14 PC H.S.S. 3-IN-1 COMBINED DRILL/TAP/COUNTERSINK & SCREWDRIVER BIT SETS

- Complete hole drilling, tapping, deburring and countersinking in one operation with power drill saves labor and time.
- For use to tap steel, copper, brass, aluminum and plastic up to 10-gauge (metal).
- Back taper die design helps prevent thread damage from over-drilling.
- One-piece drill/tap assures proper drill for tap size.
- Made of high speed steel for longer life.
- 14pc includes: 6pc of combination drill & tap countersink.
- 1pc of high torque tested quick-change adapter
- 6pc of quick change CRV steel bit.
- 1pc of carry case.

INCH SET(#6–1/4")

1011-0140

$3075

<table>
<thead>
<tr>
<th>Item#</th>
<th>Thread Range</th>
<th>CRV Bit</th>
<th>Price ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1011-0140</td>
<td>6–32, 8–32, 10–24</td>
<td>S10, S10, PZ1, PZ2, PH1, PH2</td>
<td>30.75</td>
</tr>
<tr>
<td>1011-0141</td>
<td>10–32, 12–24, 1/4–20</td>
<td>M3x0.5, M4x0.7, M5x0.8, M6x1.0, M8x1.25 &amp; M10x1.5</td>
<td>30.75</td>
</tr>
</tbody>
</table>

VERTEX BT TOOL HOLDER TIGHTENING FIXTURE STANDS

- Light weight and compact design.
- Quick tool holder setting and locking.
- Securely hold BT tooling for full pull stud installation and tool/collet change.

<table>
<thead>
<tr>
<th>Item#</th>
<th>Shank Taper</th>
<th>D-d</th>
<th>Holes F.C.D.</th>
<th>Price ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3900-4091</td>
<td>BT30</td>
<td>90</td>
<td>50</td>
<td>70</td>
</tr>
<tr>
<td>3900-4092</td>
<td>BT40</td>
<td>105</td>
<td>65</td>
<td>85</td>
</tr>
</tbody>
</table>

29PC HSS BLACK & GOLD JOBBER DRILL SET

- Premium high-speed steel withstands extended drilling in tough materials.
- Black and gold oxide finish provide maximum corrosion resistance.
- 135-degree split-point tip starts drilling immediately with less force and eliminates “walking” across the work surface.
- Metal USA made index case for easy bit access and identification.
- Includes drill bit sizes 1/16 to 1/2-inch in 1/64-inch increments.
- Reduced Tri-Flat Shank from 5/32" to 1/2".

5000-0006

$9571

1/16–1/2" by 64ths

7PC THREAD PLUG GAGE SETS

- Gages are made in "X" tolerance.
- Class 2B for Inch, Class 4H MM set.
- Fitted plastic case included.

Metric Set

4101-1171

$17700

Includes: M1x0.5, M1.25x0.7, M1.5x0.8, M2x0.75, M2.5x0.75, M3x1.0, M3x1.5, M4x1.0, M4x1.25, M5x1.5, M5x1.75.
MARKAL PRO-LINE FINE TIP MARKERS

For Precision Marking

- Fine tip sizes [2mm] for precise, permanent paint marking
- High-strength, lightweight barrel designed for industrial-grade use.
- Ideal for metal, also suitable for wood, glass, plastic, rubber and more.
- Xylene-Free for less odor.
- Self-storing cap with clip protects tip for longer life and stores easily in pocket.

<table>
<thead>
<tr>
<th>Color</th>
<th>Item#</th>
<th>Price ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>8030-9671</td>
<td>5.41</td>
</tr>
<tr>
<td>Yellow</td>
<td>8030-9672</td>
<td>5.41</td>
</tr>
<tr>
<td>Black</td>
<td>8030-9673</td>
<td>5.41</td>
</tr>
<tr>
<td>Red</td>
<td>8030-9674</td>
<td>5.41</td>
</tr>
</tbody>
</table>

Micro-Edge Finders

- Accurately locates the starting point for all types of machine work and jig boring
- Hardened and ground all over
- Accuracy .0002"

How To:
In use, the edge finder is placed in a collet or a chuck. The head moves sideways about 1/32” as the collet or chuck rotates and approaches the edge of the work, and the center of the finder is exactly one-half the head diameter away from the edge of the work.

<table>
<thead>
<tr>
<th>Item#</th>
<th>Style</th>
<th>End</th>
<th>Shank Dia</th>
<th>Tip Dia</th>
<th>Price ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4401-0029</td>
<td>Edge &amp; &amp;Edge</td>
<td>Double</td>
<td>3/8&quot;</td>
<td>3/8&quot;</td>
<td>6.68</td>
</tr>
<tr>
<td>4401-0030</td>
<td>Edge</td>
<td>Single</td>
<td>3/8&quot;</td>
<td>200/200</td>
<td>6.68</td>
</tr>
<tr>
<td>4401-0031</td>
<td>Edge</td>
<td>Single</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>6.80</td>
</tr>
<tr>
<td>4401-0032</td>
<td>Edge</td>
<td>Single</td>
<td>1/2&quot;</td>
<td>0.200&quot;</td>
<td>6.80</td>
</tr>
<tr>
<td>4401-0040</td>
<td>Edge &amp; Center</td>
<td>Double</td>
<td>3/8&quot;</td>
<td>0.200&quot;</td>
<td>7.23</td>
</tr>
<tr>
<td>4401-0041</td>
<td>Edge &amp; Center</td>
<td>Double</td>
<td>1/2&quot;</td>
<td>0.200&quot;</td>
<td>6.41</td>
</tr>
</tbody>
</table>

Pro-Series IP67 WATERPROOF TUBE LED MACHINE WORK LIGHTS

- IP67 rated water/collant proof.
- LED lights provide an excellent solution for heat sensitive environment.
- Color temperature: 6000~6500 K.
- Uniform distribution of light, excellent lighting effects and no glare.
- Diffusion plate gives high light transmittance and comfortable light for operators.
- 50,000 hours LED lifetime.
- Easy installation add low maintenance.
- High quality of IP67 waterproof connector, aluminum PCB, Silicone rubber sealing ring and borosilicate glass tube [60mm Diameter].
- Ambient working temperature: -13°F~131°F[-25°C~+55°C].
- Hardwire direct to your machine.

<table>
<thead>
<tr>
<th>Item#</th>
<th>Power</th>
<th>Power Supply</th>
<th>Length L (mm)</th>
<th>Length L1 (mm)</th>
<th>Flux</th>
<th>Price ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8401-0491</td>
<td>13 W</td>
<td>110~270V/1 Phase</td>
<td>473</td>
<td>509</td>
<td>1300</td>
<td>142.35</td>
</tr>
<tr>
<td>8401-0492</td>
<td>17 W</td>
<td>24V AC/DC</td>
<td>528</td>
<td>564</td>
<td>1700</td>
<td>162.50</td>
</tr>
<tr>
<td>8401-0493</td>
<td>20 W</td>
<td>24V AC/DC</td>
<td>668</td>
<td>704</td>
<td>2000</td>
<td>198.25</td>
</tr>
<tr>
<td>8401-0494</td>
<td>24 W</td>
<td>24V AC/DC</td>
<td>773</td>
<td>809</td>
<td>2400</td>
<td>229.13</td>
</tr>
</tbody>
</table>

Pro-Series IP65 WATERPROOF LED WORK LIGHT ON MAGNETIC BASE

- Powerful LED light (3 Watt) provide an excellent solution for heat sensitive environment.
- Color Temperature: 6000~6500K
- Small head with on/off switch[2" Diameter, 2" depth], Aluminum housing and tempered glass.
- 50,000 hours LED lifetime
- Flex Arm Length: 20".
- Magnetic base 2.5x2.0" with On/Off switch, power pull 150 lbs.
- Power Supply: 110~270V AC/ 1 phase.

BRIGHTNESS: 300 LUMENS

<table>
<thead>
<tr>
<th>Item#</th>
<th>Power</th>
<th>Power Supply</th>
<th>Length L (mm)</th>
<th>Length L1 (mm)</th>
<th>Flux</th>
<th>Price ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8401-0450</td>
<td>13 W</td>
<td>110~270V/1 Phase</td>
<td>473</td>
<td>509</td>
<td>1300</td>
<td>142.35</td>
</tr>
<tr>
<td>8401-0492</td>
<td>17 W</td>
<td>24V AC/DC</td>
<td>528</td>
<td>564</td>
<td>1700</td>
<td>162.50</td>
</tr>
<tr>
<td>8401-0493</td>
<td>20 W</td>
<td>24V AC/DC</td>
<td>668</td>
<td>704</td>
<td>2000</td>
<td>198.25</td>
</tr>
<tr>
<td>8401-0494</td>
<td>24 W</td>
<td>24V AC/DC</td>
<td>773</td>
<td>809</td>
<td>2400</td>
<td>229.13</td>
</tr>
</tbody>
</table>
HEAVY DUTY ARBOR PRESSES

- Heavy duty frame.
- Precision made.
- 4 position steel anvil.
- Steel pinions.

<table>
<thead>
<tr>
<th>Item#</th>
<th>Press (Ton)</th>
<th>Capacity Over Anvil</th>
<th>Capacity Over Table</th>
<th>Anvil H</th>
<th>W.T. (lbs)</th>
<th>Price (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600-1031</td>
<td>1/2</td>
<td>259 235 75</td>
<td>90 49 106 60 68  20</td>
<td>75.84</td>
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<td></td>
</tr>
<tr>
<td>8600-1032</td>
<td>1</td>
<td>325 270 100</td>
<td>125 56 130 75 85  33</td>
<td>113.11</td>
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<td></td>
</tr>
<tr>
<td>8600-1033</td>
<td>2</td>
<td>455 430 150</td>
<td>165 70 165 100 120 70</td>
<td>239.30</td>
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<td></td>
</tr>
</tbody>
</table>

Pro-Series RATCHET LEVER ARBOR PRESS

- 3 Ton capacity delivers the heavy force needed for riveting, squeezing, punching, bending, and other pressing applications.
- The extra large clearance over the table allows for broaching or pressing larger items.
- It is counterweighted for a quick handle return and has a rapid ram feature that is advanced by using the press’s convenient side-mounted handwheel.
- The rugged, reversible steel ram is driven by a machined piston, dimensions are 1-1/4 x 1-1/4 inches. Punches or tools may be added to the pre-drilled end of the ram with the aid of a magnetic insert. The three-bit set includes one-pointed bit, one round bit, and one square end bit along with a removable steel anvil.
- The removable 4-slotted anvil has a diameter of 8 inches.
- The sturdy cast-iron base is pre-drilled for mounting on either a bench or pedestal (HHP #8600-3615), and it is also machined to hold the included three-bit punch set.
- All parts are interchangeable with PALMGREN RP30.

<table>
<thead>
<tr>
<th>Item#</th>
<th>Capacity (Ton)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>G</th>
<th>Capacity Over Table H</th>
<th>W.T. (lbs)</th>
<th>Price (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600-4401</td>
<td>3</td>
<td>21-1/4</td>
<td>9-7/8</td>
<td>27-3/4</td>
<td>7-13/16</td>
<td>1-1/4x1-1/4</td>
<td>6-7/8 17-15/16</td>
<td>130</td>
<td>794.06</td>
</tr>
</tbody>
</table>

ARBOR PRESSES

- For riveting, squeezing, punching, bending, and other pressing applications.
- Base drilled for mounting on bench or pedestal.
- Sturdy, cast-iron construction.
- Removable machined steel anvil provides accurate work support in four slot positions.
- Rugged steel ram is driven by machined pinion.
- Punches or tools may be added to the end of the ram with the aid of a magnetic insert.

<table>
<thead>
<tr>
<th>Item#</th>
<th>Press (Ton)</th>
<th>High Speed Wheel</th>
<th>Capacity (MM)</th>
<th>Anvil Dia. (F)</th>
<th>Capacity Over Anvil</th>
<th>H</th>
<th>K</th>
<th>W.T. (lbs)</th>
<th>Price (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8600-1130</td>
<td>1/2</td>
<td>No</td>
<td>235 235 135 60 45 80 100 75 200</td>
<td>17</td>
<td>77.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8600-1131</td>
<td>1</td>
<td>Yes</td>
<td>280 270 155 60 45 110 125 90 250 31</td>
<td>115.06</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8600-1132</td>
<td>2</td>
<td>No</td>
<td>390 405 200 100 80 170 170 115 330 60</td>
<td>240.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8600-1133</td>
<td>3</td>
<td>No</td>
<td>540 456 240 100 100 170 280 130 455 117</td>
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<td></td>
<td></td>
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<tr>
<td>8600-1135</td>
<td>5</td>
<td>No</td>
<td>796 624 290 120 118 250 450 210 648 269</td>
<td>930.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ER-32 PRECISION INDEXING SPIN JIG

- Indexing and Grinding Fixture.
- Uses ER-32 collets (range 1/16-13/16”) for better gripping and accuracy.
- Extends the capabilities of Drill Presses, Surface Grinders, Gear Cutters and Milling Machines.
- Spindle hardened and ground with .0005” (T.I.R.) run-out.
- 10 vernier holes for 1” indexing.
- 2” spindle travel for flute grinding.
- 5” diameter index plate has 36 hole circle and graduated by 0 to 35 for direct indexing in 10° steps and is marked in 5° increments.
- Spindle lock for tightening collet.
- Base Footprint: 4.5x4” ground parallel to spindle.
- Weight: 14 lbs.

CENTER HEIGHT: 2.75”

NEW DESIGN
USE ER-32 COLLETS

3903-1600
$113.75

NEW DESIGN
ER COLLET
NOT INCLUDED

OPTIONAL TAILSTOCK

3900-2406
$93.48

OPTIONAL ER32 COLLET SETS

18 PC SET, INCH
3900-5267
$186.89

12 PC SET, METRIC
3903-5260
$128.08

SEE PAGE 188 FOR MORE COLLETS & SETS