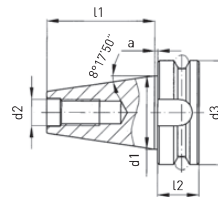


TOOLHOLDERS TAPER STANDARDS

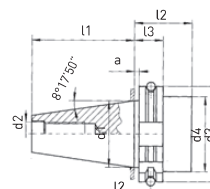


MAS 403 BT



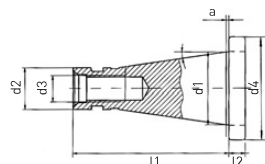
TAPER	a +/- 0.2	d1	d2	d3 0/- 0.1	l2	l1 +/- 0.02
BT30	2	31.75	M12	46	20	48.4
BT40	2	44.45	M16	63	25	65.4
BT50	3	69.85	M24	100	35	101.8

DIN 69871



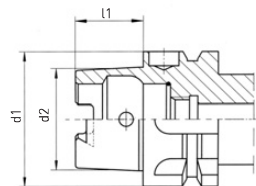
TAPER	a +/- 0.2	d1	d2	d3 0/- 0.1	d4 max.	l2 min.	l3 0/- 0.1	l1 0/- 0.3
DIN 30	3.2	31.75	M12	50.0	44	35	19.1	47.8
DIN 40	3.2	44.45	M16	63.55	50	35	19.1	69.4
DIN 50	3.2	69.85	M24	97.5	80	35	19.1	101.75

DIN 2080 (ISO)



TAPER	a +/- 0.2	d1	d2 a10	d3	d4	l2 +/- 0.15	l1
ISO 30	1.6	31.75	17.4	M12	50	8	68.4
ISO 40	1.6	44.45	25.3	M16	63	10	93.4
ISO 50	3.2	69.85	39.6	M24	97.5	12	126.8

HSK (DIN69893 A)



TAPER	d1	d2	l1
HSK 50	50	38	25
HSK 63	63	48	32
HSK 80	80	60	40

Tapers are according to AT3 specifications
On the collet chucks the run out between outside taper to the taper of collet cavity is max. 5µ.