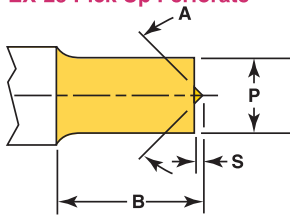


All shank to largest point diameter will be supplied with .5 radius blend unless otherwise specified. All inside corners will be supplied with .03 radius blend unless otherwise specified.

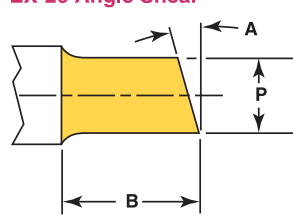
For X information see panel on page 35.

# PORTER Additional Standard Perforate, Extrude & Miscellaneous Tips.

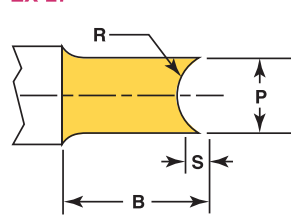
**EX-25 Pick Up Perforate**



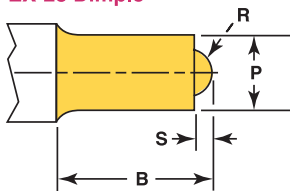
**EX-26 Angle Shear**



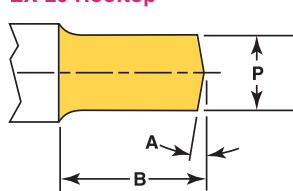
**EX-27**



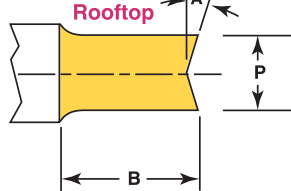
**EX-28 Dimple**



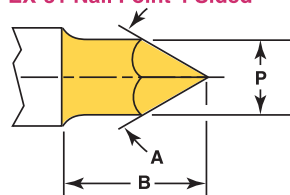
**EX-29 Rooftop**



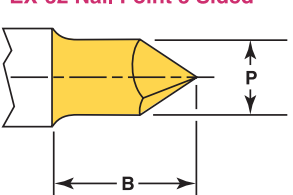
**EX-30 Inverted Rooftop**



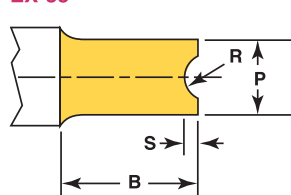
**EX-31 Nail Point 4 Sided**



**EX-32 Nail Point 3 Sided**



**EX-33**



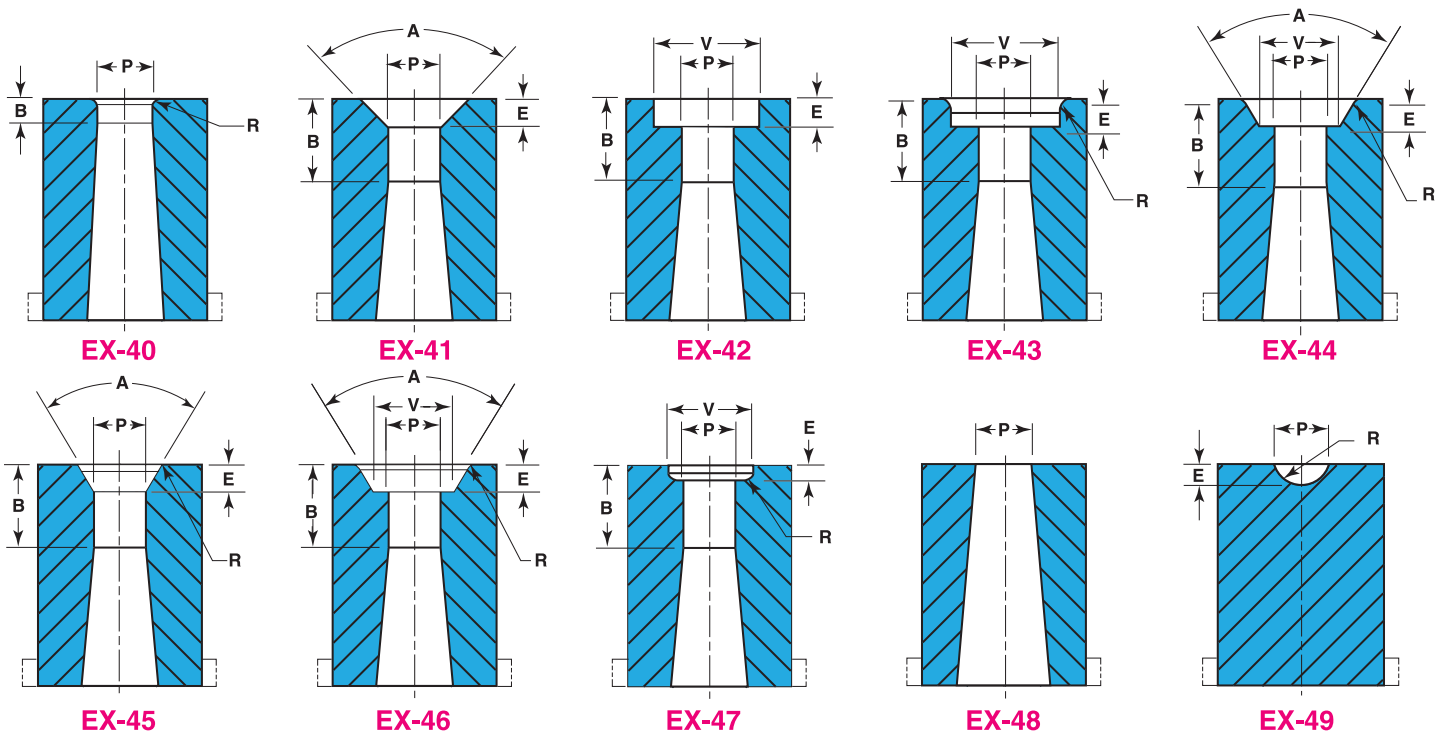
Ex. 1 thru Ex. 33 tips are available on all standard catalog range punches. (Head type, Headless and Bal-Lok Solid and Retrako.) Use caution when using Retrako type in relation to point length (P) and smallest point Ø (P). Some tips are not compatible with Retrako use. (Example # Ex. 31)

X equals the distance from under the head to an often critical junction on extrude and co-sink type punches. (For Bal-Lok and Headless type punches, this X dimension is the distance to the shank end of the punch.) You have two tolerance options on this X dimension. Normal tolerance is ±.005, for those applications requiring more critical tolerances, specify XP and this dimension will be held to ± .001.

When no B (point length) is called out, the standard B for the type punch selected will be supplied. All Ultra Precision style must call out B length as there are more than one standard available for this style punch.

Common type of extrusion punches are shown above and can be configured on any style punch as called out by the customer. Configurations of other styles can be furnished upon receipt of customer drawings with specified tolerances.

# PORTER Draw-Extrude Type Die Buttons



The above draw-extrude style die buttons can be furnished on any die button style. Tolerances on the internal configurations will be .005 unless called out by the customer to be otherwise. Standard materials used on any of these will be A2 with RC of 60-63 called out by the customer to be otherwise. Other configurations can be manufactured with tolerance drawings submitted by the customer.