A powder actuated system consists of a tool, a fastener and a power load.

**Tool Types**

**Direct***
- Fastener driven by gas
- Gas released against fastener

**In-Direct**
- Fastener driven by piston
- Gas released against piston

*Direct acting, commonly known as “High Velocity” is no longer manufactured in the USA nor sold by major suppliers.

**Tool Classes**

**Low Velocity Tool**
- Average test velocity less than 100 meters/sec. (328 ft.)

**Medium Velocity Tool**
- Average test velocity greater than 100 meters/sec. but not exceeding 150 meters/sec. (492 ft.)

**High Velocity Tool**
- Produces average test velocity greater than 150 meters/sec.

**Fastener Types**

- **Drive Pin (With Washer)**
- **Threaded Stud**
- **Ceiling Clip**

**Power Loads**

**Standard Number and Color Identification**

<table>
<thead>
<tr>
<th>Number</th>
<th>Type</th>
<th>Color</th>
<th>Type</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brass</td>
<td>Gray</td>
<td>7</td>
<td>Nickel</td>
</tr>
<tr>
<td>2</td>
<td>Brass</td>
<td>Brown</td>
<td>8</td>
<td>Nickel</td>
</tr>
<tr>
<td>3</td>
<td>Brass</td>
<td>Green</td>
<td>9</td>
<td>Nickel</td>
</tr>
<tr>
<td>4</td>
<td>Brass</td>
<td>Yellow</td>
<td>10</td>
<td>Nickel</td>
</tr>
<tr>
<td>5</td>
<td>Brass</td>
<td>Red</td>
<td>11</td>
<td>Nickel</td>
</tr>
<tr>
<td>6</td>
<td>Brass</td>
<td>Purple</td>
<td>12</td>
<td>Nickel</td>
</tr>
</tbody>
</table>

**Caliber & Load Types**

- **.22**
- **.25**
- **.27**

**Strip Loads**

**Disc Loads**
P.A.T. APPLICATIONS

DETERMINE THE SUITABILITY OF THE MATERIAL TO BE FASTENED WITH A PIN AND HAMMER USING THE "PRE-PUNCH TEST"

TOO HARD
Point flattens
No Indent

TOO BRITTLE
Surface Shatters
Material Cracks

TOO SOFT
Fastener Sinks in with Average Hammer Blow

MASONRY MATERIALS

DO NOT FASTEN WITHIN 3" OF AN EDGE.

DISTANCE BETWEEN FASTENERS SHOULD BE AT LEAST 3"

THE PROPER LENGTH FASTENER IS DETERMINED BY ADDING THE THICKNESS OF THE MATERIAL TO BE FASTENED TO THE REQUIRED PENETRATION.

EXAMPLE: 2 X 4 TO CONCRETE LENTIL (SOFT MATERIAL) USING 9/64" DIAMETER PIN.

1-1/2" (THICKNESS OF 2 X 4)
9 X 9/64" = 1-1/4"
1-1/2" + 1-1/4" = 2-3/4" CLOSEST AVAILABLE LENGTH IS 3"

STEEL

DO NOT FASTEN WITHIN 1/2" OF AN EDGE.

DO NOT FASTEN INTO STEEL WHICH IS THINNER THAN THE FASTENER SHANK DIAMETER.

THE PROPER LENGTH OF FASTENER IS DETERMINED BY THE THICKNESS OF THE MATERIAL TO BE FASTENED, PLUS THE THICKNESS OF THE STEEL, PLUS THE POINT LENGTH.

EXAMPLE: 3/4" WOOD STRIP TO 1/4" STEEL USING A 9/64" DIAMETER PIN.

9/64" PIN HAS NO APPROXIMATE POINT LENGTH OF 3/16"
3/4" + 1/4" + 3/16" = 1-3/16"
NEAREST APPROX. PIN IS 1-1/4"

• DO NOT DRIVE FASTENERS IN AREAS WHICH HAVE BEEN TORCHED, WELDED OR HEAT TREATED.

• DO NOT USE FASTENERS LONGER THAN REQUIRED.

• DISTANCE BETWEEN FASTENERS SHOULD BE AT LEAST 1".

• TEST FIRE WITH THE LIGHTEST POWER LOAD RECOMMENDED FOR THE TOOL, INCREASING POWER LEVELS BY SINGLE STEPS UNTIL PROPER PENETRATION IS OBTAINED.

TOOLS & ACCESSORIES CORP. * Annapolis Junction, MD * 800-796-4716 * www.tatoolsonline.com