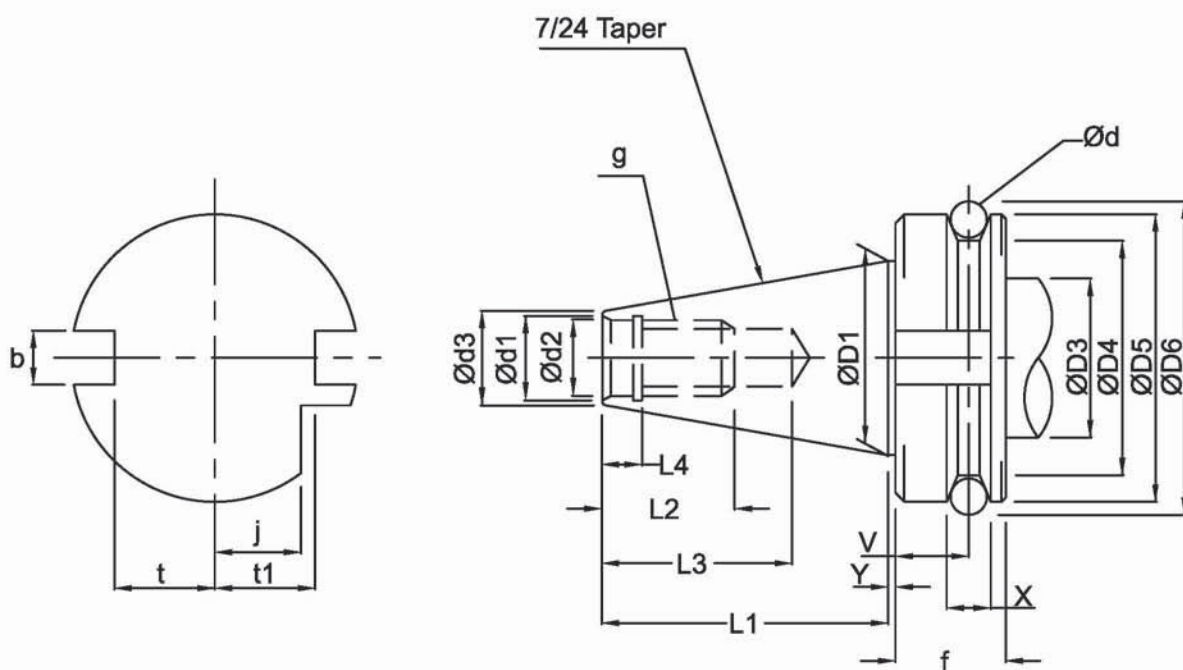


MAS BT-403



**DIN 69871
ISO, ANSI**

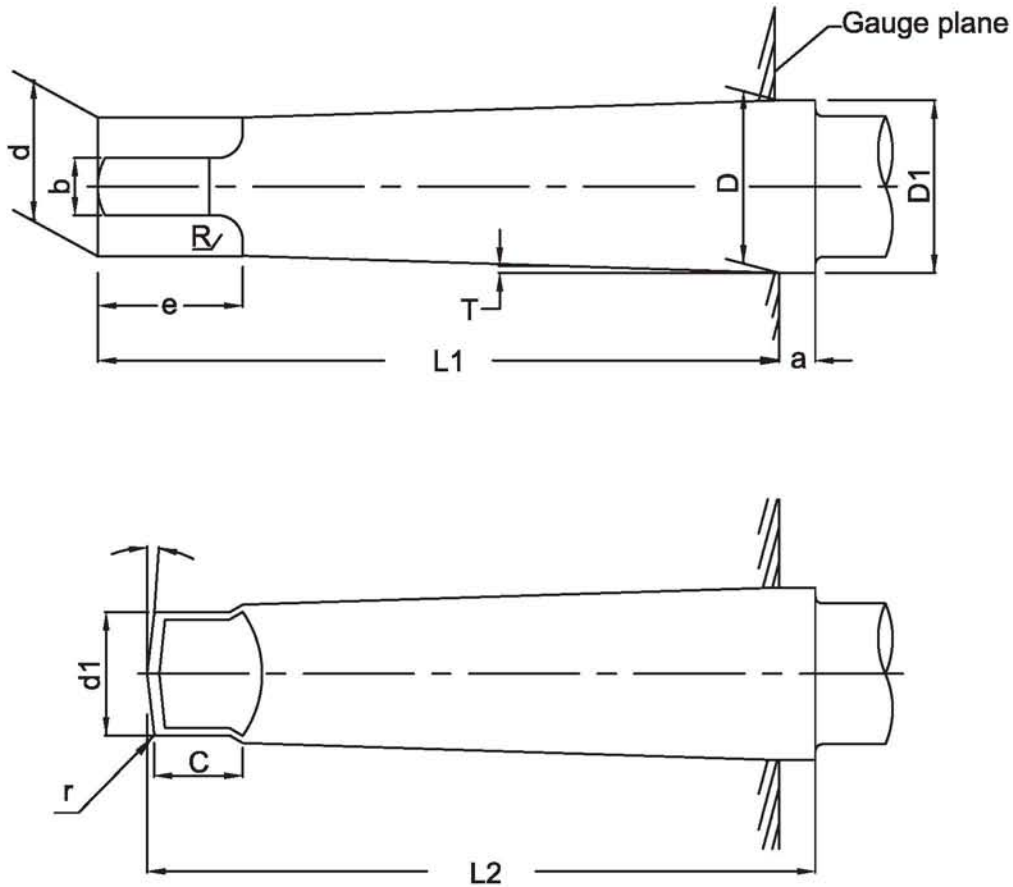


MACHINING CENTER SHANK DETAILS

Taper No.	Type	D1	L1	d1	d2	g	L2	L3	L4	b	L5	t	t1	j	D3	D4	D5	e	f	V	X	X1	Y	d3	d	D6
30	MAS	31.75	48.4	14	12.5	M 12x1.75	24	34	7.0	16.1	17	16.3	-	-	-	38	46	20	-	13.6	4	8	2	17.633	8	56.144
	DIN	31.75	47.8	14	13	M 12x1.75	24	33.5	5.5	16.1	-	16.4	19	15	45	44.3	50	-	15.90	11.1	3.75	-	3.2	17.808	7	59.3
35	MAS	38.10	56.4	14	12.5	M 12x1.75	24	34	7.0	16.1	20	19.6	-	-	-	43	53	22	-	14.6	5	10	2	21.91	9	61.97
	MAS	44.45	65.4	19.0	17	M 16x2	30	43	9.0	16.1	21	22.6	-	-	-	53	63	25	-	16.6	5	10	2	25.375	10	75.679
40	ISO	44.45	68.4	19.0	17	M 16x2	32	42.5	8.2	16.1	-	22.8	25.0	18.5	44.7	56.25	63.55	-	15.90	11.1	3.75	-	3.2	24.500	7	72.30
	ANSI	44.45	68.4	18.5	16.4	M 16x2	30	-	4.75	16.1	-	22.8	26.0	-	44.7	56.25	63.55	-	15.90	11.1	3.75	-	3.18	24.500	7	72.30
45	DIN	44.45	68.4	19.0	17	M 16x2	32	42.5	8.2	16.1	-	16.4	25.0	18.5	50	56.25	63.55	-	15.90	11.1	3.75	-	3.2	24.500	7	72.30
	MAS	57.15	82.8	23	21	M 20x2.5	38	53	11.0	19.3	26	29.1	-	-	-	73	85	30	-	21.2	6	12	3	33.000	12	100.216
50	ISO	57.15	82.7	23.4	21	M 20x2.5	40	52.5	10.0	19.3	-	29.1	31.3	24.0	57.4	75.25	82.55	-	15.90	11.1	3.75	-	3.2	33.029	7	91.35
	ANSI	57.15	82.7	22.5	20.4	M 20x2.5	38	-	5.25	19.3	-	29.1	32.5	-	57.4	75.25	82.55	-	15.82	11.1	3.75	-	3.18	33.029	7	91.35
50	DIN	57.15	82.7	23.4	21	M 20x2.5	40	52.5	10.0	19.3	-	29	-	-	63	75.25	82.55	-	15.90	11.1	3.75	-	3.2	32.029	7	91.35
	MAS	69.85	101.8	27	25	M 24x3	45	62	13.0	25.7	31	35.5	31.3	-	-	85	100	35	-	23.2	7	15	3	40.158	15	119.020
50	ISO	69.85	101.75	28.4	25	M 24x3	47	61.5	11.5	25.7	-	35.5	37.7	30	70.1	91.25	97.70	-	15.90	11.1	3.75	-	3.2	40.173	7	107.25
	ANSI	69.85	101.75	26.5	24.8	M 24x3	45	-	5.75	25.7	-	35.5	40.4	-	70.1	91.25	98.45	-	15.82	11.1	3.75	-	3.18	40.173	7	107.25
	DIN	69.85	101.75	28.0	25	M 24x3	47	61.5	11.5	25.7	-	35.5	37.7	30	80	91.25	97.50	-	15.90	11.1	3.75	-	3.2	40.173	7	107.25

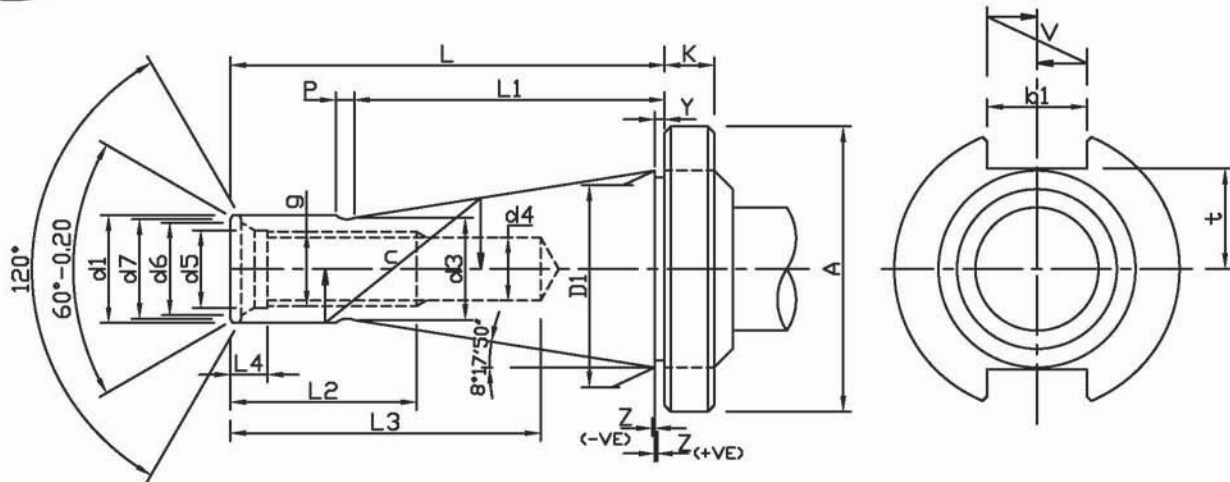
All Dimensions in mm

EXTERNAL SELF HOLDING TAPERS WITH TANGED END SHANKS

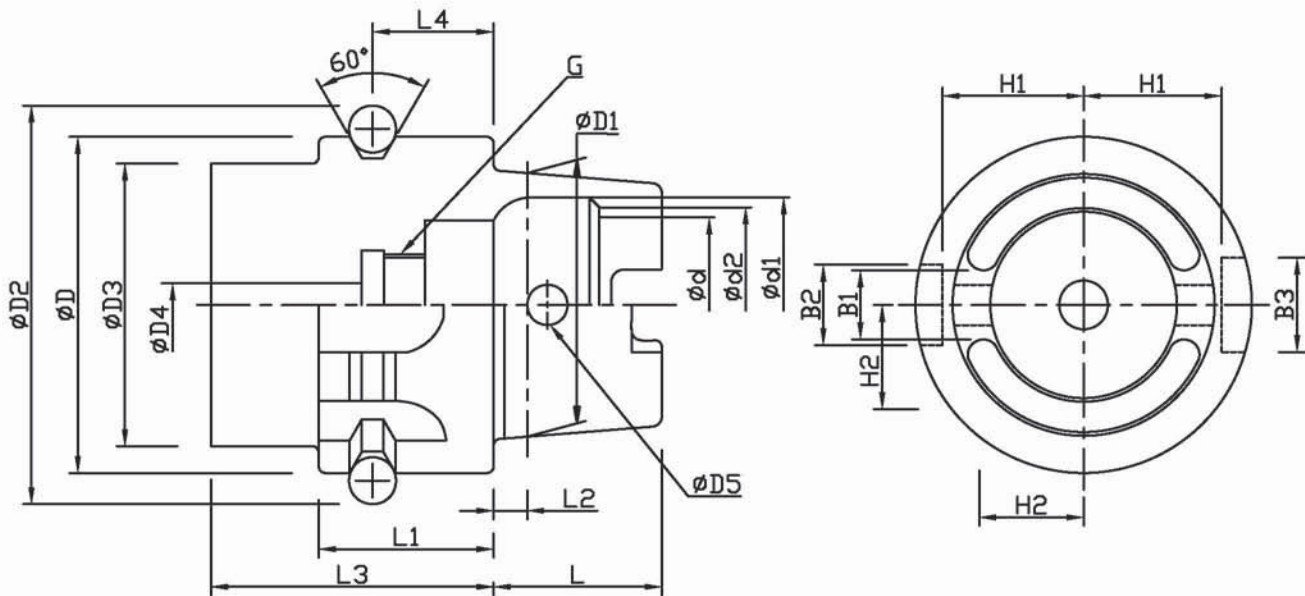


MORSE TAPER DETAILS														
Morse Taper	T	a	b h13	D	D1	d approx	d1	L1	Tolerance	L2	C	e	R	r
MT1	1°25'43"	3.5	5.2	12.065	12.2	9.4	8.7	62	-1.0	65.5	8.5	13.5	5	1.2
MT2	1°25'50"	5	6.3	17.780	18	14.8	13.5	75	-1.0	80	10	16	6	1.6
MT3	1°26'16"	5	7.9	23.825	24.1	19.8	18.5	94	-1.0	99	13	20	7	2
MT4	1°29'15"	6.5	11.9	31.267	31.6	26	24.5	117.5	-1.5	124	16	24	8	2.5
MT5	1°30'26"	6.5	15.9	44.399	44.7	37.55	35.7	149.5	-1.5	156	19	29	10	3
MT6	1°29'36"	8	19	63.348	63.8	53.75	51	210	-2.0	218	27	40	13	4
MT7	1°29'22"	-	19	83.058	-	69.85	-	285.75	-2.0	294.1	-	34.9	-	-
Metric80	1°25'56"	8	26	80.000	80.4	69.00	67	220	-2.0	228	24	48	24	5
Metric100	1°25'56"	10	32	100.000	100.5	87.00	85	260	-2.0	270	28	58	30	5

ISO TAPER SHANK



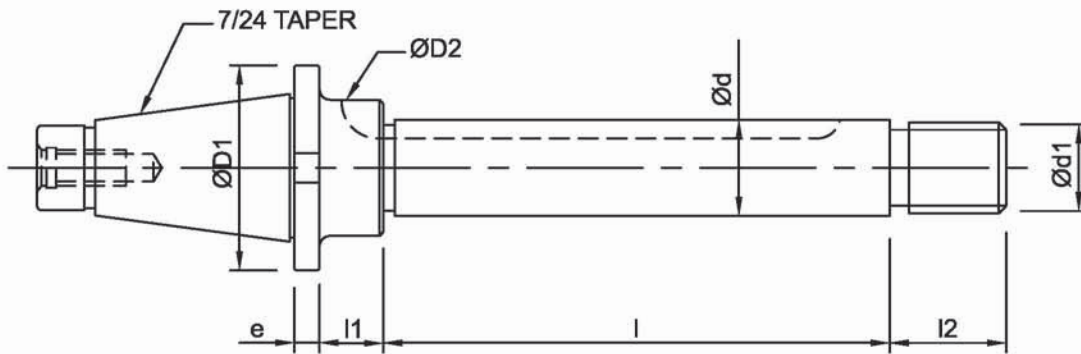
ISO TAPER		30	40	50	60
D1		31.75	44.45	69.85	107.95
A		Ø46	Ø63	Ø100	Ø140
d1	NOM	17.4	25.3	39.6	60.2
	TOL	-0.29	-0.30	-0.31	-0.34
d3		16.5	24.0	38.0	58.0
L		70	95	130	210
P		3	5	8	10
L1		50	67	105	165
Y		1.6	1.6	3.2	3.2
Z		0.4	0.4	0.4	0.4
b1	NOM	16.1	16.1	25.7	25.7
	TOL	+0.18(H12) -0	+0.18(H12) -0	+0.2(H12) -0	+0.21(H12) -0
v		0.6	0.6	0.10	0.10
t		16.2	22.5	35.3	60
g	SIZE	M12	M16	M24	M30
		1.75	2.0	3.0	3.5
d4		10.2	14	21	26.5
L2		30	35	45	56
L3		50	70	90	160
d5		12.5	17	25	32
d6		15	20	30	38
d7		16	23	35	45
L4		6	7	11	14
K		8	8	12	12



TAPER No.	HSK 32A	HSK 40A	HSK 50A	HSK 63A	HSK 100A
ϕD	32	40	50	63	100
$\phi D1$	24	30	38	48	75
$\phi D2$	37.00	45.00	59.30	72.30	109.75
$\phi D3$	26	34	42	53	85
$\phi D4$	4.2	5.0	6.8	8.4	12.0
$\phi D5$	-	4.6	6.0	7.5	12.0
L	16	20	25	32	50
L1	20	20	26	26	29
L2	3.2	4.0	5.0	6.3	10.0
L3	35	35	42	42	45
L4	16	16	18	18	20
ϕd	17	21	26	34	53
$\phi d1$	21.0	25.5	32.0	40.0	63.0
$\phi d2$	19	23	29	37	58
B1	7.05	8.05	10.54	12.54	20.02
B2	9	11	14	18	22
B3	7.0	9	12	16	20
H1	-	17.0	21.0	26.5	44.0
H2	-	12.0	15.5	20.0	31.5
G	M10x1.0	M12x1.0	M16x1.0	M18x1.0	M24x1.5



MILLING LONG ARBOR (HORIZONTAL)



7/24 Taper No	D1	e	l1	D2	d	Length l							d1	l2			
						200	250	315	400	500	630	800			1000		
30	50	8	20	27	16	x	x	x						M16X1.5	16		
				34	22	x	x	x	x					M20X2	22		
				41	27	x	x	x	x					M24X2	28		
40	63	10	25	27	16	x	x	x	x					M16X1.5	16		
				34	22	x	x	x	x	x				M20X2	22		
				41	27		x	x	x	x	x			M24X2	28		
				47	32		x	x	x	x	x			M27X2	32		
				55	40			x	x	x	x			M33X2	40		
50	100	12	30	34	22	x	x	x	x	x	x			M20X2	22		
				41	27			x	x	x	x	x		M24X2	28		
				47	32			x	x	x	x	x	x	M27X2	32		
				55	40				x	x	x	x	x	M33X2	40		
				69	50					x	x	x	x	x	M39X2	46	
				84	60						x	x	x	x	M45X3	56	
60	160	16	40	69	50							x	x	x	M39X3	46	
				84	60								x	x	x	M45X3	56
				109	80									x	x	M56X4	63
				134	100										x	x	M68X4