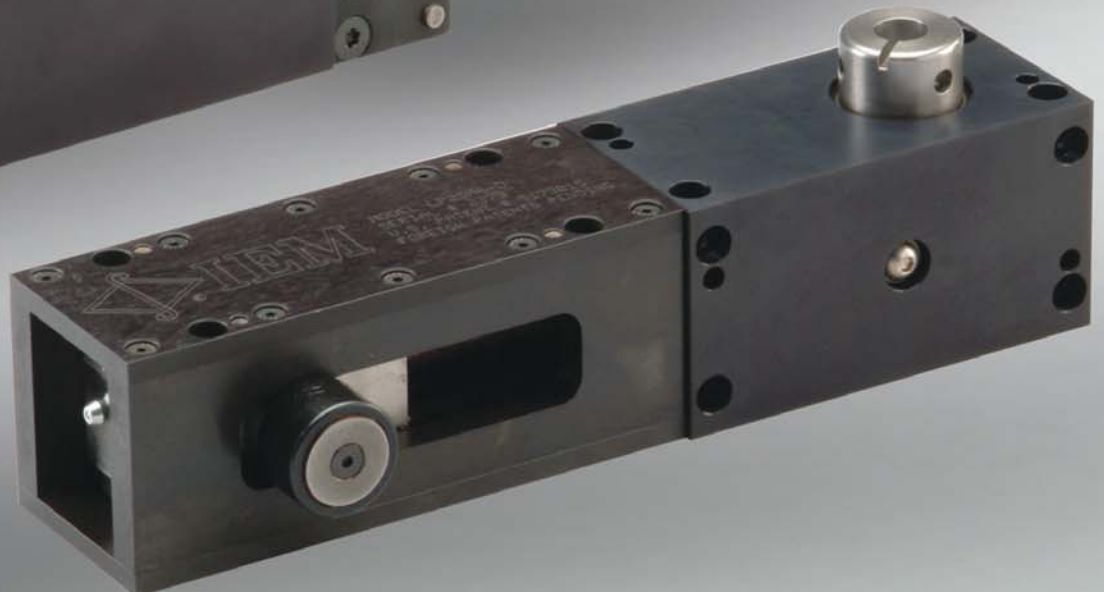




TRUSTED SOLUTIONS AND INNOVATION

Professional IDT™ In-Die Tapping Catalog

- ◆ For mechanical & hydraulic presses
- ◆ Inch & metric taps





www.danly.com

Professional IDT™ In-Die Tapping

Service We Deliver and Quality You Can Depend On

DANLY IEM is a leading manufacturer of die sets and die component products supplied globally to the parts forming industry. Backed by years of tool and die experience, quality and innovation are some of the reasons why our name is respected throughout the world. We have taken the lead role in creating and bringing new products to customers and helping them find solutions that improve their operations. Based on the capabilities **DANLY IEM** offers, we can help you to meet the demands of quick deliveries, technical support, quality products and competitive prices. **DANLY IEM** and its' broad distribution channels and direct sales personnel will assist you in any way to make your product a better and more profitable one.

Whether you purchase on-line or in person, you will receive the same reliable service **DANLY IEM** is known for. We understand the demanding schedules of die builders and production personnel and have developed efficient manufacturing processes to shorten product lead times as well as put inventory on our shelves so you can have it in your facility when you need it. Put the **DANLY IEM** network to work for you. We've got the service you've been looking for.

Included in our full line offering are both inch and metric size die sets and die components that are designed to numerous die standards including ISO, NAAMS, JIS and many large automotive and appliance manufacturers' standards. The complete product offering includes:

- Ball bearing and friction style die sets including custom and catalog sets
- Machined plate
- Guide posts & bushings
- ISO and JIS Die springs
- In-die tapping units for both mechanical and hydraulic presses
- Formathane™ Urethane springs, strippers, sheets, bars, rods and die cover film
- Diemakers' supplies such as pry bars, dowel pins, hoist rings, clamps and fasteners
- Standard and self-lubricating wear product including wear plate, wear strips, gibs, keeper plates and guide blocks
- Cam units, including Milfab®, Mini™, Aerial and Die Mount styles
- Accubend™ Rotary Benders
- Standard and Ball lock punches and retainers
- Coil Safe
- Air presses
- Pad retainers
- Nitrogen gas springs



Our facility has been Registered by Underwriters Laboratories, Inc. to the International Organization for Standardization ISO 9001 Series Standards for Quality.
Registered by UL to ISO 9001.

Professional IDT™ In-Die Tapping

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In-Die Tapping Provides the Following Advantages and Benefits:

- ◆ Off-the-shelf ordering
- ◆ Eliminates secondary or off-line tapping operations; form and tap in the same operation
- ◆ Cam-operated ME tapping units designed to optimize performance in most mechanical presses
- ◆ Compact, low profile LP tapping units with no limitations on tapping angle; tap upwards, downwards or at any angle in between
- ◆ Provides misfeed protection against a no-hole condition
- ◆ Cold formed tapping results in high-strength threads without chip formation
- ◆ Easy to move from one die set to another

*United States Patent #5,173,015; other patents applied for.
Made in the U.S.A.*

HY1024 Series

for Hydraulic Presses



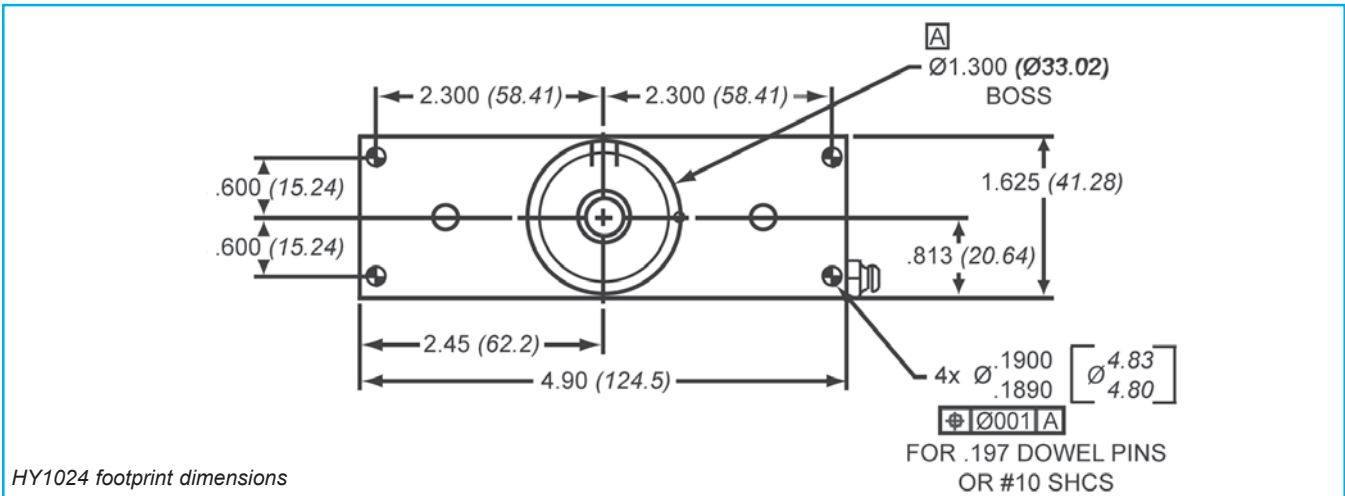
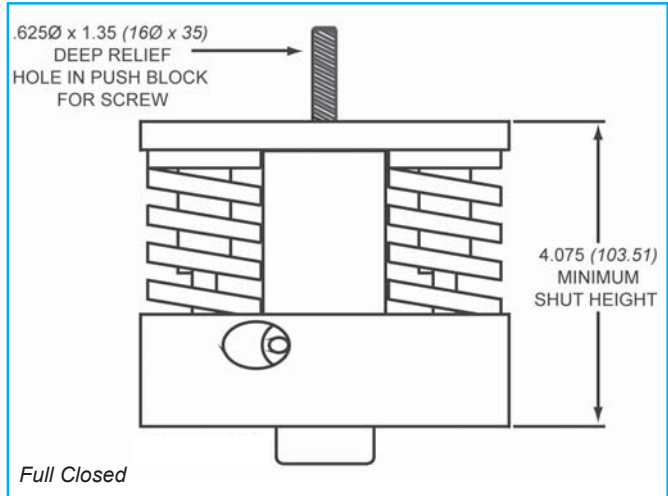
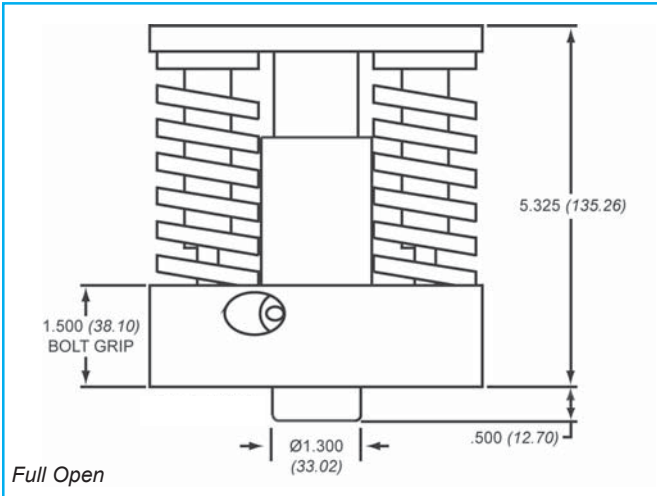
Product Features

The HY unit is the smallest and most compact of our In-Die Tapping tools. The HY1024 is an economical solution for tapping downward in a hydraulic press. Since the HY1024 is not cam actuated, the press controls the acceleration and tap speed. The HY1024 will tap sizes #0–#12 or up to M5. It typically runs at production rates between 60–100 strokes per minute (SPM) up to a maximum 200 SPM, depending on strip material, thickness, tap size and tap pitch.

By utilizing multiple tools in place of one special tapping tool, you can control flexibility in the stamping operation and greatly reduce downtime due to unscheduled maintenance.

NOTES:

- ◆ The HY1024 tapping tool cannot be used in a mechanical press. See the ME1024 or the LP25M6 for applications requiring use in a mechanical press.



- Notes: ◆ Tapping depth/maximum material thickness can be found on Page 8.
 ◆ Metric dimensions are in italics.

ME1024 Series

for Mechanical and Hydraulic Presses

Product Features

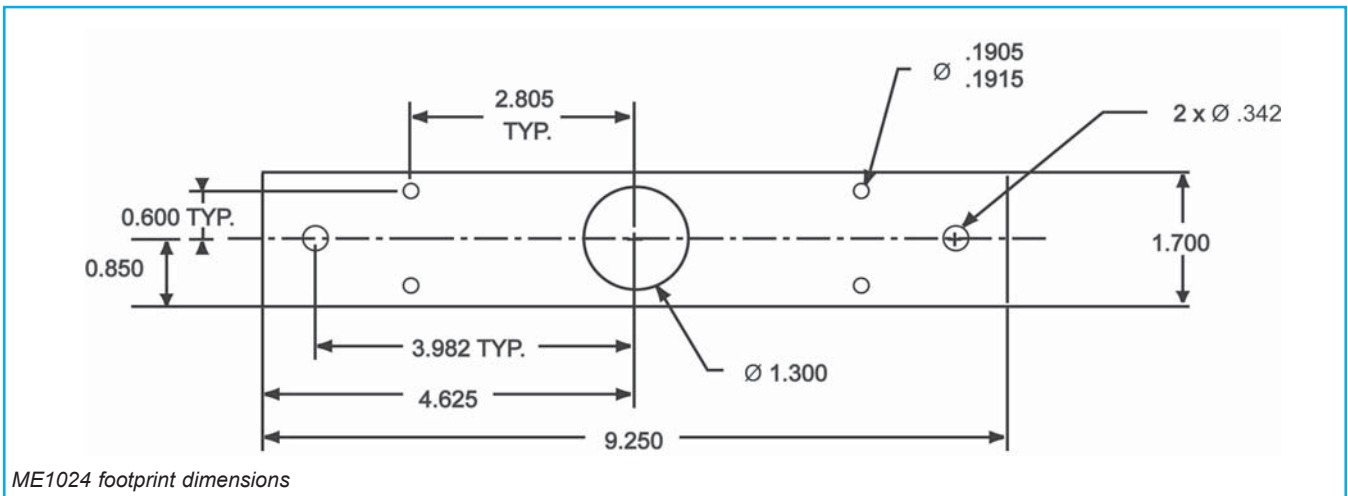
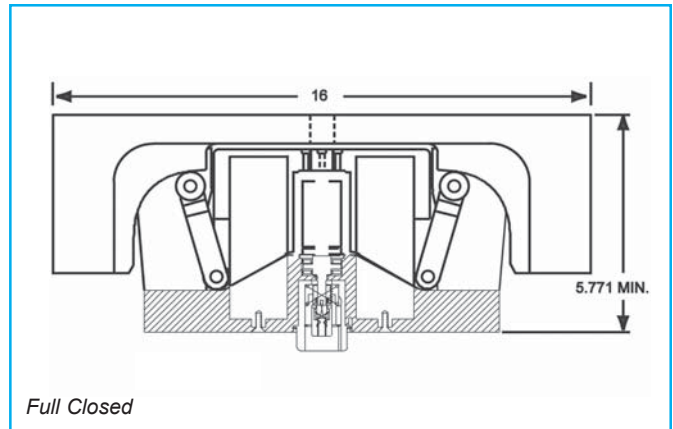
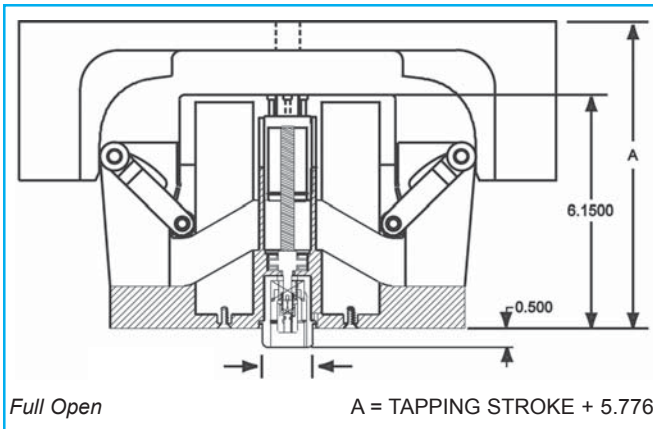
The ME1024 is a simple and compact In-Die Tapping tool for tapping downward in a mechanical or hydraulic press. The ME1024 utilizes a cam driver to control tool acceleration. The ME will tap sizes #0–#12 or up to M5 and typically runs at production rates between 60–100 strokes per minute (SPM) up to a maximum 200 SPM depending on strip material, thickness, tap size and tap pitch.

The cam driver is designed as a separate functional piece to maximize die design flexibility and transfer the inherent sinusoidal motion of the press into a rotary motion for tapping. The cam driver mounts easily on a punch plate or upper die shoe above the tapping tool. The cam driver is application specific and can be manufactured by using the free “Rapid TAP” CAD design software.

By utilizing multiple tools in place of one special tapping tool, you can control flexibility in the stamping operation and greatly reduce downtime due to unscheduled maintenance.



ME1024



- Notes:**
- ◆ Tapping depth/maximum material thickness can be found on Page 8.
 - ◆ All dimensions are in inches.

LP25M6 & LP516M8 Series

for Mechanical and Hydraulic Presses



LP25M6

Product Features

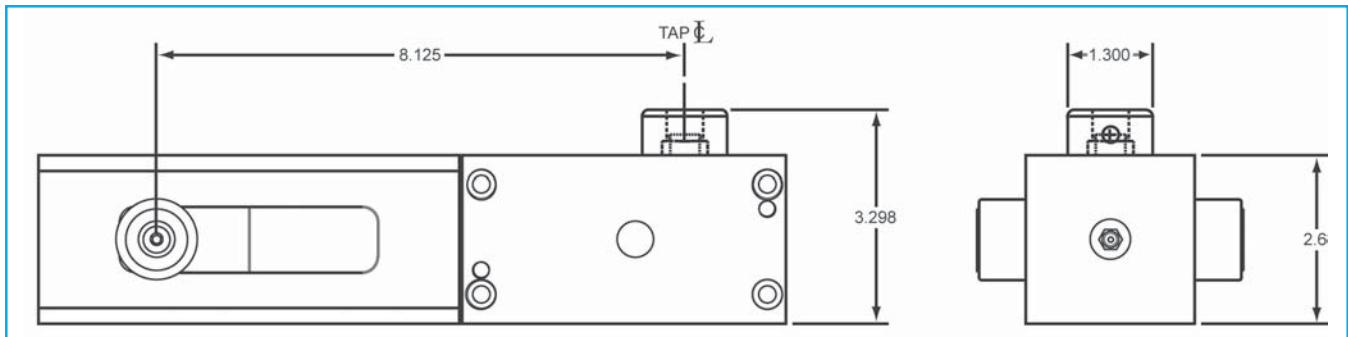
The LP is the most versatile of our mechanical In-Die Tapping tools with a simple and compact design capable of tapping in any direction. The LP units utilize a cam driver to control tool acceleration and tap speeds. The LP25M6 will tap size #0 – 1/4 or M6 and the LP516M8 will tap 1/4" – 5/16" or M8 while making either right or left-hand threads. The LP typically runs at production rates between 20–60 strokes per minute (SPM) up to a maximum of 100 SPM depending on strip material, thickness, tap size and tap pitch.

The cam driver is designed as a separate functional piece to maximize die design flexibility and transfer the inherent sinusoidal motion of the press into a rotary motion for tapping. The cam driver mounts easily on a punch plate on the upper die shoe above the tapping unit to provide the proper amount of tap acceleration and a positive return. The cam driver is application-specific and can be manufactured by using the free "Rapid TAP" CAD design software.

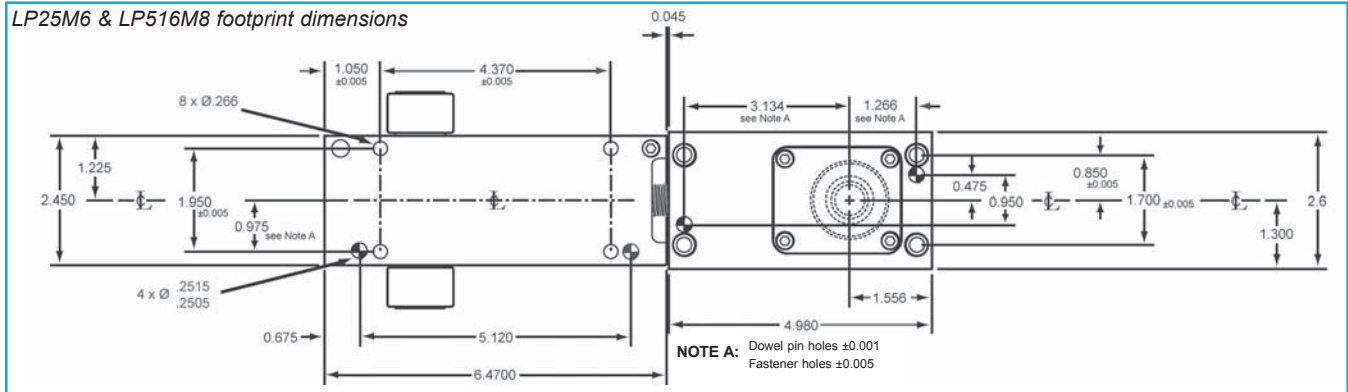
Multiple standard tools can be used in place of a special multi-head tapping tool to add flexibility and greatly reduce downtime.

Important Note

The shut height from the upper shoe to the mounting surface cannot be less than 3.775", without engineered modifications.



LP25M6 & LP516M8 footprint dimensions



- Notes:**
- ◆ Footprint dimensions are identical for both units. However, performance variations exist between the two units. Consult the Rapid Tap software.
 - ◆ Tapping depth/maximum material thickness can be found on Page 8.
 - ◆ All dimensions are in inches.

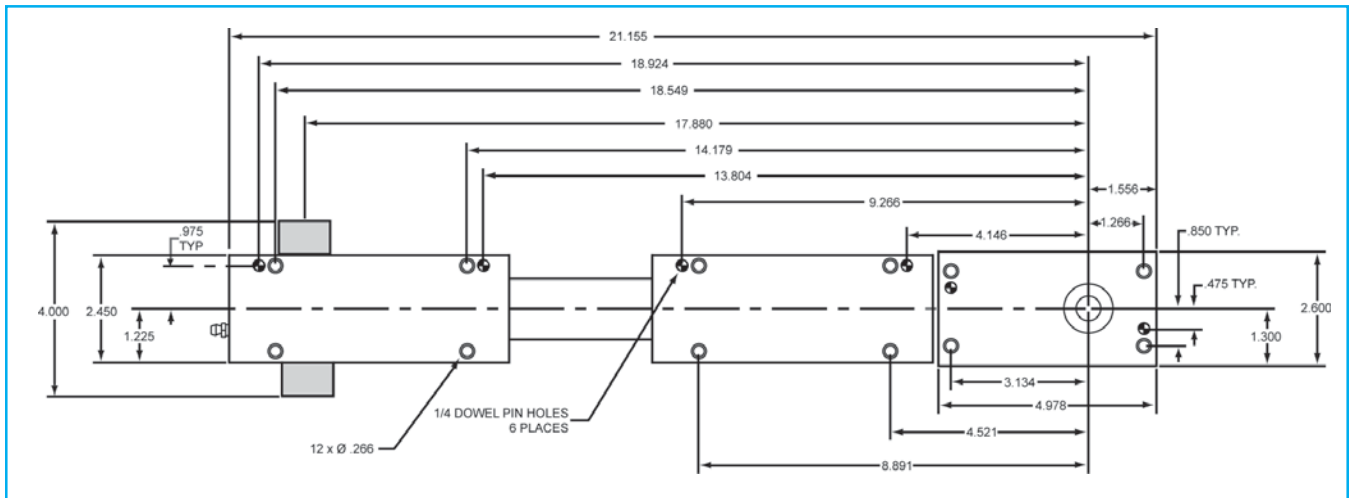
Accessories and Replacement Parts

LP Extensions

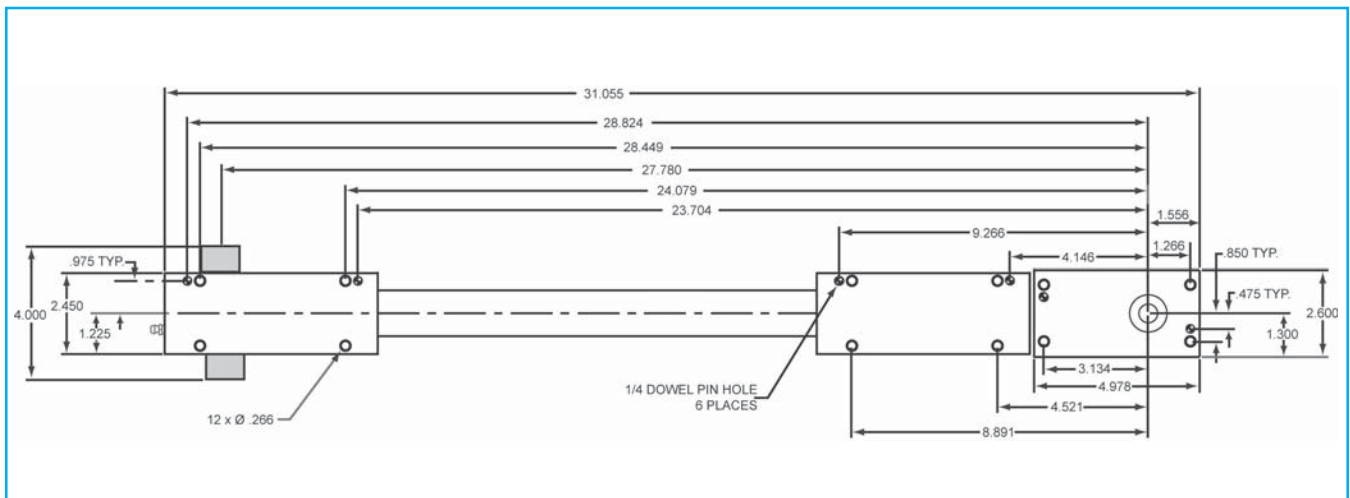
Some applications require a wide strip width incorporating a tapped hole located away from the edge of the material. The LP integrates modular extensions with a standard tapping tool to provide flexibility in design and off-the-shelf components.

The Standard Extension provides over 9" of extra length while the Extra Long Extension provides over 19". All components are made from materials designed to maximum life and performance.

LP STANDARD EXTENSION



LP EXTRA LONG EXTENSION



Notes: ♦ All dimensions are in inches.

Accessories and Replacement Parts



Forming Taps — Product Features

The special forming taps used in the in-die taping units are available in inch and metric standard sizes listed below. All forming taps are sold with a TiN coating as standard. Other coatings for special material applications are available on request. Forming taps provide a superior quality and finish of thread, with no chip formation.

| INCH SIZES | | |
|-------------|-------------------------|--------------------|
| Part Number | Shank Size ¹ | Tap Size & D Limit |
| R-006004 | Small | 2 - 56 - RH3 |
| R-006008 | Small | 4 - 40 - RH5 |
| R-006033 | Small | 4 - 40 - RH7 |
| R-006010 | Small | 5 - 40 - RH5 |
| R-006013 | Small | 6 - 40 - RH5 |
| R-006009 | Small | 4 - 48 - RH5 |
| R-006012 | Small | 6 - 32 - RH5 |
| R-006031 | Small | 6 - 32 - RH7 |
| R-006014 | Small | 8 - 32 - RH5 |
| R-006030 | Small | 8 - 32 - RH7 |
| R-006017 | Small | 10 - 32 - RH6 |
| R-006032 | Small | 10 - 32 - RH8 |
| R-006016 | Small | 10 - 24 - RH6 |
| R-006019 | Small | 12 - 28 - RH6 |
| R-006018 | Small | 12 - 24 - RH6 |
| R-006021 | Medium | 1/4 - 28 - RH6 |
| R-006090 | Large | 1/4 - 28 - RH6 |
| R-006020 | Medium | 1/4 - 20 - RH6 |
| R-006091 | Large | 1/4 - 20 - RH6 |
| R-006092 | Large | 5/16-32 – RH6 |
| R-006093 | Large | 5/16-24 – RH6 |
| R-006094 | Large | 5/16-18 – RH7 |

| METRIC SIZES | | |
|--------------|-------------------------|--------------------|
| Part Number | Shank Size ¹ | Tap Size & D Limit |
| R-006042 | Small | M2.0 x .40 D5 |
| R-006044 | Small | M2.5 x .45 D5 |
| R-006045 | Small | M3.0 x .50 D5 |
| R-006046 | Small | M3.5 x .60 D6 |
| R-006047 | Small | M4.0 x .70 D6 |
| R-006049 | Small | M5.0 x .80 D7 |
| R-006050 | Medium | M6.0 x 1.00 D8 |
| R-006095 | Large | M6.0 x 1.00 D8 |
| R-006096 | Large | M8.0 x 1.00 D8 |
| R-006097 | Large | M8.0 x 1.25 D8 |

Standard Stock Taps are TiN Coated

Special Tap Sizes, Pitches and Coatings are Available per Quotation

¹ Tap diameter shank size application:

- ◆ **Small** – 0 - #12 (M2 – M5) diameter taps: use in HY1024, ME1024, LP25M6
- ◆ **Medium** – 1/4" (M6) diameter taps: use in LP25M6
- ◆ **Large** – 1/4" – 5/16" (M6 - M8) diameter taps: use in LP516M8

Accessories and Replacement Parts

Pitch Inserts/Tap Holders — Product Features

Pitch inserts are interchangeable components of the tapping operation and are specific to the tap pitch of the tapped hole. Each pitch insert contains a tap holder with a quick release depression collar. Taps can be easily changed in most applications.

For applications which tap inside an embossment, a pitch insert extension can be made specific to your needs. Our engineering department will work with you to customize a pitch insert for your application.

| INCH SIZES | | | | |
|------------|------------------------------|---------------------------|------------------------|-------------------------|
| Pitch | Tap Holder Size ¹ | Part Number for HY/ME1024 | Part Number for LP25ME | Part Number for LP516M8 |
| 56 | Small | R-002005 | R-002024 | — |
| 48 | Small | R-002006 | R-002025 | — |
| 40 | Small | R-002007 | R-002026 | — |
| 32 | Small | R-002008 | R-002027 | — |
| 28 | Small | R-002009 | R-002028 | — |
| 28 | Medium | — | R-002031 | — |
| 28 | Large | — | — | R-002112 |
| 24 | Small | R-002010 | R-002029 | — |
| 24 | Large | — | — | R-002113 |
| 20 | Medium | — | R-002030 | — |
| 20 | Large | — | — | R-002114 |
| 18 | Large | — | — | R-002115 |

| METRIC SIZES | | | | |
|--------------|------------------------------|---------------------------|------------------------|-------------------------|
| Pitch | Tap Holder Size ¹ | Part Number for HY/ME1024 | Part Number for LP25ME | Part Number for LP516M8 |
| 0.40 mm | Small | R-002048 | R-002068 | — |
| 0.45 mm | Small | R-002047 | R-002067 | — |
| 0.50 mm | Small | R-002046 | R-002066 | — |
| 0.60 mm | Small | R-002045 | R-002065 | — |
| 0.70 mm | Small | R-002044 | R-002064 | — |
| 0.80 mm | Small | R-002042 | R-002062 | — |
| 1.00 mm | Medium | — | R-002060 | — |
| 1.00 mm | Large | — | — | R-002116 |
| 1.25 mm | Large | — | — | R-002117 |

Pitch insert for non-standard sizes or pitches are by quotation.

¹ Tap diameter shank size application:

- ◆ **Small** – 0 - #12 (M2 – M5) diameter taps: use in HY1024, ME1024, LP25M6
- ◆ **Medium** – ¼" (M6) diameter taps: use in LP25M6
- ◆ **Large** – ¼" – 5/16" (M6 - M8) diameter taps: use in LP516M8

Maximum Tapping Depth/Material Thickness

| MAXIMUM MATERIAL THICKNESS (T) - INCH | | | |
|---------------------------------------|-----------------|--------|---------|
| Size and Pitch | HY & ME 1024 | LP25M6 | LP516M8 |
| 2-64 | 0.080 | 0.168 | — |
| 2-56 | 0.091 | 0.194 | — |
| 3-56 | 0.091 | 0.194 | — |
| 3-48 | 0.106 | 0.230 | — |
| 4-48 | 0.106 | 0.230 | — |
| 4-40 | 0.128 | 0.253 | — |
| 5-44 | 0.116 | 0.280 | — |
| 5-40 | 0.128 | 0.280 | — |
| 6-40 | 0.128 | 0.280 | — |
| 6-32 | 0.159 | 0.272 | — |
| 8-36 | 0.142 | 0.261 | — |
| 8-32 | 0.159 | 0.261 | — |
| 10-32 | 0.159 | 0.261 | — |
| 10-24 | 0.213 | 0.248 | — |
| 12-28 | 0.182 | 0.248 | — |
| 12-24 | 0.213 | 0.230 | — |
| 1/4-28 | — | 0.230 | 0.319 |
| 1/4-20 | — | 0.205 | 0.305 |
| 5/16x32UN | — | — | 0.277 |
| 5/16x24UN | — | — | 0.355 |
| 5/16x18UN | — | — | 0.286 |

| MAXIMUM MATERIAL THICKNESS (T) - METRIC | | | |
|-----------------------------------------|-----------------|--------|---------|
| Size and Pitch | HY & ME 1024 | LP25M6 | LP516M8 |
| M2 x .4 | 2.0 | 4.2 | — |
| M2.5 x .45 | 2.2 | 4.8 | — |
| M3 x .5 | 2.5 | 5.4 | — |
| M3 x .6 | 3.0 | 6.6 | — |
| M3.5 x .6 | 3.0 | 6.6 | — |
| M4 x .7 | 3.5 | 6.9 | — |
| M5 x .8 | 4.0 | 6.6 | — |
| M5 x .9 | 4.5 | 6.2 | — |
| M6 x 1.0 | — | 5.9 | 8.9 |
| M8 x 1.0 | — | — | 8.9 |
| M8 x 1.25 | — | — | 8.2 |

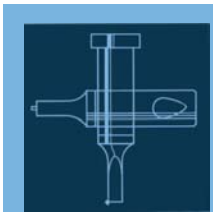
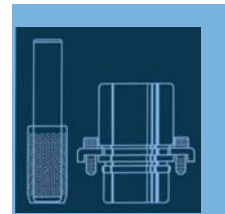
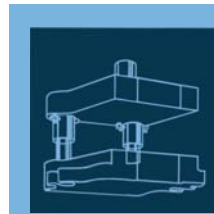
NOTE: Maximum material thickness (T) includes extrusion height and .020 inch (or 0.5mm) gap between the tip of the tap and the top of the material stock.

The Danly IEM Value Proposition

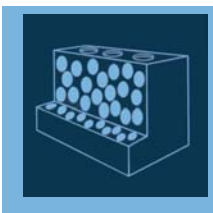
- I. **Danly IEM** is recognized as the leader in manufacturing quality die sets and related products to the global parts forming industry. Our reputation has been built by satisfying customer needs, and we are very strong in the automotive and appliance industries.
- II. **Danly IEM** offers outstanding delivery on a consistent basis. Choosing us as a supplier means that our customers have a competitive advantage in delivering their products to the market.
- III. **Danly IEM** has complex machining capabilities on die sets at several strategically located facilities. Locations throughout the USA means lower shipping costs and allowing **Danly IEM** to machine complex die sets means the customer's machining centers have additional capacity.
- IV. **Danly IEM's** vast breadth of products assures innovative solutions. We strive to address customer problems by utilizing our research and development department as well as other technical professionals.
- V. **Danly IEM** has a technically trained sales force and distributor channels with engineering support. Sales, marketing and engineering professionals are available to support our product lines.

➤ Competitive Prices

➤ Reliability and Performance



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AND INNOVATOR OF DIE SETS
AND DIE COMPONENTS
SUPPLIED GLOBALLY TO THE
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