0 | 16.1 | 2.11 |
| H-184-10L | M5 | 76.2 | 63.5 | 12.7 | 8.2 | 0.91 |
| H-184-04L | M6 | 76.2 | 63.5 | 12.7 | 10.0 | 1.14 |
| H-184-05L | M8 | 76.2 | 63.5 | 19.0 | 12.8 | 1.60 |
| H-184-M10L | M10 | 76.2 | 63.5 | 19.0 | 16.1 | 2.11 |

Basic Tooling



Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D in |
|------------|---------------|-----------|-----------|-----------|-----------|
| H-106-125S | 125 | 1.50 | 1.00 | .500 | .130 |
| H-106-187S | 187 | 1.50 | 1.00 | .500 | .192 |
| H-106-250S | 250 | 1.50 | 1.00 | .500 | .255 |
| H-106-125L | 125 | 3.00 | 2.50 | .500 | .130 |
| H-106-187L | 187 | 3.00 | 2.50 | .500 | .192 |
| H-106-250L | 250 | 3.00 | 2.50 | .500 | .255 |

Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D mm |
|------------|---------------|-----------|-----------|-----------|-----------|
| H-106-3MMS | 3MM | 38.1 | 25.4 | 12.7 | 3.11 |
| H-106-4MMS | 4MM | 38.1 | 25.4 | 12.7 | 4.11 |
| H-106-5MMS | 5MM | 38.1 | 25.4 | 12.7 | 5.13 |
| H-106-6MMS | 6MM | 38.1 | 25.4 | 12.7 | 6.12 |
| H-106-3MML | 3MM | 76.2 | 63.5 | 12.7 | 3.11 |
| H-106-4MML | 4MM | 76.2 | 63.5 | 12.7 | 4.11 |
| H-106-5MML | 5MM | 76.2 | 63.5 | 12.7 | 5.13 |
| H-106-6MML | 6MM | 76.2 | 63.5 | 12.7 | 6.12 |

Notes:

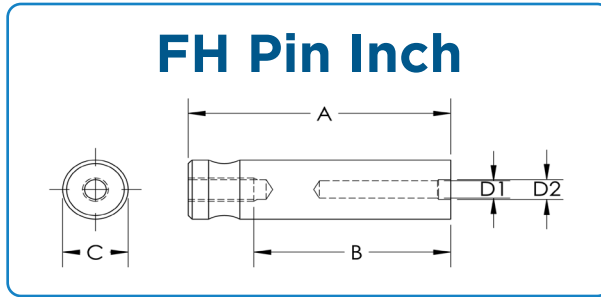
Maximum Length Pins

- a. The **maximum** length pin for all H-106-__S is 1 in
- b. The **maximum** length pin for all H-106-__L is 1.5 in

Caution:

When using short tooling (H-106-__S) and bottom screw to secure, ensure the screw allows adequate clearance for the stud.

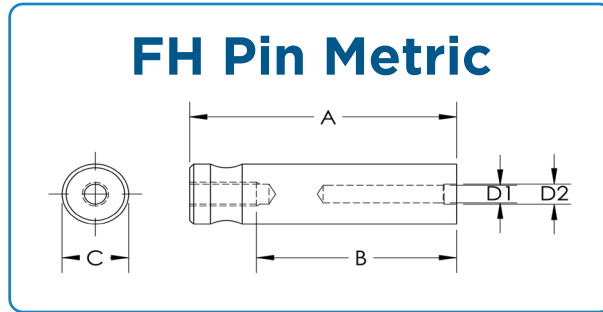
Basic Tooling



Inch

| Part # | Fastener (FH) | Dim. A in | Dim. B in | Dia. C in | Dia. D1 in | Dim. D2 in |
|------------|---------------|-----------|-----------|-----------|------------|------------|
| H-136-073S | 073 | 1.50 | 1.00 | .500 | .078 | .089 |
| H-136-084S | 084 | 1.50 | 1.00 | .500 | .089 | .103 |
| H-136-094S | 094 | 1.50 | 1.00 | .500 | .099 | .115 |
| H-136-103S | 103 | 1.50 | 1.00 | .500 | .109 | .122 |
| H-136-106S | 106 | 1.50 | 1.00 | .500 | .110 | .129 |
| H-136-116S | 116 | 1.50 | 1.00 | .500 | .121 | .141 |
| H-136-120S | 120 | 1.50 | 1.00 | .500 | .125 | .141 |
| H-136-137S | 137 | 1.50 | 1.00 | .500 | .144 | .161 |
| H-136-141S | 141 | 1.50 | 1.00 | .500 | .147 | .167 |
| H-136-160S | 160 | 1.50 | 1.00 | .500 | .166 | .193 |
| H-136-167S | 167 | 1.50 | 1.00 | .500 | .172 | .193 |
| H-136-173S | 173 | 1.50 | 1.00 | .500 | .180 | .201 |
| H-136-207S | 207 | 1.50 | 1.00 | .500 | .213 | .240 |
| H-136-215S | 215 | 1.50 | 1.00 | .500 | .221 | .254 |
| H-136-223S | 223 | 1.50 | 1.00 | .500 | .228 | .254 |
| H-136-273S | 273 | 1.50 | 1.00 | .500 | .277 | .316 |
| H-136-281S | 281 | 1.50 | 1.00 | .500 | .290 | .316 |
| H-136-073L | 073 | 3.00 | 2.50 | .500 | .078 | .089 |
| H-136-084L | 084 | 3.00 | 2.50 | .500 | .089 | .103 |
| H-136-094L | 094 | 3.00 | 2.50 | .500 | .099 | .115 |
| H-136-103L | 103 | 3.00 | 2.50 | .500 | .109 | .122 |
| H-136-106L | 106 | 3.00 | 2.50 | .500 | .110 | .129 |
| H-136-116L | 116 | 3.00 | 2.50 | .500 | .121 | .141 |
| H-136-120L | 120 | 3.00 | 2.50 | .500 | .125 | .141 |
| H-136-137L | 137 | 3.00 | 2.50 | .500 | .144 | .161 |
| H-136-141L | 141 | 3.00 | 2.50 | .500 | .147 | .167 |
| H-136-160L | 160 | 3.00 | 2.50 | .500 | .166 | .193 |
| H-136-167L | 167 | 3.00 | 2.50 | .500 | .172 | .193 |
| H-136-173L | 173 | 3.00 | 2.50 | .500 | .180 | .201 |
| H-136-207L | 207 | 3.00 | 2.50 | .500 | .213 | .240 |
| H-136-215L | 215 | 3.00 | 2.50 | .500 | .221 | .254 |
| H-136-223L | 223 | 3.00 | 2.50 | .500 | .228 | .254 |
| H-136-273L | 273 | 3.00 | 2.50 | .500 | .277 | .316 |
| H-136-281L | 281 | 3.00 | 2.50 | .500 | .290 | .316 |

Basic Tooling



Metric

| Part # | Fastener (FH) | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D1 mm | Dim. D2 mm |
|------------|---------------|-----------|-----------|-----------|------------|------------|
| H-136-116S | 3MM | 38.1 | 25.4 | 12.7 | 3.1 | 3.61 |
| H-136-4MMS | 4MM | 38.1 | 25.4 | 12.7 | 4.1 | 4.19 |
| H-136-5MMS | 5MM | 38.1 | 25.4 | 12.7 | 5.1 | 5.61 |
| H-136-116L | 3MM | 80.0 | 63.5 | 12.7 | 3.1 | 3.61 |
| H-136-4MML | 4MM | 80.0 | 63.5 | 12.7 | 4.1 | 4.19 |
| H-136-5MML | 5MM | 80.0 | 63.5 | 12.7 | 5.1 | 5.61 |

Notes:

Maximum Length Pins

- a. The **maximum** length pin for H-136-073L & H-136-073S is .625 in
- b. The **maximum** length pin for H-136-084L & H-136-084S is .750 in
- c. The **maximum** length pin for H-136-094L & H-136-094S is .750 in
- d. The **maximum** length pin for H-136-106L & H-136-106S is .750 in
- e. The **maximum** length pin for all other H-136-__S is 1 in
- f. The **maximum** length pin for all other H-136-__L is 1.5 in

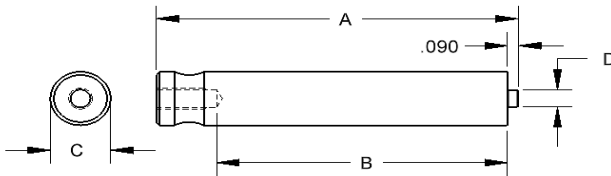
Caution:

When using short tooling (H-136-__S) and bottom screw to secure, ensure the screw allows adequate clearance for the stud.

Basic Tooling

**S, CLS, CLA, RT, SL,
SMPS, H, SH, SMPS**

Nut Pin Style



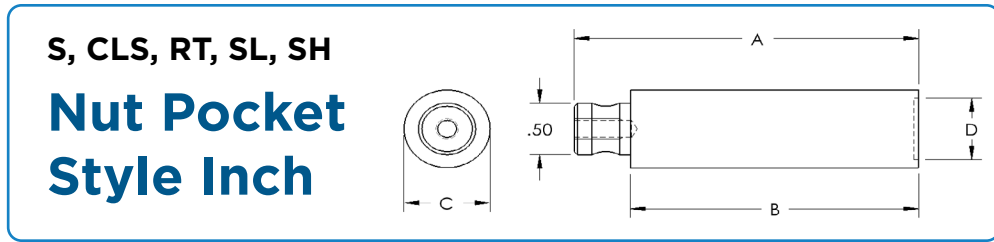
Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D in |
|----------|---------------|-----------|-----------|-----------|-----------|
| 10-00271 | 2-56 | 1.5 | 1.0 | .500 | .066 |
| 10-00272 | 4-40 | 1.5 | 1.0 | .500 | .085 |
| 10-00273 | 6-32 | 1.5 | 1.0 | .500 | .102 |
| 10-00274 | 8-32 | 1.5 | 1.0 | .500 | .132 |
| 10-00275 | 10-32 | 1.5 | 1.0 | .500 | .154 |
| 10-00276 | 1/4-20 | 1.5 | 1.0 | .500 | .196 |
| 10-00277 | 5/16-18 | 1.5 | 1.0 | .500 | .250 |
| 10-00304 | 3/8-16 | 1.5 | 1.0 | .500 | .306 |
| 10-00278 | 2-56 | 3.0 | 2.5 | .500 | .066 |
| 10-00279 | 4-40 | 3.0 | 2.5 | .500 | .085 |
| 10-00280 | 6-32 | 3.0 | 2.5 | .500 | .102 |
| 10-00281 | 8-32 | 3.0 | 2.5 | .500 | .132 |
| 10-00282 | 10-32 | 3.0 | 2.5 | .500 | .154 |
| 10-00283 | 1/4-20 | 3.0 | 2.5 | .500 | .196 |
| 10-00284 | 5/16-18 | 3.0 | 2.5 | .500 | .250 |
| 10-00303 | 3/8-16 | 3.0 | 2.5 | .500 | .306 |

Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D mm |
|----------|---------------|-----------|-----------|-----------|-----------|
| 10-00285 | M2.5 | 38.1 | 25.4 | 12.7 | 1.95 |
| 10-00286 | M3 | 38.1 | 25.4 | 12.7 | 2.36 |
| 10-00287 | M3.5 | 38.1 | 25.4 | 12.7 | 2.76 |
| 10-00288 | M4 | 38.1 | 25.4 | 12.7 | 3.17 |
| 10-00289 | M5 | 38.1 | 25.4 | 12.7 | 4.06 |
| 10-00290 | M6 | 38.1 | 25.4 | 12.7 | 4.87 |
| 10-00291 | M8 | 38.1 | 25.4 | 12.7 | 6.65 |
| 10-00302 | M 10 | 38.1 | 25.4 | 12.7 | 8.33 |
| 10-00306 | M 12 | 38.1 | 25.4 | 12.7 | 10.05 |
| 10-00292 | M2.5 | 76.2 | 63.5 | 12.7 | 1.95 |
| 10-00293 | M3 | 76.2 | 63.5 | 12.7 | 2.36 |
| 10-00294 | M3.5 | 76.2 | 63.5 | 12.7 | 2.76 |
| 10-00295 | M4 | 76.2 | 63.5 | 12.7 | 3.17 |
| 10-00296 | M5 | 76.2 | 63.5 | 12.7 | 4.06 |
| 10-00297 | M6 | 76.2 | 63.5 | 12.7 | 4.87 |
| 10-00298 | M8 | 76.2 | 63.5 | 12.7 | 6.65 |
| 10-00301 | M 10 | 76.2 | 63.5 | 12.7 | 8.33 |
| 10-00305 | M 12 | 76.2 | 63.5 | 12.7 | 10.05 |

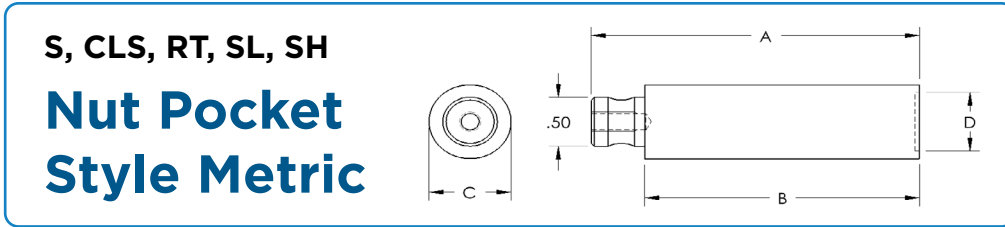
Basic Tooling



Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D in |
|---------------|---------------|-----------|-----------|-----------|-----------|
| H-101-2-4/M3S | 2-56 & 4-40 | 1.5 | 1.0 | .500 | .265 |
| H-101-6/M3.5S | 6-32 | 1.5 | 1.0 | .500 | .295 |
| H-101-8/M4S | 8-32 | 1.5 | 1.0 | .500 | .325 |
| H-101-10/M5S | 10-32 | 1.5 | 1.0 | .500 | .355 |
| H-101-04/M6S | 1/4-20 | 1.5 | 1.0 | 0.625 | .450 |
| H-101-05/M8S | 5/16-18 | 1.5 | 1.0 | .625 | .515 |
| H-101-06S | 3/8-16 | 1.5 | 1.0 | .750 | .593 |
| H-101-2-4/M3L | 2-56 & 4-40 | 3.0 | 2.5 | .500 | .265 |
| H-101-6/M3.5L | 6-32 | 3.0 | 2.5 | .500 | .295 |
| H-101-8/M4L | 8-32 | 3.0 | 2.5 | .500 | .325 |
| H-101-10/M5L | 10-32 | 3.0 | 2.5 | .500 | .355 |
| H-101-04/M6L | 1/4-20 | 3.0 | 2.5 | .500 | .450 |
| H-101-05/M8L | 5/16-18 | 3.0 | 2.5 | .625 | .515 |
| H-101-06L | 3/8-16 | 3.0 | 2.5 | .750 | .593 |

Basic Tooling



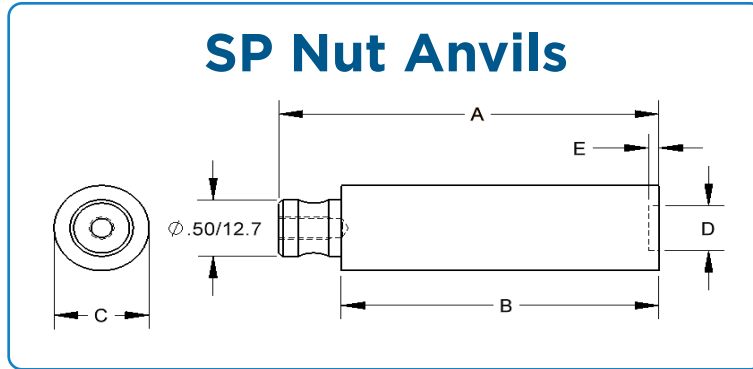
Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D mm |
|---------------|---------------|-----------|-----------|-----------|-----------|
| H-101-2-4/M3S | M2,M2.5,M3 | 38.1 | 25.4 | 12.70 | 6.73 |
| H-101-6/M3.5S | M3.5 | 38.1 | 25.4 | 12.70 | 7.49 |
| H-101-8/M4S | M4 | 38.1 | 25.4 | 12.70 | 8.25 |
| H-101-10/M5S | M5 | 38.1 | 25.4 | 12.70 | 9.01 |
| H-101-04/M6S | M6 | 38.1 | 25.4 | 15.88 | 11.43 |
| H-101-05/M8S | M8 | 38.1 | 25.4 | 15.88 | 13.08 |
| H-101-2-4/M3L | M2,M2.5,M3 | 76.2 | 63.5 | 12.70 | 6.73 |
| H-101-6/M3.5L | M3.5 | 76.2 | 63.5 | 12.70 | 7.49 |
| H-101-8/M4L | M4 | 76.2 | 63.5 | 12.70 | 8.25 |
| H-101-10/M5L | M5 | 76.2 | 63.5 | 12.70 | 9.01 |
| H-101-04/M6L | M6 | 76.2 | 63.5 | 12.70 | 11.43 |
| H-101-05/M8L | M8 | 76.2 | 63.5 | 15.88 | 13.08 |

Notes:

M10 nut tools are available as custom tooling.

Basic Tooling



Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm | Dim. E in / mm |
|----------------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| H-183-4/M3-S | 4-40 & M3 | 1.50/38.1 | 1.00/25.4 | .625/15.9 | .255/6.5 | .064/1.63 |
| H-183-6/M3.5-S | 6-32 & M3.5 | 1.50/38.1 | 1.00/25.4 | .625/15.9 | .286/7.3 | .064/1.63 |
| H-183-8/M4-S | 8-32 & M4 | 1.50/38.1 | 1.00/25.4 | .625/15.9 | .317/8.1 | .082/2.08 |
| H-183-10/M5-S | 10-32 & M5 | 1.50/38.1 | 1.00/25.4 | .625/15.9 | .348/8.8 | .082/2.08 |
| H-183-04/M6-S | 1/4-20 & M6 | 1.50/38.1 | 1.00/25.4 | .750/19.0 | .443/11.3 | .163/4.14 |
| H-183-4/M3-L | 4-40 & M3 | 3.00/76.2 | 2.50/63.5 | .625/15.9 | .255/6.5 | .064/1.63 |
| H-183-6/M3.5-L | 6-32 & M3.5 | 3.00/76.2 | 2.50/63.5 | .625/15.9 | .286/7.3 | .064/1.63 |
| H-183-8/M4-L | 8-32 & M4 | 3.00/76.2 | 2.50/63.5 | .625/15.9 | .317/8.1 | .082/2.08 |
| H-183-10/M5-L | 10-32 & M5 | 3.00/76.2 | 2.50/63.5 | .625/15.9 | .348/8.8 | .082/2.08 |
| H-183-04/M6-L | 1/4-20 & M6 | 3.00/76.2 | 2.50/63.5 | .750/19.0 | .443/11.3 | .163/4.14 |

Basic Tooling

Inch / Metric

| Part # | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm |
|-------------|-------------------|-------------------|-------------------|
| H-108-0018S | 1.5/38.1 | 1.0/25.4 | .25/6.4 |
| H-108-0019S | 1.5/38.1 | 1.0/25.4 | .50/12.7 |
| H-108-0020S | 1.5/38.1 | 1.0/25.4 | 1.00/25.4 |
| H-108-062S | 1.5/38.1 | 1.0/25.4 | .625/15.9 |
| H-108-075S | 1.5/38.1 | 1.0/25.4 | .750/19.0 |
| | | | |
| H-108-0018L | 3.0/76.2 | 2.5/63.5 | .25/6.4 |
| H-108-0019L | 3.0/76.2 | 2.5/63.5 | .50/12.7 |
| H-108-0020L | 3.0/76.2 | 2.5/63.5 | 1.00/25.4 |
| H-108-062L | 3.0/76.2 | 2.5/63.5 | .625/15.9 |
| H-108-075L | 3.0/76.2 | 2.5/63.5 | .750/19.0 |

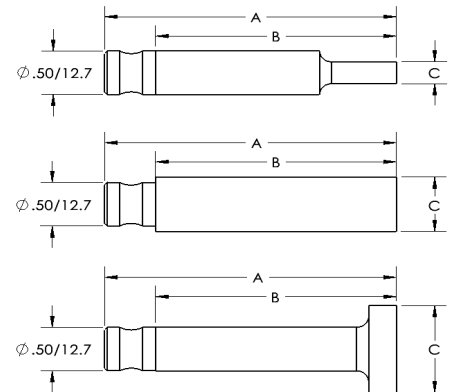
Inch / Metric

| Part # | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm |
|--------|-------------------|-------------------|-------------------|
| H-145 | 2/50.8 | 1.25/31.8 | .75/19.1 |

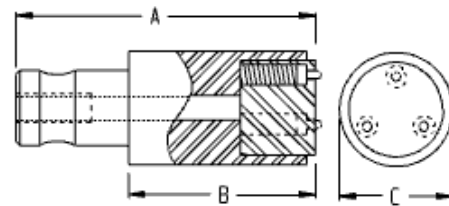
Notes:

1. This tool has an epoxy board face which is used to minimize marring of soft materials.
2. Spring loaded Continuity Pins extend above the epoxy board to permit operating in the Conductive Mode.

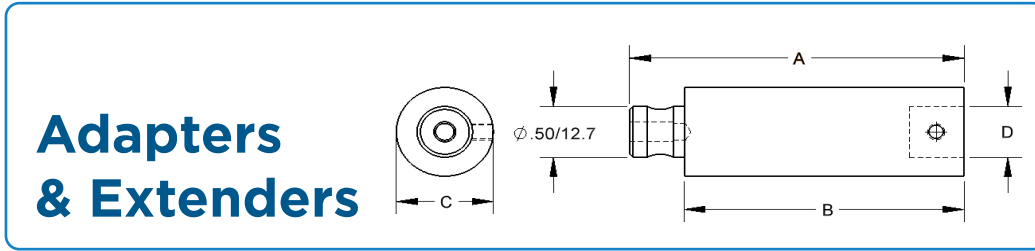
Flat Tools



Soft Face Tool



Basic Tooling



Inch / Metric

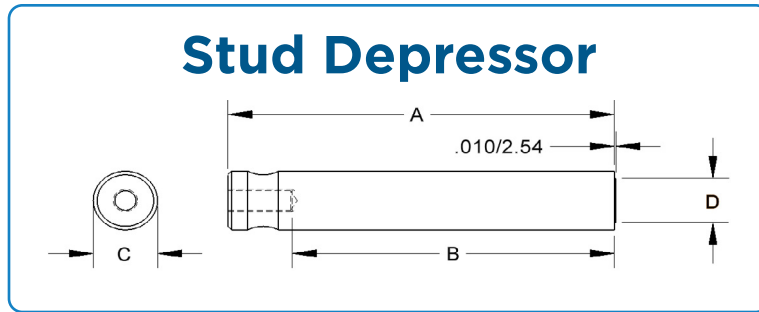
| Part # | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm |
|-------------|-------------------|-------------------|-------------------|-------------------|
| H-110-375-2 | 2.0/50.8 | 1.5/38.1 | .62/15.9 | .375/9.5 |
| H-110-500-2 | 2.0/50.8 | 1.5/38.1 | .75/19.1 | .500/12.7 |
| H-110-375-3 | 3.0/76.2 | 2.5/63.5 | .62/15.9 | .375/9.5 |
| H-110-500-3 | 3.0/76.2 | 2.5/63.5 | .75/19.1 | .500/12.7 |

Notes:

H-110-375-__ may be used to adapt and extend PEMSERTER manual tools with .375" base.

H-110-500-__ may be used to extend the length of HAEGER tooling with the .500" base.

Basic Tooling



Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D in |
|-----------|---------------|-----------|-----------|-----------|-----------|
| H-111-2S | 2-56 | 1.5 | 1.0 | .50 | .165 |
| H-111-4S | 4-40 | 1.5 | 1.0 | .50 | .180 |
| H-111-6S | 6-32 | 1.5 | 1.0 | .50 | .220 |
| H-111-8S | 8-32 | 1.5 | 1.0 | .50 | .250 |
| H-111-10S | 10-32 | 1.5 | 1.0 | .50 | .275 |
| H-111-04S | 1/4-20 | 1.5 | 1.0 | .50 | .375 |
| H-111-2L | 2-56 | 3.0 | 2.5 | .50 | .165 |
| H-111-4L | 4-40 | 3.0 | 2.5 | .50 | .180 |
| H-111-6L | 6-32 | 3.0 | 2.5 | .50 | .220 |
| H-111-8L | 8-32 | 3.0 | 2.5 | .50 | .250 |
| H-111-10L | 10-32 | 3.0 | 2.5 | .50 | .275 |
| H-111-04L | 1/4-20 | 3.0 | 2.5 | .50 | .375 |

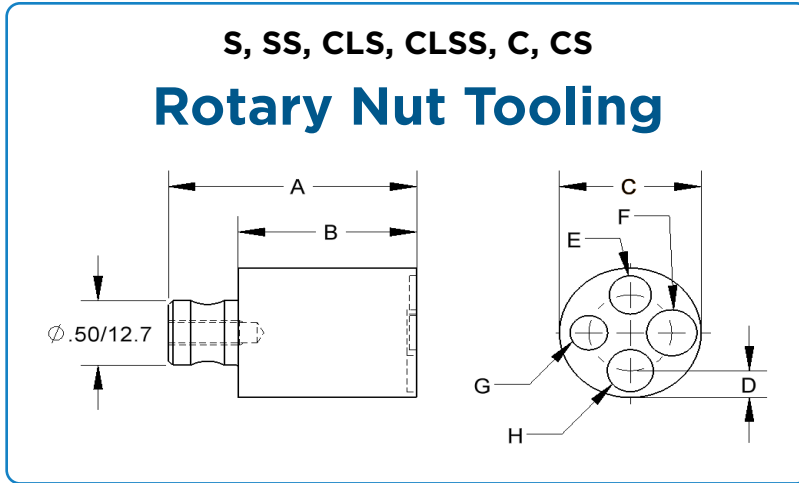
Metric

| Part # | FASTENER SIZE | Dim. A in | Dim. B in | Dia. C in | Dia. D in |
|-----------|---------------|-----------|-----------|-----------|-----------|
| H-111-4S | M2.5 & M3 | 38.1 | 25.4 | 12.7 | 4.6 |
| H-111-6S | M3.5 | 38.1 | 25.4 | 12.7 | 5.6 |
| H-111-8S | M4 | 38.1 | 25.4 | 12.7 | 6.3 |
| H-111-10S | M5 | 38.1 | 25.4 | 12.7 | 7.0 |
| H-111-04S | M6 | 38.1 | 25.4 | 12.7 | 9.5 |
| H-111-4L | M2.5 & M3 | 76.2 | 63.5 | 12.7 | 4.6 |
| H-111-6L | M3.5 | 76.2 | 63.5 | 12.7 | 5.6 |
| H-111-8L | M4 | 76.2 | 63.5 | 12.7 | 6.3 |
| H-111-10L | M5 | 76.2 | 63.5 | 12.7 | 7.0 |
| H-111-04L | M6 | 76.2 | 63.5 | 12.7 | 9.5 |

Notes:

This tooling is used to ensure that the stud's head is inserted flush with, or recessed slightly below, the surface of the workpiece.

Rotary Tooling

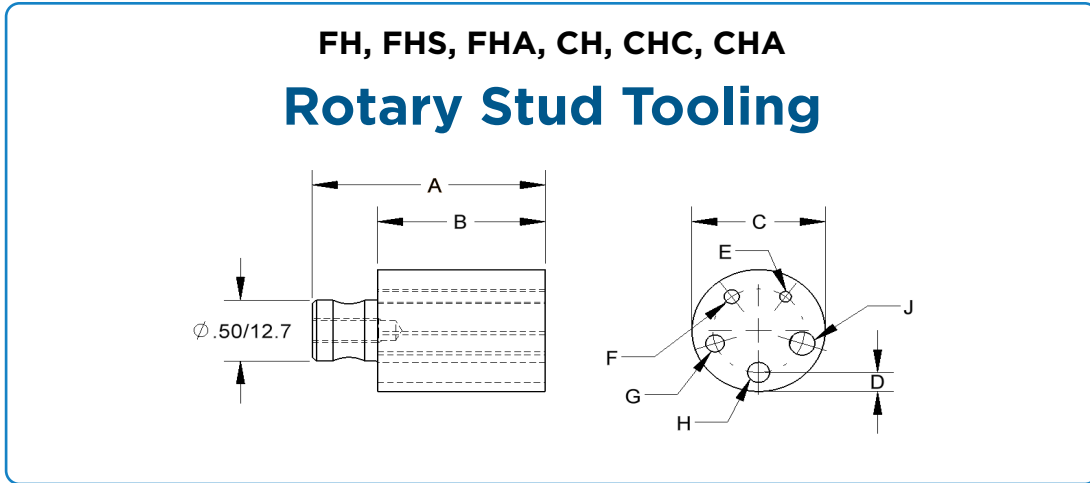


Inch / Metric

| Part # | Dim. A in / mm | Dim. B in /mm | Dia. C in /mm | Dim. D in /mm |
|--------|-------------------|------------------|------------------|------------------|
| H-104 | 1.75/44.4 | 1.25/31.8 | 1.00/25.4 | .208/5.3 |

| Fastener Size E | Fastener Size F | Fastener Size G | Fastener Size H |
|--------------------|--------------------|--------------------|--------------------|
| 2-56/4-40 | 6-32 | 8-32 | 10-32 |
| M2, M2.5, M3 | M3.5 | M4 | M5 |

Rotary Tooling



Inch

| Part # | Dim. A in | Dim. B in | Dia. C in | Dim. D in |
|--------|-----------|-----------|-----------|-----------|
| H-105 | 1.75 | 1.25 | 1.00 | .157 |

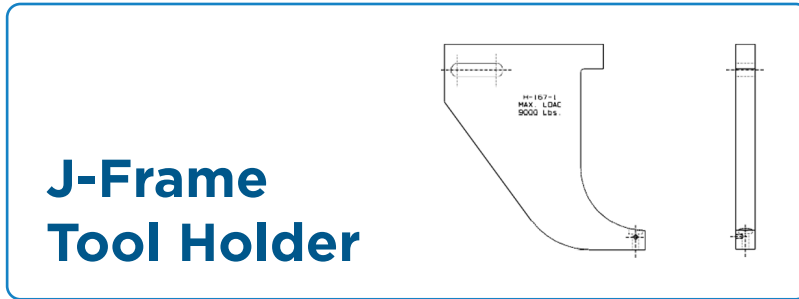
| Fastener Size E | Fastener Size F | Fastener Size G | Fastener Size H | Fastener Size J |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| 2-56 | 4-40 | 6-32 | 8-32 | 10-32 |

Metric

| Part # | Dim. A in | Dim. B in | Dia. C in | Dim. D in |
|---------|-----------|-----------|-----------|-----------|
| H-105-M | 44.4 | 31.8 | 25.4 | 4.0 |

| Fastener Size E | Fastener Size F | Fastener Size G | Fastener Size H |
|-----------------|-----------------|-----------------|-----------------|
| M3 | M3.5 | M4 | M5 |

J-Frame Tooling

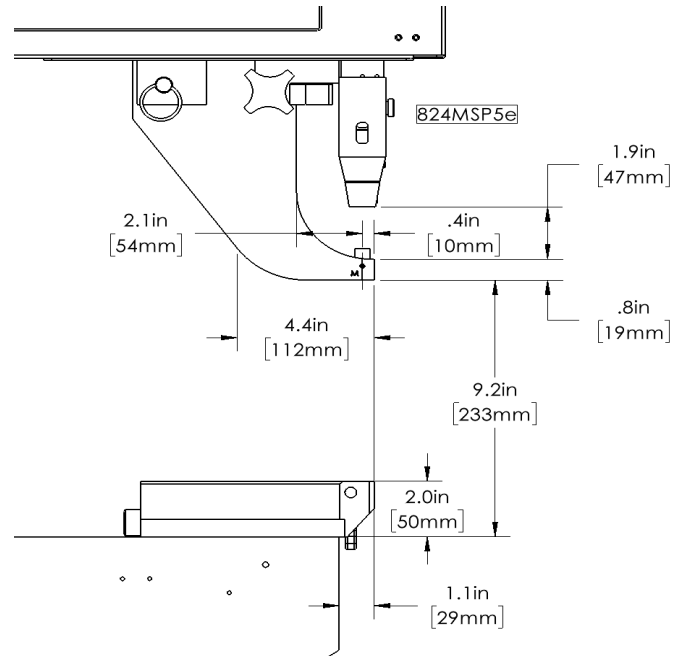
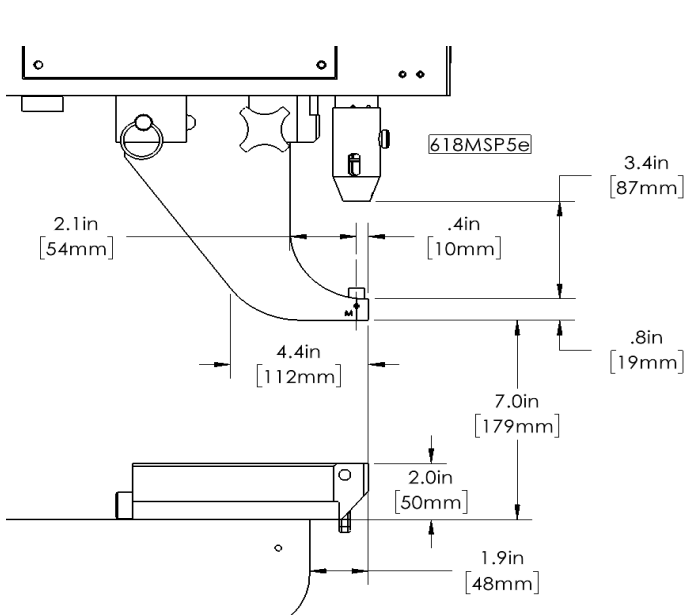


**J-Frame
Tool Holder**

| Part # | Description |
|----------|---------------------------|
| H-167-1 | J-Frame Tool Holder MSP |
| 15-03224 | J-Frame Tool Holder 824WT |

Notes:

The **Maximum Load** on the J-Frame Tool Holder is **9,000 lbs/40 kN**. This Tool Holder may be used with both inch and metric tooling.

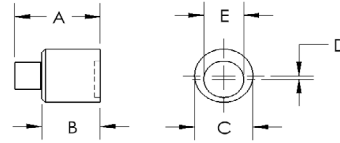


Notes:

These dimensions apply only to Haeger's current 618MSPe and 824MSPe models. For all other models, some of the dimensions may vary slightly.

J-Frame Tooling

S, CLS, CLA, RT, SL, SH
Nut Pocket Style



Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Offset D in | Dia. E in |
|--------------|---------------|-----------|-----------|-----------|-------------|-----------|
| H-100-2-4/M3 | 2-56 & 4-40 | .73 | .312 | .50 | .067 | .265 |
| H-100-6/M3.5 | 6-32 | .73 | .312 | .50 | .052 | .295 |
| H-100-8/M4 | 8-32 | .73 | .312 | .50 | .037 | .325 |
| H-100-10/M5 | 10-32 | .73 | .312 | .50 | .022 | .355 |
| H-100-04/M6 | 1/4-20 | .73 | .312 | .50 | .000 | .455 |
| H-100-0 | Flat Anvil | .73 | .312 | .50 | n/a | n/a |

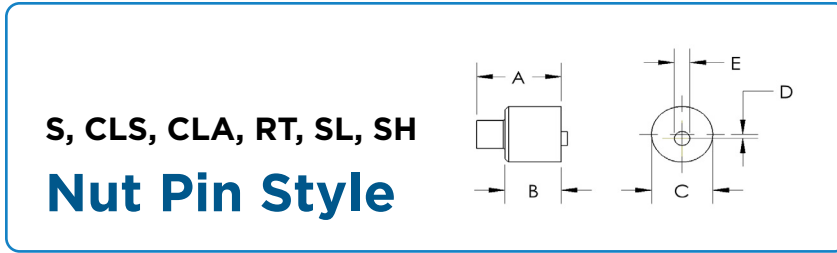
Metric

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Offset D in | Dia. E in |
|--------------|---------------|-----------|-----------|-----------|-------------|-----------|
| H-100-2-4/M3 | M2,M2.5,M3 | 18.5 | 7.9 | 12.7 | 1.7 | 6.73 |
| H-100-6/M3.5 | M3.5 | 18.5 | 7.9 | 12.7 | 1.3 | 7.49 |
| H-100-8/M4 | M4 | 18.5 | 7.9 | 12.7 | .9 | 8.25 |
| H-100-10/M5 | M5 | 18.5 | 7.9 | 12.7 | .6 | 9.01 |
| H-100-04/M6 | M6 | 18.5 | 7.9 | 12.7 | .0 | 11.55 |
| H-100-0 | Flat Anvil | 18.5 | 7.9 | 12.7 | n/a | n/a |

Notes:

These tools may also be used in the Square Tip Tool Holder, H-170-1.

J-Frame Tooling



Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Offset D in | Dia. E in |
|----------|---------------|-----------|-----------|-----------|-------------|-----------|
| 10-00650 | 2-56 | .73 | .312 | .50 | .067 | .065 |
| 10-00651 | 4-40 | .73 | .312 | .50 | .067 | .085 |
| 10-00652 | 6-32 | .73 | .312 | .50 | .052 | .102 |
| 10-00653 | 8-32 | .73 | .312 | .50 | .037 | .132 |
| 10-00654 | 10-32 | .73 | .312 | .50 | .022 | .154 |
| 10-00655 | 1/4-20 | .73 | .312 | .50 | .000 | .196 |

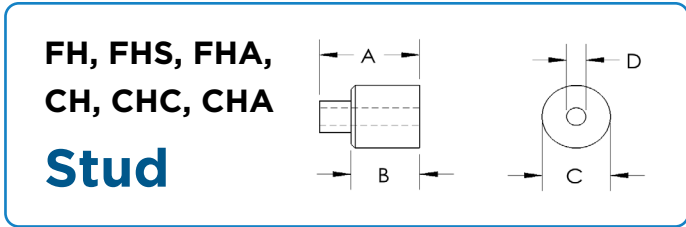
Metric

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Offset D in | Dia. E in |
|----------|---------------|-----------|-----------|-----------|-------------|-----------|
| 10-00656 | M2.5 | 18.5 | 7.9 | 12.7 | 1.7 | 1.95 |
| 10-00657 | M3 | 18.5 | 7.9 | 12.7 | 1.7 | 2.36 |
| 10-00658 | M3.5 | 18.5 | 7.9 | 12.7 | 1.3 | 2.76 |
| 10-00659 | M4 | 18.5 | 7.9 | 12.7 | .9 | 3.17 |
| 10-00660 | M5 | 18.5 | 7.9 | 12.7 | .6 | 4.06 |
| 10-00661 | M6 | 18.5 | 7.9 | 12.7 | .0 | 4.87 |

Notes:

These tools may also be used in the Square Tip Tool Holder, H-170-1.

J-Frame Tooling



Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D in |
|----------|---------------|-----------|-----------|-----------|-----------|
| H-102-2 | 2-56 | .73 | .312 | .500 | .087 |
| H-102-4 | 4-40 | .73 | .312 | .500 | .113 |
| H-102-6 | 6-32 | .73 | .312 | .500 | .140 |
| H-102-8 | 8-32 | .73 | .312 | .500 | .166 |
| H-102-10 | 10-32 | .73 | .312 | .500 | .193 |

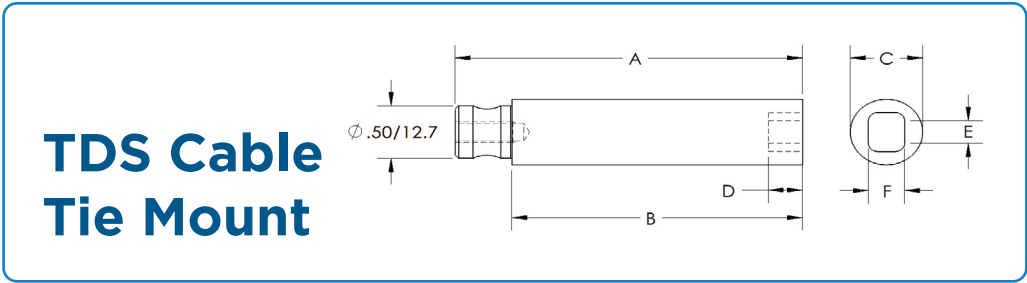
Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D mm |
|------------|---------------|-----------|-----------|-----------|-----------|
| H-102-M3 | M2.5,M3 | 18.5 | 7.9 | 12.7 | 3.07 |
| H-102-M3.5 | M3.5 | 18.5 | 7.9 | 12.7 | 3.55 |
| H-102-M4 | M4 | 18.5 | 7.9 | 12.7 | 4.06 |
| H-102-M5 | M5 | 18.5 | 7.9 | 12.7 | 5.05 |

Notes:

These tools may also be used in the Square Tip Tool Holder, H-170-1.

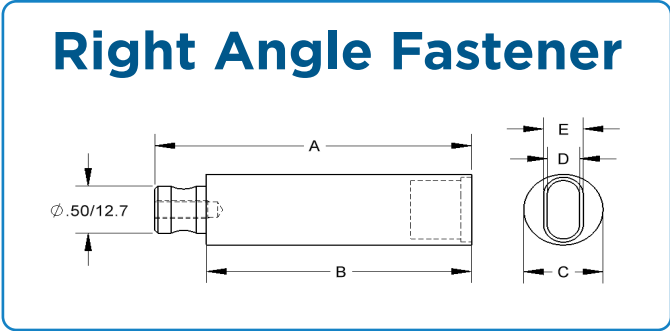
Miscellaneous Tooling



TDS Cable Tie Mount

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dim. D in / mm | Dim. E in / mm | Dim. F in / mm |
|------------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 14-01827-S | TD-40-4 | 1.50/38.1 | 1.00/25.4 | .500/12.7 | .160/4.1 | .151/3.8 | .251/6.4 |
| 14-01828-S | TD-60-6 | 1.50/38.1 | 1.00/24.4 | .625/15.9 | .190/4.8 | .214/5.4 | .313/7.9 |
| 14-01829-S | TD-175-12 | 1.75/44.5 | 1.25/31.8 | 1.00/25.4 | .295/7.5 | .401/10.2 | .501/12.7 |
| 14-01827-L | TD-40-4 | 3.00/76.2 | 2.50/63.5 | .500/12.7 | .160/4.1 | .151/3.8 | .251/6.4 |
| 14-01828-L | TD-60-6 | 3.00/76.2 | 2.50/63.5 | .625/15.9 | .190/4.8 | .214/5.4 | .313/7.9 |
| 14-01829-L | TD-175-12 | 3.00/76.2 | 2.50/63.5 | 1.00/25.4 | .295/7.5 | .401/10.2 | .501/12.7 |

Miscellaneous Tooling



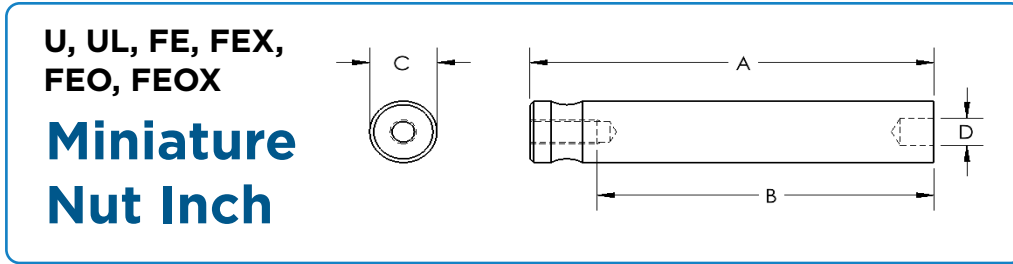
Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dim. D in | Dim. E in |
|-------------|---------------|-----------|-----------|-----------|-----------|-----------|
| H-180-440-S | 4-40 | 1.50 | 1.00 | .625 | .257 | .313 |
| H-180-632-S | 6-32 | 1.50 | 1.00 | .750 | .307 | .376 |
| H-180-832-S | 8-32 | 1.75 | 1.25 | 1.00 | .357 | .407 |
| H-180-440-L | 4-40 | 3.00 | 2.50 | .625 | .257 | .313 |
| H-180-632-L | 6-32 | 3.00 | 2.50 | .750 | .307 | .376 |
| H-180-832-L | 8-32 | 3.00 | 2.50 | 1.00 | .357 | .407 |

Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dim. D mm | Dim. E mm |
|------------|---------------|-----------|-----------|-----------|-----------|-----------|
| H-180-M3-S | M3 | 38.1 | 25.4 | 19.1 | 6.53 | 8.02 |
| H-180-M4-S | M4 | 38.1 | 25.4 | 25.4 | 9.07 | 10.03 |
| H-180-M3-L | M3 | 76.2 | 63.5 | 19.1 | 6.53 | 8.02 |
| H-180-M4-L | M4 | 76.2 | 63.5 | 25.4 | 9.07 | 10.03 |

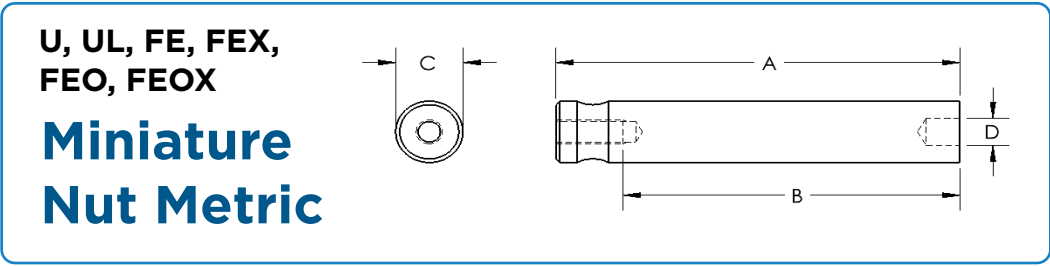
Miscellaneous Tooling



Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D in |
|-----------|---------------|-----------|-----------|-----------|-----------|
| H-133-0S | 0-80 | 1.5 | 1.0 | .500 | .081 |
| H-133-1S | 1-64 | 1.5 | 1.0 | .500 | .095 |
| H-133-2S | 2-56 | 1.5 | 1.0 | .500 | .109 |
| H-133-4S | 4-40 | 1.5 | 1.0 | .500 | .150 |
| H-133-6S | 6-32 | 1.5 | 1.0 | .500 | .180 |
| H-133-8S | 8-32 | 1.5 | 1.0 | .500 | .220 |
| H-133-10S | 10-32 | 1.5 | 1.0 | .500 | .250 |
| H-133-04S | 1/4-20 | 1.5 | 1.0 | .500 | .323 |
| H-133-0L | 0-80 | 3.0 | 2.5 | .500 | .081 |
| H-133-1L | 1-64 | 3.0 | 2.5 | .500 | .095 |
| H-133-2L | 2-56 | 3.0 | 2.5 | .500 | .109 |
| H-133-4L | 4-40 | 3.0 | 2.5 | .500 | .150 |
| H-133-6L | 6-32 | 3.0 | 2.5 | .500 | .180 |
| H-133-8L | 8-32 | 3.0 | 2.5 | .500 | .220 |
| H-133-10L | 10-32 | 3.0 | 2.5 | .500 | .250 |
| H-133-04L | 1/4-20 | 3.0 | 2.5 | .500 | .323 |

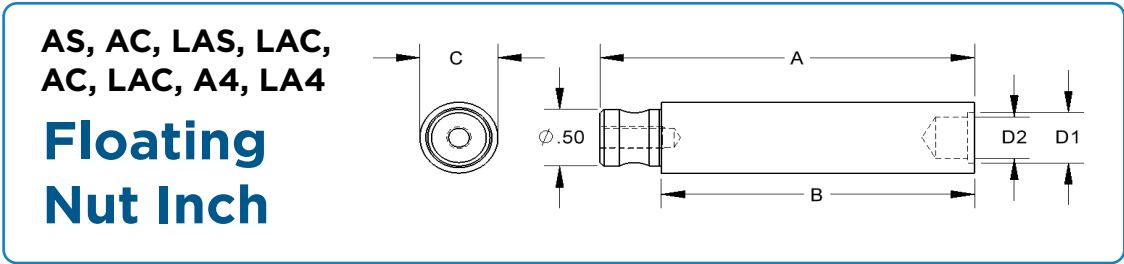
Miscellaneous Tooling



Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D mm |
|-----------|---------------|-----------|-----------|-----------|-----------|
| H-133-M3S | M3 | 38.1 | 25.4 | 12.7 | 4.08 |
| H-133-M4S | M4 | 38.1 | 25.4 | 12.7 | 5.35 |
| H-133-M5S | M5 | 38.1 | 25.4 | 12.7 | 6.60 |
| H-133-M6S | M6 | 38.1 | 25.4 | 12.7 | 7.84 |
| H-133-M3L | M3 | 76.2 | 63.5 | 12.7 | 4.08 |
| H-133-M4L | M4 | 76.2 | 63.5 | 12.7 | 5.35 |
| H-133-M5L | M5 | 76.2 | 63.5 | 12.7 | 6.60 |
| H-133-M6L | M6 | 76.2 | 63.5 | 12.7 | 7.84 |

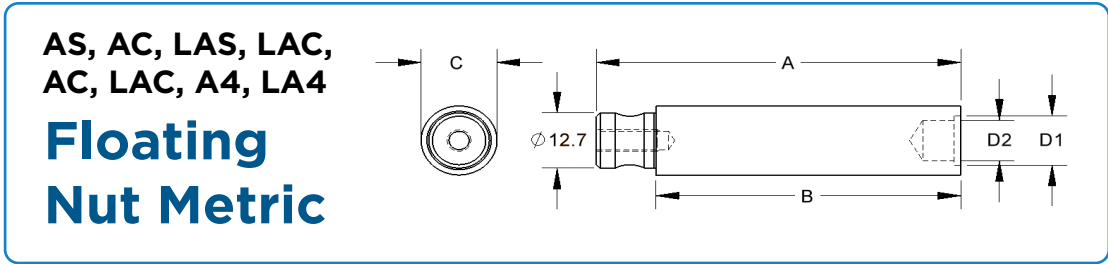
Miscellaneous Tooling



Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D1 in | Dia. D2 in |
|-----------|---------------|-----------|-----------|-----------|------------|------------|
| H-131-4S | 4-40 | 1.5 | 1.0 | .500 | .360 | .292 |
| H-131-6S | 6-32 | 1.5 | 1.0 | .500 | .390 | .337 |
| H-131-8S | 8-32 | 1.5 | 1.0 | .500 | .440 | .367 |
| H-131-10S | 10-32 | 1.5 | 1.0 | .625 | .470 | .407 |
| H-131-04S | 1/4-20 | 1.5 | 1.0 | .750 | .600 | .512 |
| H-131-4L | 4-40 | 3.0 | 2.5 | .500 | .360 | .292 |
| H-131-6L | 6-32 | 3.0 | 2.5 | .500 | .390 | .337 |
| H-131-8L | 8-32 | 3.0 | 2.5 | .500 | .440 | .367 |
| H-131-10L | 10-32 | 3.0 | 2.5 | .625 | .470 | .407 |
| H-131-04L | 1/4-20 | 3.0 | 2.5 | .750 | .600 | .512 |

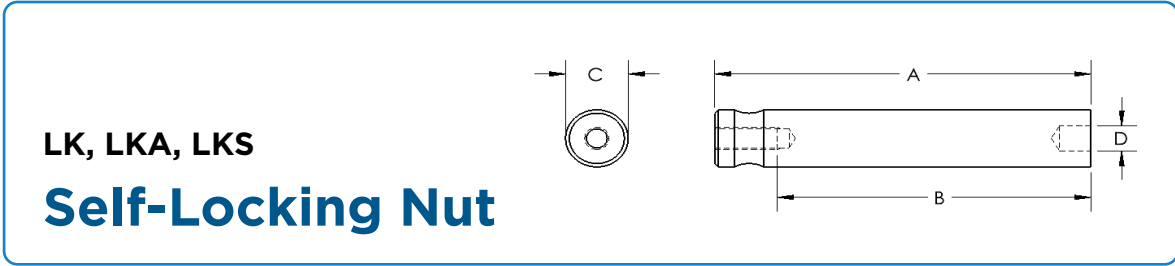
Miscellaneous Tooling



Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D1 mm | Dia. D2 mm |
|-----------|---------------|-----------|-----------|-----------|------------|------------|
| H-131-4S | M3 | 38.1 | 25.4 | 12.7 | 9.14 | 7.42 |
| H-131-8S | M4 | 38.1 | 25.4 | 12.7 | 11.18 | 9.32 |
| H-131-10S | M5 | 38.1 | 25.4 | 15.87 | 11.94 | 10.34 |
| H-131-04S | M6 | 38.1 | 25.4 | 19.05 | 15.24 | 13.00 |
| H-131-4L | M3 | 76.2 | 63.5 | 12.7 | 9.14 | 7.42 |
| H-131-8L | M4 | 76.2 | 63.5 | 12.7 | 11.18 | 9.32 |
| H-131-10L | M5 | 76.2 | 63.5 | 15.87 | 11.94 | 10.34 |
| H-131-04L | M6 | 76.2 | 63.5 | 19.05 | 15.24 | 13.00 |

Miscellaneous Tooling



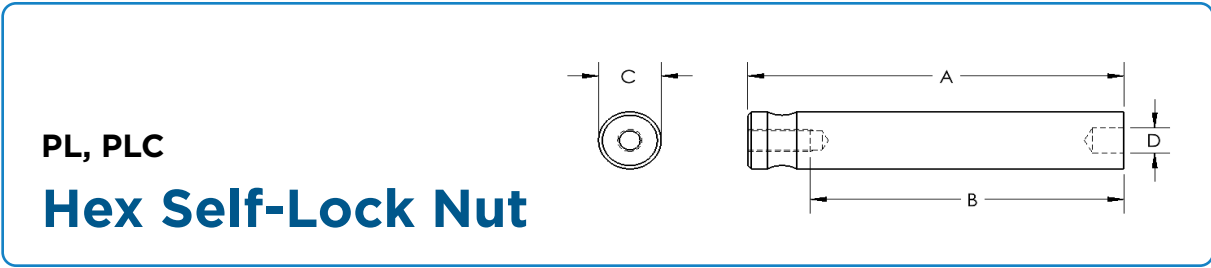
Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D in |
|-----------|---------------|-----------|-----------|-----------|-----------|
| H-130-2S | 2-56 | 1.5 | 1.0 | .500 | .170 |
| H-130-3S | 3-48 | 1.5 | 1.0 | .500 | .180 |
| H-130-4S | 4-40 | 1.5 | 1.0 | .500 | .190 |
| H-130-6S | 6-32 | 1.5 | 1.0 | .500 | .225 |
| H-130-8S | 8-32 | 1.5 | 1.0 | .500 | .255 |
| H-130-10S | 10-32 | 1.5 | 1.0 | .500 | .290 |
| H-130-2L | 2-56 | 3.0 | 2.5 | .500 | .170 |
| H-130-3L | 3-48 | 3.0 | 2.5 | .500 | .180 |
| H-130-4L | 4-40 | 3.0 | 2.5 | .500 | .190 |
| H-130-6L | 6-32 | 3.0 | 2.5 | .500 | .225 |
| H-130-8L | 8-32 | 3.0 | 2.5 | .500 | .255 |
| H-130-10L | 10-32 | 3.0 | 2.5 | .500 | .290 |

Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D mm |
|-----------|---------------|-----------|-----------|-----------|-----------|
| H-130-4S | M3 | 38.1 | 25.4 | 12.7 | 4.95 |
| H-130-8S | M4 | 38.1 | 25.4 | 12.7 | 6.32 |
| H-130-10S | M5 | 38.1 | 25.4 | 12.7 | 7.51 |
| H-130-4L | M3 | 76.2 | 63.5 | 12.7 | 4.95 |
| H-130-8L | M4 | 76.2 | 63.5 | 12.7 | 6.32 |
| H-130-10L | M5 | 76.2 | 63.5 | 12.7 | 7.51 |

Miscellaneous Tooling



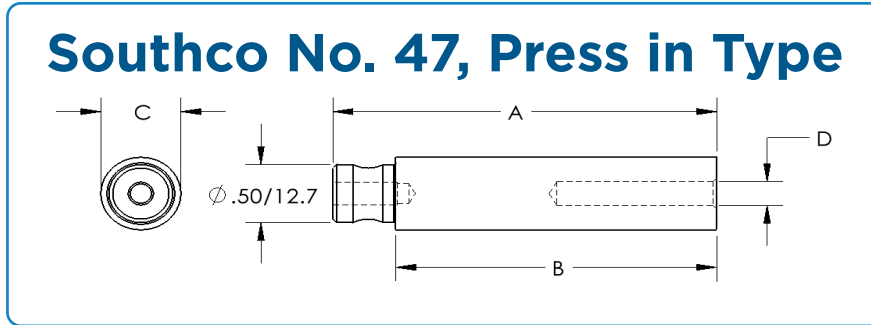
Inch

| Part # | Fastener Size | Dim. A in | Dim. B in | Dia. C in | Dia. D in |
|-----------|---------------|-----------|-----------|-----------|-----------|
| H-134-4S | 4-40 | 1.5 | 1.0 | .500 | .221 |
| H-134-6S | 6-32 | 1.5 | 1.0 | .500 | .251 |
| H-134-8S | 8-32 | 1.5 | 1.0 | .500 | .283 |
| H-134-10S | 10-32 | 1.5 | 1.0 | .500 | .297 |
| H-134-4L | 4-40 | 3.0 | 2.5 | .500 | .221 |
| H-134-6L | 6-32 | 3.0 | 2.5 | .500 | .251 |
| H-134-8L | 8-32 | 3.0 | 2.5 | .500 | .283 |
| H-134-10L | 10-32 | 3.0 | 2.5 | .500 | .297 |

Metric

| Part # | Fastener Size | Dim. A mm | Dim. B mm | Dia. C mm | Dia. D mm |
|-----------|---------------|-----------|-----------|-----------|-----------|
| H-134-4S | M3 | 38.1 | 25.4 | 12.7 | 5.61 |
| H-134-8S | M4 | 38.1 | 25.4 | 12.7 | 7.18 |
| H-134-10S | M5 | 38.1 | 25.4 | 12.7 | 7.54 |
| H-134-4L | M3 | 76.2 | 63.5 | 12.7 | 5.61 |
| H-134-8L | M4 | 76.2 | 63.5 | 12.7 | 7.18 |
| H-134-10L | M5 | 76.2 | 63.5 | 12.7 | 7.54 |

Panel Fasteners



Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm |
|-----------|---------------|-------------------|-------------------|-------------------|-------------------|
| H-115-6S | 6-32 | 1.5/38.1 | 1.0/25.4 | .50/12.7 | .146/3.70 |
| H-115-8S | 8-32 | 1.5/38.1 | 1.0/25.4 | .50/12.7 | .169/4.29 |
| H-115-10S | 10-32 | 1.5/38.1 | 1.0/25.4 | .63/15.9 | .205/5.20 |
| H-115-04S | 1/4-20 | 1.5/38.1 | 1.0/25.4 | .63/15.9 | .257/6.52 |
| H-115-6L | 6-32 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .146/3.70 |
| H-115-8L | 8-32 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .169/4.29 |
| H-115-10L | 10-32 | 3.0/76.2 | 2.5/63.5 | .63/15.9 | .205/5.20 |
| H-115-04L | 1/4-20 | 3.0/76.2 | 2.5/63.5 | .63/15.9 | .257/6.52 |

Panel Fasteners

PF11MF, PF12MF
Panel Fastener
Flare in Type

Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm |
|-----------|---------------|-------------------|-------------------|-------------------|-------------------|
| H-117-4S | 4-40 & M3 | 1.5/38.1 | 1.0/25.4 | .50/12.7 | .126/3.20 |
| H-117-6S | 6-32 | 1.5/38.1 | 1.0/25.4 | .50/12.7 | .146/3.70 |
| H-117-8S | 8-32 & M4 | 1.5/38.1 | 1.0/25.4 | .50/12.7 | .172/4.36 |
| H-117-10S | 10-32 & M5 | 1.5/38.1 | 1.0/25.4 | .50/12.7 | .197/5.00 |
| H-117-04S | 1/4-20 & M6 | 1.5/38.1 | 1.0/25.4 | .50/12.7 | .263/6.68 |
| H-117-4L | 4-40 & M3 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .126/3.20 |
| H-117-6L | 6-32 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .146/3.70 |
| H-117-8L | 8-32 & M4 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .172/4.36 |
| H-117-10L | 10-32 & M5 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .197/5.00 |
| H-117-04L | 1/4-20 & M6 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .263/6.68 |

PF11MW, PF12MW
Panel Fastener,
Floating Type, Flare

Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dim. C in / mm | Dia. D in / mm | Dia. E in / mm |
|-------------|----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| H-119-4L | 4-40 & M3 | 3.00/76.2 | 2.50/63.5 | .500/12.7 | .120/3.05 | .250/6.35 |
| H-119-6L | 6-32 | 3.00/76.2 | 2.50/63.5 | .500/12.7 | .140/3.56 | .300/7.62 |
| H-119-8/10L | 8-32, 10-32 & M4, M5 | 3.00/76.2 | 2.50/63.5 | .500/12.7 | .201/5.11 | .400/10.2 |
| H-119-04L | 1/4-20 & M6 | 3.00/76.2 | 2.50/63.5 | .500/12.7 | .252/6.40 | .500/12.7 |

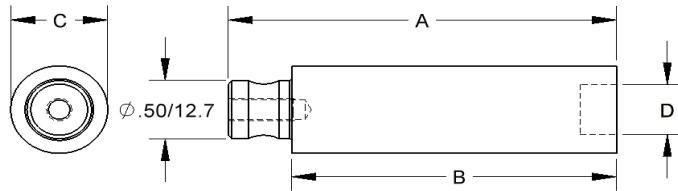
Notes:

These punches are used with H-116 anvils.

Panel Fasteners

PF11, PF12, PF15, PEM C.A.P.S.

**Panel Fastener
Capped**



Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm |
|-----------|---------------|-------------------|-------------------|-------------------|-------------------|
| H-116-4S | 4-40 & M3 | 1.5/38.1 | 1.0/25.4 | .75/19.1 | .430/10.92 |
| H-116-6S | 6-32 | 1.5/38.1 | 1.0/25.4 | .75/19.1 | .469/11.91 |
| H-116-8S | 8-32 & M4 | 1.5/38.1 | 1.0/25.4 | .75/19.1 | .527/13.38 |
| H-116-10S | 10-32 & M5 | 1.5/38.1 | 1.0/25.4 | .75/19.1 | .527/13.38 |
| H-116-04S | 1/4-20 & M6 | 1.5/38.1 | 1.0/25.4 | .75/19.1 | .592/15.03 |
| H-116-4L | 4-40 & M3 | 3.0/76.2 | 2.5/63.5 | .75/19.1 | .430/10.92 |
| H-116-6L | 6-32 | 3.0/76.2 | 2.5/63.5 | .75/19.1 | .469/11.91 |
| H-116-8L | 8-32 & M4 | 3.0/76.2 | 2.5/63.5 | .75/19.1 | .527/13.38 |
| H-116-10L | 10-32 & M5 | 3.0/76.2 | 2.5/63.5 | .75/19.1 | .527/13.38 |
| H-116-04L | 1/4-20 & M6 | 3.0/76.2 | 2.5/63.5 | .75/19.1 | .592/15.03 |

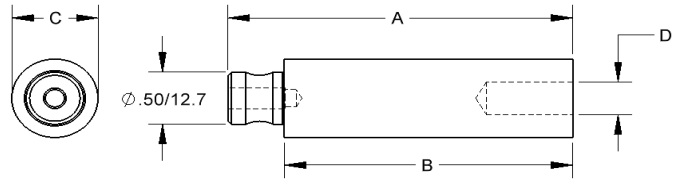
Notes:

May be used with H-115, H-117, H-119, H-132 punches

Panel Fasteners

PF11, PF12, PF15, PEM C.A.P.S.
PFS2, PFC2, PF30, PF31, PF32

Panel Fastener Punch



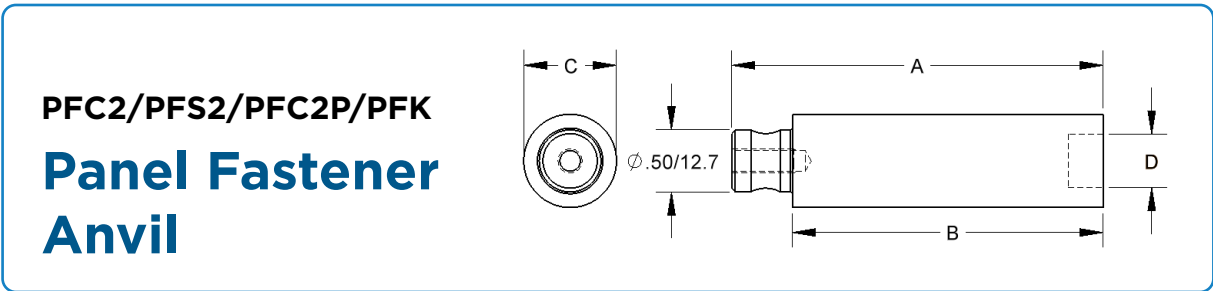
Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm |
|-----------|---------------|-------------------|-------------------|-------------------|-------------------|
| H-132-4S | 4-40 & M3 | 1.5/38.1 | 1.0/ 25.4 | .625/ 15.88 | .170/4.31 |
| H-132-6S | 6-32 | 1.5 | 1.0 | .625 | .187 |
| H-132-8S | 8-32 & M4 | 1.5/38.1 | 1.0/ 25.4 | .687/ 17.45 | .217/5.51 |
| H-132-10S | 10-32 & M5 | 1.5/38.1 | 1.0/ 25.4 | .687/ 17.45 | .249/6.32 |
| H-132-04S | 1/4-20 & M6 | 1.5/38.1 | 1.0/ 25.4 | .750/ 19.04 | .317/8.05 |
| H-132-4L | 4-40 & M3 | 3.0/76.2 | 2.5/63.5 | .625/15.88 | .170/4.31 |
| H-132-6L | 6-32 | 3.0 | 2.5 | .625 | .187 |
| H-132-8L | 8-32 & M4 | 3.0/76.2 | 2.5/63.5 | .687/15.88 | .217/5.51 |
| H-132-10L | 10-32 & M5 | 3.0/76.2 | 2.5/63.5 | .687/15.88 | .249/6.32 |
| H-132-04L | 1/4-20 & M6 | 3.0/76.2 | 2.5/63.5 | .750/15.88 | .317/8.05 |

Notes:

This tooling may be used with H-116, H-144, H-146 anvils.

Panel Fasteners



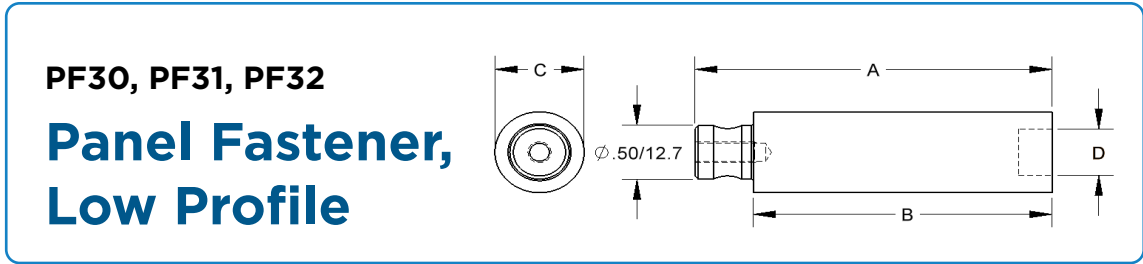
Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm |
|-----------|---------------|-------------------|-------------------|-------------------|-------------------|
| H-144-4S | 4-40 & M3 | 1.5/38.1 | 1.0/25.4 | .750/19.04 | .32/8.12 |
| H-144-6S | 6-32 | 1.5 | 1.0 | .750 | .35 |
| H-144-8S | 8-32 & M4 | 1.5/38.1 | 1.0/25.4 | .750/19.04 | .39/9.90 |
| H-144-10S | 10-32 & M5 | 1.5/38.1 | 1.0/25.4 | .750/19.04 | .42/10.66 |
| H-144-04S | 1/4-20 & M6 | 1.5/38.1 | 1.0/25.4 | .750/19.04 | .48/12.19 |
| H-144-4L | 4-40 & M3 | 3.0/76.2 | 2.5/63.5 | .750/19.04 | .32/8.12 |
| H-144-6L | 6-32 | 3.0 | 2.5 | .750 | .35 |
| H-144-8L | 8-32 & M4 | 3.0/76.2 | 2.5/63.5 | .750/19.04 | .39/9.90 |
| H-144-10L | 10-32 & M5 | 3.0/76.2 | 2.5/63.5 | .750/19.04 | .42/10.66 |
| H-144-04L | 1/4-20 & M6 | 3.0/76.2 | 2.5/63.5 | .750/19.04 | .48/12.19 |

Notes:

This tooling may be used with H-132 punches.

Panel Fasteners



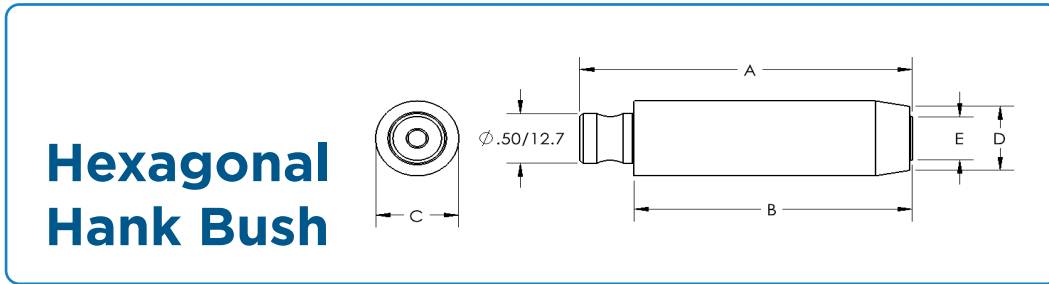
Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm |
|-----------|---------------|-------------------|-------------------|-------------------|-------------------|
| H-146-4S | 4-40 & M3 | 3.00/76.2 | 2.50/63.5 | .750/19.1 | .421/10.7 |
| H-146-6S | 6-32 | 3.00/76.2 | 2.50/63.5 | .750/19.1 | .453/11.5 |
| H-146-8S | 8-32 & M4 | 3.00/76.2 | 2.50/63.5 | .750/19.1 | .484/12.3 |
| H-146-10S | 10-32 & M5 | 3.00/76.2 | 2.50/63.5 | .750/19.1 | .546/13.9 |
| H-146-04S | 1/4-20 & M6 | 3.00/76.2 | 2.50/63.5 | 1.00/25.4 | .640/16.3 |
| H-146-4L | 4-40 & M3 | 1.50/38.1 | 1.00/25.4 | .750/19.1 | .421/10.7 |
| H-146-6L | 6-32 | 1.50/38.1 | 1.00/25.4 | .750/19.1 | .453/11.5 |
| H-146-8L | 8-32 & M4 | 1.50/38.1 | 1.00/25.4 | .750/19.1 | .484/12.3 |
| H-146-10L | 10-32 & M5 | 1.50/38.1 | 1.00/25.4 | .750/19.1 | .546/13.9 |
| H-146-04L | 1/4-20 & M6 | 1.50/38.1 | 1.00/25.4 | 1.00/25.4 | .640/16.3 |

Notes:

This tooling is used with H-132 punches.

Hank Rivet Bush Tooling



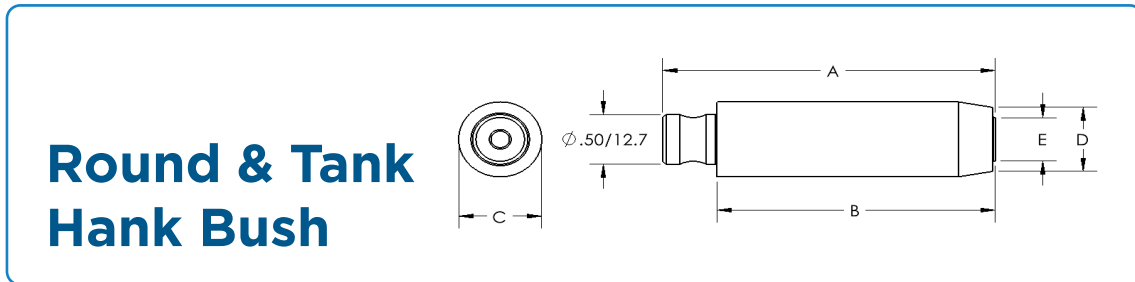
**Hexagonal
Hank Bush**

Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm | Dia. E in / mm |
|----------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 10-00696 | M2.5/M3 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .356/9.0 | .195/5.0 |
| 10-00697 | M3.5/M4 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .356/9.0 | .240/6.1 |
| 10-00698 | M5 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .427/10.8 | .283/7.2 |
| 10-00699 | M6 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .50/12.7 | .340/8.6 |
| 10-00700 | M8 | 3.0/76.2 | 2.5/63.5 | .75/19.0 | .640/16.3 | .461/11.7 |

Notes:

The Pin Style Nut Tooling is recommended for use with these tools.



**Round & Tank
Hank Bush**

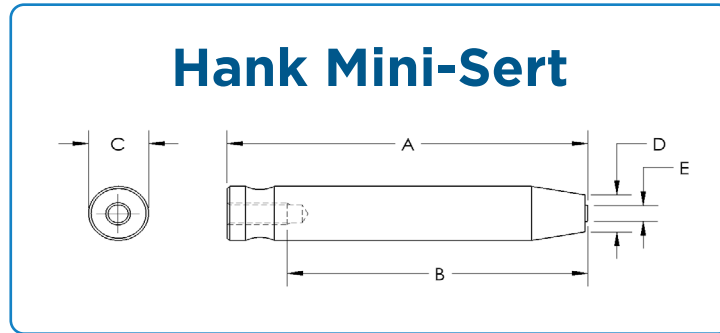
Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm | Dia. E in / mm |
|----------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 10-00691 | M2.5/M3 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .311/7.9 | .173/4.4 |
| 10-00692 | M3.5/M4 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .375/9.5 | .216/5.5 |
| 10-00693 | M5 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .437/11.1 | .262/6.7 |
| 10-00694 | M6 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .500/12.7 | .324/8.2 |
| 10-00695 | M8 | 3.0/76.2 | 2.5/63.5 | 0.750/19.04 | 0.641/16.3 | .435/11.0 |

Notes:

The Pin Style Nut Tooling is recommended for use with these tools.

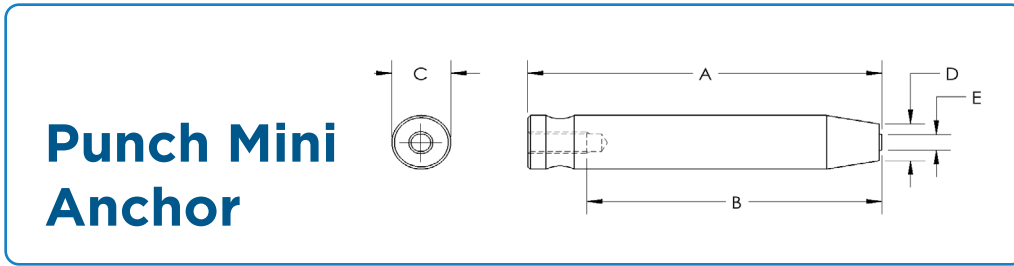
Hank Rivet Bush Tooling



Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm | Dia. E in / mm |
|----------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 10-00701 | M2.5/M3 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .217/5.5 | .145/3.68 |
| 10-00702 | M3.5/M4 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .276/7.0 | .193/4.90 |
| 10-00703 | M5 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .335/8.5 | .231/5.87 |
| 10-00704 | M6 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .394/10.0 | .297/7.09 |
| 10-00705 | M8 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .472/12.0 | .350/8.89 |

Kerbkonus Tooling



Punch Mini Anchor

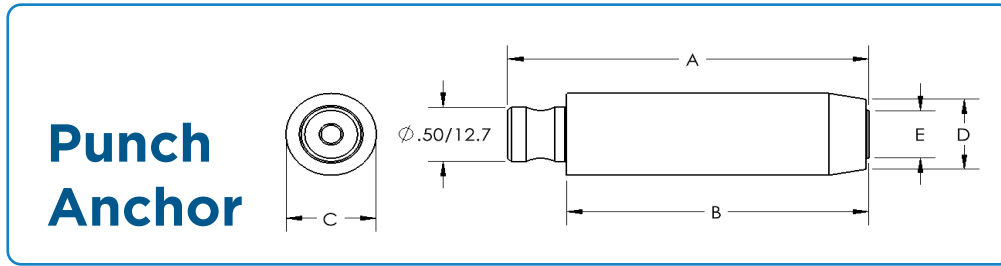
Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm | Dia. E in / mm |
|----------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 10-00685 | M2 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .189/4.8 | 0.094 |
| 10-00686 | M2.5/M3 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .216/5.5 | 0.122 |
| 10-00687 | M3.5/M4 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .279/7.5 | 0.169 |
| 10-00688 | M5 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .342/8.7 | 0.209 |
| 10-00689 | M6 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .310/7.9 | 0.257 |
| 10-00690 | M8 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .500/12.7 | 0.335 |

Notes:

The Pin Style Nut Tooling is recommended for use with these tools.

Kerbkonus Tooling



Inch / Metric

| Part # | Fastener Size | Dim. A in / mm | Dim. B in / mm | Dia. C in / mm | Dia. D in / mm | Dia. E in / mm |
|----------|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 10-00679 | M2/M2.5/M3 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .297/7.5 | 0.164 |
| 10-00681 | M3.5/M4 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .342/8.7 | 0.202 |
| 10-00682 | M5 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .405/10.3 | 0.261 |
| 10-00683 | M6 | 3.0/76.2 | 2.5/63.5 | .50/12.7 | .468/11.9 | 0.306 |
| 10-00684 | M8 | 3.0/76.2 | 2.5/63.5 | .61/15.5 | .610/15.5 | 0.427 |

Notes:

The Pin Style Nut Tooling is recommended for use with these tools.

Standard Manual Tooling Package

STP
(35 Pieces)

| Part # | Description |
|----------------|---------------------------------------|
| H-170-1 | Square Tip Tool Holder |
| H-167-1 | J-Frame Attachment |
| H-100-0 | Flat Anvil |
| 10-00650 | 2-56 J-Frame Pin Style Tool |
| 10-00651 | 4-40 J-Frame Pin Style Tool |
| 10-00652 | 6-32 J-Frame Pin Style Tool |
| 10-00653 | 8-32 J-Frame Pin Style Nut Tool |
| 10-00654 | 10-32 J-Frame Pin Style Nut Tool |
| 10-00655 | 04-32 J-Frame Pin Style Nut Tool |
| H-102-2 | 2-56 J-Frame Stud Tool |
| H-102-4 | 4-40 J-Frame Stud Tool |
| H-102-6 | 6-32 J-Frame Stud Tool |
| H-102-8 | 8-32 J-Frame Stud Tool |
| H-102-10 | 10-32 J-Frame Stud Tool |
| H-108-0019S | 1/2" Flat Anvil, 1-1/2" long |
| H-108-0019L | 1/2" Flat Anvil, 3" long |
| H-108-0020S | 1" Flat Anvil, 1-1/2" long |
| H-108-0020L | 1" Flat Anvil, 3" long |
| 10-00278 | 2-56 Pin Style Nut Tool, 3" long |
| 10-00279 | 4-40 Pin Style Nut Tool, 3" long |
| 10-00280 | 6-32 Pin Style Nut Tool, 3" long |
| 10-00281 | 8-32 Pin Style Nut Tool, 3" long |
| 10-00282 | 10-32 Pin Style Nut Tool, 3" long |
| 10-00283 | 4-20 Pin Style Nut Tool, 3" long |
| 10-00284 | 5/16-18 Pin Style Nut Tool, 3" long |
| H-103-2L | 2-56 Stud Tool, 3" long |
| H-103-4L | 4-40 Stud Tool, 3" long |
| H-103-6L | 6-32 Stud Tool, 3" long |
| H-103-8L | 8-32 Stud Tool, 3" long |
| H-103-10L | 10-32 Stud Tool, 3" long |
| H-103-04L | 04-20 Stud Tool, 3" long |
| H-103-05L | 5/16-18 Stud Tool, 3" long |
| H-109-4/M3L | 4-40 Standoff Tool, 3" long |
| H-109-6/M3.5L | 6-32 Standoff Tool, 3" long |
| H-109-8-10/M5L | 8-32 and 10-32 Standoff Tool, 3" long |

Notes:

This package is available with pocket style nut tools as **STP-PS**

Standard Manual Tooling Package

MSTP
(33 Pieces)

| Part # | Description |
|----------------|------------------------------------|
| H-170-1 | Square Tip Tool Holder |
| H-167-1 | J-Frame Attachment |
| H-100-0 | Flat Anvil |
| 10-00656 | M2.5 J-Frame Pin Style Tool |
| 10-00657 | M3 J-Frame Pin Style Tool |
| 10-00658 | M3.5 J-Frame Pin Style Tool |
| 10-00659 | M4 J-Frame Pin Style Nut Tool |
| 10-00660 | M5 J-Frame Pin Style Nut Tool |
| 10-00661 | M6 J-Frame Pin Style Nut Tool |
| H-102-M3 | M3 J-Frame Stud Tool |
| H-102-M3.5 | M3.5 J-Frame Stud Tool |
| H-102-M4 | M4 J-Frame Stud Tool |
| H-102-M5 | M5 J-Frame Stud Tool |
| H-108-0019S | 12.7mm Flat Anvil, 38mm long |
| H-108-0019L | 12.7mm Flat Anvil, 76mm long |
| H-108-0020S | 25.4mm Flat Anvil, 38mm long |
| H-108-0020L | 25.4mm Flat Anvil, 76mm long |
| 10-00292 | M2.5 Pin Style Nut Tool, 76mm long |
| 10-00293 | M3 Pin Style Nut Tool, 76mm long |
| 10-00294 | M3.5 Pin Style Nut Tool, 76mm long |
| 10-00295 | M4 Pin Style Nut Tool, 76mm long |
| 10-00296 | M5 Pin Style Nut Tool, 76mm long |
| 10-00297 | M6 Pin Style Nut Tool, 76mm long |
| 10-00298 | M8 Pin Style Nut Tool, 76mm long |
| H-103-M3L | M3 Stud Tool, 76mm long |
| H-103-M3.5L | M3.5 Stud Tool, 76mm long |
| H-103-M4L | M4 Stud Tool, 76mm long |
| H-103-M5L | M5 Stud Tool, 76mm long |
| H-103-M6L | M6 Stud Tool, 76mm long |
| H-103-M8L | M8 Stud Tool, 76mm long |
| H-109-4/M3L | M3 Standoff Tool, 76mm long |
| H-109-6/M3.5L | M3.5 Standoff Tool, 76mm long |
| H-109-8-10/M5L | M4/M5 Standoff Tool, 76mm long |

Notes:

This package is available with pocket style nut tools as **MSTP-PS**

Standard Manual Tooling Package

STP-516
(16 Pieces)

| Part # | Description |
|----------------|---------------------------------------|
| H-108-0019S | 1/2" Flat Anvil, 1-1/2" Long |
| H-108-0019L | 1/2" Flat Anvil, 3" Long |
| H-108-0020S | 1" Flat Anvil, 1-1/2" Long |
| H-108-0020L | 1" Flat Anvil, 3" Long |
| 10-00279 | 4-40 Pin Style Nut Tool, 3" Long |
| 10-00280 | 6-32 Pin Style Nut Tool, 3" Long |
| 10-00281 | 8-32 Pin Style Nut Tool, 3" Long |
| 10-00282 | 10-32 Pin Style Nut Tool, 3" Long |
| 10-00283 | 04-20 Pin Style Nut Tool, 3" Long |
| H-103-4L | 4-40 Stud Tool, 3" Long |
| H-103-6L | 6-32 Stud Tool, 3" Long |
| H-103-8L | 8-32 Stud Tool, 3" Long |
| H-103-10L | 10-32 Stud Tool, 3" Long |
| H-109-4/M3L | 4-40 Standoff Tool, 3" Long |
| H-109-6/M3.5L | 6-32 Standoff Tool, 3" Long |
| H-109-8-10/M5L | 8-32 and 10-32 Standoff Tool, 3" Long |

STP-J-516
(11 Pieces)

| Part # | Description |
|----------|----------------------------------|
| H-167-1 | J-Frame Attachment |
| H-100-0 | Flat Anvil |
| 10-00651 | 4-40 J-Frame Pin Style Nut Tool |
| 10-00652 | 6-32 J-Frame Pin Style Nut Tool |
| 10-00653 | 8-32 J-Frame Pin Style Nut Tool |
| 10-00654 | 10-32 J-Frame Pin Style Nut Tool |
| 10-00655 | 04-20 J-Frame Pin Style Nut Tool |
| H-102-4 | 4-40 J Frame Stud Tool |
| H-102-6 | 6-32 J Frame Stud Tool |
| H-102-8 | 8-32 J Frame Stud Tool |
| H-102-10 | 10-32 J Frame Stud Tool |

Standard Manual Tooling Package

MSTP-516
(16 Pieces)

| Part # | Description |
|----------------|------------------------------------|
| H-108-0019S | 12.7mm Flat Anvil, 38mm Long |
| H-108-0019L | 12.7mm Flat Anvil, 76mm Long |
| H-108-0020S | 25.4mm Flat Anvil, 38 Long |
| H-108-0020L | 25.4mm Flat Anvil, 76mm Long |
| 10-00293 | M3 Pin Style Nut Tool, 76mm Long |
| 10-00294 | M3.5 Pin Style Nut Tool, 76mm Long |
| 10-00295 | M4 Pin Style Nut Tool, 76mm Long |
| 10-00296 | M5 Pin Style Nut Tool, 76mm Long |
| 10-00297 | M6 Pin Style Nut Tool, 76mm Long |
| H-103-M3L | M3 Stud Tool, 76mm Long |
| H-103-M3.5L | M3.5 Stud Tool, 76mm Long |
| H-103-M4L | M4 Stud Tool, 76mm Long |
| H-103-M5L | M5 Stud Tool, 76mm Long |
| H-109-4/M3L | M3 Standoff Tool, 76mm Long |
| H-109-6/M3.5L | M3.5 Standoff Tool, 76mm Long |
| H-109-8-10/M5L | M4/M5 Standoff Tool, 76mm Long |

MSTP-J-516
(11 Pieces)

| Part # | Description |
|------------|---------------------------------|
| H-167-1 | J-Frame Attachment |
| H-100-0 | Flat Anvil |
| 10-00657 | M3 J-Frame Pin Style Nut Tool |
| 10-00658 | M3.5 J-Frame Pin Style Nut Tool |
| 10-00659 | M4 J-Frame Pin Style Nut Tool |
| 10-00660 | M5 J-Frame Pin Style Nut Tool |
| 10-00661 | M6 J-Frame Pin Style Nut Tool |
| H-102-M3 | M3 J Frame Stud Tool |
| H-102-M3.5 | M3.5 J Frame Stud Tool |
| H-102-M4 | M4 J Frame Stud Tool |
| H-102-M5 | M5 J Frame Stud Tool |

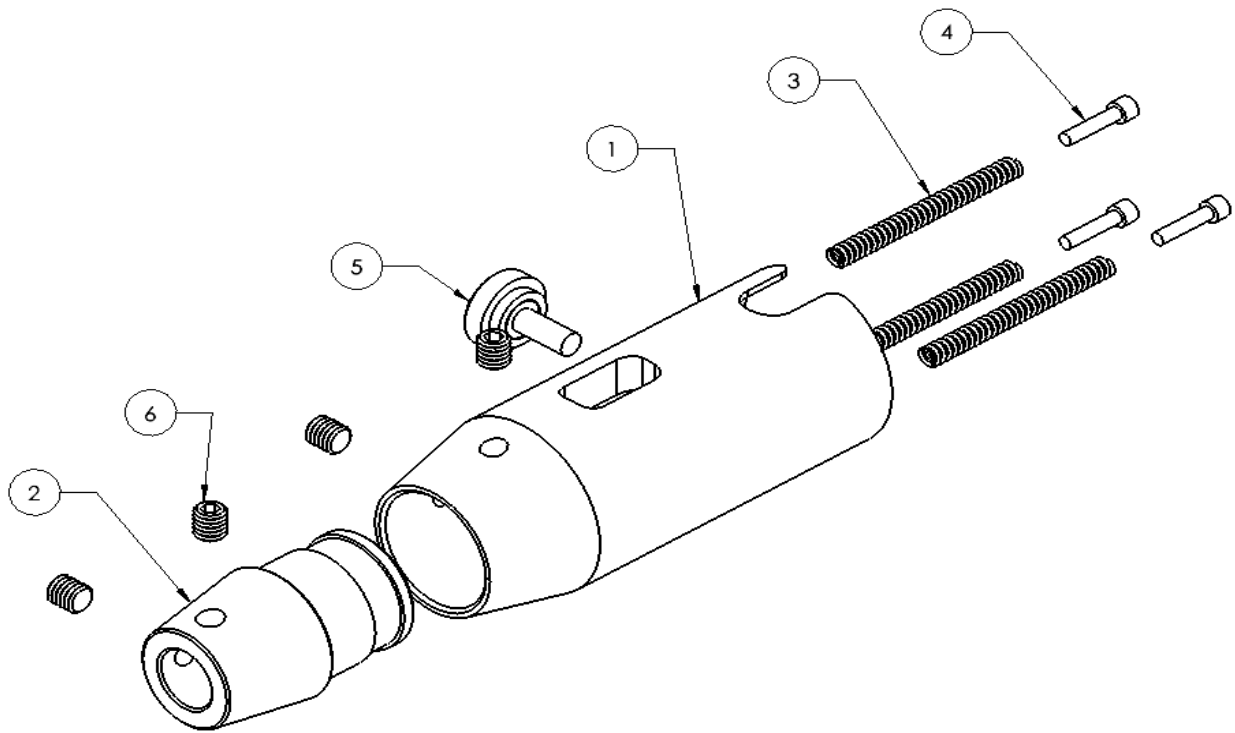
Tool Holders

Standard Upper Tool Holder 15-40036

| Item | Part # | Description | Qty. |
|------|----------|------------------------|------|
| 1 | 15-03439 | Upper Tool Holder Body | 1 |
| 2 | 11-00236 | Standard Tool Adapter | 1 |
| 3 | 15-03206 | Continuity Spring | 3 |
| 4 | 11-00016 | Continuity Guide Pin | 3 |
| 5 | 11-00239 | Thumb Screw, M5 | 1 |
| 6 | 11-00242 | SHSS M6 X 6 | 4 |

Notes:

This tool holder is compatible with all 824 machines except 824OneTouch machines.



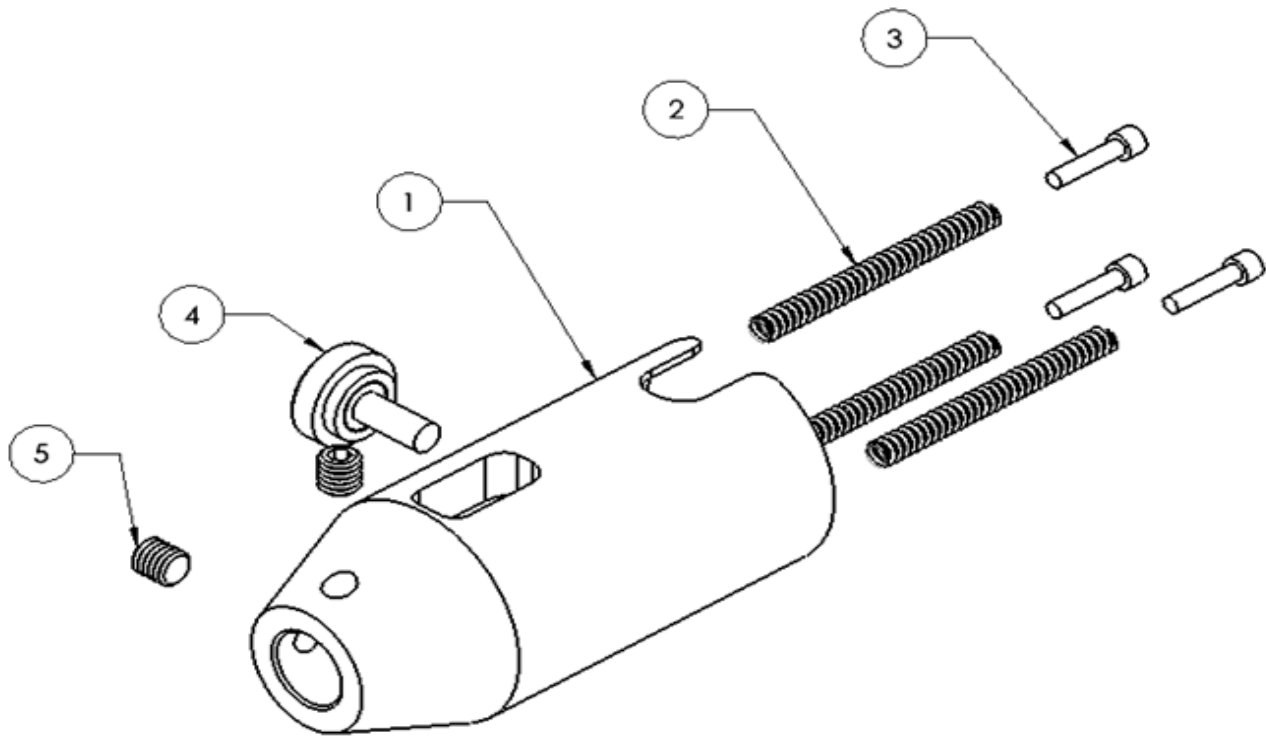
Tool Holders

Standard Upper Tool Holder 15-40185

| Item | Part # | Description | Qty. |
|------|----------|------------------------|------|
| 1 | 15-03664 | Upper Tool Holder Body | 1 |
| 2 | 15-03206 | Continuity Spring | 3 |
| 3 | 11-00016 | Continuity Guide Pin | 3 |
| 4 | 11-00239 | Thumb Screw, M5 | 1 |
| 5 | 11-00242 | SHSS M6 X 6 | 2 |

Notes:

This tool holder is compatible with 618 machines.



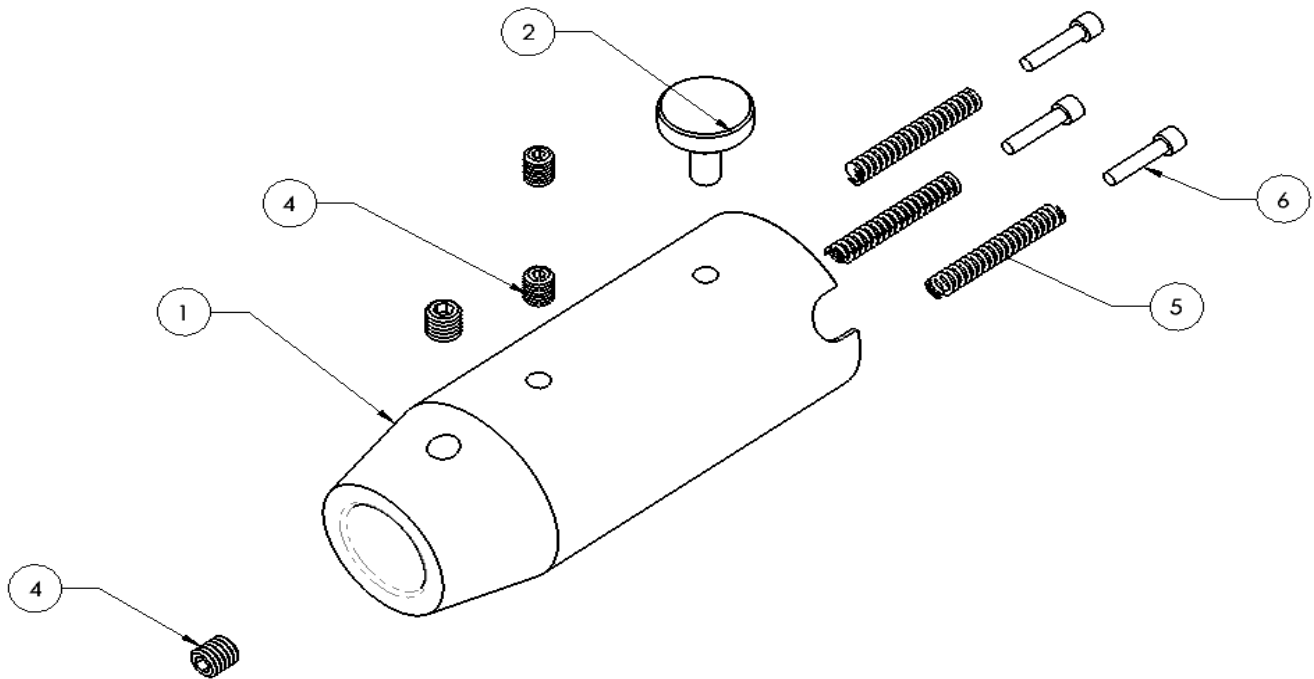
Tool Holders

H-3501-5 BTM Upper Tool Holder

| Item | Part # | Description | Qty. |
|------|----------|------------------------|------|
| 1 | H-149-1 | Upper Tool Holder Body | 1 |
| 2 | 11-00239 | Thumb Screw, M5 | 1 |
| 3 | 11-00238 | SHSS, M5 X 6 | 2 |
| 4 | 11-00242 | SHSS, M6 X 6 | 2 |
| 5 | 11-00114 | Continuity Spring | 3 |
| 6 | 11-00016 | Continuity Guide Pin | 3 |

Notes:

This Upper Tool Holder is compatible only with older generation machines manufactured before 2012.



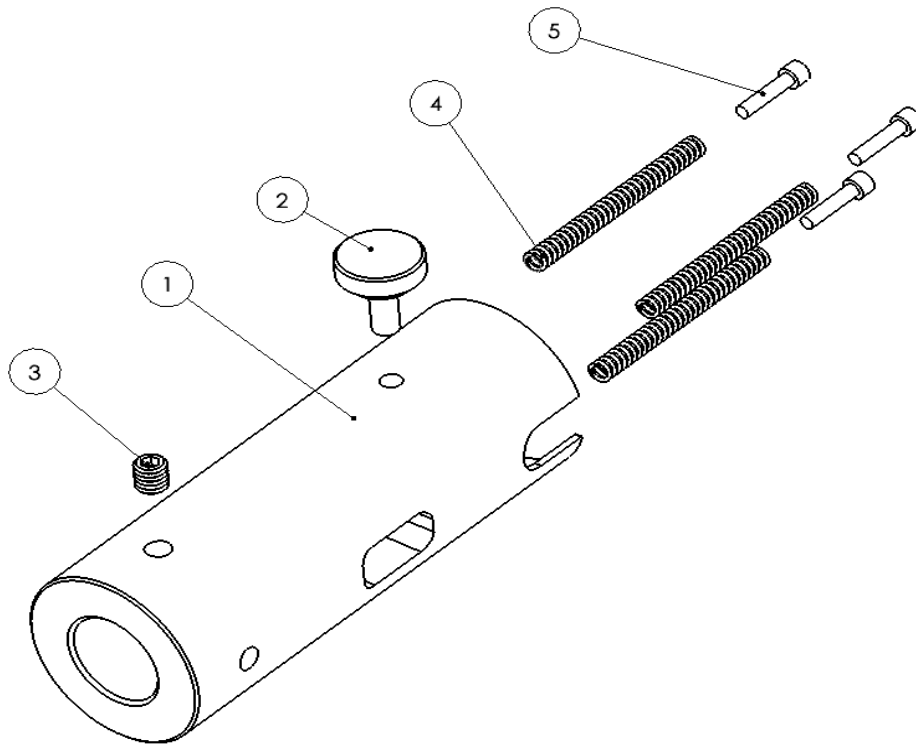
Tool Holders

15-40044 BTM Upper Tool Holder

| Item | Part # | Description | Qty. |
|------|----------|------------------------|------|
| 1 | 15-03500 | Upper Tool Holder Body | 1 |
| 2 | 11-00239 | Thumb Screw, M5 | 1 |
| 3 | 11-00242 | SHSS, M6 X 6 | 1 |
| 4 | 15-03206 | Continuity Spring | 3 |
| 5 | 11-00016 | Continuity Guide Pin | 3 |

Notes:

This tool holder compatible with machines manufactured in 2012 and later.



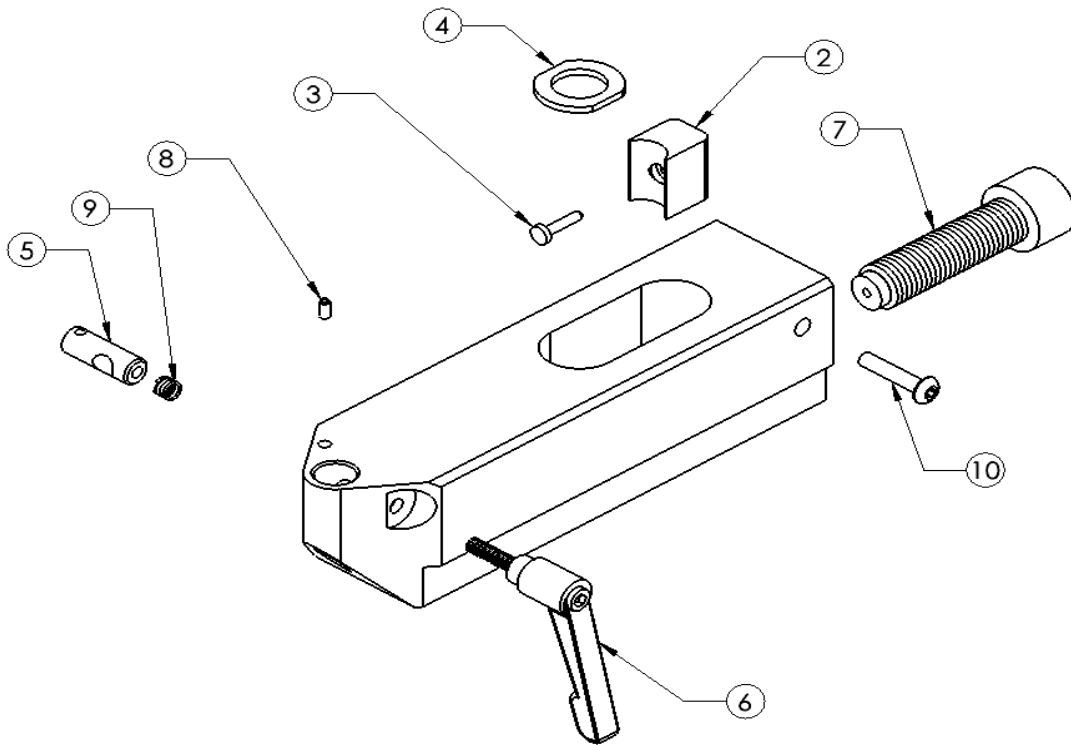
Tool Holders

H-166-8 Quick Change Lower Tool Holder

| Item | Part # | Description | Qty. |
|------|----------|----------------------------|------|
| 1 | H-166-9 | Lower Tool Holder Body | 1 |
| 2 | H-169-4 | Shoe | 1 |
| 3 | H-169-5 | Pin | 1 |
| 4 | H-169-6 | Lower tool Washer | 1 |
| 5 | 11-00041 | Locking Cylinder | 1 |
| 6 | 11-00042 | Locking Lever | 1 |
| 7 | 11-00191 | SHCS M16 X 2 Modified | 1 |
| 8 | 11-00199 | Spring Roll Pin, 1/8 X 1/4 | 1 |
| 9 | 11-00212 | Lock Cylinder Spring | 1 |
| 10 | H-3731 | BHCS M5 x 25 | 1 |

Notes:

This tool holder may be used on all machines except 824OneTouch machines.



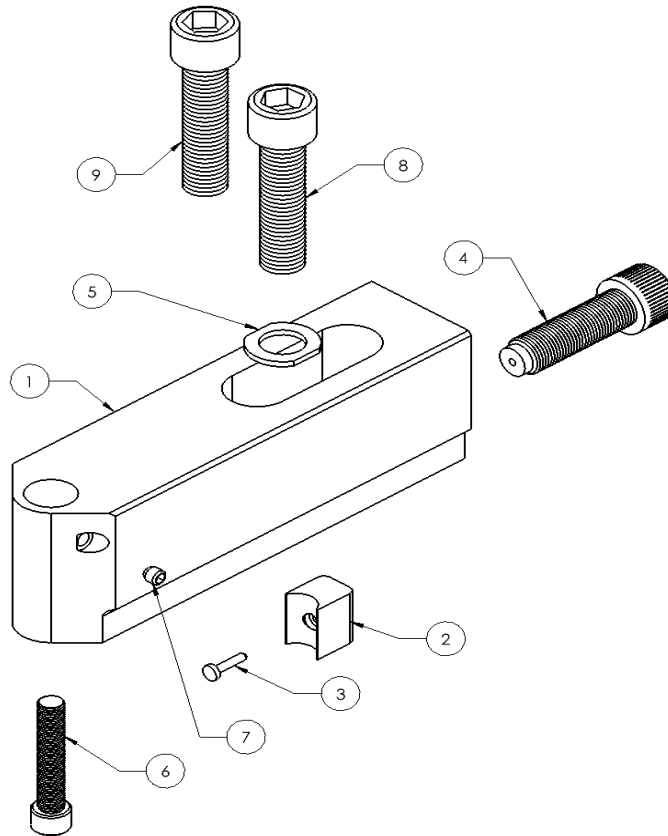
Tool Holders

H-147-2 BTM Lower Tool holder

| Item | Part # | Description | Qty. |
|------|----------|------------------------|------|
| 1 | H-147-1 | Lower Tool Holder Body | 1 |
| 2 | H-169-4 | Shoe | 1 |
| 3 | H-169-5 | Pin | 1 |
| 4 | 11-00191 | M16 SHCS Modified | 1 |
| 5 | H-169-6 | Lower Tool Washer | 1 |
| 6 | H-3859 | 3/8-24 X 2 SHCS | 1 |
| 7 | H-3773 | 1/4-28 X 1/4 SHSS | 1 |
| 8 | H-3890 | 5/8-18 X 2-3/4 SHCS | 1 |
| 9 | 11-00190 | M16 X 2.0 X 65 SHCS | 1 |

Notes:

This tool holder may be used on all machines except 824OneTouch machines.



Tool Holders

H-170-1 Square Tip Lower Tool Holder

| Item | Part # | Description | Qty. |
|------|----------|-------------------------------|------|
| 1 | H-170 | Sq. Nose Lwr Tool Holder Assy | 1 |
| 2 | 11-00191 | M16 SHCS Modified | 1 |
| 3 | H-169-4 | Shoe | 1 |
| 4 | H-169-5 | Pin | 1 |
| 5 | H-3625 | 8-32 X 1/8 SHSS | 1 |
| 6 | H-3761 | 10-32 5/8 BHCS | 1 |
| 7 | H-169-6 | Lower Tool Washer | 1 |

Notes:

1. This tool holder may be used on all machines except 824OneTouch machines.
2. The J-Frame Stud Tooling (H-102), Pocket Style Nut Tooling (H-100) and the Pin Style Nut Tooling (10-006xxx) may be used in this tool holder.

