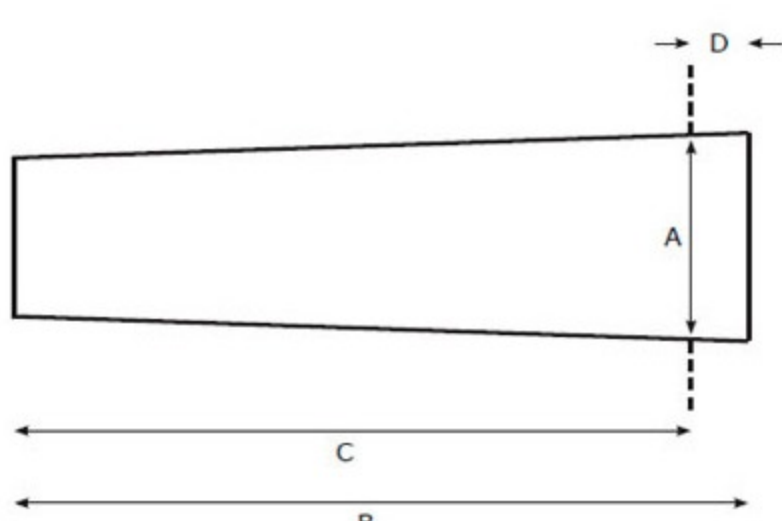


# MORSE TAPER DIMENSIONS AND DRILL CHUCK ARBORS



## MORSE TAPER DIMENSIONS



TAPER SIZE	A	B	C	D	TAPER
MT 0	9.045	49.0	46.0	3.0	0.05205
MT 1	12.065	52.0	48.5	3.5	0.049882
MT 2	17.780	64.0	59.0	5.0	0.049951
MT 3	23.825	79.0	74.0	5.0	0.050196
MT 4	31.267	100.0	93.7	6.5	0.051938
MT 5	44.399	127.0	120.5	6.5	0.052626

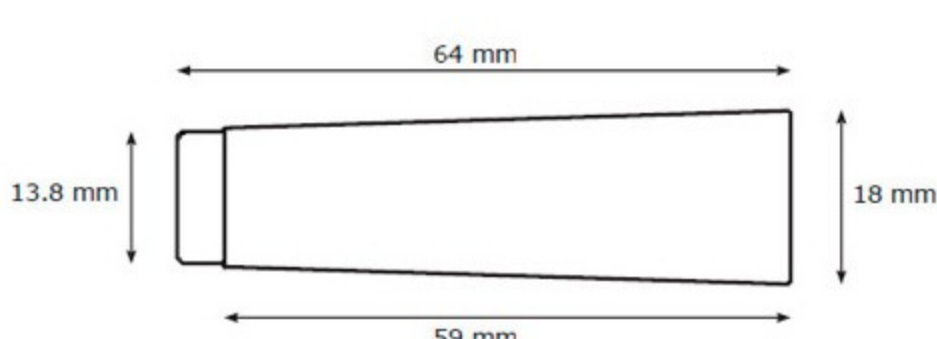
A, B, C, D dimensions in millimeters. D is the amount of the taper that will remain protruding from the quill or spindle. Taper values on right column are for both mm and inches. For example, for MT 2, taper is 0.049951 mm per each length mm or 0.04995 inch per each length inch. Tapers represented without tang.

## MORSE TAPERS FOR MINI-LATHE TAILSTOCK



Standard MT2 tapers with tang are not a good choice for the mini-lathe. Due to the small size of the lathe, the tailstock leadscrew will conflict with the tang. Though they can be used, a considerable amount of the quill movement will be lost due to the tang. And some usable bed length will be lost too.

Based on the dimensions of the live center MT2 taper that came with the lathe (bottom left on picture), I ended making several MT2 tapers (all the others on picture). MT2 tapers I'm using on the mini-lathe tailstock have standard morse taper dimensions without tang and straight turned down to 13.8mm on the smaller end. I think it is a good idea to make this straight end when machining MT arbors, as the clearance made by the straight end will avoid any wear on the end to produce interference on the taper fit.



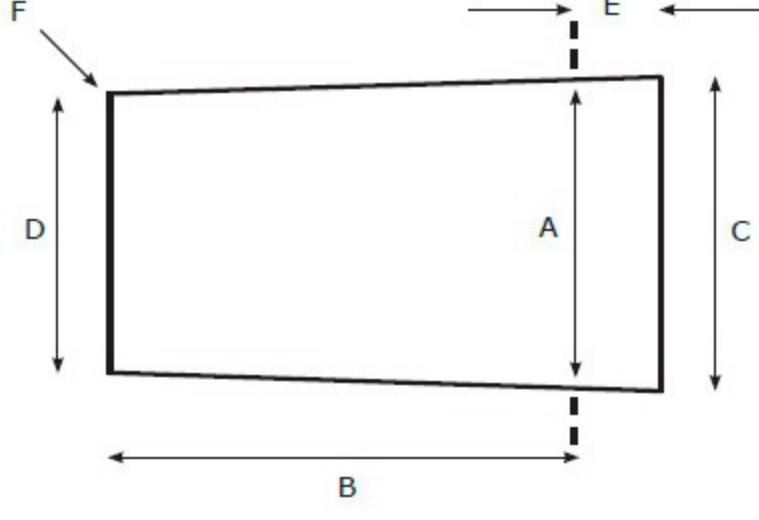
## DRILL CHUCK ARBORS TAPERS



DIN tapers for drill chuck arbors are shorter MT tapers. B 10 and B 12 tapers are identical to MT 1 taper, B 16 and B 18 identical to MT 2 taper, B 22 and B 24 identical to MT 3 taper.

Each MT taper is identical to two chuck tapers. Identical to one on the small MT taper end and identical to other on the MT taper larger end. For example, B 16 is as the smaller end of a MT 2 taper and B 18 is as the larger end of a MT 2 taper.

On picture you can see a standard MT 2 - B 16 arbor I bought and the one made on the lathe. Made it without the tang and the chuck taper was turned a bit undersized, for the chuck to mount as close as possible from the tailstock quill. This way I can use all the tailstock quill travel and the chuck protrudes as less as possible. On a small lathe, every millimeter must be saved.



CHUCK TAPER	A	B	C	D	E	F (CHAMFER)	TAPER
B 10	10.094	14.5	10.3	9.4	3.5	1.0	0.04988
B 12	12.065	18.5	12.2	11.1	3.5	1.0	0.04988
B 16	15.733	24.0	16.0	14.5	5.0	1.5	0.04985
B 18	17.780	32.0	18.0	16.2	5.0	1.5	0.04985
B 22	21.793	40.5	22.0	19.8	5.0	2.0	0.05020
B 24	23.825	50.5	24.1	21.3	5.0	2.0	0.05020

A, B, C, D, E, F dimensions in millimeters. F is for a 45° chamfer. E is the amount of the taper that will remain out from the chuck. Taper values on right column are for both mm and inches. For example, for B 16, taper is 0.04995 mm per each length mm or 0.04995 inch per each length inch.