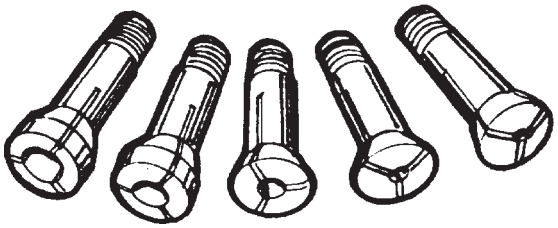

UNITURN & UNIMILL
The cool tool

WW COLLETS AND SETS
P/N 1160

Collets provide a quick, easy method of mounting cylindrical parts or bar stock in a lathe with a great deal of centering accuracy. A drawbar which passes through the headstock and threads into the back side of the collet is used to draw the collet tightly into the appropriate adapter. (See Figure 1) The adapter causes the jaws of the collet to close down, gripping the part to be machined. UNITURN Collet Adapter and drawbar (P/N 1161) holds collets with a shaft diameter of .312" to .313". Since many collets are available with shafts of .315" (8 mm) diameter, UNITURN now also offers an adapter for that size as well. (P/N 1156)

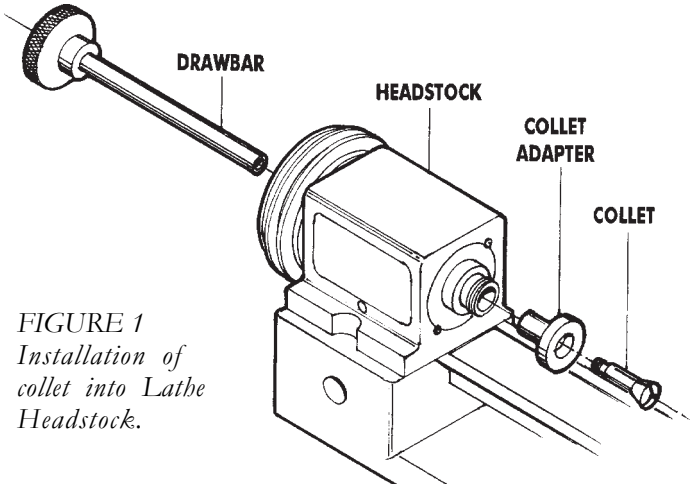

FIGURE 1 Installation of collet into Lathe Headstock.

WW Collets differ from Milling Collets (P/N 3060) in that WW Collets have a hole completely through the collet and drawbar. This is so long material can be passed through the headstock and the appropriate portion machined. The maximum diameter material that can pass through the WW Collet is 3/16" for American size collets and 4.5 mm for metric size collets. WW Collets in larger sizes are sometimes refered to as "Pot Collets". (See Figure 5.)

Collet accuracy may be improved by taking a light cut across the entrance angle of the Collet Adapter with the headstock set at 20° using a boring tool as shown in figure 2. (Refer also to the instruction manual on Taper Turning and Boring.) In most cases, however, collets are accurate enough and do not require this truing operation.

Note also that the collets available from UNITURN are accurate yet economically priced. Should extreme accuracy beyond the tolerances of these collets be required, even more accurate collets are available from other sources and cost not too much.

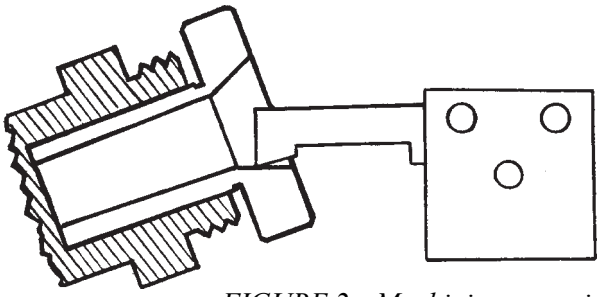

FIGURE 2-- Machining a precise angle on a Collet Adapter

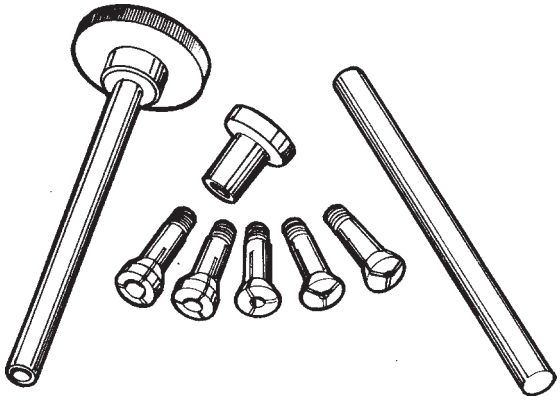

FIGURE 3-- Collet Set with Drawbar, Adapter and Knock-out Bar (P/N 1160, American-- P/N 1178, Metric).

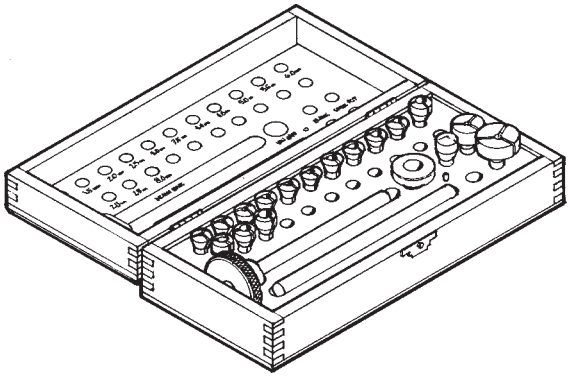

FIGURE 4-- Deluxe Collet Set in Wooden Box (P/N 1162, American--P/N 1179, Metric).

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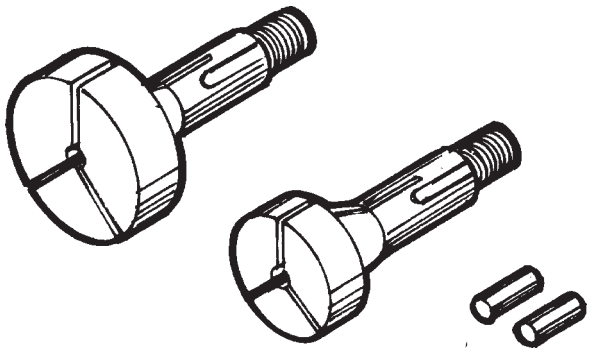


FIGURE 5-- "Pot" or "Step" Collets and Dowel Pins (P/N 2101, 1" and P/N 2100, 3/4").

POT OR STEP COLLETS

These collets are designed to hold larger and odd shaped pieces. The collets are split and have a 1/8" hole through. It is your job to bore them to fit your application. This is accomplished by tightening the collet in the lathe on the 1/8" pin supplied and boring the collet to the size needed. The depth of the bore shouldn't exceed .200" (5 mm). The diameter shouldn't exceed .625" (16 mm) on the 3/4" and .875" (22 mm) on the 1" Pot Collets.

NOTE: Pot Collets are designed to hold material only on the face end, not through the collet.

WW COLLETS--AVAILABLE SIZES

INCH

PART NO.	FRACTION	DECIMAL
2051*	1/16"	.063"
2052	5/64	.078
2053	3/32	.094
2054	7/64	.109
2055*	1/8	.125
2056	9/64	.141
2057	5/32	.156
2058	11/64	.172
2059*	3/16	.188
2060	13/64	.203
2061	7/32	.219
2062	15/64	.234
2063*	1/4	.250
2064	17/64	.266
2065	9/32	.281
2066	19/64	.297
2067*	5/16	.313

* Indicates Collets included in set P/N 1160

METRIC

PART NO.	MM SIZE	DECIMAL
2068	1.5 mm	.059"
2069*	2.0	.079
2070	2.5	.098
2071*	3.0	.118
2072	3.5	.138
2073*	4.0	.158
2074	4.5	.177
2075*	5.0	.197
2076	5.5	.217
2077*	6.0	.236
2078	6.5	.256
2079	7.0	.276
2080	7.5	.295
2081	8.0	.315

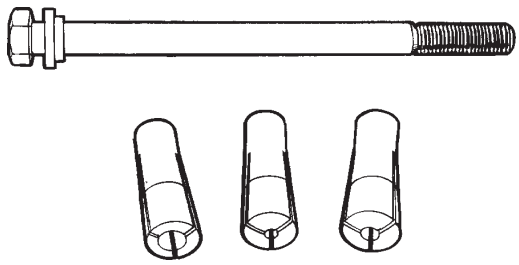
* Indicates Collets included in set P/N 1178

NOTE: Special Collets can be ordered within the range of .050" to .320". When ordering special sizes, please use Part Number 2082 followed by the desired size in inches. (Example: P/N 2082-.193")

PLEASE ALLOW AT LEAST 5 WEEKS DELIVERY FOR SPECIAL ORDER COLLETS.

Collet Blanks (P/N 2050) are available. These can be machined to any custom size you desire for special projects.

You may also order the Wooden Box and Insert only from the Deluxe set to create your own custom set. Order Part Number 1170.



MILLING COLLETS, P/N 3060

UNITURN Milling Collets are designed to be used with Morse #1 internal taper that is standard on the spindle of both the UNITURN lathe and mill. Because of the shallow angle of the Morse #1 taper when the drawbolt is tightened, greater clamping force can be applied when compared to the clamping pressure of WW Collets; therefore, we recommend the use of these milling collets for holding miniature size end mills, #1 and smaller center drills (1/8" shank), and assorted other small cutters.