<table>
<thead>
<tr>
<th>Section Reference Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectors, Cable Assemblies, IC Sockets.</td>
</tr>
<tr>
<td>Semiconductors, ICs, Transistors, Diodes, Rectifiers</td>
</tr>
<tr>
<td>Crystals, Oscillators</td>
</tr>
<tr>
<td>Inductors, Coils, Filters</td>
</tr>
<tr>
<td>Capacitors</td>
</tr>
<tr>
<td>Audio, Buzzers, Microphones, Speakers</td>
</tr>
<tr>
<td>Resistors, Potentiometers, Thermistors, ZNRs</td>
</tr>
<tr>
<td>Switches, Relays, Electromechanical</td>
</tr>
<tr>
<td>Wire, Cable, and Accessories</td>
</tr>
<tr>
<td>Prototyping, Tools, Solder, Test Equipment</td>
</tr>
<tr>
<td>Batteries</td>
</tr>
<tr>
<td>Fuses</td>
</tr>
<tr>
<td>Fans</td>
</tr>
<tr>
<td>Transformers, Power Supplies</td>
</tr>
<tr>
<td>Optoelectronics, LEDs, LCDs, Lasers, Displays</td>
</tr>
</tbody>
</table>
3M Fastening Systems

Scotchmate™ brand Hook and Loop Fastening Systems

When the two sides of a Scotchmate Hook and Loop Fastener are pressed together, hundreds of tiny, stiff hooks mash with a million or more loops. Simply press together to fasten and pull apart to open. And thousands of times during the life of your product. Depending on the application, you can select either plain-backed or adhesive-backed versions.

Plain-backed versions are easily sewn or stapled in place. Adhesive-backed fasteners are available for bonding to bare or painted metal, many plastics including plasticized vinyl, wood, glass and more. Mat Type 400 and Type 170 stems provide the most universal Dual Lock fastening combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

Plain-backed versions are easily sewn or stapled in place. Adhesive-backed fasteners are available for bonding to bare or painted metal, many plastics including plasticized vinyl, wood, glass and more. Mat Type 400 and Type 170 stems provide the most universal Dual Lock fastening combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

Flexible surfaces, Type 400 can be mated with itself. For even greater strength, the Lock fastener combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

When the two sides of a Scotchmate Hook and Loop Fastener are pressed together, hundreds of tiny, stiff hooks mash with a million or more loops. Simply press together to fasten and pull apart to open. And thousands of times during the life of your product. Depending on the application, you can select either plain-backed or adhesive-backed versions.

Plain-backed versions are easily sewn or stapled in place. Adhesive-backed fasteners are available for bonding to bare or painted metal, many plastics including plasticized vinyl, wood, glass and more. Mat Type 400 and Type 170 stems provide the most universal Dual Lock fastening combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

When the two sides of a Scotchmate Hook and Loop Fastener are pressed together, hundreds of tiny, stiff hooks mash with a million or more loops. Simply press together to fasten and pull apart to open. And thousands of times during the life of your product. Depending on the application, you can select either plain-backed or adhesive-backed versions.

Plain-backed versions are easily sewn or stapled in place. Adhesive-backed fasteners are available for bonding to bare or painted metal, many plastics including plasticized vinyl, wood, glass and more. Mat Type 400 and Type 170 stems provide the most universal Dual Lock fastening combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

Dual Lock™ brand Reusable Fastening Systems

When Dual Lock brand Reusable Fasteners are pressed together, hundreds of mushroom-shaped resilient stems interlock with one another. An audible snap announces that the fastener is locked. Compared to hook and loop fasteners, you get improved tensile strength with five times more holding power. Open and close hundreds of times during the life of your product. Depending on the application, you can select either plain-backed or adhesive-backed versions.

Plain-backed versions can be easily sewn, stapled or ultrasonically bonded in place. Adhesive-backed versions are available for bonding to bare or painted metal, many plastics including plasticized vinyl, wood, glass and more. Mat Type 400 and Type 170 stems provide the most universal Dual Lock fastening combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

Flexible surfaces, Type 400 can be mated with itself. For even greater strength, the Lock fastener combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

When the two sides of a Scotchmate Hook and Loop Fastener are pressed together, hundreds of tiny, stiff hooks mash with a million or more loops. Simply press together to fasten and pull apart to open. And thousands of times during the life of your product. Depending on the application, you can select either plain-backed or adhesive-backed versions.

Plain-backed versions are easily sewn or stapled in place. Adhesive-backed fasteners are available for bonding to bare or painted metal, many plastics including plasticized vinyl, wood, glass and more. Mat Type 400 and Type 170 stems provide the most universal Dual Lock fastening combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

Flexible surfaces, Type 400 can be mated with itself. For even greater strength, the Lock fastener combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

When the two sides of a Scotchmate Hook and Loop Fastener are pressed together, hundreds of tiny, stiff hooks mash with a million or more loops. Simply press together to fasten and pull apart to open. And thousands of times during the life of your product. Depending on the application, you can select either plain-backed or adhesive-backed versions.

Plain-backed versions are easily sewn or stapled in place. Adhesive-backed fasteners are available for bonding to bare or painted metal, many plastics including plasticized vinyl, wood, glass and more. Mat Type 400 and Type 170 stems provide the most universal Dual Lock fastening combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

Flexible surfaces, Type 400 can be mated with itself. For even greater strength, the Lock fastener combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

When the two sides of a Scotchmate Hook and Loop Fastener are pressed together, hundreds of tiny, stiff hooks mash with a million or more loops. Simply press together to fasten and pull apart to open. And thousands of times during the life of your product. Depending on the application, you can select either plain-backed or adhesive-backed versions.

Plain-backed versions are easily sewn or stapled in place. Adhesive-backed fasteners are available for bonding to bare or painted metal, many plastics including plasticized vinyl, wood, glass and more. Mat Type 400 and Type 170 stems provide the most universal Dual Lock fastening combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

Flexible surfaces, Type 400 can be mated with itself. For even greater strength, the Lock fastener combination. As an alternative when the closure involves two materials, you can select either plain-backed or adhesive-backed versions.

When the two sides of a Scotchmate Hook and Loop Fastener are pressed together, hundreds of tiny, stiff hooks mash with a million or more loops. Simply press together to fasten and pull apart to open. And thousands of times during the life of your product. Depending on the application, you can select either plain-backed or adhesive-backed versions.
Both versions have these features: attractively styled and ergonomically designed for use as a hand held enclosure; ends sized for infra-red applications; extra deep top and ultra shallow base; two piece lap joint construction; recessed top area ideal for membrane display; internal battery compartment; user friendly 10mm x 10mm reference grid is molded into the top interior; six PC board mounting bosses molded into both the top and the base; vertical mounting slots molded into the top for PC boards or optional dividers. All versions carry UL flammability rating of 94V-0 and are secured with integral tapped brass bushings. Styrene styles are secured with self-tapping screws.

Fig. 5 - Plastic Hand Held Instrument Boxes - 1593 Series: Available in both High Impact Polystyrene (light grey) and Flame Retardant ABS (black or light grey). Both versions feature lap joint construction, interlocking flanged lid and integral card guides to accept .062" (1.57mm) PC cards. Dimensions - Inch (mm) Digi-Key Pricing Hammond Part No.

<table>
<thead>
<tr>
<th>Color</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Pricing</th>
<th>10</th>
<th>100</th>
<th>Hammond Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>4.7 (120)</td>
<td>4.7 (120)</td>
<td>2.2 (56)</td>
<td>22.56</td>
<td>50.00</td>
<td>1593BBK</td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td>4.7 (120)</td>
<td>4.7 (120)</td>
<td>2.2 (56)</td>
<td>22.56</td>
<td>50.00</td>
<td>1593BBK</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 6 - Plastic Instrument Boxes - 1594 Series: Available in both High Impact Polystyrene (light grey) and Flame Retardant ABS (black or light grey). Both versions feature lap joint construction, interlocking flanged lid, and a rugged and robust design.

Fig. 7 - Plastic Instrument Consoles - 1595 Series: Available in Flame Retardant ABS (black or light grey) which meets UL 94V-0 flammability tests. Unique sloped front design comes with 0.04" (1.02mm) thick brushed aluminum front panel, four self-adhesive rubber feet, and four M3 x 5 mm machine threads screwed into integral brass bushings. Integral card guides accept .062" (1.57mm) PC boards. Base has four internal 0.20" (5.08mm) stand-off bosses.

Fig. 8 - Aluminum Utility Cases - 1411 Series: .040" (1.02mm) thick aluminum. 4 self-tapping screws included. ASA 61 gray baked enamel finish (outside only).

Fig. 9 - Heavy Duty Chassis Case and Cover Plates - 1444 Series: Spot welded heavy duty construction chassis. Cover holes are punched with 4 holes (hardware not provided). Natural finish.

Fig. 10 - Metal Utility Cases - 1415 Series: SIZES A to E are 20 gauge 0.036" (915mm) thick steel. Self-tapping screws included. ASA 61 gray baked enamel finish (outside only). Models A to D have 4 mounting holes. Models E to J have 6 mounting holes.

Fig. 11 - Ventilated Low Profile Instrument Cases - 1426 Series: 20 gauge steel case finished in satin off-white. 0.064" (1.63mm) thick aluminum panels front and rear. Front panel is satin black, rear panel matches case color.

Fig. 12 - Low Profile Instrument Cases - 1458 Series: 20 gauge steel case with black satin finish. 0.064" (1.63mm) thick aluminum panels. Front and rear panel matches case color.

Fig. 13 - Ventilated High Profile Instrument Cases - 1401 Series: 20 gauge steel case finished in satin off-white. 0.064" (1.63mm) thick aluminum panels, front finished in satin black; vented back finished in satin off-white. Rear panel is vented top and bottom 6-32 Phillips nickel plated screws and self-adhesive rubber feet included.

Legend:
- Black
- Blue
- Gray
- Satin Black
- Satin White
- Natural Finish
- Chrome Plated
- 5 mm Spring Steel
- 25.4 mm (1 in.)
- 20.32 mm (0.8"")
- 10.16 mm (0.4"")
- 76.2 mm (3"")
- 4.8 mm (5/32"")
- 3.2 mm (1/8"")
- 2.5 mm (1/10"")
- 2.0 mm (1/16"")
- 1.9 mm (3/64"")
- 1.6 mm (1/32"")
- 1.0 mm (1/36"")
- 0.8 mm (1/24"")
- 0.5 mm (1/64"")
Adjustable Kwik Klip

- 4 sizes adjust to any holding diameter of 5/64" to 1" (7.92-25.4mm) - Locks securely, easily applied for routing changes - Adhesive back - Material: Nylon 6/6 - Color: Natural

<table>
<thead>
<tr>
<th>Hole Grommet</th>
<th>• Installs instantly • Material: Red-vinyl • Color: Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holes</td>
<td>ID (mm)</td>
</tr>
<tr>
<td>3.05</td>
<td>4.57</td>
</tr>
<tr>
<td>3.41</td>
<td>5.61</td>
</tr>
<tr>
<td>4.89</td>
<td>7.87</td>
</tr>
<tr>
<td>6.24</td>
<td>11.40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tie Holders</th>
<th>Fig. 1</th>
<th>• Multi-directional • Material: Nylon 6/6, UV Stabilized Nylon 6/6 • Adhesive, UV Stabilized/Nylon 6/6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height (mm)</td>
<td>Bundle Dia. (mm)</td>
<td>Part No.</td>
</tr>
<tr>
<td>25</td>
<td>Ø4.75</td>
<td>RP690-ND</td>
</tr>
<tr>
<td>100</td>
<td>Ø5.50</td>
<td>RP691-ND</td>
</tr>
<tr>
<td>1,000</td>
<td>Ø6.35</td>
<td>RP692-ND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Locking Circuit Supports</th>
<th>• Both ends held by hand no tools required • Strong, dependable grip • Material: Nylon 6/6 • Color: Natural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height (mm)</td>
<td>Bundle Size (mm)</td>
</tr>
<tr>
<td>25</td>
<td>Ø4.75</td>
</tr>
<tr>
<td>100</td>
<td>Ø5.50</td>
</tr>
<tr>
<td>1,000</td>
<td>Ø6.35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LED Spacers</th>
<th>• Spaced LED from surface of board • Easily installed by hand • Insulates and spaces leads • Slots and holes for choice of mount • Material for LED3S3 and LED52E2: Nylon 6/6 • Color: Natural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dim. A (mm)</td>
<td>Dim. B (mm)</td>
</tr>
<tr>
<td>5.00</td>
<td>34.80</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kurylo-K on Base (KLB Series)</th>
<th>• Adhesive backing, RMS-15 • Material: Nylon 6/6, RMS-01 • Color: Natural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height (mm)</td>
<td>Bundle Dia. (mm)</td>
</tr>
<tr>
<td>27.18</td>
<td>7.62-10.16</td>
</tr>
<tr>
<td>31.24</td>
<td>10.16-12.70</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wire Cord Klip (WCK Series)</th>
<th>• Adhesive backing for quick mounting • Material: Nylon 6/6, RMS-01 • Color: Natural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hole Dia. (mm)</td>
<td>Part No.</td>
</tr>
<tr>
<td>3.05</td>
<td>RP402-ND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C-Type Flat Cable Clamps (CFC Series)</th>
<th>• Designed for routing flat ribbon cable • Separated grooves to prevent slipage • Adhesive backing for quick mount in any direction • Material: Noryl-White, RMS-05, PVC-Grey, RMS-04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dim. A (mm)</td>
<td>Dim. B (mm)</td>
</tr>
<tr>
<td>11.48</td>
<td>7.62-10.16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cable Clamps (N Series)</th>
<th>• Material: Nylon 6/6, RMS-01 • Colors: Natural and Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dim. A (mm)</td>
<td>Snap Locks Into</td>
</tr>
<tr>
<td>15.75</td>
<td>Ø18-Ø35 Flat Head Combo</td>
</tr>
</tbody>
</table>
Wrap-It-Ties

- Easy to use permanent lock  • Strong, durable, one-piece construction  • Serviceable to 185°F (85°C), UL recognized  • Material: Nylon 6/6, UV Stabilized Nylon 6/6

Wrap-It-Ties

<table>
<thead>
<tr>
<th>Color</th>
<th>Approx. Dia. (mm)</th>
<th>Approx. Length (mm)</th>
<th>Approx. Weight (g)</th>
<th>Digi-Key</th>
<th>Pricing 1,000</th>
<th>Pricing 5,000</th>
<th>Richco Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural</td>
<td>1.61</td>
<td>45.72</td>
<td>0.01</td>
<td>RP214-ND</td>
<td>6.56</td>
<td>23.88</td>
<td>MNI #1-2</td>
</tr>
<tr>
<td>Black</td>
<td>1.68</td>
<td>46.45</td>
<td>0.01</td>
<td>RP213-ND</td>
<td>6.93</td>
<td>25.10</td>
<td>MNI #1-2</td>
</tr>
<tr>
<td>Red</td>
<td>1.68</td>
<td>46.45</td>
<td>0.01</td>
<td>RP212-ND</td>
<td>7.27</td>
<td>27.29</td>
<td>MNI #1-2</td>
</tr>
<tr>
<td>Blue</td>
<td>1.61</td>
<td>45.72</td>
<td>0.01</td>
<td>RP211-ND</td>
<td>6.93</td>
<td>25.10</td>
<td>MNI #1-2</td>
</tr>
</tbody>
</table>

Molded Nylon Insulators (MNI Series)

- Use for screw insulators and in many bushing applications  • Lightweight  • High dielectric strength  • Resistant to corrosion and abrasion  • Material: Nylon 6/6, RMS-48  • Color: Natural

Molded Nylon Insulators

<table>
<thead>
<tr>
<th>Screw Size</th>
<th>Digi-Key</th>
<th>Pricing 1,000</th>
<th>Pricing 5,000</th>
<th>Richco Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3</td>
<td>3.56</td>
<td>12.01</td>
<td>47.84</td>
<td>MNI M3-3.5</td>
</tr>
<tr>
<td>M4</td>
<td>4.75</td>
<td>16.00</td>
<td>60.00</td>
<td>MNI M4-4.75</td>
</tr>
<tr>
<td>M5</td>
<td>6.35</td>
<td>22.23</td>
<td>82.88</td>
<td>MNI M5-6.35</td>
</tr>
<tr>
<td>M6</td>
<td>8.00</td>
<td>30.24</td>
<td>113.28</td>
<td>MNI M6-8.00</td>
</tr>
</tbody>
</table>

Wire Tie Gun

- RPWTA-ND .............$12.09
- RPWTA-ND .............$12.09

Installation Tool

- 1-800-344-4539
- 1-800-344-4539

Wire Tie Gun

- RPWTA-ND .............$12.09
- RPWTA-ND .............$12.09

Installation Tool

- 1-800-344-4539
- 1-800-344-4539

Wire Tie Gun

- RPWTA-ND .............$12.09
- RPWTA-ND .............$12.09

Installation Tool

- 1-800-344-4539
- 1-800-344-4539
Male/Female 6.35mm Hex Threaded Standoffs

- Hex Threaded Standoffs
- Male/Female 6.35mm thread sizes of 4-40, 6-32 and 8-32.
- 100 pieces of each size.
- 6.35mm, 9.52mm, 12.70mm, 19.05mm and 25.40mm lengths with
- Hex Aluminum Kit

<table>
<thead>
<tr>
<th>Dimensions (mm)</th>
<th>Screw</th>
<th>Digi-Key Part No. 100</th>
<th>Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-40 Thread</td>
<td>6.35</td>
<td>8400K/ND</td>
<td>8410K/ND</td>
</tr>
<tr>
<td>6-32 Thread</td>
<td>6.35</td>
<td>8402K/ND</td>
<td>8412K/ND</td>
</tr>
<tr>
<td>8-32 Thread</td>
<td>6.35</td>
<td>8404K/ND</td>
<td>8414K/ND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fig.</th>
<th>Description</th>
<th>Part No. 10 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
<tr>
<td>2</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
<tr>
<td>3</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
<tr>
<td>4</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
<tr>
<td>5</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
<tr>
<td>6</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions (mm)</th>
<th>Female/Female</th>
<th>Male/Female</th>
<th>Male/Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>O.D.</td>
<td>3.56</td>
<td>3.56</td>
<td>3.56</td>
</tr>
<tr>
<td>I.D.</td>
<td>2.85</td>
<td>2.85</td>
<td>2.85</td>
</tr>
<tr>
<td>Thick</td>
<td>0.70</td>
<td>0.70</td>
<td>0.70</td>
</tr>
</tbody>
</table>

- Internal Thread .130/.150 deep.
- Internal Thread .250 deep.

**Nylon Spacers**

- Flame Retardant Hex Threaded Spacers — Material: Monsanto 340 FR UL 94V-0 rating
- Economical for terminal or printed circuit board supports. Hex Threaded Spacers — Material: Nylon 6/6

<table>
<thead>
<tr>
<th>Dimensions (mm)</th>
<th>Screw</th>
<th>Digi-Key Part No. 100</th>
<th>Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-40 Thread</td>
<td>6.35</td>
<td>8400K/ND</td>
<td>8410K/ND</td>
</tr>
<tr>
<td>6-32 Thread</td>
<td>6.35</td>
<td>8402K/ND</td>
<td>8412K/ND</td>
</tr>
<tr>
<td>8-32 Thread</td>
<td>6.35</td>
<td>8404K/ND</td>
<td>8414K/ND</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fig.</th>
<th>Description</th>
<th>Part No. 10 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
<tr>
<td>2</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
<tr>
<td>3</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
<tr>
<td>4</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
<tr>
<td>5</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
<tr>
<td>6</td>
<td>Female/Female Male/Female Male/Male</td>
<td>1299K-ND</td>
</tr>
</tbody>
</table>

- Rubber, BUNA S, (fig. 1 & 2) Vinyl, (fig. 3).
- Provides excellent traction and shock absorbing qualities.
- Materials:
  - Spacers — Material: Glass filled Nylon, Grades 6/6 per ASTM D4066
  - Flat Washers — Fibre: Commercial per MIL-F-1144A, Grade CH Nylon: Grade 6/6 per ASTM D4066
  - Nylon Shoulder Washers/Bushings — Nylon, Grades 6/6 per ASTM D879-66

- Alumina (Iridite MIL-C-5441)
- Prepunched Insulating Boards
- Ideal for securing, insulating and routing cables, wiring, piping, tubing, components and fibre optics. Made of 1.27mm thick nylon 6/6, white.

<table>
<thead>
<tr>
<th>Dimensions (mm)</th>
<th>Digi-Key Part No. 100</th>
<th>Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.75</td>
<td>6.35</td>
<td>7609K/ND</td>
</tr>
<tr>
<td>5.54</td>
<td>6.35</td>
<td>7607K/ND</td>
</tr>
<tr>
<td>6.35</td>
<td>6.35</td>
<td>7605K/ND</td>
</tr>
<tr>
<td>7.92</td>
<td>6.35</td>
<td>7603K/ND</td>
</tr>
</tbody>
</table>

- Male/Female 6.35mm
- Recessed Bumpers
- Provides excellent traction and shock absorbing qualities.
- Materials:
  - Rubber, BUNA S, (fig. 1 & 2) Vinyl, (fig. 3).

<table>
<thead>
<tr>
<th>Dimensions (mm)</th>
<th>Digi-Key Part No. 100</th>
<th>Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.75</td>
<td>6.35</td>
<td>7609K/ND</td>
</tr>
<tr>
<td>5.54</td>
<td>6.35</td>
<td>7607K/ND</td>
</tr>
<tr>
<td>6.35</td>
<td>6.35</td>
<td>7605K/ND</td>
</tr>
<tr>
<td>7.92</td>
<td>6.35</td>
<td>7603K/ND</td>
</tr>
</tbody>
</table>
**Zinc Plated Nuts and Washers**

### Description
- **Hex Nuts**
- **Lock Washers**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>100</th>
<th>1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>H122-ND</td>
<td>1.31</td>
<td>10.51</td>
</tr>
<tr>
<td>H166-ND</td>
<td>0.93</td>
<td>7.44</td>
</tr>
<tr>
<td>H220-ND</td>
<td>1.07</td>
<td>8.73</td>
</tr>
</tbody>
</table>

### Machine Screws

#### Phillips Panhead Machine Screws
- **Steel, Zinc Plated**

#### Phillips Nylock Machine Screws
- **Steel, Zinc Plated**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>100</th>
<th>1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>H107-ND</td>
<td>0.85</td>
<td>7.00</td>
</tr>
<tr>
<td>H109-ND</td>
<td>0.90</td>
<td>7.20</td>
</tr>
<tr>
<td>H111-ND</td>
<td>0.90</td>
<td>7.20</td>
</tr>
<tr>
<td>H113-ND</td>
<td>0.90</td>
<td>7.20</td>
</tr>
</tbody>
</table>

### Digi-Key® Electronic Hardware Kits
- **Complete with a divided plastic box for easy storage.**

---

**New!** Metric Phillips, Panhead Machine Screws

### Zinc Plated

<table>
<thead>
<tr>
<th>Part No.</th>
<th>100</th>
<th>1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>H161-ND</td>
<td>1.62</td>
<td>12.96</td>
</tr>
<tr>
<td>H162-ND</td>
<td>0.83</td>
<td>6.64</td>
</tr>
</tbody>
</table>

### Slotted Panhead Machine Screws

#### Phillips Panhead Machine Screws
- **Steel, Zinc Plated**

#### Phillips Nylock Machine Screws
- **Steel, Zinc Plated**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>100</th>
<th>1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>H151-ND</td>
<td>1.46</td>
<td>11.52</td>
</tr>
<tr>
<td>H153-ND</td>
<td>1.46</td>
<td>11.52</td>
</tr>
</tbody>
</table>

### Phillips Nylock Hardware Kit

<table>
<thead>
<tr>
<th>Part No.</th>
<th>250</th>
<th>2,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>H154-ND</td>
<td>0.85</td>
<td>6.64</td>
</tr>
<tr>
<td>H155-ND</td>
<td>0.85</td>
<td>6.64</td>
</tr>
</tbody>
</table>

---

**Slotted Steel Nuts and Washers**

### Sizes #2, #4, #6, #8, and #10

<table>
<thead>
<tr>
<th>Part No.</th>
<th>100</th>
<th>1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>H167-ND</td>
<td>0.73</td>
<td>5.85</td>
</tr>
<tr>
<td>H168-ND</td>
<td>0.83</td>
<td>6.64</td>
</tr>
</tbody>
</table>

---

**Digi-Key® Stainless Steel Hardware Kits**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>250</th>
<th>2,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>H169-ND</td>
<td>0.85</td>
<td>6.64</td>
</tr>
<tr>
<td>H170-ND</td>
<td>0.85</td>
<td>6.64</td>
</tr>
</tbody>
</table>
3M Super Strips and Circuit Strips

Universal Breadboarding with Solderless Plug-In Tie Points

As with all solderless breadboarding units from 3M, components simply plug-in and are interconnected with ordinary solid hook-up wire. #22 AWG is recommended.

All sizes of DIPs and discrete components with lead diameters up to .032" (.82mm) can be accommodated.

These handy strips may be permanently mounted with the integral non-positioning instant-mounting back or, for quick removal, they may be mounted with screws on panels up to 1/8" (3.18mm) thick.

Hardware and mounting templates are provided with every kit.

![Image of breadboard strips]

**3M Brand Silicon Lubricant**

In a palm-sized, spray pump which now makes your job that much easier.

This versatile spray:
- Resists temperatures to 800°F.
- Won't stain or become gummy.
- Helps prevent build-up of glues, waxes, inks and paints.
- Lubricates cutting tools and equipment.
- Contains no: Chlorofluorocarbons (CFCs), 1,1,1-trichloroethylene, methylchloride or Freon acceptable.
- Conforms to FDA regulations for indirect food additives (21 CFR and 178.370), surface lubricants (21 CFR and 178.3910), and release agents (21 CFR and 181.28).

**Application Ideas:**
- Printing presses
- Punch presses
- Lab equipment
- Oil field equipment
- Plant maintenance
- Locks and pulleys
- Musical instruments
- Doors/Windows
- Air conditioner fans
- Cutting blades
- Die cutting equipment
- Slaters
- Collators
- Air tools
- General lube
- You get two major benefits:
  - No aerosol propellant, so you're not paying for chemicals you don't need on the job or in the air.
  - Helps put more chemical to work for your money.

**Features:**
- At only 6 fluid ounces, you may think the pump won't take you far. It fits in your palm and tucks in a tool box for take-to-the-job convenience.
- Each pump holds enough active ingredients for two typical 16 fluid ounce aerosol cans. That means concentrated value and fewer cans for disposal.
- Contents are not under pressure, Spray pump contains no chlorofluorocarbons (CFCs), 1,1,1-trichloroethylene, or methylchloride.

**Digi-Key® Spacer Kit**

Components included are 10 each of part numbers marked with □. 150 components. Price includes convenient divided plastic box with bin guide for easy storage and quick access.

**3M SuperBoard**

Solderless Breadboards

**FEATURES:**
- 0.1" x 0.1" (.254mm) solderless tie point matrix accepts all DIP sizes and a wide variety of discrete components with lead diameters up to .032" (.81mm). Capacities range from 610 to 5424 tie points.
- Accommodates from 6 to 54, 14 pin DIPs. Separate distribution bases for ground, signal and signal lines. Molded alphanumeric grid for faster, easier tie point identification.
- Circuit elements are easily connected with #22 AWG solid wire.
- Strip boards are constructed of durable Acetal Copolymer with Alloy 688 terminals. Durable basplate keeps boards stationary during use and help to minimize noise and voltage spikes in today's high speed circuits.

**3M Replacement Wire**

**Length**
- **Color**
- **Part No. Each**
- **Price/Pkg.

3M Boardboard Jumper Wire Kit

**FEATURES:**
- 350 wires • 14 different lengths • Wire is stripped and leads bent 90° • Lengths are classified by color coding • Wire is sold by the box • PVC insulation

Kit contains 25 each of 14 different lengths.

![Image of wire kit]

**3M AcoC™ Board**

Solderless Breadboards

**3M Cable Stripper**

**Specifications**

<table>
<thead>
<tr>
<th>Size</th>
<th>SUPER-STRIP</th>
<th>CIRCUIT-STRIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plug-In-Tie-Points</td>
<td>840</td>
<td>610</td>
</tr>
<tr>
<td>Materials: Body</td>
<td>Acetal Copolymer</td>
<td>Acetal Copolymer</td>
</tr>
</tbody>
</table>

**SUPER-STRIP**

<table>
<thead>
<tr>
<th>Terminals</th>
<th>Part No.</th>
<th>Price/Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alloy 770</td>
<td>923252-ND</td>
<td>19.25</td>
</tr>
<tr>
<td>Gold (10m)</td>
<td>923748-ND</td>
<td>63.38</td>
</tr>
</tbody>
</table>

**CIRCUIT-STRIP**

<table>
<thead>
<tr>
<th>Terminals</th>
<th>Part No.</th>
<th>Price/Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alloy 770</td>
<td>923252-ND</td>
<td>12.80</td>
</tr>
<tr>
<td>Gold (10m)</td>
<td>923748-ND</td>
<td>52.59</td>
</tr>
</tbody>
</table>
VMExcel Backplanes

VMExcel offers excellent performance characteristics in the key areas of controlled impedance, power distribution and termination design. Features:
- 6 layer Stripline construction: J1 & J2 Stripline construction
- 572 characteristic impedance control
- Patented earth guard track design
- Excellent crosstalk performance
- Low ground shift
- Terminations designed for short stubs, decoupling capacitors and anti-crosstalk layout
- Power connector: Male FR4 Loka • A decoupling capacitor position is provided for each slot position permitting fine tuning of the backplane to match system parameters • Male FR4 Loka connectors supplied (including mating connector) • On-board termination • With the exception of the following additional feature, the Monolithic enjoys the same construction and performance features as the J1 and J2 backplanes: • Power plug on J1 backplane • Exception 5 slot has Faston Power connection
- Jumper links provided to allow signal line interconnection

Prototyping Boards

General Board Specifications:
- Board Type: Epoxy glass (233-1051-ND and 233-1050-ND are SRBP) • Nom. Board Thickness (incl. copper): 1.6mm • Copper Thickness: 35µm • Hole Grid: 2.54mm x 2.54mm • Hole Diameter: 1.02mm

VeroBoard - Single-Sided Copper:
- VeroBoard is designed for hard wiring of discrete components, typically in analogue circuits, but is equally useful where a number of common bus or signal lines are required.

PTH Microboard:
- DIN 41494 (KM6-II) compatible • DIN 41612 connector pattern up to 96/96 ways, front and rear • Two Vcc power rails and a 0V ground plane • Grid print to aid component layout

VMEbus Extender Boards
- Full ground plane plus individual signal track screening
- Signal pin-out identification silk screened onto VMEbus Extender Boards
- Jumper links provided to allow signal line interconnection

NOTE: PTH = Plated Through Holes
Prototype Boards

Vector Prototyping Boards with punched holes are convenient economical tools for assembling circuit components and cost effective alternatives to custom designs. Use general purpose Plugboards and Bus specific for edgeboard connection prototyping, while Circboards are ideal for cutting down to smaller board area.

- **Holes on 0.1" (2.5mm) grid.** 
- **0.043" (1.09mm) dia.** 
- **V1018 and V1029:** Ejector Hole • Plating: Gold/Nickel • Board Material: Epoxy Glass Composite.
- **IBM PC, XT and AT Expansion Units:** Marked edge contact identification • Gold plated edge contacts on 0.1" centers • Power & ground buses terminate to connectors • Pads on board & bracket accepts D99-H, 15-, 25- or 37-Pin HD connector • Accepts Vector’s cross terminals for wiring & soldering • Holes are .042" (1.07mm) dia. or 0.1" (2.54mm) grid • 1/16" (1.59mm) thick epoxy glass material, gold plated contacts • Universal mounting bracket and card guide incl. • Layout, planning sheets & instructions incl. • Plugs into any IBM AT slot with dual connectors (AT board unit only). • Pads for mounting dual, row 0.1" (2.54mm) spaced header (AT unit only).

---

### General Purpose Plugboards

| Edge Contacts | Dimensions | 16-pin Dip Cap | Digi-Key No. | Pricing (10) | Pricing (25) | PCB Part No. | Accessory
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Purpose Plugboards</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>4.00 (11.43)</td>
<td>4.00 (11.43)</td>
<td>V0117-ND</td>
<td>166.16</td>
<td>306.36</td>
<td>6225-5</td>
<td></td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>4.00 (11.43)</td>
<td>5.00 (12.50)</td>
<td>V0118-ND</td>
<td>199.59</td>
<td>336.25</td>
<td>6225-5</td>
<td></td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>4.00 (11.43)</td>
<td>6.00 (15.24)</td>
<td>V0119-ND</td>
<td>249.52</td>
<td>436.22</td>
<td>6225-5</td>
<td></td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>4.00 (11.43)</td>
<td>6.00 (15.24)</td>
<td>V0125-ND</td>
<td>25.25</td>
<td>25.25</td>
<td>6232-5</td>
<td></td>
</tr>
<tr>
<td><strong>E</strong></td>
<td>4.00 (11.43)</td>
<td>7.50 (19.05)</td>
<td>V0126-ND</td>
<td>42.31</td>
<td>42.31</td>
<td>6237-2</td>
<td></td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>4.00 (11.43)</td>
<td>9.00 (22.86)</td>
<td>V0127-ND</td>
<td>25.06</td>
<td>25.06</td>
<td>6239-2</td>
<td></td>
</tr>
<tr>
<td><strong>G</strong></td>
<td>4.00 (11.43)</td>
<td>9.00 (22.86)</td>
<td>V0128-ND</td>
<td>18.46</td>
<td>18.46</td>
<td>6239-2</td>
<td></td>
</tr>
<tr>
<td><strong>H</strong></td>
<td>4.00 (11.43)</td>
<td>11.00 (27.94)</td>
<td>V0130-ND</td>
<td>32.50</td>
<td>32.50</td>
<td>6237-2</td>
<td></td>
</tr>
<tr>
<td><strong>I</strong></td>
<td>4.00 (11.43)</td>
<td>11.00 (27.94)</td>
<td>V0131-ND</td>
<td>31.37</td>
<td>31.37</td>
<td>6237-2</td>
<td></td>
</tr>
</tbody>
</table>

---

### Multi Layer Board

IBM PC, XT and AT Expansion Units. Material: Epoxy Glass Composite. Bus specific for edgeboard connection prototyping, while Circboards alternatives to custom designs. Use general purpose Plugboards and PC BOARD PATTERNS circuits.

- **D.C. Buses Only**
- **Around Bare Board**
- **Electrical Contacts Only**
- **3-Hole Solder Pad**
- **Zig-Zag Buses &" Ground Plane**
- **IBM AT/ISA Expansion Units**

---

### PCI Development Boards

For fast development of adapter card to PCI bus.

**P/N V1163-ND Features:**

- Multilayer board contains pad per hole patterns.
- Power and ground accessible throughout the board.
- For use in 5 Volt or 3.3 Volt applications.
- For use with Vector prototype accessories.

---

### PCI Bus Development Boards

<table>
<thead>
<tr>
<th>Description</th>
<th>P/N V1163-ND</th>
<th>Digi-Key Part No.</th>
<th>Pricing (10)</th>
<th>Pricing (25)</th>
<th>Vector Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PCI Bus, PCI DMA</strong></td>
<td>V1163-ND</td>
<td>33.33</td>
<td>332.00</td>
<td>785.00</td>
<td>V1001-ND</td>
</tr>
<tr>
<td><strong>PCI Extender Card</strong></td>
<td>V1165-ND</td>
<td>33.38</td>
<td>317.40</td>
<td>750.50</td>
<td>V1002-ND</td>
</tr>
<tr>
<td><strong>PCI Extender Card</strong></td>
<td>V1166-ND</td>
<td>49.95</td>
<td>460.10</td>
<td>1060.10</td>
<td>V1003-ND</td>
</tr>
<tr>
<td><strong>PCMCIA Adapter Board</strong></td>
<td>V1167-ND</td>
<td>33.38</td>
<td>317.40</td>
<td>750.50</td>
<td>V1001-ND</td>
</tr>
<tr>
<td><strong>PCMCIA Adapter Board</strong></td>
<td>V1168-ND</td>
<td>49.95</td>
<td>460.10</td>
<td>1060.10</td>
<td>V1003-ND</td>
</tr>
<tr>
<td><strong>PCMCIA Adapter Board</strong></td>
<td>V1169-ND</td>
<td>33.38</td>
<td>317.40</td>
<td>750.50</td>
<td>V1002-ND</td>
</tr>
<tr>
<td><strong>PCI Extender Card</strong></td>
<td>V1170-ND</td>
<td>33.38</td>
<td>317.40</td>
<td>750.50</td>
<td>V1002-ND</td>
</tr>
</tbody>
</table>

---

**1-800-344-4539**

218-681-6674 • FAX: 218-681-3380 • www.digkey.com
Circuit Board Accessories

Contacts slip on .025” (.64mm) squared wrap or pins. Contacts are tin plated, and offered in a reel of contacts wired together. “daisy chain” style, to 28 gauge bus insulated wire. Each contact is spaced 5” (127mm) apart. Sold in reels of 50.

Prepunched Insulating Boards

Dimensions - Inch (cm)  
Width x Length  
Digi-Key Part No.  

<table>
<thead>
<tr>
<th>Width</th>
<th>Length</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5 x 6.5</td>
<td>11.43 x 16.51</td>
<td>V1043-ND</td>
</tr>
<tr>
<td>4.5 x 7.17</td>
<td>11.43 x 18.19</td>
<td>V1062-ND</td>
</tr>
<tr>
<td>4.5 x 7.17</td>
<td>11.43 x 18.19</td>
<td>V1007-ND</td>
</tr>
<tr>
<td>4.5 x 7.17</td>
<td>11.43 x 18.19</td>
<td>V1009-ND</td>
</tr>
<tr>
<td>4.5 x 7.17</td>
<td>11.43 x 18.19</td>
<td>V1011-ND</td>
</tr>
<tr>
<td>4.5 x 7.17</td>
<td>11.43 x 18.19</td>
<td>V1012-ND</td>
</tr>
<tr>
<td>4.5 x 7.17</td>
<td>11.43 x 18.19</td>
<td>V1042-ND</td>
</tr>
</tbody>
</table>

Solder Eyetap Type Insulator Material: Phenolic, UL-94V-0 or Glass Filled, dialylic, Phenolic LL-94V-1 or Ryton R10. Wrap Tail Type Insulator Material: Phenolic, UL-94V-0 or Glass Filled, Phenolic LL-94V-1 or Polyval. UL-94V-0 Contact Material: Phenolic bronze QB-790 or Bakelized copper. Contact Rating: 000010” gold over 000050” nickel. Voltage: 500 VAC, Rated Current: 3A. 30 Max V 000010” gold over 000050” thick nickel. 300000000 megohms, max. $500 VDC.

Card Extenders

Current rating: 5A @ 108°F temp. rise. Voltage rating: 200 RMS or 300 VDC. Circuit contacts are gold-nickel plated, 000010” gold over 000050” nickel. Connector contacts: Gold inlay, 00000” thick, on CA725 copper-nickel alloy base. Board epoxy glass composite - 2 oz. coppered. (Ref.) 4422-ND. V13490.

PC Test Points

- Color coded for visibility and quick identification
- Economical choice for PC test point terminations
- Snap-fit mounting provides positive retention for wave soldering
- Wire form loop for safe, non-slip testing
- Space saving, ultra low and low profile designs
- High profile for difficult to reach applications
- Suitable for high density packaging, including .008” (1.57mm) and .093” (2.36mm) or .008” (2.36mm) PC boards
- Practical replacement for wire-wrap posts and turrets
- Secure grip for J hooks, EZ hooks, knobs, grippers, alligator clips, tips or probes
- Plastic base strengthens termination for positive holding power
- Ideal for reliable production testing and vast troubleshooting
Card Racks

Designed in accordance with EIA standard, these 19" (48.26cm) subracks are compatible with Vector prototyping boards. All racks are adjustable in both height and depth and can be used with snap-in, plastic or metal card guides. Available in kit form (CKK) or fully assembled (CCA) all models feature brushed aluminum construction with a full line of prototyping boards, extenders and backplanes available. Card racks include nylon snap-in card guides.

**EIA Backplanes**

<table>
<thead>
<tr>
<th>Description</th>
<th>Width</th>
<th>Length</th>
<th>Plug-board</th>
<th>Digi-Key Part No.</th>
<th>Vector Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 Slot CCK13 Series Backplane</td>
<td>4.35 x 7.00</td>
<td>(11.05 x 17.78)</td>
<td>4610</td>
<td>V1096-ND</td>
<td>190.34 1809.80</td>
</tr>
<tr>
<td>16 Slot CCK13 Series Backplane</td>
<td>4.35 x 13.00</td>
<td>(11.05 x 33.00)</td>
<td>4610</td>
<td>V1097-ND</td>
<td>254.68 2421.50</td>
</tr>
</tbody>
</table>

**Card Rack Accessories**

Accessories for card rack enclosures for customizing your application. Card guides are tapered slides for PCB cards to slide along. Snap-In versions provide easy installation without the need for tools. Screw mount versions (comes with hardware) allow card placement anywhere within 25" (635mm) spacing.

<table>
<thead>
<tr>
<th>Description</th>
<th>Length</th>
<th>Digi-Key Part No.</th>
<th>Vector Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grab Handle with Hardware for Card Racks</td>
<td>5.25&quot; (13.34cm) and 8.75&quot; (22.32cm) height.</td>
<td>V1161-ND</td>
<td>117.33 111.50</td>
</tr>
<tr>
<td>Ejector Handle with Hardware for Cards (4 pc bag)</td>
<td>—</td>
<td>V1162-ND</td>
<td>7.67 73.00</td>
</tr>
</tbody>
</table>

**Card Guides — Plastic Screw Mount**

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Vector Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic Screw Mount (Pkg. of 12)*</td>
<td>V1151-ND</td>
<td>16.99 160.60</td>
</tr>
<tr>
<td>Plastic Screw Mount (Pkg. of 12)*</td>
<td>V1153-ND</td>
<td>17.83 169.50</td>
</tr>
<tr>
<td>Plastic Screw Mount (Pkg. of 12)*</td>
<td>V1156-ND</td>
<td>25.29 240.50</td>
</tr>
<tr>
<td>Plastic Screw Mount (Pkg. of 12)*</td>
<td>V1160-ND</td>
<td>19.66 186.95</td>
</tr>
</tbody>
</table>

**Card Guides — Nylon Snap-In Mount**

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Vector Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nylon Snap-In Mount (Pkg. of 12)*</td>
<td>V1150-ND</td>
<td>11.51 109.50</td>
</tr>
<tr>
<td>Nylon Snap-In Mount (Pkg. of 12)*</td>
<td>V1152-ND</td>
<td>10.16 96.60</td>
</tr>
<tr>
<td>Nylon Snap-In Mount (Pkg. of 12)*</td>
<td>V1155-ND</td>
<td>14.94 142.00</td>
</tr>
<tr>
<td>Nylon Snap-In Mount (Pkg. of 12)*</td>
<td>V1158-ND</td>
<td>12.94 123.10</td>
</tr>
</tbody>
</table>

**Card Guides — Metal Screw Mount**

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Vector Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Screw Mount (Pkg. of 12)*</td>
<td>V1154-ND</td>
<td>23.00 218.70</td>
</tr>
<tr>
<td>Metal Screw Mount (Pkg. of 12)*</td>
<td>V1157-ND</td>
<td>28.49 270.90</td>
</tr>
</tbody>
</table>

**Dimensions**

<table>
<thead>
<tr>
<th>Card Size Range</th>
<th>Side A (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.00-5.00 x 4.5</td>
<td>19.00 x 9.00</td>
</tr>
<tr>
<td>5.50-7.00 x 4.5</td>
<td>19.00 x 9.00</td>
</tr>
<tr>
<td>5.50-7.00 x 4.5</td>
<td>19.00 x 9.00</td>
</tr>
<tr>
<td>5.50-7.00 x 4.5</td>
<td>19.00 x 9.00</td>
</tr>
<tr>
<td>5.50-7.00 x 4.5</td>
<td>19.00 x 9.00</td>
</tr>
<tr>
<td>5.50-7.00 x 4.5</td>
<td>19.00 x 9.00</td>
</tr>
<tr>
<td>5.50-7.00 x 4.5</td>
<td>19.00 x 9.00</td>
</tr>
</tbody>
</table>

**Power Supply**

Available in 2 wattage outputs (100 and 300) and 4 voltage outputs (5V, 3.3V, +12V, and –12V), these cPCI power supplies plug directly into the CompactPCI card rack and connect to the backplane to supply system voltages to all slots on backplane connectors. Supplies are hot swappable and redundant sharing with Overvoltage/Overtemperature/Short circuit protection on all outputs and inputs. Input voltage is 90-264VAC (47Hz to 440Hz).

**CompactPCI® Card Racks**

The newest specification for PCI-based computers is CompactPCI. It is electrically a superset of desktop PCI with a different physical form factor. CompactPCI utilizes the Eurocard form factor popularized by the VME bus. Card racks for CompactPCI Bus come completely assembled with card guides. Plug-in power supply and backplane are ordered separately. Standard 3U and 6U formats are available with 4 or 8 slot card configurations.

**CompactPCI® Backplane**

**CompactPCI® Test Load Boards**

For enclosure and backplane monitoring without any additional probes. Gives test loading for power supply for remote voltage calibration. Mount in card slot and is fully assembled and tested.

**Filter**

Filter: 1, Small Particle: For trapping extremely fine particles. Typical applications color laser printers, color copiers and highly sensitive equipment.

**3M Electronics Vacuum & Accessories**

Vacuum comes complete with Hose, 32" - 10 ft. (81.28cm - 3.05 meters), Wand, Crevice Tool, Crevice Tool Brush, Dusting Brush, Needle Nozzle, 3 Way Swivel. **Options**: Shoulder strap with shoulder pad.

**Specifications**

- Electrical: 115 VAC, 50/60Hz, 5.0 amps.
- Dimensions: Length: 17.80" (45.21cm), Width: 7.75" (19.69cm), Height: 9.25" (23.50cm). Weight: 9 lbs 14 oz. (4.48kg). Motor: 1HP, continuous duty, thermally protected with automatic reset. Conducted RFI filtered (reduces EMI to be below FCC requirements).
Assortment A (20 Pieces) — 9 pieces 2" (50.80mm) long blue, 3 pieces 6" (152.40mm) long red, 2 pieces 9" (228.60mm) long black.

Assortment B (10 Pieces) — 5 pieces 15" (381mm) long red, 5 pieces 15" (381mm) long blue.

Assortment B (10 Pieces) — 9 pieces 2" (50.80mm) long yellow, 6 pieces 4" (101.60mm) long red, 2 pieces 6" (152.40mm) long red, 2 pieces 9" (228.60mm) long red, 2 pieces 12" (304.80mm) long red.

---

**HOYME MANUFACTURING INC. Ultimate Prototyping Tool**

The Electronic Network Designer is a tool for the prototyping of electronic circuits. It is composed of a base matrix of high quality nickel silver connector clips, over which a printed circuit board is aligned. The designer protypes the circuits through the board, using the clips to make the connections until the circuit is tested and ready for soldering. The circuit is soldered before being removed from the unit, and the painstaking process of transposing to a hard wired system is eliminated.

**PRODUCT FEATURES:**

- Compact Functional Design: • UMT can be closed (with the circuit in process) for storage or transport. • All metal chassis construction for durability. • Several separate working areas: two vertical, on horizontal. • Connection strips in rows of six (conventionally five): 3,400 connection points. • 14 vertical bus bars and 8 binding posts. • Accepts banana plug connectors. • Dimensions: 17.00" (x 11.00") x 1.25" (19.69 cm x 27.94 cm x 3.18 cm). Circuit Board: 6.875" (x 8.00") x 0.031" (10.31 cm x 17.37 cm x 0.79 cm). Time Saving: • The ENSO prototype system can save hours in the production of prototypes and short-run or custom circuits.

**INPUT TOOLS:**

- Drill Bits
- Carbide – All carbide bits have 1/8" (3.18 mm) shank

**DRIIL BITS**

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Part No.</th>
<th>Digi-Key Pricing (Inch)</th>
<th>Pricing (Inch)</th>
<th>Injectableor Pin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/16 (1.59mm) Thick Double sided, 1 oz</td>
<td>3 x 4.75 (12.14)</td>
<td>PC50-52-ND</td>
<td>3.92</td>
<td>PC50-52</td>
</tr>
<tr>
<td>3 x 6.35 (16.00)</td>
<td>PC50-53-ND</td>
<td>4.06</td>
<td>PC50-53</td>
<td></td>
</tr>
<tr>
<td>3 x 11.43 (29.03)</td>
<td>PC50-54-ND</td>
<td>9.93</td>
<td>PC50-54</td>
<td></td>
</tr>
<tr>
<td>1 x 3.81 (10.00)</td>
<td>PC50-55-ND</td>
<td>5.23</td>
<td>PC50-55</td>
<td></td>
</tr>
<tr>
<td>1 x 5.08 (12.85)</td>
<td>PC50-56-ND</td>
<td>6.65</td>
<td>PC50-56</td>
<td></td>
</tr>
<tr>
<td>1 x 7.62 (19.35)</td>
<td>PC50-57-ND</td>
<td>7.99</td>
<td>PC50-57</td>
<td></td>
</tr>
<tr>
<td>1 x 10.16 (25.71)</td>
<td>PC50-58-ND</td>
<td>13.00</td>
<td>PC50-58</td>
<td></td>
</tr>
<tr>
<td>1.5 x 1.5 (3.81)</td>
<td>PC50-59-ND</td>
<td>3.33</td>
<td>PC50-59</td>
<td></td>
</tr>
<tr>
<td>1.5 x 2.5 (6.35)</td>
<td>PC50-60-ND</td>
<td>4.06</td>
<td>PC50-60</td>
<td></td>
</tr>
<tr>
<td>1.5 x 3.81 (9.65)</td>
<td>PC50-61-ND</td>
<td>6.02</td>
<td>PC50-61</td>
<td></td>
</tr>
<tr>
<td>1.5 x 5.08 (12.85)</td>
<td>PC50-62-ND</td>
<td>7.99</td>
<td>PC50-62</td>
<td></td>
</tr>
<tr>
<td>1.5 x 7.62 (19.35)</td>
<td>PC50-63-ND</td>
<td>13.00</td>
<td>PC50-63</td>
<td></td>
</tr>
<tr>
<td>1.5 x 10.16 (25.71)</td>
<td>PC50-64-ND</td>
<td>19.35</td>
<td>PC50-64</td>
<td></td>
</tr>
</tbody>
</table>

**CARBIDE**

- All carbide bits have 1/8" (3.18 mm) shank

**1/16 (1.59mm) Thick Double sided, 1 oz**

- Carbide – All carbide bits have 1/8" (3.18 mm) shank

**DRIIL BITS**

<table>
<thead>
<tr>
<th>Diameter (inch)</th>
<th>Part No.</th>
<th>Digi-Key Pricing (inch)</th>
<th>Pricing (inch)</th>
<th>Injectableor Pin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/16 (1.59mm) Thick Double sided, 2 oz</td>
<td>3 x 4.75 (12.14)</td>
<td>PC51-ND</td>
<td>3.92</td>
<td>PC51-ND</td>
</tr>
<tr>
<td>3 x 6.35 (16.00)</td>
<td>PC52-ND</td>
<td>4.06</td>
<td>PC52-ND</td>
<td></td>
</tr>
<tr>
<td>3 x 11.43 (29.03)</td>
<td>PC53-ND</td>
<td>9.93</td>
<td>PC53-ND</td>
<td></td>
</tr>
<tr>
<td>1 x 3.81 (10.00)</td>
<td>PC54-ND</td>
<td>5.23</td>
<td>PC54-ND</td>
<td></td>
</tr>
<tr>
<td>1 x 5.08 (12.85)</td>
<td>PC55-ND</td>
<td>6.65</td>
<td>PC55-ND</td>
<td></td>
</tr>
<tr>
<td>1 x 7.62 (19.35)</td>
<td>PC56-ND</td>
<td>7.99</td>
<td>PC56-ND</td>
<td></td>
</tr>
<tr>
<td>1 x 10.16 (25.71)</td>
<td>PC57-ND</td>
<td>13.00</td>
<td>PC57-ND</td>
<td></td>
</tr>
<tr>
<td>1.5 x 1.5 (3.81)</td>
<td>PC58-ND</td>
<td>3.33</td>
<td>PC58-ND</td>
<td></td>
</tr>
<tr>
<td>1.5 x 2.5 (6.35)</td>
<td>PC59-ND</td>
<td>4.06</td>
<td>PC59-ND</td>
<td></td>
</tr>
<tr>
<td>1.5 x 3.81 (9.65)</td>
<td>PC60-ND</td>
<td>6.02</td>
<td>PC60-ND</td>
<td></td>
</tr>
<tr>
<td>1.5 x 5.08 (12.85)</td>
<td>PC61-ND</td>
<td>7.99</td>
<td>PC61-ND</td>
<td></td>
</tr>
<tr>
<td>1.5 x 7.62 (19.35)</td>
<td>PC62-ND</td>
<td>13.00</td>
<td>PC62-ND</td>
<td></td>
</tr>
<tr>
<td>1.5 x 10.16 (25.71)</td>
<td>PC63-ND</td>
<td>19.35</td>
<td>PC63-ND</td>
<td></td>
</tr>
</tbody>
</table>

**3M Patch Cords and Accessories**

Compatible with 3M board strips, terminal strips, super strips, distribution strips, test clips, miniature 8-pin connectors and .64mm square wrap posts.

- Ideal for breadboarding and troubleshooting. • Incorporate #26 AWG stranded wire with PVC insulation. • Rugged, integral strain relief. • Choices of two pin sizes (.48mm and .76mm), and two socket sizes (.48mm x .71mm and .71mm x .89mm). E-Z Hook terminations.
**Brochure for PCBoards Power Etching System**

**SuperTools and SuperTools Plus for Windows™**

**SuperTools**
- Schematic Capture: SuperCad schematic program and autorouter included
- Visually Cued Command Entry: Full-drawn mechanical boxes, toolbar buttons
- Draw-to-Print and Zoom Operations: Display entire layout, zoom any portion to normal size
- Object Entity Command: Entries of traces, pads, rectangles, ellipses, text
- Graphics: Edit Commands: Copy, move, rotate, stretch, erase, single and group edits
- Advanced Editing Features: Rubberbanding, snap modes, auto text alignment
- Routing: Point to point and incremental
- Board Layers: Single and double-sided boards with solder mask and silk screen
- Board Size/Resolution: 8" x 16" (20.32cm x 40.64cm) boards, specify dimensions/traces of one mil/0.001" increments
- Layout: Flexible in 1000 schematic component library parts with parts editor/build utility

**SuperTools Plus for Windows™**
- Includes all the features of the PCBoards SuperTools with the following additions:
  - SuperCad Schematic Plus: Schematic layout/capture, netlist conversion, auto-wire and auto-placement utilities
  - Built-In Auto-router: Point to point, batch routing (1 to 16 layers)
  - Boards-High Resolution: 32" x 32" (81.28cm x 81.28cm) boards, specify dimensions/traces of one mil/0.001" increments
- Library: 5000 schematic component library parts with parts editor/build utility

**SuperTools Plus for Windows™ 16-Bit Version**
- System Requirements: Microsoft® Windows®: Version 3.1 or greater, Windows 95, 98, or NT

**SuperTools Plus for Windows™ 32-Bit Version**
- System Requirements: Windows™: Version 3.1 or greater, Windows 95, 98, or NT

**NEW! SuperTools and SuperTools Plus for Windows™**

**NEW! MentalMAX Plus**

**Description**
- **SuperTools Plus**: 32-bit version
- **SuperSIM**: A digital simulation program which works directly with SuperTools Plus. Includes libraries of TTL and CMOS part models. Up to 500 logic gates.
- **MentalSIM**: An analog simulation program which works directly with the SuperTools Plus package and includes libraries of TTL and CMOS part models. Up to 500 analog gates.

**System Requirements:** Windows™ 95, 98, or NT

**PCBD5-ND**
- Price: $469.00

**PCBD6-ND**
- Price: $649.00

**PCBD9-ND**
- Price: $699.00

**PCBD10-ND**
- Price: $849.00

**NEW! MentalMAX Plus 32-Bit Version**

**Description**
- **SuperTools Plus**: 32-bit version
- **SuperSIM**: A digital simulation program which works directly with SuperTools Plus. Includes libraries of TTL and CMOS part models. Up to 500 logic gates.
- **MentalSIM**: An analog simulation program which works directly with the SuperTools Plus package and includes libraries of TTL and CMOS part models. Up to 500 analog gates.

**System Requirements:** Windows™ 95, 98, or NT

**PCBD5-ND**
- Price: $1099.00

**NEW! SuperTools and SuperTools Plus for Windows™**

**Description**
- **SuperTools**: 32-bit version
- **SuperSIM**: A digital simulation program which works directly with SuperTools Plus. Includes libraries of TTL and CMOS part models. Up to 500 logic gates.

**System Requirements:** Windows™ 95, 98, or NT

**PCBD5-ND**
- Price: $469.00

**PCBD6-ND**
- Price: $649.00

**PCBD9-ND**
- Price: $699.00

**PCBD10-ND**
- Price: $849.00

**NEW! MentalMAX Plus 32-Bit Version**

**Description**
- **SuperTools Plus**: 32-bit version
- **SuperSIM**: A digital simulation program which works directly with SuperTools Plus. Includes libraries of TTL and CMOS part models. Up to 500 logic gates.

**System Requirements:** Windows™ 95, 98, or NT

**PCBD5-ND**
- Price: $1099.00

**NEW! SuperTools and SuperTools Plus for Windows™**

**Description**
- **SuperTools**: 32-bit version
- **SuperSIM**: A digital simulation program which works directly with SuperTools Plus. Includes libraries of TTL and CMOS part models. Up to 500 logic gates.

**System Requirements:** Windows™ 95, 98, or NT

**PCBD5-ND**
- Price: $469.00

**PCBD6-ND**
- Price: $649.00

**PCBD9-ND**
- Price: $699.00

**PCBD10-ND**
- Price: $849.00
SURFBOARDS® by

The Surfboard Concept: The concept behind SURFBOARDS is elegantly simple. Many models incorporate built-in pin-out guidelines that provide the ability to accommodate a wide variety of component mounting footprints. SURFBOARDS models include SOT-23s and PLCCs, providing standard mounting footprints for the IC and depending on the model chosen, may accommodate a prototyping area for additional components or provide a direct pin-out. Most SURFBOARDS® models feature SIP (single-in-line) pins that make prototyping and interfacing with other circuits easy.

Specifications: - Material: Cl to FR-4 (Fiberglass laminate), 1oz. Cu., .032” (816µm), Thickness ±0.005” (±13µm) - Finish: Level 60/40 Solder Alloy - .1” (2.54mm) center holes. On applicable models, soldered on .125” (3.175mm) centers. SURFBOARDS® can be hand soldered and are compatible with most industrial soldering processes. (Suggested soldering and assembly guidelines included).

6000 Series for Discrete Devices — .1” (2.54mm) Pin Spacing

For building:
- Resistor Networks
- Capacitor Networks
- R-C Networks
- Diodo Arrays
- Transistor Arrays
- SMD Sub-Assemblies

The 33000 Series of Surfboards® are application-specific adapters that convert surface mount component footprints to Single-In-Line (SIP) format. The boards feature pre-installed pins on .100” (2.54mm) centers making them compatible with conventional breadboards, solderless breadboards, and sockets. The SIP format provides ease of signal probing as well as higher densities when prototyping. Models are available to accept a wide range of surface mount semiconductors and integrated circuits.

Models 33113 and 33623 feature two SIP pins for each pin header. Current models 33213 features large soldering pads as connection points and SIP pins for measuring purposes. Boards are .031” ± .005” (790µm ±13µm) thick FR-4 and feature solder-coated 1-oz. Circuit Foils that can be hand-soldered or soldered by most conventional processes. SIP pins are soldered in place on .100” (2.54mm) centers. All boards feature solder mask to limit flow of solder to pad area and aid assembly. Just add parts and plug in.

Sheathes

The universal circuit patterns allow for the mounting of 0603, 0805, 1206, and mini-mold packages as well as a wide variety of terminal devices.

9000 Series for ICs

Build • prototype circuits • Evaluate ICs easily • Build circuit upgrades • Adapt SMD to thru-hole

The Breadboarding Medium for Surface Mount

Package Outline — Inch (mm)

- Accept Wide Range of Surface Mount Discrete Semiconductors and ICs
- Provide Convenient Medium for Prototyping, Test, and Development

Application-Specific Adapters
- Accept SMD
- Accept Wide Range of Surface Mount Small-Signal Discrete Components and ICs
- Provide Convenient Medium for Prototyping, Test, and Development

For more information, contact Digi-Key Corporation at 1-800-344-4539.
**Silt-N-Wrap Tools & Wire**

No Pre-cutting or Pre-stripping. Fast, reliable, safe, slip on wire. Silt and opens insulation exposing bare wire before wire is wrapped on post. Forming actual wire wrapped gas tight joint as tool is rotated.

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Str-Wrap Tool #28, includes bit 50, (15.24mm) roll of green wire</td>
<td>V1081-ND</td>
<td>140.03</td>
</tr>
<tr>
<td>Replacement Wirewrap Bit #42</td>
<td>V1082-ND</td>
<td>130.76</td>
</tr>
</tbody>
</table>

**Hobby Wrap Hand Tools**

Wire-wrapping, stripping, un-wrapping tool for AWG #20 .025 (0.63mm) Square Post

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>K104-ND Regular Wrap</td>
<td>$21.00</td>
<td></td>
</tr>
<tr>
<td>K105-ND Modified Wrap</td>
<td>$22.00</td>
<td></td>
</tr>
</tbody>
</table>

**Hobby Wrap Battery Tool**

For .025 (0.63mm) sq. post MODIFIED wrap, positive indexing, anti-overwinding

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Wrap Tool (BW2630)</td>
<td>K108-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Bit For #26</td>
<td>K109-ND</td>
<td>$22.00</td>
</tr>
</tbody>
</table>

**Wire Wrap Tools & Wire**

- **Manual Str-Wrap Tool #28**, includes bit 50, (15.24mm) roll of green wire
- **Replacement Wirewrap Bit #42**

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire Wrap Gun &amp; Bits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OK-20 WR Gun: The OK-20’s ergonomic design features such as two-finger trigger control, lightweight ABS housing and extended handle to reduce operator fatigue. The high torque gear drive and high speed will wrap 18-30 AWG wire. The ideal tool for prototyping up thru high volume applications. Available in 115v or 230v versions. Black/Orange version prevents over-wrapping.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cut/Strip/Wrap Bit: Make connections directly from cable, wire harness or relay. Cuts off excess wire, strips insulation and wraps correct number of turns automatically.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Wire Wrap Gun & Bits**

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire Wrap Gun 115v Ergonomic handle</td>
<td>K105-ND</td>
<td>$205.00</td>
</tr>
<tr>
<td>Wire Wrap Gun 115v Backforce</td>
<td>K106-ND</td>
<td>$215.00</td>
</tr>
<tr>
<td>Wire Wrap Gun 230v Ergonomic Handle</td>
<td>K107-ND</td>
<td>$220.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire Wrap Bit 30 AWG</td>
<td>K102-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Wire Wrap Bit 28 AWG</td>
<td>K103-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Wire Wrap Bit 26 AWG</td>
<td>K104-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Wire Wrap Bit 24 AWG</td>
<td>K105-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Wire Wrap Bit 20 AWG</td>
<td>K106-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Wire Wrap Bit 18 AWG</td>
<td>K107-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Wire Wrap Bit 16 AWG</td>
<td>K108-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Wire Wrap Bit 14 AWG</td>
<td>K109-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Wire Wrap Bit 12 AWG</td>
<td>K110-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Wire Wrap Bit 10 AWG</td>
<td>K111-ND</td>
<td>$32.57</td>
</tr>
</tbody>
</table>

**Battery Powered and Manual Wire Wrap Tools**

Model BW-520 is a heavy duty battery operated wire wrapping tool, also available in a reversible model, for wrapping and un-wrapping operations. Useful for field service work as well as small production jobs. Available with backforce to prevent over-wrapping. Batteries Included. Uses bits and sleeves above.

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy Duty Battery Wrap Gun (Includes batteries)</td>
<td>K380-ND</td>
<td>$205.00</td>
</tr>
<tr>
<td>Battery Wrap Gun/Unwrap Gun (Includes batteries)</td>
<td>K381-ND</td>
<td>$215.00</td>
</tr>
<tr>
<td>Battery Wrap Gun w/Backforce (Includes batteries)</td>
<td>K382-ND</td>
<td>$215.00</td>
</tr>
<tr>
<td>Manual Wrap Tool Lexan for use w/bits and sleeves above</td>
<td>K383-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Internal Wire Wrap Tool Aluminum for use w/bits and sleeves above</td>
<td>K384-ND</td>
<td>$32.57</td>
</tr>
<tr>
<td>Power Unwrap Bit/Sleeve for 26-28 AWG</td>
<td>K385-ND</td>
<td>$45.00</td>
</tr>
</tbody>
</table>

**Tri-Color Dispenser**

- 3 Rolls of Wire in one dispenser
- 3 Colors: White, Red, 50 feet (15.24 meters) of each color
- AWG 30 (0.25 mm) KYNAR insulated Wire.
- Built-in Plunger cuts to desired length.
- Built-in Stripper strips 1” (25.4mm) of insulation.
- Reffillable (for refills, see below).

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tri-Color Dispenser</td>
<td>K386-ND</td>
<td>$14.95</td>
</tr>
</tbody>
</table>

**Wire Wrap Gun w/ Backforce (includes batteries)**

- Built-in Plunger cuts to desired length.
- Built-in Stripper strips 1” (25.4mm) of insulation.
- Reffillable (for refills, see below).

**Single Wire Dispenser**

- With 50L, (1.24 meter) roll of AWG 30 KYNAR wire-wrapping wire.
- Built-in Stripper strips 1” (25.4mm) of insulation.
- Reffillable (for refills, see below).

**Surface Mount - Prototype Tools**

**Fine Flush Cutter suitable for up to a maximum of 20 AWG copper wire. Size: 4.5” (11.43cm)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>K404-ND</td>
<td>$21.95</td>
<td></td>
</tr>
</tbody>
</table>

**Single Wire Dispenser**

- **50° Angle Flush Cutter enabling access in most difficult areas. Size: 4.5” (11.43cm)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>K405-ND</td>
<td>$27.95</td>
<td></td>
</tr>
</tbody>
</table>

**Micro Noz Plier with finely ground jaws, ideal for handling small components.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>K407-ND</td>
<td>$21.95</td>
<td></td>
</tr>
</tbody>
</table>

**Nano Plier**

- For 45° angle wires, enabling easy reach into difficult work areas.

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>K408-ND</td>
<td>$25.95</td>
<td></td>
</tr>
</tbody>
</table>
**Long Nose Pliers**

- For reaching into confined spaces. Nose bent approximately 60°. Smooth jaws. 5" (127.00mm).
- Has finely scored jaws. Size: 5" (127.00mm).
- Has scoring on jaws. Size: 5" (127.00mm).

**Needle Nose Pliers**

- Has scoring on jaws. Size: 5" (127.00mm).
- Similar to long nose pliers but with 7/32" (5.56mm) cutter near joint. Size: 5" (127.00mm).

**Duck Bill Pliers**

- Flat nose duck bill pliers with smooth jaws. Size: 5" (127.00mm).

**Long Nose Side Cutter**

- Similar to long nose pliers but with 7/32" (5.56mm) cutter near joint. Size: 5" (127.00mm).

---

**Xcelite® Cordless Rechargeable Screwdriver Kit**

- Kit contains: Driver - Battery - Charger
- 99PA adapter - 1 slotted, 2 Phillips bits

**Features:**
- 3.6V power - 2 speeds - 1 hour full recharge
- 8 stage torque adjustable - Easily converts from in line to pistol form - Replaceable battery pack - 99PA adapter enables use with all Xcelite Series 99 blades

**XP18-ND** Replacement Battery $112.20
**XP18-ND** Replacement Battery $24.23

**Xcelite® COPALOY® Electronic Pliers**

- All Copaloy pliers are furnished with coil spring and ESD safe cushioned grip handles.
- The copper alloy rivet distinguishes the Copaloy® line of miniature electronic pliers. Like a precision bearing, Copaloy® eliminates steel-against-steel friction in a permanent, corrosion-proof joint that will wear longer and smoother and maintain perfect alignment of tips and cutting edges. Each plier is manufactured from extreme toughness and rigidity. Cutting edges are electrochemically hardened. Machining is to close tolerances, with individual finishing and testing for exact fit of jaws. All have polished heads with gun metal handles.

---

**Full Flushed Relieved Tapered Cutter**

- Diagonal flush cutter, ground down on back side for reaching into confined places. Size: 4" (102.00mm).
- Diagonal cutter with flush ground cutting edges. Size: 4" (102.00mm).

**Semi-Flush Diagonal Cutter**

- Diagonal flush cutter, ground down on back side for reaching into confined places. Size: 4" (102.00mm).

**Angled Flush Cutter**

- Cutting blade is flush ground and angled at 20°. Cutting plier is designed to give long wear for cutting soft wire. Size: 4" (102.00mm).

**Long Nose Pliers**

- Has finely scored jaws. Size: 5" (127.00mm).
- Has scoring on jaws. Size: 5" (127.00mm).

---

**Precision Electronic Screwdriver Set**

- Chrome-molybdenum vanadium steel blades.
- Fast-turning swivel caps with cavity for precise centering.
- Precision tolerance black tips.
- No-roll handle design.

**EREM® Tweezers**

- Straight Tapered Tip Tweezers
  - EROP 4.5" (114.30mm). Straight, round, tapered tip tweezers. Provide larger, flat gripping surface for handling a variety of small components.
  - EROP2-SA-ND $7.34
- Straight Precision Tip Tweezers
  - EROP 4.25" (107.95mm). Straight Point Tweezers. For general use.
  - EROP3-SA-ND $7.40
- Curved Precision Tip Tweezers
  - EROP 4.5" (114.30mm). Curved precision tip tweezers improve visibility when used under magnification.
  - EROP7-SA-ND $7.40
- Straight Fine Tip Tweezers
  - EROP 5" (127.00mm). General use straight point tweezers with hardened tips.
  - EROPA-SA-ND $7.34
- Angled Cutting Tip Tweezers
  - EREM 4.5" (114.30mm). Angled cutting tweezers. Tempered carbon steel, hard but low rust resistance.
  - 15A-GW-ND $50.58
- Straight Soft Carbon Tip Tweezers
  - EREM 5" (127.00mm). 304/305 stainless steel. Soft carbon tipped handling tweezers. Soft tips minimize scratching or nicking of fragile wires and parts. Temperature range is 250° to 300°F (121° to 149°C).
  - 249-SA-ND $52.84

**“N” Series Diagonal Cutters**

- EREM - Magic Springs
  - Superior to Leaf Springs - Invisible, internal EREM Magic springs provide uniform, constant tension and ultimate performance. Linear closing and opening force Guaranteed for over 1 million openings.
  - High Precision Inter-Lock Screw Joint System
  - Surfaces between the two halves are machine-faceted to provide smooth, wobble free operation with no blade overlap. Tested for over 1 million operations.

---

**Crescent ToolZall Pro Multi-Purpose Tool**

- Tools included in the ToolZall Pro:
  - Needle-Nose/Regular Pliers
  - Wire Cutter - 2 Flat Head Screwdrivers - Metal/Wood File
  - Phillips Screwdriver - Drop Point Blade - Serrated Sheepfoot Blade - Ballistic Sheath - Metric/English Ruler (measures up to 8’8”/2.6m) - Lanyard Ring
  - Can/Bottle Opener. Comes with its own carrying sheath.

**Tools included in the ToolZall Pro:**

- Needle-Nose/Regular Pliers
- Wire Cutter - 2 Flat Head Screwdrivers - Metal/Wood File
- Phillips Screwdriver - Drop Point Blade - Serrated Sheepfoot Blade - Ballistic Sheath - Metric/English Ruler (measures up to 8’8”/2.6m) - Lanyard Ring
- Can/Bottle Opener. Comes with its own carrying sheath.
Spartan Standard:
- High carbon, alloy forged American steel—for long tool life.
- Alloy steel rivets—for smooth action.
- Machined and lapped joints—for better jaw alignment.
- Polished finish—for cleanliness and rust prevention.
- Double stainless steel leaf spring—for quick action.
- Soft touch, soft plastic grips—to minimize ESD & CTS.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Part No.</th>
<th>Each</th>
<th>Price</th>
<th>Mfg. Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C1101-ND</td>
<td></td>
<td>21.50</td>
<td>84.00</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>C1102-ND</td>
<td></td>
<td>25.00</td>
<td>87.00</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>C1103-ND</td>
<td></td>
<td>29.00</td>
<td>93.00</td>
<td></td>
</tr>
</tbody>
</table>

Super Ergonomic:
- Swedish American high chromium, alloy forged steel—for maximum tool life.
- Electronic induction hardening—for maximum cutter life.
- Hard alloy self-lubricating bearings—for perfect jaw alignment.
- Precision machined and lapped joints—for perfect jaw alignment.
- Beautiful black anti-glare finish—to minimize visual fatigue.
- Soft touch, soft plastic grips—to minimize ESD & CTS.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Part No.</th>
<th>Each</th>
<th>Price</th>
<th>Mfg. Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10311-ND</td>
<td></td>
<td>21.00</td>
<td>324</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>10312-ND</td>
<td></td>
<td>23.00</td>
<td>325</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>10313-ND</td>
<td></td>
<td>26.00</td>
<td>311</td>
<td></td>
</tr>
</tbody>
</table>

Tools Kits

Beginners Electronic Tool Kit
10 hand tools, cutters, screwdrivers and flashlight all in a blue canvas zippered case. 12.5" x 10.5" x 2" (317.50mm x 266.70mm x 50.80mm)
245-1000-ND (Basic Kit) ........................................ $80.00
245-1001-ND (With Soldering Iron) ................. $99.00
245-1002-ND (With Soldering Iron and Multimeter) .................. $199.00

Basic Technicians Tool Kit
Includes all necessary tools for soldering, desoldering and making typical adjustments. Tools included are alignment tools, nutdrivers, screwdrivers, cutters and pliers in a canvas case. 12.5" x 10.5" x 2" (317.50mm x 266.70mm x 50.80mm)
245-1003-ND (Basic Kit) ........................................ $395.00
245-1004-ND (With Soldering Iron) ................. $499.00
245-1005-ND (With Soldering Iron and Multimeter) .................. $699.00

Customer Service Tool Kit
A canvas, double-sided zipper tool Kit. Tools and equipment on one side, opposite side has document pouch 9" x 11" (228.60mm x 279.40mm) and various size small pockets. Tools include pliers, screwdrivers, cutters, nutdrivers, flashlight and ESD wrist strap (items to be ordered separately)
245-1006-ND (With Soldering Iron) ................. $175.00
245-1007-ND (With Soldering Iron and Multimeter) .................. $299.00

Complete Service Technicians Tool Kit
71 tools in an ABS-injected molded case. Tools included are slot and phillips screwdrivers, wire strippers, crimp tool, flashlight, allen hex drivers, cutters, pliers, scissors and knife. All tools have manufacturers lifetime warranty. 17.5" x 12.5" x 4" (444.50mm x 317.50mm x 127.00mm)
245-1008-ND (Basic Kit) ........................................ $775.00
245-1009-ND (With Soldering Iron) ................. $899.00
245-1010-ND (With Soldering Iron and Multimeter) .................. $1,199.00

Deluxe Technicians Tool Kit
Heavy duty polyethylene wing case with foam inserts. Kit contains both metric and standard size nutdrivers, combination wrenches, torque wrenches, cutters, wrenches, screwdrivers, cutters and pliers in a canvas case. 12.5" x 10.5" x 2" (317.50mm x 266.70mm x 50.80mm)
245-1011-ND (Basic Kit) ........................................ $799.00
245-1012-ND (With Soldering Iron) ................. $999.00
245-1013-ND (With Soldering Iron and Multimeter) .................. $1,399.00

For complete tool listing for each kit, call 1-800-DIGI-KEY
**Fig. Description Part No. Each**

1. Universal Wire Holder for 366 & 376 jaws ..................................... 358PV-ND 3.59
2. Magnetic Base - Adapts to 201, 300 & 305 bases ............................. 335PV-ND 21.99
3. Solder Station - Solder iron holder, wire holder & 2 slit sponges, can be used for left or right hand use ............................................. 312PV-ND 23.99
4. Tray Base Mount - 8 1/2” (215.90mm) dia., base mount only ................. 312PV-ND 19.99
5. Vacuum Base .................................................................. 380PV-ND 31.99
6. Circuit Board Holder - 6” (152.40mm) arms, extends to 12” .............................. 350PV-ND 74.99
7. Wide Opening-Self Centering Head - 1 3/4” (44.45mm) wide, opens to 2” (50.8mm) ........ 324PV-ND 76.99
8. Standard Head - 2 1/2” (63.50mm) wide, opens to 2 1/4” (57.15mm) ........ 303PV-ND 23.99
9. Circuit-Board Holder - 6” (152.40mm) arms, extends to 12” .............................. 350PV-ND 74.99
10. Wide Opening-Self Centering Panavise Work Station (376 head/300 base/312 tray base mount) ................................................ 350PV-ND 74.99
11. Standard Female IDC Socket Base Plate ................................ 510PV-ND 26.99
13. Hand Press IDC Conversion Kit .................................... 506PV-ND 90.00
16. Standard Female IDC Socket Base Plate ........................... 510PV-ND 26.99
17. Hand Press IDC Conversion Kit .................................... 506PV-ND 90.00

---

**Fig. Description**

- **Fig. 1**: Standard Electronic Work Center - Solder wire & soldering station not included...
- **Fig. 2**: Standard Panavise Station (300 head/300 base).
- **Fig. 3**: Wide Opening Panavise Station (366 head/300 base).
- **Fig. 4**: Wide Opening-Self Centering Panavise Work Station (376 head/300 base/312 tray base mount).
- **Fig. 5**: Standard Head - 2 1/2” (63.50mm) wide, opens to 2 1/4” (57.15mm).
- **Fig. 6**: Wide Opening Head - 1 3/4” (44.45mm) wide, opens to 6” (152.40mm).
- **Fig. 7**: Wide Opening-Self Centering Head - 1 3/4” (44.45mm) wide, opens to 6” (152.40mm).
- **Fig. 8**: Panavise Junior Universal Vise.
- **Fig. 9**: Circuit Board Holder - 6” (152.40mm) arms, extends to 12” (304.80mm) wide.
- **Fig. 10**: Standard Base 3 3/4” (95.25mm) high.
- **Fig. 11**: Low Profile Base - Only 2 1/2” (63.50mm) high.
- **Fig. 12**: Vacuum Base.
- **Fig. 13**: Tray Base Mount - 8 1/2” (215.90mm) dia., base mount only.
- **Fig. 14**: Weighted Base Mount.
- **Fig. 15**: Solder Station - Solder iron holder, wire holder & 2 slit sponges, can be used for left or right hand use.
- **Fig. 16**: Magnetic Base - Adapts to 301, 300 & 305 bases.
- **Fig. 17**: Universal Wire-Holder for 366 & 376 jaws (sold separately).

---

**Fig. Description**

- **Fig. 1**: Elastic Band Wrist Strap
- **Fig. 2**: Spandex Metal Band Wrist Strap
- **Fig. 3**: Elastic Band Wrist Strap
- **Fig. 4**: Spandex Metal Band Wrist Strap

---

**Static Control Products**

**EMI Shielding Bags - Moisture Vapor Barrier**

This bag combines the properties of MOISTURE-VAPOR-BARRIER with EMI-RFI-ESD shielding. Manufactured from a Type 1 Class N652-260M film which is qualified to MIL-B-81705C.

<table>
<thead>
<tr>
<th>Size [Inch (cm)]</th>
<th>Digi-Key Part No.</th>
<th>Pricing</th>
<th>Charleswater Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 x 8 [12.70 x 20.32]</td>
<td>10385-ND</td>
<td>$6.79</td>
<td>13806</td>
</tr>
<tr>
<td>6 x 10 [15.24 x 25.40]</td>
<td>10386-ND</td>
<td>$6.65</td>
<td>13807</td>
</tr>
<tr>
<td>8 x 10 [20.32 x 25.40]</td>
<td>10387-ND</td>
<td>$8.19</td>
<td>13808</td>
</tr>
<tr>
<td>10 x 12 [25.40 x 30.48]</td>
<td>10388-ND</td>
<td>$8.88</td>
<td>13809</td>
</tr>
<tr>
<td>12 x 16 [30.48 x 40.64]</td>
<td>10389-ND</td>
<td>$13.84</td>
<td>13810</td>
</tr>
<tr>
<td>16 x 24 [45.72 x 60.96]</td>
<td>10390-ND</td>
<td>$57.49</td>
<td>13811</td>
</tr>
</tbody>
</table>

**BenchTop Grounding Mats**

ESD Grounding Mats for use along benches and shelving. These 24" (60.96cm) wide by 40" (12.2 meters) long bench mats are reversible single layer vinyl and can be easily cut to dimension — 100' (2.54m) thick. Their durability and general purpose construction make them ideal for benches, shelving and food mats.

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Pricing</th>
<th>Charleswater Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue, Lightly Textured ..................................</td>
<td>16-1009-ND</td>
<td>$38.98</td>
<td>16350</td>
</tr>
<tr>
<td>Grey, Lightly Textured ..................................</td>
<td>16-1010-ND</td>
<td>$38.98</td>
<td>16352</td>
</tr>
<tr>
<td>Green, Lightly Textured ..................................</td>
<td>16-1011-ND</td>
<td>$38.98</td>
<td>16353</td>
</tr>
</tbody>
</table>

**Adjustable Wrist Straps**

- Basic wrist straps have silver impregnated nylon knit inside with a soft lightweight fabric, allowing softness, comfort and flexibility. May be fitted to any size.
- Speidel wrist straps are Twist-O-Flex metal wrist straps made of nonallergenic stainless steel for reducing reactions and providing long service life.

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Pricing</th>
<th>Charleswater Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>With 6’ (1.8M) Coiled Cord (black)</td>
<td>16-1006-ND</td>
<td>$24.65</td>
<td>14905</td>
</tr>
<tr>
<td>With 10’ (3.0M) Coiled Cord (black)</td>
<td>16-1007-ND</td>
<td>$25.98</td>
<td>14922</td>
</tr>
<tr>
<td>Strap Only (extra large, no cord)</td>
<td>16-1008-ND</td>
<td>$17.94</td>
<td>14955</td>
</tr>
</tbody>
</table>

**Static Label for Packaging**

Static Attention labels used for sealing Shielding Bags and marking ESD Containers. Color: Yellow/Black.

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Pricing</th>
<th>Mfg. Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4” x 4” (10.16 cm x 10.16 cm)</td>
<td>16-1002-ND</td>
<td>$25.83</td>
<td>12914</td>
</tr>
<tr>
<td>6” x 6” (15.24 cm x 15.24 cm)</td>
<td>16-1003-ND</td>
<td>$28.70</td>
<td>12915</td>
</tr>
<tr>
<td>8” x 8” (20.32 cm x 20.32 cm)</td>
<td>16-1004-ND</td>
<td>$31.53</td>
<td>12916</td>
</tr>
</tbody>
</table>

**Field Service Kits:**

Field service kits provide a static safe workstation for the field technician during service calls. The wrist strap provides an effective and safe means of draining static charges from personnel. The grounded vinyl mat provides a static safe work surface.

**Field Service Pocket Kit:**

- Multi-layer red vinyl. .018” (44mm) thick. Size: 15” x 20” (38.1cm x 50.8cm) with one pocket 4.5” x 6.25” (11.43cm x 13.34cm). RTG = 10^9 - 10^10 ohms. This kit is designed to be folded to fit into a shirt or pants pocket. The kit includes one ground snap, adjustable wrist strap and common point ground cord.

**ESD Awareness Guide - Booklet:**

An introduction to ESD. This booklet uses easy-to-understand language and drawings to describe the causes of static electricity and the importance of an ESD program. Ideal for training personnel who handle static sensitive components.

**ESD Guidelines For Employees - Video:**

- 12-minute training session which teaches employees and equipment operators the causes of static electricity and describes how to prevent static in their own work environment.

- An overview of various ESD control techniques and products available from Charleswater is provided.

**Chemtronics ESD Hand Lotion**

Non-contaminating hand lotion for electronics. Contains no silicon. Non-greasy formula with a fresh natural fragrance in an 8 oz. (24 liter) pump. Minimizes potential for static damage and build-up. Won't affect the solderability of components or PCBs.

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Pricing</th>
<th>Chemtronics Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 oz. (0.24 liter) pump</td>
<td>16085-ND</td>
<td>$4.36</td>
<td>CB659</td>
</tr>
</tbody>
</table>
3M Static Control Products

Reusable Transparent Static-Shielding Bags

(2100 Series Metal-Out)

3M 2100 bags are produced with a proprietary "metal-out" construction in the shielding layer to create a thin, mirror-like surface. A thin abrasion-resistant coating protects this metal surface from scratching, but still permits measurement of electrical continuity with common voltmeters for easy verification of shielding performance prior to use.

Economy Static-Shielding Bags

(1900 Series Metal-In)

Use these more economical Static-Shielding Bags for less demanding applications where metal shielding and metallic conductive surface are not a primary consideration. The metal-in aluminum vapor coating is on a thinner 0.48 mil polyester as opposed to the more rigid 0.625 mil polyester used in the 1900 Series.

Economy ZipBag Static-Shielding Bags

(1910 Series Metal-In)

The 1910 features a dual track seal for easy opening and closing.

---

### Velostat™ Pin Insertion Grade Foam

- **Density**
  - Brown, 3 Layer Construction: 259.01 g/l
  - Gray, 3 Layer Construction: 259.01 g/l
  - White, 3 Layer Construction: 259.01 g/l

- **Dimensions**
  - 3.1 mil, 1910 Series Metal-In Shielding ZipBags
  - 1/4 (6.35), 12 x 12 (30.48 x 30.48)
  - 1/2 (12.70), 12 x 12 (30.48 x 30.48)

- **Applications**
  - Cushioning foam
  - Pin insertion application with sturdier device leads

---

### Velostat™ Table Mat

- **Material**
  - Table Mat: 0.15 in (1.5mm) thick, 2 ft. x 4 ft. (610mm x 1219mm)
  - Wrist Mat: 0.15 in (1.5mm) thick, 10 in. (30.48 cm) x 15 in. (38.10 cm)

- **Components**
  - Table Mat: Kit includes two different types of static control mats
  - Wrist Mat: Kit includes two different types of static control mats

- **Requirements**
  - 6 volts (4 AA cells)
  - Resistance is within acceptable ranges

- **Power Supply**
  - Makes it easy to test a wrist strap frequently and regularly

- **Wrist Strap Tester**
  - Tests the connection of the wrist strap to the grounding system

---

### Charge-Guard™ Disposable Wrist Strap

- **Characteristics**
  - Low profile, lightweight design
  - Easy to take and use

- **Applications**
  - Disposable wrist strap
  - Provides cost-effective and reliable static protection

---

### Charge-Guard™ Series Adjustable Wrist Strap

- **Characteristics**
  - Adjustable strap
  - Fits any size wrist

- **Applications**
  - Adjustable strap
  - Provides cost-effective and reliable static protection

---

### Charge-Guard™ Wrist Strap Tester

- **Characteristics**
  - Tests the connection of the wrist strap to the grounding system

- **Applications**
  - Tests the connection of the wrist strap to the grounding system

---

### Field Service Kit

- **Characteristics**
  - Static dissipative Field Service Kit
  - Includes:
    - Static Dissipative Work Surface with Pocket
    - Conductive Gloves
    - Conductive Mat

- **Applications**
  - Static dissipative Field Service Kit
  - Provides cost-effective and reliable static protection
The WRS3000S combines all of the tools needed to cover most through hole and SMT repair or rework applications. The soldering tool is powered by a 4700mA, featuring 54 watts of power to cover even the most difficult multi-layered applications. The desoldering tool is the DS58. This tool features a vacuum design and 60 watts of power. Finally, the HIP Hot Air tool features a static-free air stream that is heated to 110 watts of power. A full complement of nozzles are available for fine solder reflow or removing PLCC packages. The system is completely ESD safe, L.L. Approved and meets the MIL-Spec.

Features: • Self-contained • Closed Loop Controlled handpiece • Digital Display • Microprocessor Control for the ultimate in accuracy • Lock-out Button • Temperature Set-back • Separate control of air flow rate, time and temperature • Three independently controlled channels • Bare Resistor Cots • PIC degree selector • ESD Safe • Meets UL Requirements • A range of tips for rework and repair available • Hot Air and Desoldering Applications can be run without any separate switching • Temperature Range 350° F to 850° F (177°C to 454°C)

Note: Tweezers will also work with EC-series units.

**WS “Silver Series” Soldering Station**

The WS80 (80 Watt analog dial station) and WS230 (80 Watt digital dial station) iron units heat up in one third to one fourth the time of regular irons. The patented Weller low mass tip has a faster recovery time and very little temperature loss when compared to other conventional irons and tips. Perfect for the production line and away from where control of soldering takes place. Features: • Pencil • Holder • Antistatic housing • Automatic tool recognition • All Weller accessories up to 5A IR.

**WS80 Features**: • Analog control electronics • Temperature dial control from 300°F to 850°F (149°C to 454°C) • Temperature locking via key-operated switch • Accuracy ±2% from input box may be connected for time electronics • Temperature control from 120°F to 1000°F (49°C to 538°C) • ESD Safe • Meets U.L. Requirements • Three basic modes: (1) Touch Mode: Intended for soldering very small components with microtips; (2) Idle Mode: Similar to Touch Mode, but uses large tips; (3) Continuous Mode: Suited for very large surface mount device tips; • Average tip temperature is calibrated to ±2°F (±1°C) at idle with load; • Tip temperature range 400°F to 800°F (204°C to 427°C) • Stably ±1°F (±0.6°C) • Control setting resolution 1°F (1°C) • Unit not provided with tip • tips to be purchased separately.

**WS System Calibration Unit**

- Designed to work with WS series soldering stations • Allows user to calibrate tip temperature of soldering iron to outside temperature reference • Enables timer setback mode (allows station to set back to 350°F (177°C) after period of inactivity) • Heat fixed temperature into station and turning off front panel control knob • Switching station display between “For” °C at selected temperature • Reducing station electronics to original factory calibration • Unit uses four “AA” alkali batteries for power (included) • 3 month normal life expectancy of batteries • 16 button keypad • Three digit LED display • Connectors to attach to soldering station and iron.

**DS700M Electronically Controlled Desoldering Station**

- Lightweight desoldering tool with convenient index finger push button to control vacuum • Product designed as technicians portable unit (intermittent use) • Lightweight, compact electronic desoldering unit with internal vacuum pump • Replaces conventional desoldering vacuum • Special, large capacity air filter provided in power unit to back up small filter in tool’s collector-cumulator • Air output for low volume heat shrinking and other heat jobs • ESD safe

**SCD100 Desoldering Gun**

Self-contained desoldering gun draws solder into the disposable collector tube.

**EASY BRAID CO.**

Compact, lightweight fixed-temp solder iron designed for the occasional user and hobbyist. Super quick heat up with replaceable tip and stainless steel heating core.

**Fig. 1**

- Fig. Description: **Fixed Temp Iron**
  - 1. Deluxe, 30W, 115VAC ............................................. EB108-ND 19.95 DJY-1032R
  - 3. High Power, 40W, 115VAC ................................. EB107-ND 10.95 DJY-1034R

**Fig. 2**

- Fig. Description: **Solder Iron Holder**
  - 1. Small, with Spool ............................................. EB17D-ND 10.95 DDT18
  - 2. Large, with Spool ............................................ EB17E-ND 16.95 DDT20

**Replacement Tip**

- Conical for EB108-ND (30W, 1 pc.) .................. EB107-ND 3.99 DDT30W
- Conical for EB109-ND (20W, 1 pc.) ............ EB107-ND 2.99 DDT30W
- Conical for EB107-ND (40W, 1 pc.) ............ EB107-ND 2.99 DDT40W

**921ZX1 Soldering Station**

Now you can get the quality, dependability, and reputation of a Weller soldering station at prices that’s very competitive. Features: • Electronically Controlled • ZERO CROSS circuitry • SPARE FREE • ESD SAFE • Ceramic heater rated for Controlled - ZERO CROSS circuitry • SPIKE that’s very competitive.

**921ZX1 Soldering Station (Through Hole and SMT Repair or Rework)**

- Immediate, accurate tip temperature for faster soldering (MT200-3 seconds) • Quick tip change system, no tools required • Expanded tip selection - .010” point to PCLC88 over 50 available • Touch feature for extended tip life • Reduces operating cost • Excellent thermal capacity • Improves performance in all applications • Immediate response to thermal load • Improved productivity • Complete control with adjustable temperature and digital display • Three basic modes: (1) Touch Mode: Intended for soldering very small components with microtips; (2) Idle Mode: Similar to Touch Mode, but uses large tips; (3) Continuous Mode: Suited for very large surface mount device tips • Average tip temperature is calibrated to ±2°F (±1°C) at idle with load; • Tip temperature range 400°F to 800°F (204°C to 427°C) • Stably ±1°F (±0.6°C) • Control setting resolution 1°F (1°C) • Unit not provided with tip • tips to be purchased separately.
**WCM1 System Calibration Unit**

- Designed to work with EC2002M (above) series soldering stations.
- Allows user to calibrate tip temperature of soldering iron to outside temperature reference.
- Enables timer setback mode (allows station to set back to 350°F (177°C) after period of inactivity).
- Insert fixed batteries for power (included).
- 3 month normal life expectancy of batteries.
- Switching station display between °F or °C.
- Resetting station temperature into station and turning off front panel control knob. To set back to 350°F (177°C) after period of inactivity.
- Insert fixed batteries for power (included).
- Switching station display between °F or °C.
- Resetting station temperature into station and turning off front panel control knob.
- Water reservoir will keep the sponge moist.  • Extremely fused.  • UL listed and FCC approved.

**Soldering Irons**

- Specifically designed for use at electrostatic free work stations.
- Non-burnable silicon rubber cord.
- Lightweight, high impact plastic handle.
- Blue plastic meets requirements for ESD, ELECTROSTATIC DISSIPATIVE MATERIALS.  • Uses Weller EM series tips made of copper w/heavy iron, nickel and chromium alloy.
**Variable Soldering Stations**

OK International’s SA-400 Series feature connectorized handpieces for interchangeability with different irons. By using the SA-400 base you have the versatility of changing soldering irons (Macro or Micro) as well as the SMT Tweezers for SMT desoldering. Temperature variable from 446°F to 850°F (230°C to 454°C) with better than 10°F (5.5°C) temp. repeatability. Fully ESD safe and meets Mil-STD 2000, Mil-1686 requirements. 115VAC.


Temperature Modules
- Heater: Ceramic with embedded RTD.
- Power Base: 115VAC.
- High Power Micro Iron: 90W, 28V, RTD Sensor
- Micro Iron: 40W, 28V, RTD Sensor

Featuring durable corrosion resistant plastic construction and corrosion treated springs with uniform reset pressure and cushioned shock reduction. Fitted with replaceable tip sets.

**High Vacuum Desolderer Stations**

OK International’s SA-400 soldering station fitted with a fixed fume extraction adapter for clean, fume free soldering. Must be used with an external fume extraction unit. Comes complete with variable station, handpiece with integral fume extraction tube, sponge and tray, 115VAC.

**Fume Extract Solder Stations**

OK International’s unique modular design allows the operator low cost system upgrades with its Connectorized Handpiece and Removable Temp Module. Changes can be made in seconds. Sold individually or as complete stations. Complete stations are supplied with Power Base, Variable Temp Module, Handpiece and Holder.


**Replacement Tips for Irons**

<table>
<thead>
<tr>
<th>Tip Dim. In. (mm)</th>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>OK Int'l Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.047 (1.19)</td>
<td>Double Flat K303-ND</td>
<td>6.51</td>
<td>S4-305L</td>
<td></td>
</tr>
<tr>
<td>0.047 (1.19)</td>
<td>Chisel      K305-ND</td>
<td>6.51</td>
<td>S4-105S</td>
<td></td>
</tr>
<tr>
<td>0.047 (1.19)</td>
<td>Double Flat K341-ND</td>
<td>6.51</td>
<td>S4-305S</td>
<td></td>
</tr>
<tr>
<td>0.015 (0.38)</td>
<td>Conical     K342-ND</td>
<td>7.95</td>
<td>S4-201L</td>
<td></td>
</tr>
<tr>
<td>0.020 (0.51)</td>
<td>Angled      K343-ND</td>
<td>7.95</td>
<td>S4-203B</td>
<td></td>
</tr>
<tr>
<td>0.047 (1.19)</td>
<td>Dist. Rat Long Life K450-ND</td>
<td>7.25</td>
<td>S4-305SX</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tip Dim. In. (mm)</th>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>OK Int'l Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.039 (0.99)</td>
<td>Conical     K307-ND</td>
<td>6.51</td>
<td>S9-204L</td>
<td></td>
</tr>
<tr>
<td>0.031 (0.79)</td>
<td>Conical     K308-ND</td>
<td>7.95</td>
<td>S9-203S</td>
<td></td>
</tr>
<tr>
<td>0.047 (1.19)</td>
<td>Double Flat K344-ND</td>
<td>6.51</td>
<td>S9-305S</td>
<td></td>
</tr>
<tr>
<td>0.015 (0.38)</td>
<td>Conical     K345-ND</td>
<td>7.95</td>
<td>S9-201L</td>
<td></td>
</tr>
<tr>
<td>0.047 (1.19)</td>
<td>Dist. Rat Long Life K449-ND</td>
<td>7.25</td>
<td>S9-305SX</td>
<td></td>
</tr>
</tbody>
</table>

**Benchtop Fume Absorber**

Aerodynamic hood design effectively draws solder fumes away from the work area. Carbon filters traps up to 80% of the flux fumes, Compact size and adjustable for convenient placement near work area. Optional articulating arm with bench mount clamp converts benchtop fume absorber to suspended fume absorber for positioning directly over the work area. An inexpensive alternative to individual fume extraction.

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchtop fume absorber 115V with 3 filters K416-ND</td>
<td>105.00</td>
<td></td>
</tr>
<tr>
<td>Benchtop ESD safe fume absorber 115V with 3 filters K417-ND</td>
<td>135.00</td>
<td></td>
</tr>
<tr>
<td>Articulating arm kit w/bench clamp K418-ND</td>
<td>119.00</td>
<td></td>
</tr>
<tr>
<td>Replacement carbon filter set, 3 Pcs. K419-ND</td>
<td>18.81</td>
<td></td>
</tr>
</tbody>
</table>
### Fluid Dispensing Systems

**K424 – Analog Dispenser**

**K425 – Foot Valve Dispenser**

OK International fluid dispensing equipment is well suited for all types of liquids and fluids, from water thin solvents to thick pastes to sticky syrups. Both dispensers require external air source.

The K424-ND Analog dispenser has a vacuum control of all viscosities of fluids. The solid state timer provides accurate and repeatable dispensing cycles. This unit offers an adjustable vacuum feature for controlling drip of fluid or paste between dispense cycles. Three dispense time ranges are included to offer controlled time shots from .01 to 30 seconds with one-touch or intermittently actuation.

Features:
- Solid state digital circuitry timer
- 0.18 CV factor constant flow solvent
- Lighted function switches
- Adjustable vacuum up to 15 inches Hg
- Micro action foot switch

The K425-ND foot valve dispenser is the ideal dispensing unit for most general applications of adhesives, sealants and compounds.

Features:
- Rugged and easy to use
- Built-in pressure regulator
- Connects to any OK syringe adapter
- Fluid flow as long as foot pedal is depressed

The K426-ND dispense kit consists of 3 syringe assemblies complete with barrels, air stoppers, tip caps and barrel adapters. The kit also includes 50 tips (assorted sizes) and an in-line filter, shop air filter with barrels; air stoppers, tip caps and barrel adapters. The kit also includes a plunger kit and a 4-ounce bottle of 500gm Water Soluble Paste.

### Hot Air Rework for SMT FCR-1000 Series

The FCR-1000 Series is a low-cost hot air rework system with closed-loop temperature control and air flow control. Heat is focused on the components leads for fast, safe removal and attachment.

**Features**:
- Removes and replaces discrete, SOIC, PLCC and QFP components
- Closed-loop, variable temperature control
- Variable air flow adjusts to thermal demands of the board
- Self-contained air source provides easy set up
- Fully grounded and static-safe system
- Optical isolation with zero voltage switching

**System includes**:
- Air flow meter/temperature control module
- Focused convection handpiece
- Power base with pump
- Handpiece holder
- Nozzle removal tool

**Specifications**:
- **Input Voltage**: 115VAC, 60 Hz
- **Power Consumption**: 280W
- **Mounting**: Heated: Resistive, 280W @ 280VAC
- **Heater Control**: Closed-Loop Thermocouple sensor feedback
- **Air Source**: High efficiency diaphragm pump
- **Air Flow**: Variable, 3.20 liters/minute
- **Temperature**: 212°F to 932°F (100°C to 500°C)
- **Weight**: 16 lbs. (7.27kg)
- **Dimensions**: (L x W x H): 11.25” x 6.5” x 7.0” (286mm x 165mm x 178mm)

**Description**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Each Part No.</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>KE1501-ND</td>
<td>3.33</td>
<td>$6.40</td>
</tr>
<tr>
<td>KE1502-ND</td>
<td>4.92</td>
<td>$6.40</td>
</tr>
<tr>
<td>KE1503-ND</td>
<td>6.04</td>
<td>$6.40</td>
</tr>
<tr>
<td>KE1504-ND</td>
<td>8.21</td>
<td>$6.40</td>
</tr>
<tr>
<td>KE1505-ND</td>
<td>10.33</td>
<td>$6.40</td>
</tr>
</tbody>
</table>

### Surface Mount Hot Air Soldering System

**SMT Hot Air Soldering System**

**Kester 10-30-51**

- **Base with pump**
- **Variable temperature module**
- **Handpiece**
- **Handpiece holder**
- **3-pc. nozzle kit**
- **Instruction manual**

**Specifications**:
- **Input**: 115VAC/60Hz
- **Temperature Range**: 600° - 800°F (316° - 427°C)
- **Airflow**: 1 to 6 liters/min.
- **Dimensions**: 5.7” x 4.3” x 8.5” (148mm x 109.2mm x 215.9mm)
- **Weight**: 8.8 lbs. (3.9kg)

**Description**

<table>
<thead>
<tr>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>OK Int’l Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>K353-ND</td>
<td>745.00</td>
<td>SMT-1161-V</td>
</tr>
</tbody>
</table>

### Focused Convexion Rework System Nozzles

**Focused Convexion SMT Rework System**

**Handpiece Holder and Stand for FCR-1001**

**Adjustable Board Holder for FCR-1001**

**Nozzle Tray and Holder for FCR-1001**

**Replacement Vacuum Pad**

**Description**

<table>
<thead>
<tr>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>OK Int’l Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>K466-ND</td>
<td>995.00</td>
<td>FCR-1001</td>
</tr>
<tr>
<td>K464-ND</td>
<td>900.00</td>
<td>RTS-A</td>
</tr>
<tr>
<td>K447-ND</td>
<td>750.00</td>
<td>RBH-A</td>
</tr>
<tr>
<td>K448-ND</td>
<td>47.32</td>
<td>18767S</td>
</tr>
</tbody>
</table>

### Flux - Pens & Rosin Paste

**Flux Pen**

**Rosin Paste**

Kester flux pens use a spring loaded tip to dispense just the right amount of flux while preventing the flux inside from drying out. The SP44 rosin paste is ideal for larger rework jobs while leaving no corrosive residue.

**SP44 Rosin Paste**

**SP596 Organic Paste**

Kester solder paste was developed for applications of surface mount PCB’s and components. All pastes are SN63/37Pb with mesh size of 325 -500 (25 to 40 microns) and come in 25gm syringes for hand and automatic application or 500gm jars for screen or stencil printing. The R596 formulation is an improved Halide Free formula that is utilized for SMT component rework.

**SP596 Paste**

**Description**

<table>
<thead>
<tr>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>OK Int’l Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>KE1503-ND</td>
<td>112.46</td>
<td>KE1705-ND</td>
</tr>
<tr>
<td>KE1501-ND</td>
<td>112.46</td>
<td>KE1501-ND</td>
</tr>
<tr>
<td>KE1502-ND</td>
<td>112.46</td>
<td>KE1502-ND</td>
</tr>
<tr>
<td>KE1504-ND</td>
<td>112.46</td>
<td>KE1504-ND</td>
</tr>
<tr>
<td>KE1505-ND</td>
<td>112.46</td>
<td>KE1505-ND</td>
</tr>
</tbody>
</table>

### Solder Paste

**No Clean Paste 25gm Syringe (R594)**

**No Clean Paste 500gm Jar (R592)**

**Water Soluble Paste 25gm Syringes (R593)**

**Water Soluble Paste 500gm Jar (R593)**

**Water Soluble Paste 25gm Syringes (R596)**

**Water Soluble Paste 500gm Jar (R596)**

**Plunger & Tip for 25gm Syringe**

**Plunger for 500gm Syringe**

**Description**

<table>
<thead>
<tr>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>OK Int’l Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>KE1504-ND</td>
<td>1.98</td>
<td>KE1504-ND</td>
</tr>
<tr>
<td>KE1505-ND</td>
<td>.99</td>
<td>KE1505-ND</td>
</tr>
</tbody>
</table>

### Dispensing Tips

These tips are molded in high density polyethylene with color coding indicating tip inside diameter.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Color</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>KE1503-ND</td>
<td>.63” (1.60mm) ID Tan Color (pkg. of 50)</td>
<td>.63”</td>
<td>$6.40</td>
</tr>
<tr>
<td>KE1504-ND</td>
<td>.67” (1.70mm) ID Grey Color (pkg. of 50)</td>
<td>.67”</td>
<td>$6.40</td>
</tr>
<tr>
<td>KE1505-ND</td>
<td>.84mm (34mm) ID Green Color (pkg. of 50)</td>
<td>.84mm</td>
<td>$6.40</td>
</tr>
<tr>
<td>KE1506-ND</td>
<td>.81” (21mm) ID Pink Color (pkg. of 50)</td>
<td>.81”</td>
<td>$6.40</td>
</tr>
<tr>
<td>KE1507-ND</td>
<td>.81” (21mm) ID Blue Color (pkg. of 50)</td>
<td>.81”</td>
<td>$6.40</td>
</tr>
</tbody>
</table>

### Air Powered Syringe Assemblies

Available in 3 popular sizes (6cc, 10cc, and 35cc). Air powered assemblies include syringe barrel and tip caps, air stoppers and end plugs for safety when transporting filled syringes.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Pkg. Size</th>
<th>Price Each</th>
</tr>
</thead>
<tbody>
<tr>
<td>K427-ND</td>
<td>5cc-6cc (pkg. of 20 assemblies)</td>
<td>.10</td>
<td>$10.40</td>
</tr>
<tr>
<td>K428-ND</td>
<td>10cc-12cc (pkg. of 15 assemblies)</td>
<td>.05</td>
<td>$9.75</td>
</tr>
<tr>
<td>K429-ND</td>
<td>30cc-35cc (pkg. of 10 assemblies)</td>
<td>.05</td>
<td>$9.75</td>
</tr>
</tbody>
</table>

### References

For more information, contact Digi-Key at 1-800-344-4539 or visit www.digikey.com.
Multicore’s flux cored solder contains 5 separate cores of flux inside the solder wire. This design helps assure even wetting action and reduces the need for fluxing agents. Kester’s “44” activated flux is a highly active solder that will clean with fast wetting action, used for hard to solder joints. No-Clean solder reduces or eliminates the need for cleaning after the soldering process, leaving very little residue. Dross-X is a solder bath dross reducer for solder baths and wave soldering applications. Lead-Free Solder has similar soldering characteristics to standard lead based solders but without the health hazard associated with lead.

Kester’s “44” activated resin flux has been used for decades because of its “instant-action” performance and low maintenance, used for both wave and dip soldering processes. Water-soluble flux was developed as an active cleaner when exposed to water, eliminating the need for solvent washes. Solid wire solder is intended for previously fluxed assemblies and completely removed with a simple water rinse. RA solder is a highly active solder that will clean with fast wetting action, used for hard to solder joints. No-Clean solder reduces or eliminates the need for cleaning after the soldering process, leaving very little residue. Crystal is a heat stable flux giving crystal clear residues with minimal Low Residue is a non-corrosive, halide free flux that leaves minimal residue. Water soluble solder is an active cleaner that is a solution when exposed to water, eliminating the need for solvent washes. Savbit is a copper core solder that has reduced drossing and copper based soldering tips. Used for copper based soldering and extending soldering life. Lead-Free Solder has similar soldering characteristics to standard lead based solders but without the health hazard associated with lead.

Kester’s RMA flux is used to provide resin flux where difficult assemblies are to be soldered but stipulate use of an RMA flux, over the more active RA. No-Clean flux was developed for assemblies normally soldered with RMA but allows a visually clean assembly without the need for cleaning. Water-soluble flux is an organic flux used for hard to solder joints where a low residue is difficult to use. The residue can also be completely removed with a simple water rinse. Solid wire solder is intended for previously fluxed assemblies and extending soldering applications. Silver solder is a Tin-Silver mixed solder with generally higher melting points than lead, making them ideal for under hood automotive and higher temperature applications. Lead-free solder is a suitable replacement to Tin-Lead solders where higher temperature applications.

- **RA Flux 64/37, 1 Lb. (.45 kg)**
  - 18 Gauge, .032” dia. (.81mm) SN6321-ND 11.14
  - 21 Gauge, .031” (.79mm) dia. KE1200-ND 11.36
  - 25 Gauge, .020” (.51mm) dia. KE1201-ND 15.89

- **No Clean 1.1% Flux “245”, 1 Lb. (.45 kg)**
  - 18 Gauge, .032” (.81mm) dia. KE1200-ND 11.36
  - 21 Gauge, .031” (.79mm) dia. KE1201-ND 11.36

- **Water Soluble Fluxes, 63/37, 1 Lb. (.45 kg)**
  - 18 Gauge, .032” (.81mm) dia. KE1399-ND 11.14
  - 21 Gauge, .031” (.79mm) dia. KE1400-ND 11.36
  - 25 Gauge, .020” (.51mm) dia. KE1401-ND 15.89

- **Solid Wire Solder (No Flux) 63/37, 1 Lb. (.45 kg)**
  - 18 Gauge, .032” (.81mm) dia. KE1399-ND 11.14
  - 21 Gauge, .031” (.79mm) dia. KE1400-ND 11.36
  - 25 Gauge, .020” (.51mm) dia. KE1401-ND 15.89

- **3M Scotch Tape**
  - 3M 591912-ND 21.47 (Low Static Polyimide Film Tape 0.5 (12.70))
  - 3M 591934-ND 32.15 (Low Static Polyimide Film Tape 0.75 (19.05))

**Scotch brand No. 5413 Polyimide Film Tape**

- **Description**
  - **Width (In.)**
  - **Digi-Key Price**
  - **Each**
  - **Part No.**

**Scotch brand No. 5414 Water Soluble Solder**

- **Description**
  - **Part No.**
  - **Net Wt.**
  - **Digi-Key Price**

**Scotch brand No. 5419 Low Static Polyimide Film Tape**

- **Description**
  - **Width (In.)**
  - **Digi-Key Price**
  - **Each**
  - **Part No.**

**Scotch brand No. 1285 Plating Tapes**

- **Description**
  - **Width (In.)**
  - **Digi-Key Price**
  - **Each**
  - **Part No.**

**Kester’s RMA solder pastes**

- **No-Clean Solder Paste**
  - 9555320-ND 14.88
  - 9555239-ND 14.88
  - 9559510-ND 14.88

- **RA Solder Paste**
  - 9566237-ND 14.88

- **NEW No-Clean “Crystal” Flux 64/40, 1 Lb. (.45 kg)**
  - 18 Gauge, .032” (.81mm) dia. KE1399-ND 11.14
  - 21 Gauge, .031” (.79mm) dia. KE1400-ND 11.36
  - 25 Gauge, .020” (.51mm) dia. KE1401-ND 15.89

- **No Clean 1.1% Flux “245”, 1 Lb. (.45 kg)**
  - 18 Gauge, .032” (.81mm) dia. KE1399-ND 11.14
  - 21 Gauge, .031” (.79mm) dia. KE1400-ND 11.36
  - 25 Gauge, .020” (.51mm) dia. KE1401-ND 15.89

- **Water Soluble 3.3% Flux “331”, 63/37, 1 Lb. (.45 kg)**
  - 18 Gauge, .032” (.81mm) dia. KE1399-ND 11.14
  - 21 Gauge, .031” (.79mm) dia. KE1400-ND 11.36
  - 25 Gauge, .020” (.51mm) dia. KE1401-ND 15.89

- **Solid Wire Solder (No Flux) 63/37, 1 Lb. (.45 kg)**
  - 18 Gauge, .032” (.81mm) dia. KE1399-ND 11.14
  - 21 Gauge, .031” (.79mm) dia. KE1400-ND 11.36
  - 25 Gauge, .020” (.51mm) dia. KE1401-ND 15.89

- **3M Scotch Tape**
  - 3M 591912-ND 21.47 (Low Static Polyimide Film Tape 0.5 (12.70))
  - 3M 591934-ND 32.15 (Low Static Polyimide Film Tape 0.75 (19.05))

- **3M Scotch Tape**
  - 3M 591912-ND 21.47 (Low Static Polyimide Film Tape 0.5 (12.70))
  - 3M 591934-ND 32.15 (Low Static Polyimide Film Tape 0.75 (19.05))

- **3M Scotch Tape**
  - 3M 591912-ND 21.47 (Low Static Polyimide Film Tape 0.5 (12.70))
  - 3M 591934-ND 32.15 (Low Static Polyimide Film Tape 0.75 (19.05))
486

1-800-344-4539
218-681-6674 • FAX: 218-681-3380 • www.digikey.com
1-800-344-4539

Dispensing Bottles

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>OK International Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid Bottle with Curved Spout, 4 oz.</td>
<td>K461-ND</td>
<td>4.25</td>
<td>OK-80</td>
</tr>
<tr>
<td>Fluid Bottle with Curved Spout, 8 oz.</td>
<td>K462-ND</td>
<td>4.95</td>
<td>OK-80</td>
</tr>
</tbody>
</table>

Desoldering Strips and Pads

25% cleaner than most major brands (leaving less residue on the desoldered connection). Meets the requirements of Mil-F-14256 Type R, MIL-STD-2000 and in compliance with DOD Standard MIL-STD-810A. Also meets the requirements of Bellcore spec. TR-T5Y-00078 and IPC Test Method III. 63/37 Eutectic Solder

<table>
<thead>
<tr>
<th>Diameter (in)</th>
<th>Length (in)</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>EasyBraid Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0106-ND</td>
<td>1.97</td>
<td>1.68 1.52</td>
</tr>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0111-ND</td>
<td>2.23</td>
<td>2.25 1.71</td>
</tr>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0103-ND</td>
<td>2.23</td>
<td>2.25 1.71</td>
</tr>
</tbody>
</table>

Solder Spoons

<table>
<thead>
<tr>
<th>Replacements</th>
<th>Size (in)</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>EasyBraid Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OK Ind. 48503</td>
<td>1.2 x 2.7</td>
<td>EB0101-ND</td>
<td>0.61</td>
<td>0.52 0.47</td>
</tr>
<tr>
<td>Uchida 9901</td>
<td>1.9 x 4.5</td>
<td>EB0102-ND</td>
<td>0.68</td>
<td>0.53 0.47</td>
</tr>
<tr>
<td>Waller MP</td>
<td>2 x 2.6</td>
<td>EB0103-ND</td>
<td>0.68</td>
<td>0.53 0.47</td>
</tr>
<tr>
<td>Waller DF 100 ED-1000, ED-2000</td>
<td>2.2 x 3.55</td>
<td>EB0104-ND</td>
<td>0.68</td>
<td>0.53 0.47</td>
</tr>
<tr>
<td>Waller WTDC ED-3000, ED-4000, TC050</td>
<td>2.6 x 2.6</td>
<td>EB0105-ND</td>
<td>0.95</td>
<td>0.84 0.72</td>
</tr>
<tr>
<td>Matsumoto 8000</td>
<td>3.2 x 3.2</td>
<td>EB0106-ND</td>
<td>0.95</td>
<td>0.84 0.72</td>
</tr>
<tr>
<td>Moscut (808)</td>
<td>3.4 x 4.4</td>
<td>EB0107-ND</td>
<td>1.18</td>
<td>1.61 1.45</td>
</tr>
<tr>
<td>Hakko 860, Pat. 43-43</td>
<td>4 x 1.7</td>
<td>EB0108-ND</td>
<td>0.96</td>
<td>0.84 0.72</td>
</tr>
<tr>
<td>Eagle (Long-Neck)</td>
<td>8.5 x 17.5</td>
<td>EB0109-ND</td>
<td>2.15</td>
<td>16.00 16.00</td>
</tr>
<tr>
<td>EDM Models</td>
<td>2.4 x 3.2</td>
<td>EB0110-ND</td>
<td>0.93</td>
<td>0.79 0.72</td>
</tr>
</tbody>
</table>

BGA / PLCC Desoldering Braid

Sized to fit existing footprints of BGA, PLCC and QFP pads for removing residual solder from the PCB solder pads. Strips can be easily cut to length, while packages are pre-cut coupons that fit over the pads and may be heated by either convection or conduction methods.

<table>
<thead>
<tr>
<th>Size (W x L)</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>EasyBraid Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0106-ND</td>
<td>1.97</td>
</tr>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0111-ND</td>
<td>2.23</td>
</tr>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0103-ND</td>
<td>2.23</td>
</tr>
</tbody>
</table>

Solders and Applicators

For general purpose cleaning of magnetic heads, video heads and optical pickups.

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>Mfg. Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flux-Off II Pen</td>
<td>CP40-ND</td>
<td>3.50</td>
<td>CP40</td>
</tr>
<tr>
<td>Swabs and Applicators</td>
<td>CP400-ND</td>
<td>18.49</td>
<td>CP400</td>
</tr>
<tr>
<td>Cleaning and Polishing Pads</td>
<td>CP410-ND</td>
<td>16.80</td>
<td>CP410</td>
</tr>
<tr>
<td>Nonabrasive Cleaning Pads</td>
<td>CP420-ND</td>
<td>32.42</td>
<td>CP420</td>
</tr>
<tr>
<td>Gold, Tin and Silver Contacts (50 Pcs)</td>
<td>CP420E-ND</td>
<td>32.42</td>
<td>CP420E</td>
</tr>
</tbody>
</table>

Presaturated Wipes

Optic Prep High Quality Optical Cleaning and Polishing Pads (50 Pcs)

<table>
<thead>
<tr>
<th>Digi-Key Part No.</th>
<th>Mfg. Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP410-ND</td>
<td>CP410</td>
</tr>
<tr>
<td>CP420-ND</td>
<td>CP420</td>
</tr>
<tr>
<td>CP420E-ND</td>
<td>CP420E</td>
</tr>
</tbody>
</table>

Liquid Spoons

Chempump ® Automatic liquid dispenser eliminates manual filling by spills & evaporation.

<table>
<thead>
<tr>
<th>Description</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>Mfg. Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chempump 4 oz. (12 fluid oz.) Automatic Liquid Dispenser for Solvents</td>
<td>CB40-ND</td>
<td>16.82 15.02</td>
<td>CB40</td>
</tr>
<tr>
<td>Chempickle 4 oz. (24 fluid oz.) Liquid Dispenser with Curved Spout</td>
<td>CB40-ND</td>
<td>5.76 5.21</td>
<td>CB40</td>
</tr>
</tbody>
</table>

Chemtronics® Desoldering Braid

Pure copper braid construction coated with high purity resin, quickly and thoroughly removes solder. Use Chem-Wik to remove components, SMDs, ICs, and clean up poor solder connections. Meets or exceeds these requirements: • Mil-F-14256 F Type R • NASA/NIH 5000-3/4A Reliability and Quality Assurance publication • NASA SP-5002 Soldering Electrical Connections • NASA MCR-04-4 Quality publication • DOD Standard 1668 and DODB Standard 263 • Mil-S-81705C Static Decay Rate Position • Mil-S-8020C

<table>
<thead>
<tr>
<th>Diameter (in)</th>
<th>Length (in)</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>EasyBraid Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0106-ND</td>
<td>1.97</td>
<td>1.68 1.52</td>
</tr>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0111-ND</td>
<td>2.23</td>
<td>2.25 1.71</td>
</tr>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0103-ND</td>
<td>2.23</td>
<td>2.25 1.71</td>
</tr>
</tbody>
</table>

Dispenser with Curved Spout CB40-ND 4.16 3.67 3.37 10-100L

<table>
<thead>
<tr>
<th>Diameter (in)</th>
<th>Length (in)</th>
<th>Digi-Key Part No.</th>
<th>Price Each</th>
<th>EasyBraid Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0106-ND</td>
<td>1.97</td>
<td>1.68 1.52</td>
</tr>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0111-ND</td>
<td>2.23</td>
<td>2.25 1.71</td>
</tr>
<tr>
<td>.020 (.51)</td>
<td>.030 (.76)</td>
<td>EB0103-ND</td>
<td>2.23</td>
<td>2.25 1.71</td>
</tr>
</tbody>
</table>

Fluid Bottle with Curved Spout, 4 oz. | K461-ND | 4.25 | OK-80 |
| Fluid Bottle with Curved Spout, 8 oz. | K462-ND | 4.95 | OK-80 |
2MHz Function Generator

**Model BK4010-ND**
- **Frequency Range**: 0.2Hz to 2MHz in 7 ranges: 0.2Hz, 1Hz, 10Hz, 50Hz, 100Hz, 500Hz, 2MHz.
- **Display**: Digital LCD.
- **Resolution**: 6 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

**Model BK4011-ND**
- **Frequency Range**: 0.1Hz to 1MHz in 5 ranges: 0.1Hz, 1Hz, 10Hz, 50Hz, 100Hz.
- **Display**: Digital LCD.
- **Resolution**: 6 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

**Model BK4101-ND**
- **Frequency Range**: 0.1Hz to 1MHz in 10 ranges: Resolution: 4 digits.
- **Display**: Digital LCD.
- **Resolution**: 6 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

10MHz Sweep/Function Generator with Digital Display

**Model BK4004-ND**
- **Frequency Range**: 0.2Hz to 20MHz in 10 ranges: Resolution: 4 digits.
- **Display**: Digital LCD.
- **Resolution**: 6 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

DC Power Supplies

**Model BK1780-ND**
- **Output Voltage**: 0-18V, 2A.
- **Output Current**: 0-3A.
- **Resolution**: 2 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

**Model BK1775-ND**
- **Output Voltage**: 0-18V, 1A.
- **Output Current**: 0-3A.
- **Resolution**: 2 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

**Model BK1760-ND**
- **Output Voltage**: 0-18V, 0.5A.
- **Output Current**: 0-3A.
- **Resolution**: 2 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

**Model BK1755-ND**
- **Output Voltage**: 0-18V, 0.33A.
- **Output Current**: 0-3A.
- **Resolution**: 2 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

**Model BK1750-ND**
- **Output Voltage**: 0-18V, 0.2A.
- **Output Current**: 0-3A.
- **Resolution**: 2 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

**Model BK1745-ND**
- **Output Voltage**: 0-18V, 0.1A.
- **Output Current**: 0-3A.
- **Resolution**: 2 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

**Model BK1740-ND**
- **Output Voltage**: 0-18V, 0.05A.
- **Output Current**: 0-3A.
- **Resolution**: 2 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

**Model BK1735-ND**
- **Output Voltage**: 0-18V, 0.025A.
- **Output Current**: 0-3A.
- **Resolution**: 2 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

**Model BK1730-ND**
- **Output Voltage**: 0-18V, 0.005A.
- **Output Current**: 0-3A.
- **Resolution**: 2 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.

**Model BK1725-ND**
- **Output Voltage**: 0-18V, 0.001A.
- **Output Current**: 0-3A.
- **Resolution**: 2 digits.
- **Input Impedance**: 10MΩ.
- **Power Source**: 120V/230V AC ±10% 50/60 Hz.
- **Power Consumption**: 23W.
- **Dimensions**: 144.78mm x 266.7mm x 381mm.
- **Weight**: 10kg.
- **Warranty**: Three year.
New! Pen Style DMM With Current Clamp and Temperature Adapter

DMM is a 3200 count multimeter that measures VDC, VAC resistance and checks continuity. The current clamp head attaches to the top of the DMM and reads output in VAC up to 300A. The temperature adapter also attaches to the top of the DMM and reads temperature output in mK.

Specifications: VAC: 3.2V to 600V, 1% accuracy. VDC: 320V to 600V, 0.7% accuracy. AC/DC Current: 0.1A to 300A (10H-1), 1% accuracy. Temperature: -58°F to 183°F, ±2% accuracy (full scale).

Model BK2720ND: $165.00

New! High Performance Dual-Display Multimeters

General Specifications: ±4,000/40,000 selectable display counts and 14 ranges.

Model BK2880A-ND: DMM with AC Coupled RMS.

Model BK2980ND: DMM with frequency counter to 10kHz. True RMS input protection. 3-1/2 Digit, 20.32mm high contrast LCD display. Audible Continuity: 20 A range, 20 A. Analog bar graph, 32 segments. Battery, 3-Volt, Digi-Key Part No P104-ND.

Model BK390-ND: 4-1/2 Digit, 15.24mm LCD Display (20,000 count), 0.05% DCV accuracy. Measures voltage to 2000V, 5 ranges, ±1% accuracy, 500V input and 10mA input. Power: 2x3.7V CR-2032.

Model BK-5390-ND: 4-1/2 Digit, 15.24mm LCD Display (20,000 count), 0.05% DCV accuracy. Measures voltage to 2000V, 5 ranges, ±1% accuracy, 500V input and 10mA input. Power: 2x3.7V CR-2032.

Premium DMM “Certificate of Traceability Supplied”


Model BK-5390-ND: 0.05% DCV, 0.07% AC. 100 kHz AC response. 0.3% AC or DC + DC. Capacitance, capacitance + capacitance. Power: 15V battery, 3-Volt, Digi-Key Part No P104-ND.

Model BK-5350-ND: 0.01% DCV, 0.1% AC. 30 kHz AC response. Range calibrate. Data hold. Power: 15V battery, 3-Volt, Digi-Key Part No P104-ND.

Model BK-5350-ND: $185.00

Model BK-5390-ND: $235.00

Model BK-5380-ND: $289.00

Model BK-5360-ND: $229.00

Model BK-5390-ND: $219.00

Accuracy Specifications:

- RMS
- BK2890-ND

- Measures DC & AC Voltage: 50/500/5000V
- Measures current: 200µA to 20mA, ±1% accuracy (full scale).
- Measures resistance: 0-1kΩ, ±1% degree arc of scale length. Measures decibel +4dB to +66dB on voltage ranges. Battery Test Range: 1.5V/V. Power Supply: One 1.5V AA battery.

Dimensions: 83mm x 120mm x 30mm. Accessories Supplied: Battery, Test leads, instruction manual.

Model BK-5390-ND: $20.00

Pocket Size Multimeters

Model BK-5400-ND: Data hold, ±0.05% DCV accuracy. Measures voltage to 200V, 5 ranges, ±1% accuracy, 500V AC/DC RMS. Dimensions 62 x 149 x 10mm. Accessories Supplied: Battery, test leads, instruction manual.

Model BK-5400-ND: $43.00

“Tool Kit” Multimeters


Model BK2702-ND: $55.00

Model BK-5400-ND: Data hold, ±0.05% DCV accuracy. Measures voltage to 200V, 5 ranges, ±1% accuracy, 500V AC/DC RMS. Dimensions 62 x 149 x 10mm. Accessories Supplied: Battery, test leads, instruction manual.

Model BK-5400-ND: $43.00

High Quality, rugged, multi-function DMM’s in a drop resistant case. Resistance and Frequency measurement. Display check, Auto power off. All current ranges fused. Power Requirements: Single 9V battery, Digi-Key Part No P104-ND. Dimensions: 90.5 x 86.3 x 38.1mm. Accessories Supplied: 9 Volt Battery, Test Leads, Instruction Manual.

Model BK-5390-ND: 3-3/4 Digit, 15.24mm LCD Display (4000 count). Drop resistant case. Audible continuity. 0 to 440°F temperature. ±0.05% DCV accuracy. 120Hz AC response. 200mA peak current.

Model BK-5389-ND: $125.00

Model BK-5390-ND: $165.00

Model BK-5389-ND: $185.00

Model BK-5391-ND: $185.00

Model BK-5390-ND: $11.00

“Test Bench” Multimeters

High quality, rugged, multifunction DMM’s in a drop resistant case. Resistance and Frequency measurement. Display check, Auto power off. All current ranges fused. Power Requirements: Single 9V battery, Digi-Key Part No P104-ND. Dimensions: 90.5 x 86.3 x 38.1mm. Accessories Supplied: 9 Volt Battery, Test Leads, Instruction Manual.

Model BK2980A-ND: Data hold, ±0.05% DCV accuracy. Measures voltage to 200V, 5 ranges, ±1% accuracy, 500V AC/DC RMS. Dimensions 62 x 149 x 10mm. Accessories Supplied: Battery, test leads, instruction manual.

Model BK-5390-ND: $185.00

Temperature Probe

Model TP-300B-ND: Platinum and BK-5370 and BK-5400-ND. $89.00

3½ Digit Ruggedized DMM


Model BK2860A-ND: $99.00

Model LC-29A-ND: $99.00

Model BK2700-ND: $35.00

Temperature Probe

Model TP-300B-ND: Platinum, for BK-5370 and BK-5400-ND. $89.00
**High-Voltage Probes**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP-29-ND</td>
<td>Test probe for high-voltage levels, 2:1 voltage divider, 40kV DC rating, 2000V AC rating, TP-29-ND NEW</td>
</tr>
<tr>
<td>TP-39-ND</td>
<td>Test probe for high-voltage levels, 2:1 voltage divider, 40kV DC rating, 2000V AC rating, TP-39-ND NEW</td>
</tr>
</tbody>
</table>

**Test Leads**

Universal Test Leads with unshrouded banana plugs includes red and black alligator clip attachments. Order TP-4L-ND all B&K Precision Test Leads, Kit, Test Leads, TP-4L-ND NEW. For Models 390, 2706, and other digital multimeters.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
</table>

**Accessory Tips Kit**


<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKP-C3-ND</td>
<td>Accessory Tips Kit, B&amp;K Precision Model TL-2A Deluxe Test Leads. Attachment Method: 6-32 threaded connector securely attaches screw-on tips to probe handle of TL-2A. Insulation: PVC Insulation, 314 thread length. Red and Black alligator clip included.</td>
</tr>
</tbody>
</table>

**Digital Capacitance Meter**

Model: 2.5µF - 30nF. Measures capacitance from 0.1pF - 1000µF. Outputs 1mA to 30mA. Power Source: Standard 9V battery (Digi-Key Part No. P104-ND). Dimensions: 17.78mm x 217mm x 20.8mm. Memory mode “freezes” pulse display. Displays pulse presence and logic states. High/Low limit sorting. Data hold. Auto power off. Display zeroing. Audible alert mode (for sorting). High/Low limit sorting. Data hold. Auto power off. Display zeroing. Audible alert mode (for sorting).

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BKP890-ND</td>
<td>Digital Capacitor Meter, B&amp;K Precision Model BC-1000. Measures capacitance from 0.1pF - 1000µF. Outputs 1mA to 30mA. Power Source: Standard 9V battery (Digi-Key Part No. P104-ND). Dimensions: 17.78mm x 217mm x 20.8mm. Memory mode “freezes” pulse display. Displays pulse presence and logic states. High/Low limit sorting. Data hold. Auto power off. Display zeroing. Audible alert mode (for sorting). High/Low limit sorting. Data hold. Auto power off. Display zeroing. Audible alert mode (for sorting).</td>
</tr>
</tbody>
</table>

**Solid State Megohmmeter**

Specifically designed as an inexpensive alternative to costly taut band, (swivel, needle) megohmmeters. This reliable battery powered megohmmeter can be used with LED indicators, which accurately measure insulation values up to 1000megohms at 500 volts and also indicate the condition of insulation on the zone scale.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
</table>
Multimeters


Model 290-1153-ND (TPI 133): Meets UL, cUL, CE and IEC 1010 safety standards. Specifications: Range DC: 400mV-100V and 400µA-10A. Range AC: 400mV-750V and 400µA-10A. Range DC: 200mV-2000V and 200µA-10A. Frequency Range: 200kHz-20MHz. Auto/manual range. Diode test. Continuity buzzer. Auto large LCD. Dimensions: 2.7” x 3.5” x 7.44” (70mm x 89mm x 190mm). Rubber boot included. Three Year Limited Warranty.


Model 290-1183-ND (TPI 183): Meets UL, cUL, CE and IEC 1010 safety standards. Specifications: Range DC: 400mV-1000V and 400µA-10A. Range AC: 400mV-1000V and 400µA-10A. Range DC: 200mV-2000V and 200µA-10A. Frequency Range: 200kHz-20MHz. Auto/manual range. Diode test. Continuity buzzer. Auto large LCD. Dimensions: 2.7” x 3.5” x 7.44” (70mm x 89mm x 190mm). Rubber boot included. Three Year Limited Warranty.


NEW! Model 290-1140-ND (TPI 440 Scope plus True RMS DMM): Hand-held oscilloscope. 1MHz DC Bandwidth. 25 Megasamples per second. Auto range. True RMS DMM to 4000 count. Continuous update. Real time display. Cursor measurement. Flexible triggering including latch capture. Roll mode. Frequency counter to 10MHz. Basic DC accuracy to 0.3%. Opto-Isolated RS-232C Port. Designed to meet IEC 1010-1-600V Cat III Rating. Dimensions: 8.7” x 9.8” x 0.9” (222.5mm x 250mm x 23mm). Test leads included.

Model 290-1440-ND (TPI 440 Scope plus True RMS DMM): Hand-held oscilloscope. 1MHz DC Bandwidth. 25 Megasamples per second. Auto range. True RMS DMM to 4000 count. Continuous update. Real time display. Cursor measurement. Flexible triggering including latch capture. Roll mode. Frequency counter to 10MHz. Basic DC accuracy to 0.3%. Opto-Isolated RS-232C Port. Designed to meet IEC 1010-1-600V Cat III Rating. Dimensions: 8.7” x 9.8” x 0.9” (222.5mm x 250mm x 23mm). Test leads included.

Oscilloscope Probe Line

Wiper Jumpers Test Leads

Handy test leads with insulated alligator clips attached to each end. Each end is suitable for alligator clips and yellow jumpers.

GC396-ND Std. Test Leads, 2 Ea. 15” (38.10cm) long 20 AWG/24 AWG (25 Pack) — 5.68
GC397-NZ Heavy Duty Test Leads, 1 Ea. 22” (55.88cm) long 24 AWG/20 AWG (5 Pack) — 6.44

Oscilloscope Probes and Accessories

One out of every five oscilloscope users in the world has already used a STACK probe without knowing it!

CROSS REFERENCE GUIDE

60MHz B/W — CP-801-ND: Kikusui: C05S0404MT, C05S041MT CS05S007MT, CS05S012MT, DSS020A, Hitachi: V-239, V-222, V-422, V-599.

60MHz B/W — CP-802-ND: Tektronix: 2221, 2211, 2224.

*A give us a call if your scope is not listed!

The unique ‘floating’ adjustment screws allow you to calibrate the Stack probe to a known frequency without disturbing the probe. Stack used the same stringent test requirements for calibration bandwidth capability as Tektronix and Hewlett Packard.

Oscilloscope Bandwidth

Bandwidth

<table>
<thead>
<tr>
<th>Test Lead Part No.</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100MHz, x 10</td>
<td>CP-901, CP-223, CP-801</td>
<td>39.00</td>
</tr>
<tr>
<td>100MHz, x 10*</td>
<td>CP-902, CP-240, CP-802</td>
<td>39.00</td>
</tr>
<tr>
<td>200MHz, x 10</td>
<td>CP-904, CP-242, CP-804</td>
<td>39.00</td>
</tr>
<tr>
<td>250MHz, x 10</td>
<td>CP-909, CP-252, CP-809</td>
<td>39.00</td>
</tr>
<tr>
<td>500MHz, x 10</td>
<td>CP-914, CP-255, CP-814</td>
<td>39.00</td>
</tr>
<tr>
<td>1GHz, x 10</td>
<td>CP-919, CP-256, CP-819</td>
<td>39.00</td>
</tr>
<tr>
<td>2GHz, x 10</td>
<td>CP-919, CP-256, CP-819</td>
<td>39.00</td>
</tr>
<tr>
<td>2GHz, x 10*</td>
<td>CP-919, CP-256, CP-819</td>
<td>39.00</td>
</tr>
</tbody>
</table>

With Readout

<table>
<thead>
<tr>
<th>Test Lead Part No.</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100MHz, x 10</td>
<td>CP-901, CP-223, CP-801</td>
<td>39.00</td>
</tr>
<tr>
<td>100MHz, x 10*</td>
<td>CP-902, CP-240, CP-802</td>
<td>39.00</td>
</tr>
<tr>
<td>200MHz, x 10</td>
<td>CP-904, CP-242, CP-804</td>
<td>39.00</td>
</tr>
<tr>
<td>250MHz, x 10</td>
<td>CP-909, CP-252, CP-809</td>
<td>39.00</td>
</tr>
<tr>
<td>500MHz, x 10</td>
<td>CP-914, CP-255, CP-814</td>
<td>39.00</td>
</tr>
<tr>
<td>1GHz, x 10</td>
<td>CP-919, CP-256, CP-819</td>
<td>39.00</td>
</tr>
<tr>
<td>2GHz, x 10</td>
<td>CP-919, CP-256, CP-819</td>
<td>39.00</td>
</tr>
<tr>
<td>2GHz, x 10*</td>
<td>CP-919, CP-256, CP-819</td>
<td>39.00</td>
</tr>
</tbody>
</table>

Wiper Jumpers Test Leads

Handy test leads with insulated alligator clips attached to each end. Each end is suitable for alligator clips and yellow jumpers.

GC396-ND Std. Test Leads, 2 Ea. 15” (38.10cm) long 20 AWG/24 AWG (25 Pack) — 5.68
GC397-NZ Heavy Duty Test Leads, 1 Ea. 22” (55.88cm) long 24 AWG/20 AWG (5 Pack) — 6.44
**LAMPS & ACCESSORIES**

**MicroLux Microscope**


**K" Arm (inch) | Mount | Digit-Key Part No. | Price Each | Luxo Part No.**
| 26 (6.64) | Clamp Bracket | L601LB-N | 1414.17 | 18200 |

**Wave + Plus Series Magnifiers**

3-DOPTER LENS

The Luxo Wide Angle Viewing Enlargement system with stadium shaped lamp offers the largest distortion-free area in the industry. Improved light output uses two 10 watt compact fluorescent lamps. Bulb indicator lights are located on either side of the magnifier head. When one or both fluorescent tubes are in operation the respective indicator lights is illuminated. Magnification 3X: Focal length: 13" (33.02cm); viewing area: 6 2/5" (17.15cm). ABS molded housing. Independently switched, energy-efficient, long life compact fluorescent lamps offer both shadow-free dual light-two dimensional and single light three-dimensional viewing. Lux listed (33W R. Compact Bulb)

**KFM Series Magnifiers**

KFM's multi-lens capability offers a wider range of distortion-free magnification than any other magnifier. KFM's patented internal spring arm offers perfect balance and full adjustability to an infinite number of positions. There are no need to tighten, nothing to lose. A (12.7mm) diameter lenses are mounted in die-cast aluminum housing. Comes with a 220w energy efficient fluorescent bulb which provide cool, shadow-free illumination. (22W T-B Bulb)

**Lens Type** | "L" Arm (inch) | "L" Arm Mount | Color | Digit-Key Part No. | Price Each | Luxo Part No.**
| 3d 45 (114.30) | Clamp Bracket | Lt. Gray | L845LG-N | 419.69 | 1785EL |
| 3d 45 (114.30) | Clamp Bracket | Black | L845BL-N | 391.76 | 1784GEL |
| 3d 45 (114.30) | Weighted Base | Lt. Gray | L847LGN | 476.44 | 1787GEL |

**IFM Series**

Full size 5" (127mm) 3 diopter lens provides distortion free 1/4X power magnification. Lens allows a generous 13" (33.02cm) (focal length) work area between lens and objects. 5" (127mm) view area is of tough, man-resistant synthetic material that is reinforced by a steel plate and back with heavy steel plate. Comes with an energy-efficient 220w circular fluorescent lamp for cool, shadow-free illumination. (22w T-B Bulb)

**Lens Type** | "L" Arm (inch) | "L" Arm Mount | Color | Digit-Key Part No. | Price Each | Luxo Part No.**
| 3d 45 (114.30) | Clamp Bracket | Lt. Gray | L601LG-N | 173.25 | 16301LG |
| 3d 30 (76.20) | Weighted Base | Lt. Gray | L554LG-N | 332.06 | 17253LG |

**Ledu Task Master Series**

C12D Series

UN12D Series

DF12D Series

L554 Series Halogen Worklight

Three way switch: incandescent only, fluorescent only, or both on at the same time. Includes adjustable drafting board clamp.

**L" Arm (inch) | Mount | Color | Digit-Key Part No. | Price Each | Luxo Part No.**
| 42 (106.68) | Clamp Bracket | White | L1205W-N | 165.90 | C12D |
| 42 (106.68) | Clamp Bracket | Black | L1205B-N | 165.90 | C12D |
| 42 (106.68) | Clamp Bracket | Lt. Gray | L1205LG-N | 152.00 | C12D |

**Clamp Bracket**

For edging mount on horizontal surface

**Replacement Bulbs**

**Description** | Digit-Key Part No. | Price Each | Luxo Part No.**
| 22 Watt T-9 Bulb | L540-N | 5.40 | 31640 |
| 22 Watt T-10 Bulb | L536-N | 6.25 | 31646 |
| 13 Watt Plusfluorescent Bulb | L5025-N | 24.06 | 36205 |
| 5 Watt Pli Compact Lamp | L5172-N | 17.73 | 36206 |
| 5 Watt Halogen Lamp | L577-N | 23.10 | 34977 |

**Command Console**

Command Console gives you ISOBAR® protection in an under-monitor design and finger-tip control of your computer peripherals.

- Superior ISOBAR® surge and RFI/EMI noise filtration • Built-in touch-anywhere static guard • 6 outlets; master control and 4 convenience outlets • Individual component switches • 15 amp circuit breaker with reset

- Modern/fax spike filter on CCI-6 PLUS model • CCC4 features a slimline plastic housing and diagnostic LEDs. $5,000 Lifetime Insurance

**Standby and On-Line UPS Systems**

**Standby UPS Systems**

BC Standby UPS systems are battery backups in stack, compact housings. They protect your computers, and electronic equipment from power failures, brownouts and AC surges and transients. With critical business functions being performed at home now more than ever before, TrippLite BC Series makes power protection for the office affordable and a necessity. BC Pro units are ideal for networked PCs and workstations.

**Internet Backups** offer complete protection for PCs connected to the internet and World Wide Web. All of the above offers the benefits of the BC Personal with RFI jacks for public protection.

- All UPS's are UL Approved • 2 year warranty • 115VAC (TL202, 230VAC)

**SMART Pro Net Intelligent Standby UPS Systems**

The Smart Pro Net UPS system is complete network power protection in a single box. You get a reliable Tripp Ups sure power system plus all the latest in surge protection. A CD Rom containing power software for every major network operating system and complete cabling to implement your UPS solution. Everything you need is included in a single box. Complete brownout protection keeps your battery from flatting out. Customizable protection lets you choose the best possible battery with your device's power requirements. A built-in microprocessor constantly monitors incoming line voltages and protects your computer from damaging voltage spikes, sags, EM/RFI. • 115VAC

**OmniSmart PnP Interactive Standby UPS System**

Includes all the features of the Smart Pro UPS system with the capability of detailed self test to all major functions of UPS and offers automatic inverter shutdown 20 seconds after your file server has performed an unconditional shutdown, the OmniSmart will also power itself down to save battery power. Network card allows you to monitor critical conditions including input voltage, load capacity, battery conditions, operating temperatures and output voltage and frequency data in easy to read pull down menus. • 110VAC

**True On-Line UPS Systems With Zero Transfer Time**

The new TrippLite/Union models give you the true on-line, pure sine wave UPS protection with standby UPS affordability. Provides reliable blackout protection and fully regulated output, only one continuous condition all power to your computer to eliminate brownouts, spikes, line noise, transients. Absolute surgery on noise spikes, spurious power disturbances which power irregularities cannot penetrate Union’s double conversion on-line UPS design. Comes with TrippLite’s award winning PowerAlert software and cable. Perfect for high-end servers and workstations, CAD/CAM, RISC, UNIX and other systems that have proven more sensitive to power irregularities.

**Description** | Digit-Key Part No. | Price Each | Tripp Lite Part No.**
| Unison UPS 400 VA, 300 watts, 4 outlet | TL140-ND | 569.00 | P45400 |
| Unison UPS 700 VA, 500 watts, 4 outlet | TL141-ND | 691.00 | P45700 |
| Unison UPS 1000 VA, 700 watts, 6 outlets | TL142-ND | 855.12 | P459100 |
| Unison UPS 1200 VA, 800 watts, 6 outlets | TL143-ND | 1332.66 | MPS1400 |
| Unison UPS 2000 VA, 1300 watts, 6 outlet | TL144-ND | 1894.49 | MPS2000 |
**DC to AC Power Inverters**

Solid-state electronic power inverter change 12VDC to 115VAC. Simply plug into power outlet and plug in your equipment. Inverters hold appliances for convenient portable AC power. Use on boats, campers, cars, and anywhere 12VDC is available.

**Auto Moto Inverters** are housed in a sturdy portable metal case with 12V cigarette lighter plug built-in. Ideal for laptops, test equipment, and small electronic test units. **General Purpose Inverters** are low cost power inverters for equipment that doesn’t require control or output regulation. Easy to use for light-duty applications.

**Peak Power Models** are able to handle up to twice their normal wattage for short periods of time. Delivered high start-up current. Frequency controlled AC, making them ideal for motors, refrigerators, power tools and microprocessors. **APS inverters** feature modified sine wave, frequency controlled, and output regulated. The inverter automatically sense and switch to AC between line power and battery power. A built-in recharge circuit will recharge the equipment the voltage becomes available. Perfect for sump pumps, emergency lighting, and more.

**Line Conditioners**

Line Conditioners let you work through power surges and system overload for unlimited time periods, without using emergency power such as UPS systems. Line conditioners automatically adjust under and over voltage to provide safe computer grade AC power meeting MIL-C-41941 specifications. Full surge protection and noise filtering to eliminate erratic cost spike and line noise. Line conditioners are available in multiple sizes and models to suit your needs.

**DSS Surge Suppressors**

DSS surge suppressor combines 4 coaxial connectors and 6 outlet AC surge protection. Designed to protect all high end video and audio equipment such as large-screen TVs, satellite equipment, DSS systems, VCRs, CD changers and stereo receivers.

**Surge Suppressor** is the most economically advanced surge suppressor available today. Includes isolation — preventing connected equipment from interfacing damage and surge spikes up to $25,000. UL Listed. Cuts cost spike and line noise. Performance in a low cost and line noise suppressor. Supressors up to 27,000 amps. UL approved. Lifetime warranty.

**Economy Surge Suppressors**

For a more economical approach to power protection, Tripp Lite offers five products for your specialized applications.

**Power Miser**

Automatically shuts down your monitor when not in use while providing continuous surge protection and surge suppression. It can save as much as $1900 per year in electricity bills. Use selective time out. An economical alternative to a green PC.

**Modem/Fax Protectors**

Protects modems, phone lines and faxes from damaging spikes and harmful line noise.
Panasonic: Extra Heavy Duty Carbon Zinc Batteries

**FEATURES:**
- **Unsurpassed Leakage Resistance for a Longer Service Life**
- **Discharge Characteristics Suited for All Applications**
  - Excellent Storage Life
- **High Quality & High Reliability:**
  - Unsurpassed Leakage Resistance for a Longer Service Life

**APPLICATIONS:**
- **Electronic Calculators**, **8 mm Cameras**, **Electric Shavers**, **Tape Recorders**, **Portable TVs**, **Interphones**, **Transistor Radios**, **Tape Recordings**, **Portable TVs**, **Interphones**, **Pressure Contact Terminals**.
- **Trickle Charge Series** (for communications, micro UPS, emergency lights, etc.)
- **Digi-Key Part number** is not approved by any state or federal agency as an authorized supplier of product for medical, life support or life sustaining devices or systems.

**Specifications:**
- **Dimensions:**
<table>
<thead>
<tr>
<th>Size (V)</th>
<th>Dimensions (In. - mm)</th>
<th>Weight (lbs. - g)</th>
<th>Capacity (to 0.9V/Cell)</th>
<th>Part No. Each</th>
<th>Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>1.5 0.571 (14.5) 1.066 (27) 0.44 (47)</td>
<td>120 hrs (100% cont.)</td>
<td>950MAH</td>
<td>P244-NA 100</td>
<td>100</td>
</tr>
<tr>
<td>AAA</td>
<td>1.5 0.413 (10.5) 0.75 (19)</td>
<td>39 hrs (100% cont.)</td>
<td>265MAH</td>
<td>P255-ND .51</td>
<td>17.00</td>
</tr>
<tr>
<td>1.5</td>
<td>0.472 (12.0) 0.95 (24)</td>
<td>22 hrs (100% cont.)</td>
<td>144MAH</td>
<td>P256-ND .62</td>
<td>12.00</td>
</tr>
<tr>
<td>9V</td>
<td>1 1.91 x 1.04 x 0.98 (48.5 x 26.5 x 25.5) 1.74 (38) 2.5V (100% cont to 0.5V)</td>
<td>154hrs</td>
<td>P258-ND 1.77</td>
<td>14/16/12 310/600 100/500</td>
<td></td>
</tr>
</tbody>
</table>

- **Cylinder:**
  - The cylindrical battery is composed of manganese dioxide for the positive-activating substance, zinc powder for the negative-activating substance, and caustic alkali for the electrolyte.

- **Leak-resistant, leak-proof:**
  - Total sealing, and needs only charging for maintenance.

- **Dimensions – In. (mm):**
  - **Cap. Panasonic Replacement Battery Cross Reference** (see above for mfg. abbreviations)

- **Panasonic economical Digi-Key Pricing**

- **Note:**
  - Shipping charges on prepaid orders.

Panasonic: Alkaline Batteries

**FEATURES:**
- **Large Current and Large Capacity for an Excellent Performance**
- **Stable Voltage and Current**
- **Unsurpassed Resistance to Leakage**
- **Excellent Storage Life**

**APPLICATIONS:**
- **Alkaline Batteries**
  - **Manganese Dioxide**
  - **Alkalin**
  - **Heavy Duty**
  - **Extra Heavy Duty**

**Specifications:**
- **Dimensions:**
<table>
<thead>
<tr>
<th>Size (V)</th>
<th>Dimensions (In. - mm)</th>
<th>Weight (gr.)</th>
<th>Capacity (to 0.9V/Cell)</th>
<th>Part No. Each</th>
<th>Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>2.0 5.62 (143) 3.05 (77.5) 0.60 (14)</td>
<td>39 hrs (100% cont.)</td>
<td>265MAH</td>
<td>P255-ND .51</td>
<td>17.00</td>
</tr>
<tr>
<td>1.5</td>
<td>1.91 x 1.04 x 0.98 (48.5 x 26.5 x 25.5) 1.74 (38) 2.5V (100% cont to 0.5V)</td>
<td>22 hrs (100% cont.)</td>
<td>144MAH</td>
<td>P256-ND .62</td>
<td>12.00</td>
</tr>
<tr>
<td>9V</td>
<td>1 1.91 x 1.04 x 0.98 (48.5 x 26.5 x 25.5) 1.74 (38) 2.5V (100% cont to 0.5V)</td>
<td>154hrs</td>
<td>P258-ND 1.77</td>
<td>14/16/12 310/600 100/500</td>
<td></td>
</tr>
</tbody>
</table>

- **Digi-Key is not approved by any state or federal agency as an authorized supplier of product for medical, life support or life sustaining devices or systems.**

Panasonic: Sealed Lead-Acid Batteries

**GENERAL INFORMATION:**
- **DO NOT LEAK!!**
- **Quality High & Reliability:**
  - The LCR battery has stable and reliable capacity. 100% tested on life for voltage, capacity, and seal. All vents are 100% visually inspected during the final assembly process.
- **High Power Density:**
  - These batteries save installation space, while providing full and reliable power for the equipment, and many have been designed for rapid recharge, or for high power output. (Dead-end use is not recommended.)

**Applications:**
- **Rechargeable Battery**
  - **Trickle Charge Series** (for communications, micro UPS, emergency lights, etc.)

**Specifications:**
- **Dimensions – In. (mm):**
<table>
<thead>
<tr>
<th>Size (V)</th>
<th>Dimensions (In. - mm)</th>
<th>Weight (oz. - gr.)</th>
<th>Capacity (to 0.9V/Cell)</th>
<th>Part No. Each</th>
<th>Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>0.571 (14.5) 0.988 (25)</td>
<td>4.3 (120)</td>
<td>700MAH</td>
<td>P244-ND 100</td>
<td>100</td>
</tr>
<tr>
<td>1.5</td>
<td>0.715 (14.2) 1.66 (42)</td>
<td>4.3 (120)</td>
<td>700MAH</td>
<td>P255-ND .51</td>
<td>17.00</td>
</tr>
<tr>
<td>9V</td>
<td>1.91 x 1.04 x 0.98 (48.5 x 26.5 x 25.5) 1.74 (38) 2.5V (100% cont to 0.5V)</td>
<td>22 hrs (100% cont.)</td>
<td>144MAH</td>
<td>P256-ND .62</td>
<td>12.00</td>
</tr>
</tbody>
</table>

- **Panasonic economical Digi-Key Pricing**

- **Note:**
  - Shipping charges on prepaid orders.

Panasonic: Battery Tester

**Specifications:**
- **Battery Tester:**
  - **DC, AA, AAA, and 9-Volt:**
  - **button cell batteries** under load — a true test of terminal voltage!

**CROSS REFERENCE ABBREVIATIONS:**
- EP=Eagle-Picher; Yuasa; PS=Power Sonic; PA=Panasonic

**Panasonic:**
- **Trickle Charger Series** (for communications, micro UPS, emergency lights, etc.)

**Specifications:**
- **Dimensions:**
<table>
<thead>
<tr>
<th>Size (V)</th>
<th>Dimensions (In. - mm)</th>
<th>Weight (oz. - gr.)</th>
<th>Capacity (to 0.9V/Cell)</th>
<th>Part No. Each</th>
<th>Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>0.571 (14.5) 0.988 (25)</td>
<td>4.3 (120)</td>
<td>700MAH</td>
<td>P244-ND 100</td>
<td>100</td>
</tr>
<tr>
<td>1.5</td>
<td>0.715 (14.2) 1.66 (42)</td>
<td>4.3 (120)</td>
<td>700MAH</td>
<td>P255-ND .51</td>
<td>17.00</td>
</tr>
<tr>
<td>9V</td>
<td>1.91 x 1.04 x 0.98 (48.5 x 26.5 x 25.5) 1.74 (38) 2.5V (100% cont to 0.5V)</td>
<td>22 hrs (100% cont.)</td>
<td>144MAH</td>
<td>P256-ND .62</td>
<td>12.00</td>
</tr>
</tbody>
</table>

- **Panasonic economical Digi-Key Pricing**

- **Note:**
  - Shipping charges on prepaid orders.

**Panasonic:**
- **Digi-Key Part number** is not approved by any state or federal agency as an authorized supplier of product for medical, life support or life sustaining devices or systems.
**Panasonic NEW! Nickel-Metal Hydride Batteries and Tabbed Versions**

**Features:**
- Superior Energy Density: Nickel-metal hydride batteries have approximately 20-30% more capacity than equivalent standard cells. Super High Capacity & Rapid Charge “S” Type: Super high capacity & rapid charge “S” type batteries are ideal for high energy increased capacity applications. Ni-MH battery is charged within approx. 1 hr. The high-density positive base material of foam nickel is combined with the pasted negative plate to produce a capacity approximately 40% greater than that of the rapid-charge “R” type battery of the same size. Rapid Charge “R” Type: Rapid charge, high rate discharge batteries suitable for the use of all Panasonic Ni-MH technology. It employs unique plates featuring unsurpassed gas absorption technology & a current-collecting system to provide charging in 1.5 to 4 hours. The internal resistance is also greatly reduced for improved voltage retention at approximately 90% charge.

**Applications:**
- Communication
- Office Automation
- Audio Visual
- High Temperature “H” Type
- Communication  • Office Automation  • Audio Visual

**Nickel-Cadmium Batteries**

*Sealed Nickel Cadmium Battery*

**APPLICATIONS:** For Cyclic Use:
- Temperature Range • Reliable, Self-Resealing Vent

**Features:**
- Non-extending positive terminals.
- *See “How To Order” for note on shipping charges on prepaid orders.

**Specifications:**
- Devices • Memory Back-up.

**Digi-Key Pricing**

<table>
<thead>
<tr>
<th>Capacity (mAh)</th>
<th>Dimensions (D x H x Dia)</th>
<th>Standard Ni-Cad batteries</th>
<th>Weight (g)</th>
<th>Charge (hrs)</th>
<th>1</th>
<th>10</th>
<th>Carton</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA 1.2</td>
<td>550</td>
<td>4.1 x 1.75 (10.5 x 44.5)</td>
<td>0.42 (12)</td>
<td>550</td>
<td>2.76</td>
<td>24.75</td>
<td>2833.40/1800</td>
</tr>
<tr>
<td>AAA 1.2</td>
<td>1150</td>
<td>5.7 x 1.69 (14.5 x 43.0)</td>
<td>0.81 (23)</td>
<td>1150</td>
<td>2.83</td>
<td>24.53</td>
<td>1356.00/800</td>
</tr>
<tr>
<td>AAA 1.2</td>
<td>1200</td>
<td>5.7 x 1.69 (14.5 x 43.0)</td>
<td>0.82 (23)</td>
<td>1200</td>
<td>2.83</td>
<td>24.53</td>
<td>1356.00/800</td>
</tr>
<tr>
<td>AAA 1.2</td>
<td>1500</td>
<td>5.7 x 1.69 (14.5 x 43.0)</td>
<td>0.92 (26)</td>
<td>1500</td>
<td>2.92</td>
<td>24.53</td>
<td>1356.00/800</td>
</tr>
<tr>
<td>AAA 1.2</td>
<td>1700</td>
<td>6.7 x 1.71 (17 x 43.0)</td>
<td>1.09 (31)</td>
<td>1700</td>
<td>3.06</td>
<td>24.53</td>
<td>1356.00/800</td>
</tr>
<tr>
<td>AAA 1.2</td>
<td>2000</td>
<td>6.7 x 1.71 (17 x 43.0)</td>
<td>1.13 (34)</td>
<td>2000</td>
<td>3.22</td>
<td>24.53</td>
<td>1356.00/800</td>
</tr>
<tr>
<td>AAA 1.2</td>
<td>2500</td>
<td>7.6 x 1.71 (19 x 43.0)</td>
<td>1.31 (41)</td>
<td>2500</td>
<td>3.55</td>
<td>24.53</td>
<td>1356.00/800</td>
</tr>
<tr>
<td>AAA 1.2</td>
<td>3000</td>
<td>7.6 x 1.71 (19 x 43.0)</td>
<td>1.46 (51)</td>
<td>3000</td>
<td>3.86</td>
<td>24.53</td>
<td>1356.00/800</td>
</tr>
</tbody>
</table>

**iNote:** *Non-extending positive terminals.* • *See “How To Order” for note on shipping charges on prepaid orders.*