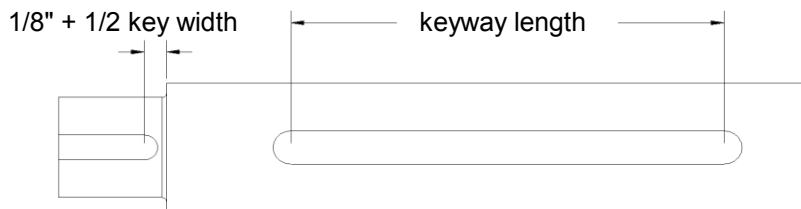


KEYSTONE Manufacturing, Inc.

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TOLERANCES AND STANDARDS FOR TURNED SHAFTS AND INTERRUPTED KEYWAYS

Shaft sizes:	For shaft turning: 2-3/4" max diameter, 60" maximum length 8" Diameter x 10" maximum length
Square Shafts:	For milling work: 6" diameter x 96" long. Larger sizes, consult Keystone
Length Tolerance:	1-15/16" is the largest square shaft we can turn. All other specs. remain the same. Saw cut bars = +/- 1/16" (+/- 1/32" is typical) Lathe cut ends = +/- .010"
Turned Work:	Keystone can perform turning work such as turned down ends and ring grooves up to 16" from the end of the shaft.
Dia Tolerance:	All Shafting made to a bearing fit. Diameter tolerances = +0, -.003" guaranteed, -.0005, -.002 typical For +0, -.001" tolerance, add 15% to turning cost (\$12.50 minimum)
Surface Finish:	Ground shafting = approx 32 RMS Turned shafting = approx 64 RMS
Corner Radius:	1/16" approximate Any other corner radius available at no additional charge.
Ring Grooves:	We break all sharp corners and put a 45 degree chamfer on all bar and turned ends. Ring Grooves can be only added within 16" of the shaft ends.
Keyways:	All keyways to be ANSI standard. Alignment of interrupted keyways is not guaranteed. Keyway lengths are measured from the center of the end mill to the center of the end mill. This is the useable portion of the keyway assuming square end keystock.



Keyways in turned down ends, will end 1/8" from the end of the turned portion. This allows 1/16" for the corner radius plus 1/16" of safety, plus 1/2" the keyway width for the end mill radius.

Keystone can vary from these standards only if the variation is included with the quotation. Items and terms shown on P.O. but not included in quotation will be considered extraneous and not be honored.