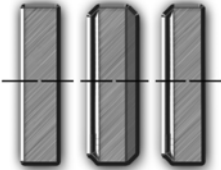
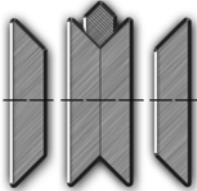
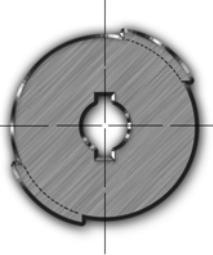
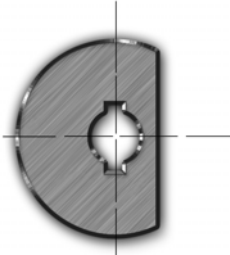


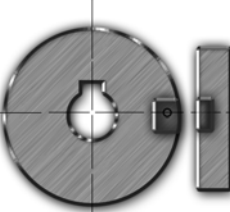
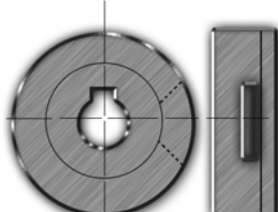


## Roll Die Construction

- Machined roll die characters made to accurate geometrical proportions.
- Roll marking subjects the marking dies to great side pressures, consequently, great importance is attached to the shape of the bevels on the characters.
- COLUMBIA'S new machining process automatically provides every angle and bevel with that extra built-in strength of geometrically true characters.
- COLUMBIA roll dies exhibit greater strength and wear-resistance over an exceptionally long period of marking life.

### Shapes for Every Marking Application

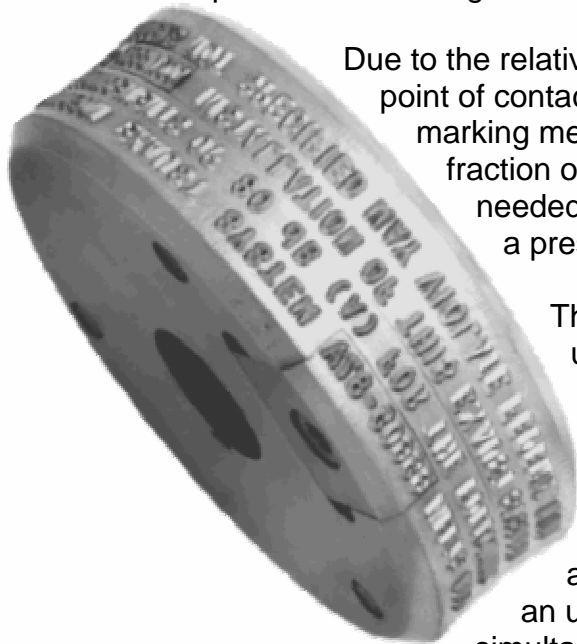
<p>1. For marking on flat surfaces or in recesses, the engraving is on the periphery of the roll die.</p> 	<p>2. For marking hexagon and octagon shaped parts on two adjacent surfaces. The two parts of the split roll dies are bolted together.</p> 
<p>3. Two or more impression roll dies are recommended where impression takes up only a fraction of the die circumference. Additional blank cost is saved by repeating the legend on opposite side.</p> 	<p>4. Roll dies with relieved section to facilitate loading and unloading of parts. Also to clear projections on marking surface.</p> 
<p>5. For marking parallel to axis of rounds and shafts. The concave surface of the roll die must have the same radius as the part.</p> 	<p>6. For marking concave surfaces. The marking surface of the roll die is machined convex to the contour of the part to be marked.</p> 
<p>7. Roll die blanks mortised for changeable inserts. Constant reading impression engraved on die blank. Variable information is engraved on inserts.</p> 	<p>8. Roll die blanks mortised for changeable wedge type inserts. Constant reading impression engraved on die blank. Variable information is made up of wedge or logo-type.</p> 

## Roll Dies

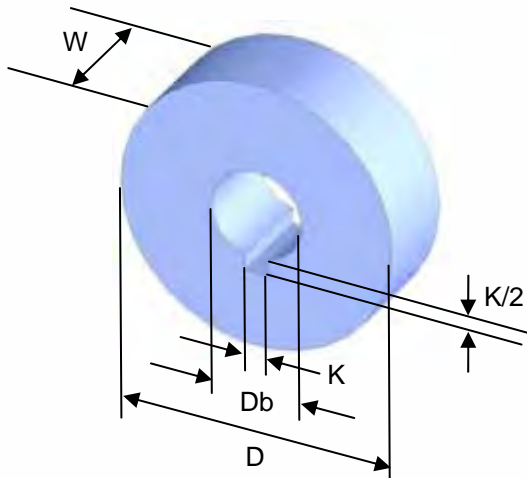
Marking by means of a roll die is one of the fastest and most efficient methods known. Roll dies, used in manually operated marking fixtures, hand, air, and hydraulic marking machines, bar markers, and special purpose marking machines, solve a large variety of production marking needs.



Due to the relatively small point of contact, the roll marking method requires only a fraction of the pressure that would be needed to mark the same legend by a press method.



The roll die marking method is used exclusively when marking uneven surfaces by employing COLUMBIA roll marking machines. In contouring, the machine allows the roll die to follow an uneven surface while, simultaneously, keeping the impression depth uniform.



### Lettering Knurl (Round Die)

D = diameter  
W = width  
D<sub>b</sub> = diameter of bore  
K = width of keyway  
K/2 = depth of keyway  
(D x W x D<sub>b</sub> x K x K/2)