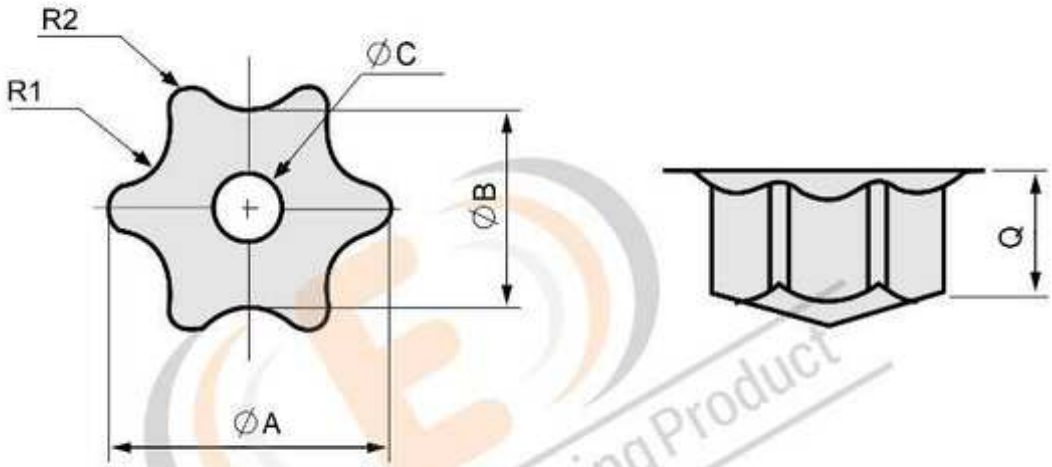
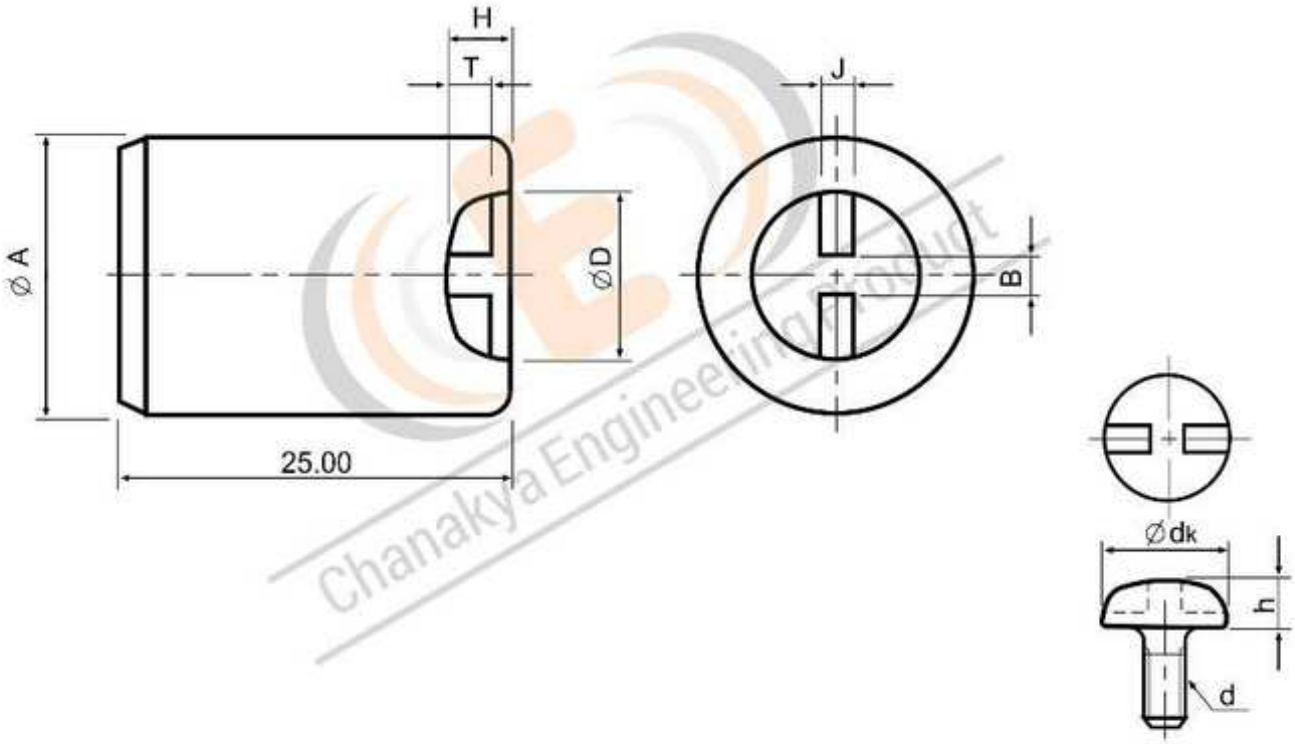


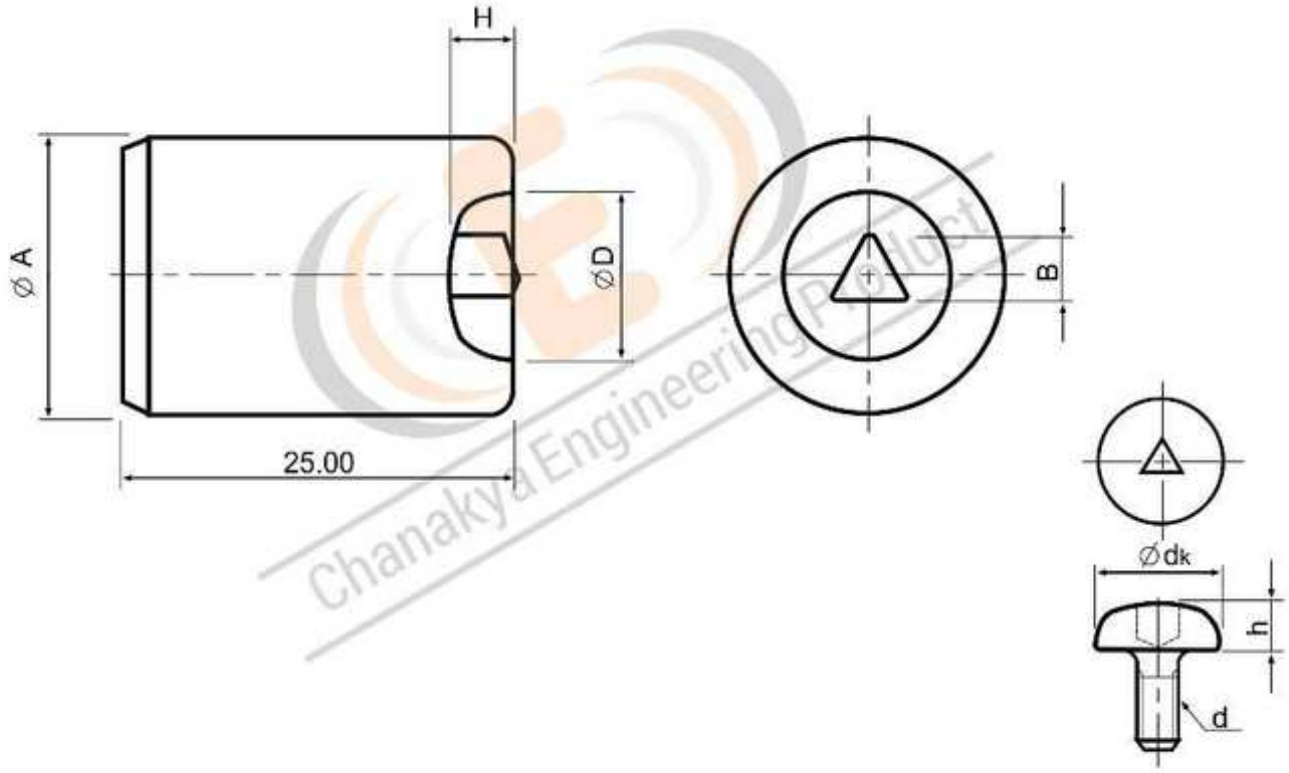
SIX-LOBE	A AS	B	R1	R2	C	
T1	0.90	0.64	0.18	0.08		
T2	1.01	0.72	0.20	0.09		
T3	1.21	0.87	0.25	0.11		
T4	1.37	0.99	0.27	0.12		
T5	1.48	1.07	030	0.13		
T6	1.75	1.27	0.36	0.16		
T7	2.06	1.49	0.42	0.19		
T8	2.39	1.73	0.49	0.22	0.60	
T9	2.57	1.86	0.53	0.23		
T10	2.82	2.03	0.57	0.25	0.80	
T15	3.35	2.41	0.69	0.29	1.00	
T20	3.94	2.83	0.83	0.33	1.40	
T25	4.52	3.24	0.89	0.41	1.80	
T27	5.08	3.64	1.05	0.43	2.00	
T30	5.63	4.05	1.16	0.48	2.30	
T40	6.76	4.84	1.40	0.58	2.60	
T45	7.92	5.65	1.72	0.64	3.20	
T50	8.94	6.45	1.78	0.81	3.60	
T55	11.33	8.10	2.46	0.92	4.60	
T60	13.34	9.55	2.74	1.15	5.00	

JPHT I H-TYPE JIS PAN HEAD



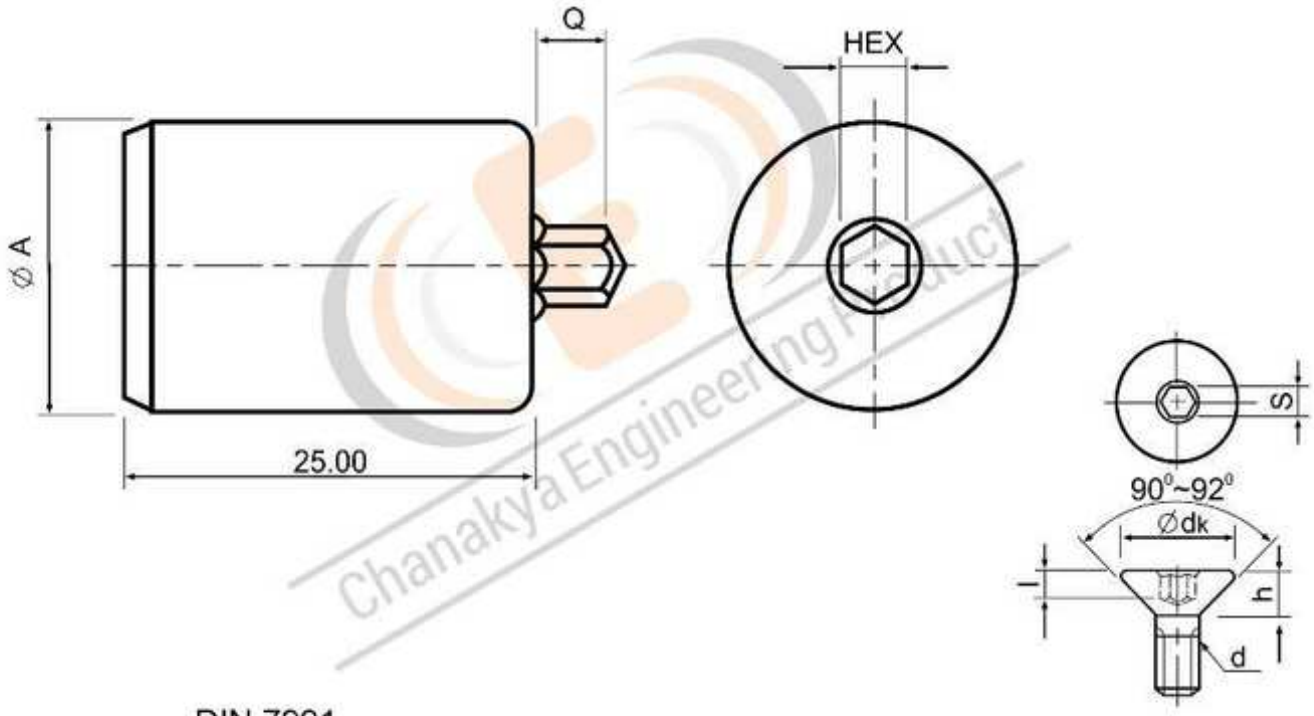
d	D $^{+0.10}_{-0}$	H $^{\pm0.05}$	J $^{\pm0.05}$	T $^{\pm0.05}$	B	A	dk max.	dk min.	hmax.	hmin.
M20	3.50	1.20	0.75	0.75	0.70	12	3.50	3.10	1.40	1.20
M23	4.00	1.40	0.80	0.85	0.80	12	4.00	3.60	1.60	1.40
M26	4.50	1.40	1.00	1.00	0.90	12	4.50	4.10	1.80	1.60
M30	5.50	1.70	1.20	1.25	1.00	12	5.50	5.00	2.15	1.85
M35	6.00	1.90	1.25	1.35	1.50	12	6.00	5.50	2.45	2.15
M40	7.00	2.20	1.40	1.50	1.70	14	7.00	6.50	2.75	2.45
M45	8.00	2.50	1.50	1.75	1.80	14	8.00	7.40	3.05	2.75
M50	9.00	2.80	1.70	2.00	1.90	14	9.00	8.40	3.45	3.15

JPTA I TRIANGLE JIS PAN HEAD



d		D $^{+0.10}_{-0}$	H ±0.05	B	A	dk max.	dk min.	h max.	h min.	
M20		3.50	1.10	1.60~1.80	12	3.50	3.10	1.40	1.20	TA-1.5
M23		4.00	1.30	1.60~1.80	12	4.00	3.60	1.60	1.40	TA-1.5
		4.00	1.28	1.90~2.10	12	4.00	3.60	1.60	1.40	TA-2.0
M26		4.50	1.40	1.90~2.10	12	4.50	4.10	1.80	1.60	TA-2.0
		4.50	1.30	2.20~2.40	12	4.50	4.10	1.80	1.60	TA-2.3
M30		5.50	1.60	2.20~2.40	12	5.50	5.00	2.15	1.85	TA-2.3
M35		6.00	1.85	2.60~2.80	12	6.00	5.50	2.45	2.15	TA-2.6
M40		7.00	2.15	2.70~2.90	14	7.00	6.50	2.75	2.45	TA-2.8

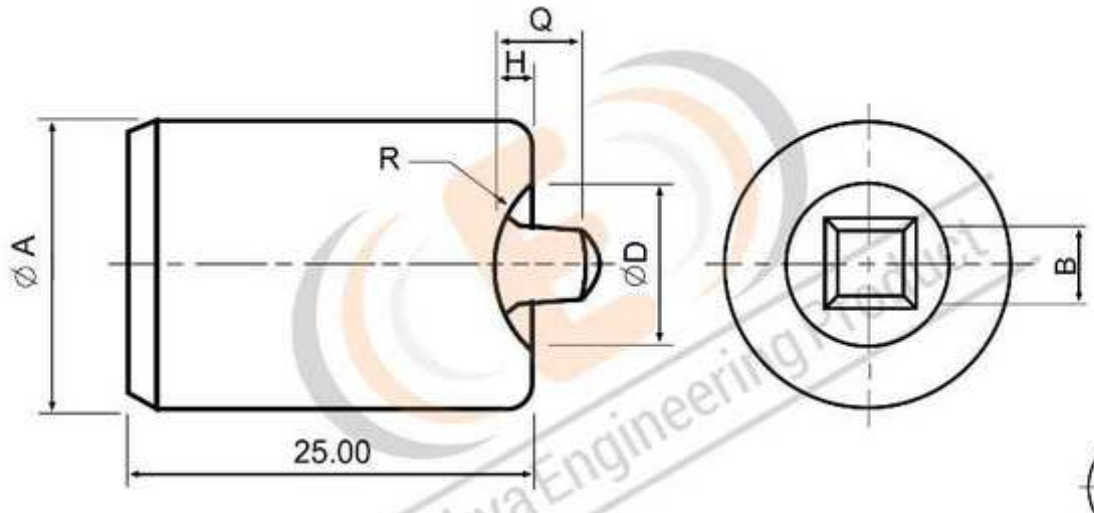
DF6H I HEX. DIN 7991 FLAT HEAD

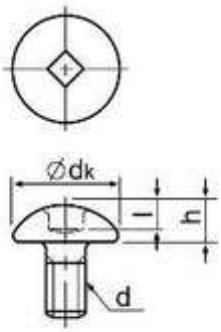


DIN 7991

d	HEX	Q $^{+0.05}_{-0}$	A	dk max.	dk min.	h max.	Smax.	Smin	l max..
M2.0	1.30	0.70	12	4.00	3.70	1.20	1.38	1.32	0.75
M2.5	1.50	0.75	12	5.00	4.70	1.50	1.58	1.52	0.80
M3.0	2.00	1.15	12	6.00	5.70	1.70	2.10	2.02	1.20
M4.0	2.50	1.75	12	8.00	7.64	2.30	2.60	2.52	1.80
M5.0	3.00	2.25	14	10.00	9.64	2.80	3.10	3.02	2.30
M6.0	4.00	2.45	14	12.00	11.57	3.30	4.12	4.02	2.50
M8.0	5.00	3.40	18	16.00	15.57	4.40	5.14	5.02	3.50
M10.0	6.00	4.30	23	20.00	19.48	5.50	6.14	6.02	4.40
M12.0	8.00	4.50	30	24.00	23.48	6.50	8.175	8.025	4.60

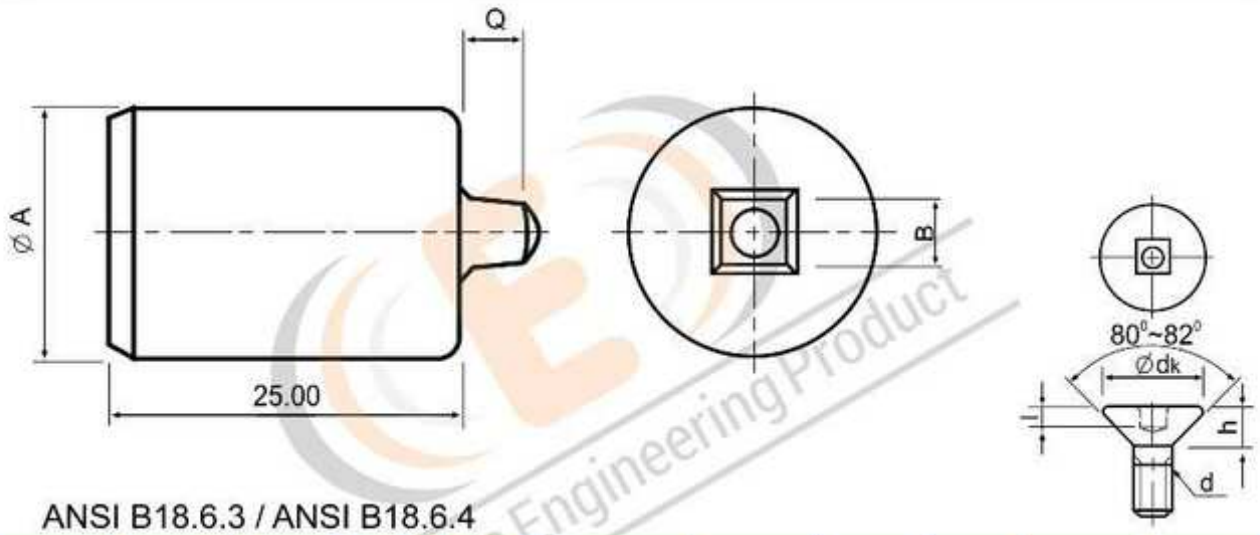
APSQ I SQUARE ANSI PAN HEAD





d		B	D	H	R	Q	A	PUNCH	dk max.	dk min.	h ref.	lmax.	l min.
#3		1.78	4.90	0.90	3.00		12	0	4.90	4.57	1.80	0.97	0.71
#4	-01	1.78	5.85	1.05	4.00	1.05	12		5.56	5.21	2.03	0.97	0.71
#5		2.30	6.22	1.20	3.80		12	1	6.22	5.87	2.26	1.65	1.27
#6	-14	2.30	7.25	1.20	5.10	1.80	12		6.86	6.50	2.46	1.65	1.27
#8	-25	2.85	8.55	1.40	6.10	1.85	14		8.18	7.77	2.92	1.91	1.52
#8	-26	2.85	8.55	1.40	6.10	2.00	14	2	8.18	7.77	2.92	1.91	1.52
#10	-25	2.85	10.00	1.70	7.25	1.90	18		9.47	9.07	3.38	1.91	1.52
#12	-32	3.36	11.30	1.90	8.20	1.95	18		10.80	10.34	3.84	2.41	2.03
#12	-33	3.36	11.30	1.90	8.20	2.35	18	3	10.80	10.34	3.84	2.41	2.03
1/4	-33	3.36	13.00	2.30	9.40	2.30	18		12.50	12.01	4.45	2.41	2.03
1/4	-34	3.36	13.00	2.30	9.40	2.60	18		12.50	12.01	4.45	2.41	2.03

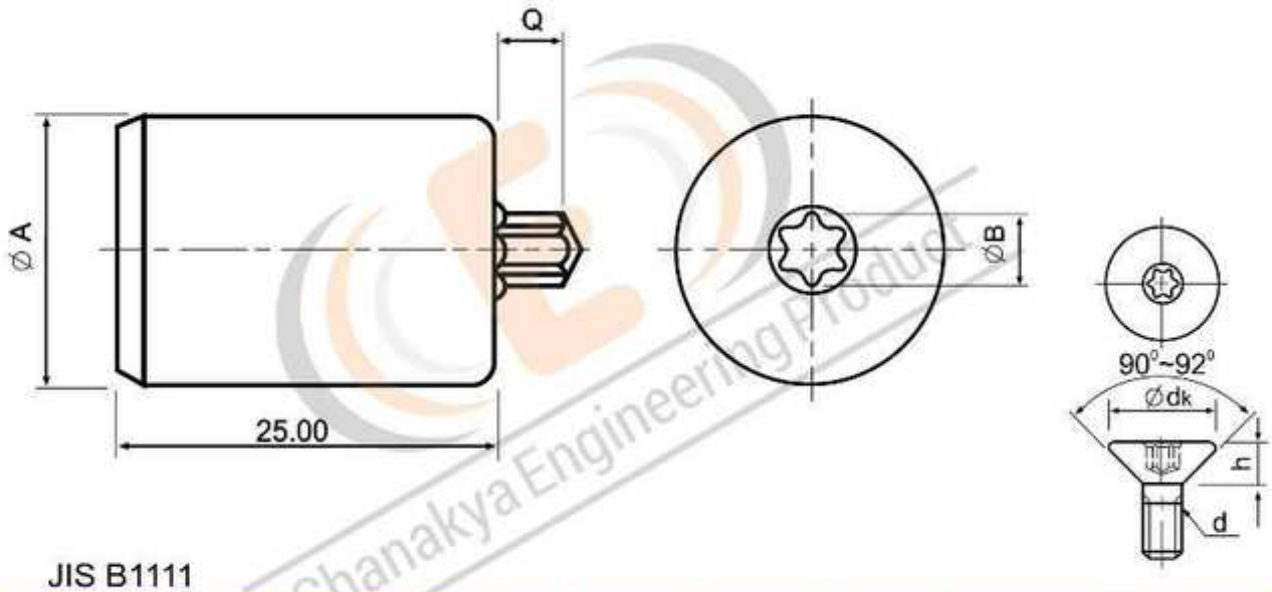
AFSQ I SQUARE ANSI FLAT HEAD



ANSI B18.6.3 / ANSI B18.6.4

d		B REF	Q +0.05 -0	A	PUNCH	dk max.	dk min.	h ref	l max.	l min.
#3	-01	1.78	0.95	12	0	5.05	4.34	1.50	1.10	0.75
#4	-01	1.78	1.00	12		5.72	4.95	1.70	1.10	0.75
#5	-13	2.30	1.50	12	1	6.40	5.59	1.90	1.60	1.15
#6	-14	2.30	1.80	12		7.09	6.20	2.11	1.90	1.55
#7	-15	2.30	2.10	12		7.75	6.81	2.31	2.20	1.55
#6	-24	2.85	1.60	12	2	7.09	6.20	2.11	1.70	1.40
#7	-25	2.85	1.80	12		7.75	6.81	2.31	1.90	1.40
#8	-26	2.85	2.00	12		8.43	7.42	2.54	2.10	1.80
#10	-27	2.85	2.25	14		9.78	8.64	2.95	2.40	1.80
#12	-32	3.36	1.95	18	3	11.13	9.88	3.35	2.10	1.30
#12	-33	3.36	2.25	18		11.13	9.88	3.35	2.40	1.50
1/4	-34	3.36	2.60	18		12.88	11.48	3.89	2.70	1.90
5/16	-41	4.84	3.30	23	4	16.33	14.43	4.85	3.40	2.40
3/8	-42	4.84	3.50	23		19.35	17.40	5.84	3.60	2.40

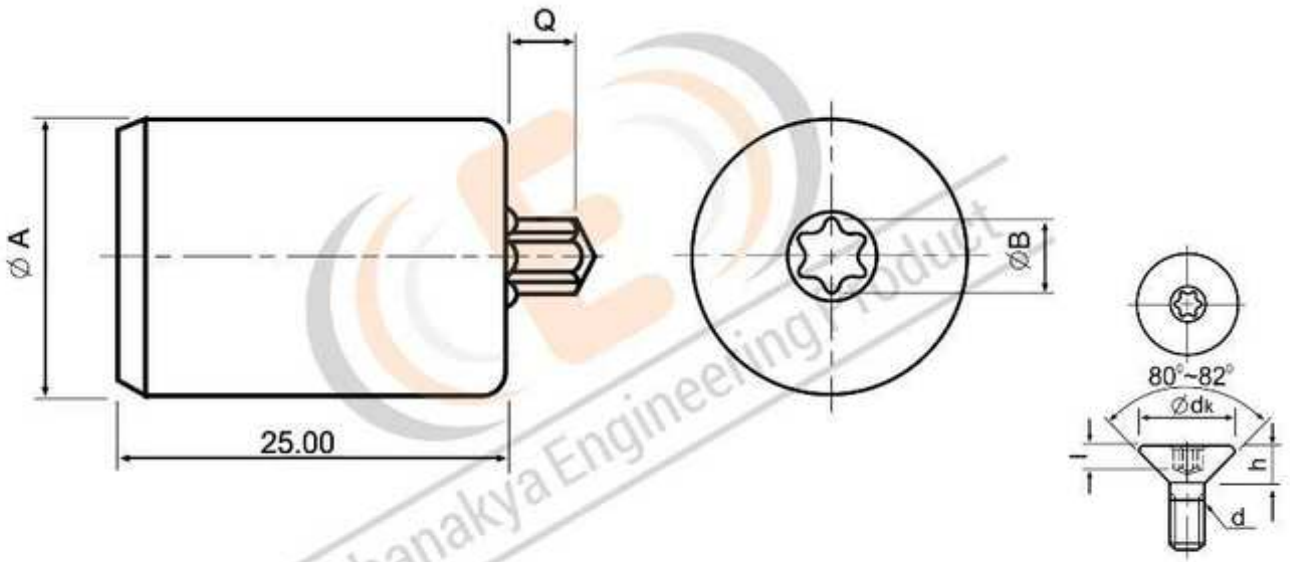
JF6L I SIX-LOBE JIS FLAT HEAD



JIS B1111

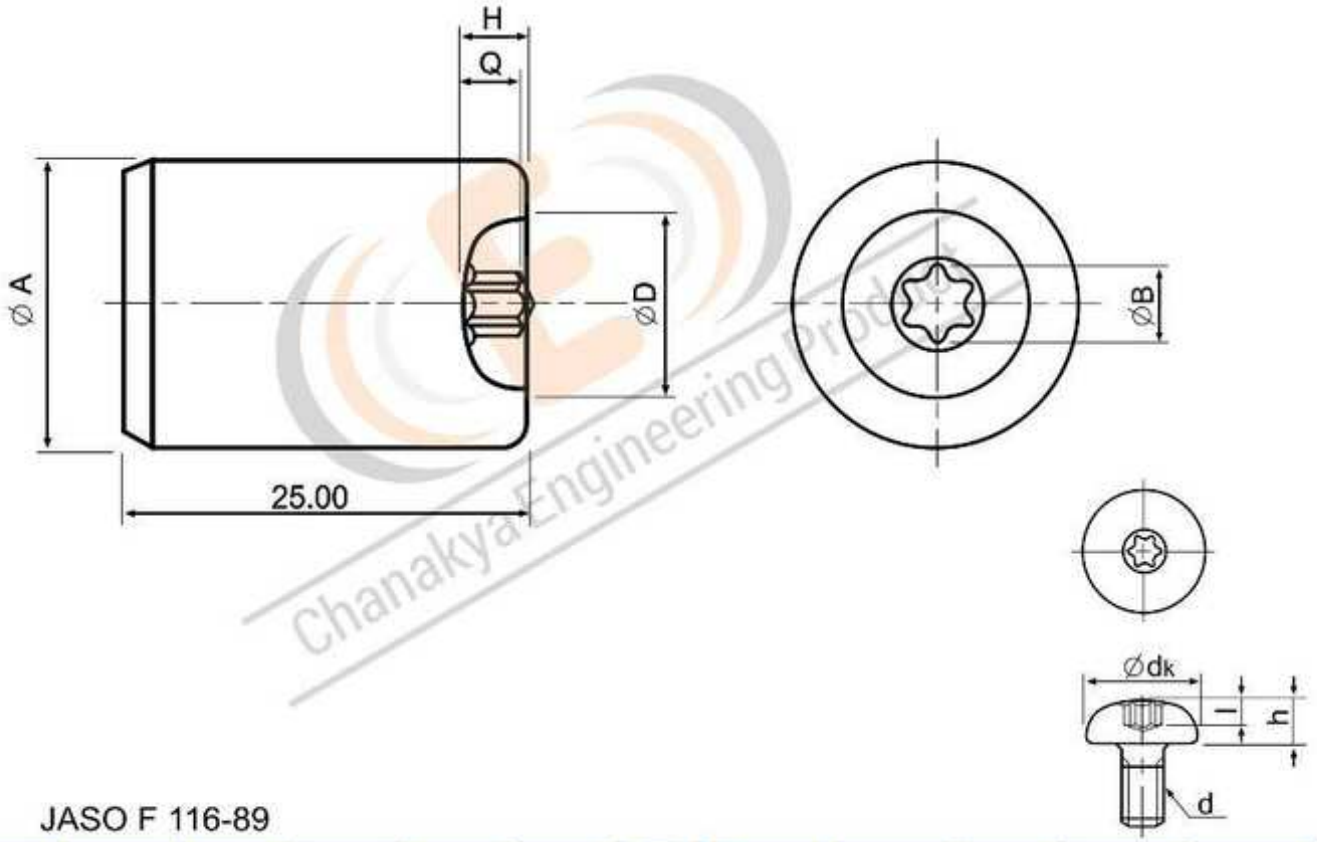
d	SIX -LOBE	B	Q $^{+0.05}_{-0}$	A	dk max.	dk min.	h max.	h min
	T5	1.48	0.50	12				
M20	T6	1.75	0.60	12	4.00	3.60	1.20	1.00
	T7	2.06	0.70	12				
M26	T8	2.39	0.80	12	5.20	4.80	1.50	1.30
	T9	2.57	0.80	12				
M30	T10	2.82	0.90	12	6.00	5.50	1.75	1.45
M35	T15	3.35	1.00	12	7.00	6.50	2.00	1.70
M40	T20	3.94	1.20	14	8.00	7.50	2.30	2.00
M45	T20	3.94	1.40	14	9.00	8.50	2.55	2.25
M50	T25	4.52	1.60	14	10.00	9.40	2.80	2.50
	T27	5.08	1.80	18				
M60	T30	5.63	1.90	18	12.00	11.30	3.40	3.00
M80	T40	6.76	2.60	23	16.00	15.20	4.40	4.00

AF6L I SIX-LOBE ANSI FLAT HEAD



d	SIX LOBE	B	Q $^{+0.05}_{-0}$	A	dk max.	dk min.	h max.	h min
	T5	1.48	0.60	12				
#2	T6	1.75	0.80	12	4.37	3.73	1.30	0.43
	T7	2.06	0.80	12				
#4	T8	2.39	1.00	12	5.72	4.95	1.70	0.71
	T9	2.57	1.00	12				
#6	T10	2.82	1.20	12	7.09	6.20	2.11	0.89
#8	T15	3.35	1.30	12	8.43	7.42	2.54	1.02
#10	T20	3.94	1.60	14	9.78	8.64	2.95	1.27
#12	T25	4.52	1.70	14	11.13	9.88	3.35	1.40
1/4	T27	5.08	2.20	18	12.88	11.48	3.89	1.91
	T30	5.63	2.50	18				
5/16	T40	6.76	2.70	23	16.13	14.43	4.85	2.21

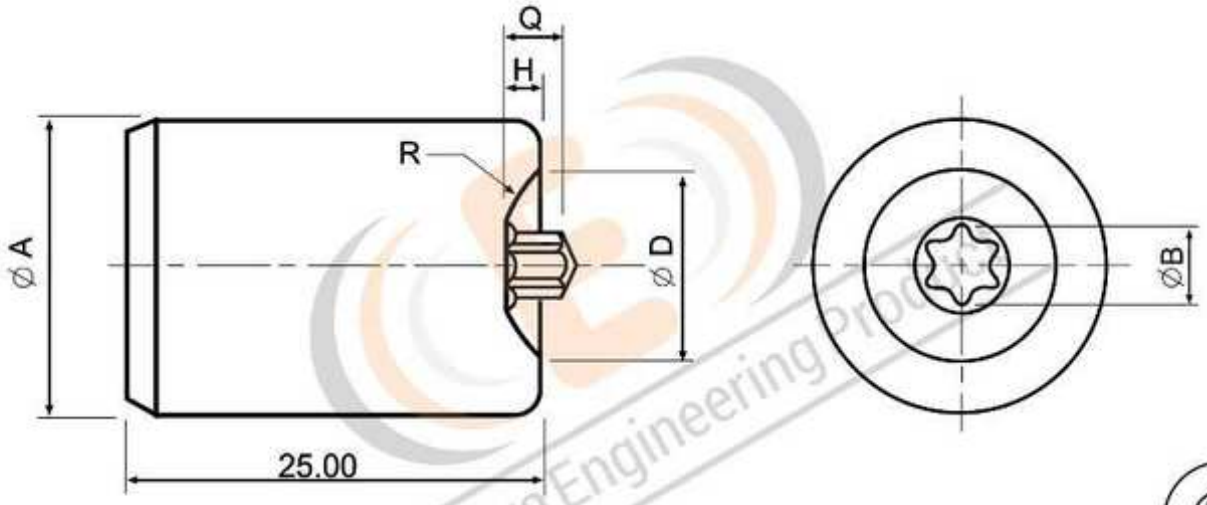
JP6L I SIX-LOBE JIS PAN HEAD

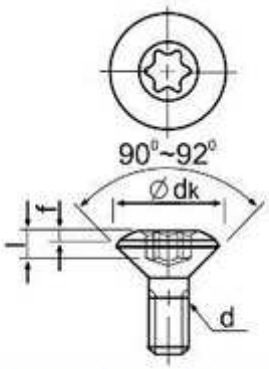


JASO F 116-89

d	SIX -LOBE	B	D $^{+0.10}_{-0}$	H $^{\pm0.05}$	Q $^{+0.05}_{-0}$	A	dk max.	dk min.	h max.	h min	lmin
M20	T6	1.75	3.50	1.00	0.70	12	3.50	3.10	1.40	1.20	0.50
M26	T8	2.39	4.50	1.20	0.90	12	4.50	4.10	1.80	1.60	0.70
M30	T10	2.82	5.50	1.55	1.05	12	5.50	5.00	2.15	1.85	0.85
M35	T15	3.35	6.00	1.70	1.20	12	6.00	5.50	2.45	2.15	1.00
M40	T20	3.94	7.00	2.00	1.40	14	7.00	6.50	2.75	2.45	1.20
M45	T20	3.94	8.00	2.30	1.40	14	8.00	7.40	3.05	2.75	1.20
M50	T25	4.52	9.00	2.60	1.65	18	9.00	8.40	3.45	3.15	1.40
M60	T30	5.63	10.50	3.10	1.90	23	10.50	9.80	4.10	3.70	1.65
M80	T40	6.76	14.00	4.20	2.60	30	14.00	13.20	5.40	5.00	2.35

JO6L I SIX-LOBE JIS OVAL HEAD

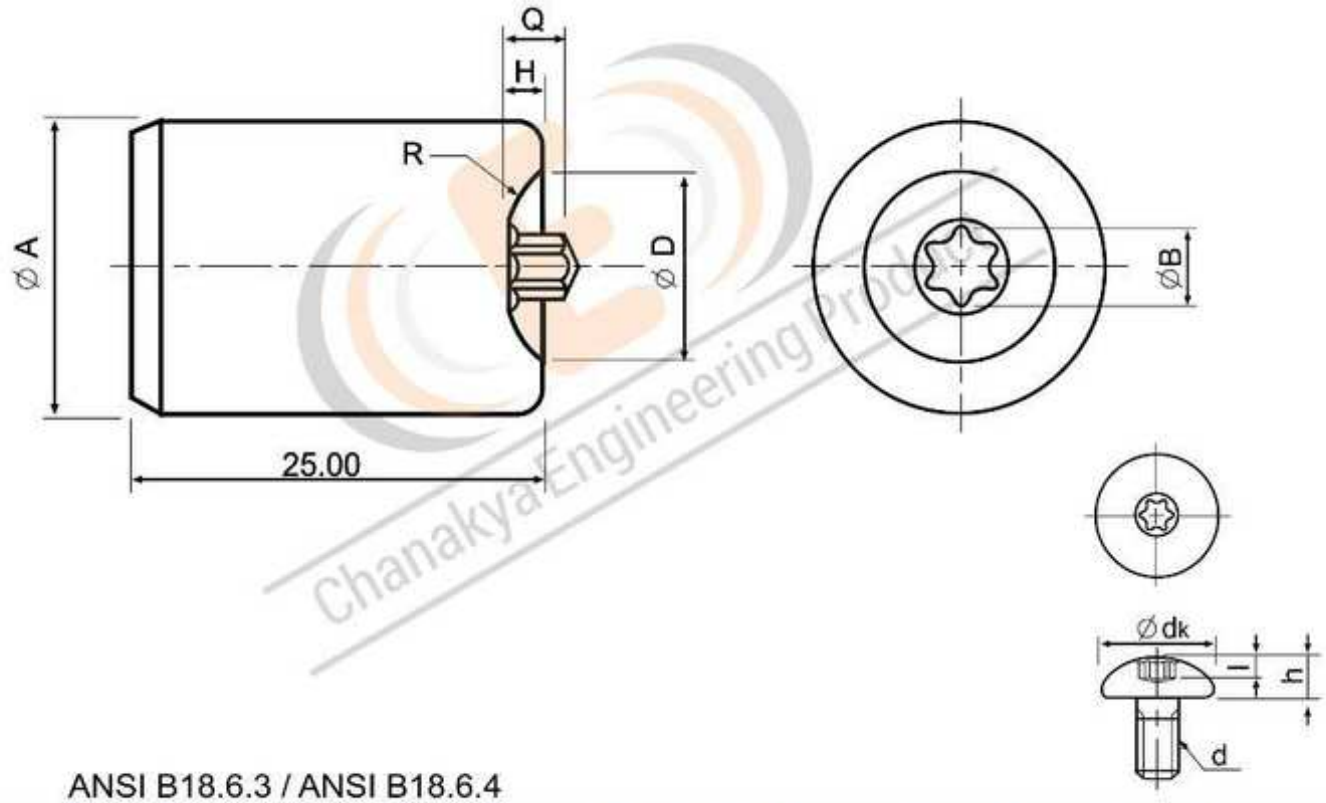




JIS B1107 , B1128

d		SIX -LOBE	B	$D^{+0.10}_{-0}$	$H^{\pm 0.05}$	$R^{+0.05}_{-0}$	Q	A	dk max.	dk min.	F REF.	lmax.	lmin
M20		T6	1.75	4.00	0.50	3.35	0.70	12	3.80	3.50	0.50	0.77	0.63
M25		T8	2.39	4.90	0.60	4.00	1.00	12	4.70	4.40	0.60	1.04	0.91
M30	ST29	T10	2.82	5.70	0.70	4.70	1.10	12	5.50	5.20	0.70	1.15	0.88
M35	ST35	T15	3.35	7.50	0.80	7.25	1.40	12	7.30	6.94	0.80	1.53	1.27
M40	ST42	T20	3.94	8.60	1.00	7.70	1.70	14	8.40	8.04	1.00	1.80	1.42
M50	ST48	T25	4.52	9.50	1.20	7.80	1.90	14	9.30	8.94	1.20	2.03	1.65
	ST55	T25	4.52	10.50	1.30	9.25	1.90	18	10.30	9.90	1.30	2.03	1.65
M60	ST63	T30	5.63	11.50	1.40	9.65	2.30	18	11.30	10.87	1.40	2.42	2.02
M80		T45	7.92	16.00	2.00	13.20	3.20	23	15.80	15.37	2.00	3.31	2.92

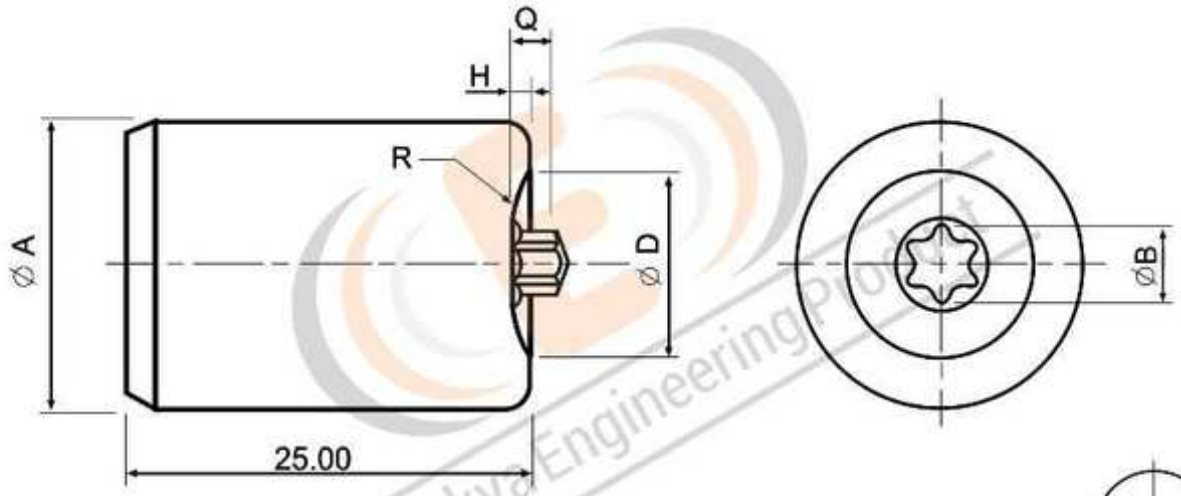
AP6L I SIX-LOBE ANSI PAN HEAD

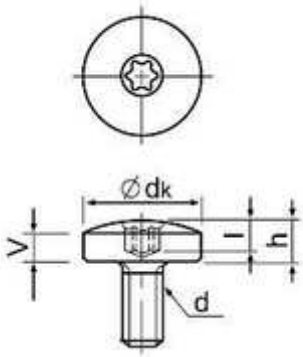


ANSI B18.6.3 / ANSI B18.6.4

d	SIX -LOBE	B	D $^{+0.10}_{-0}$	H $^{+0}_{-0.10}$	R REF	Q $^{+0.05}_{-0}$	A	dk max.	dk min.	h max.	hmin.	lmin
#2	T8	2.39	4.24	0.70	2.54	0.90	12	4.24	3.94	1.57	1.35	0.76
#3	T8	2.39	4.90	0.90	3.00	1.00	12	4.90	4.57	1.80	1.57	0.84
#4	T10	2.82	5.56	1.00	3.40	1.05	12	5.56	5.21	2.03	1.78	0.89
#5	T10	2.82	6.22	1.20	3.80	1.30	12	6.22	5.87	2.26	2.01	1.14
#6	T15	3.35	6.86	1.30	4.10	1.30	12	6.86	6.50	2.46	2.21	1.14
#8	T20	3.94	8.18	1.40	5.20	1.55	14	8.18	7.77	2.92	2.67	1.40
#10	T25	4.52	9.47	1.70	6.00	1.95	14	9.47	9.07	3.38	3.10	1.78
#12	T27	5.08	10.80	2.00	6.80	2.00	18	10.80	10.34	3.84	3.53	1.78
1/4	T30	5.63	12.50	2.30	8.00	2.30	23	12.50	12.01	4.45	4.11	2.16

DL6L I SIX-LOBE DIN7985 FILLISTER HEAD

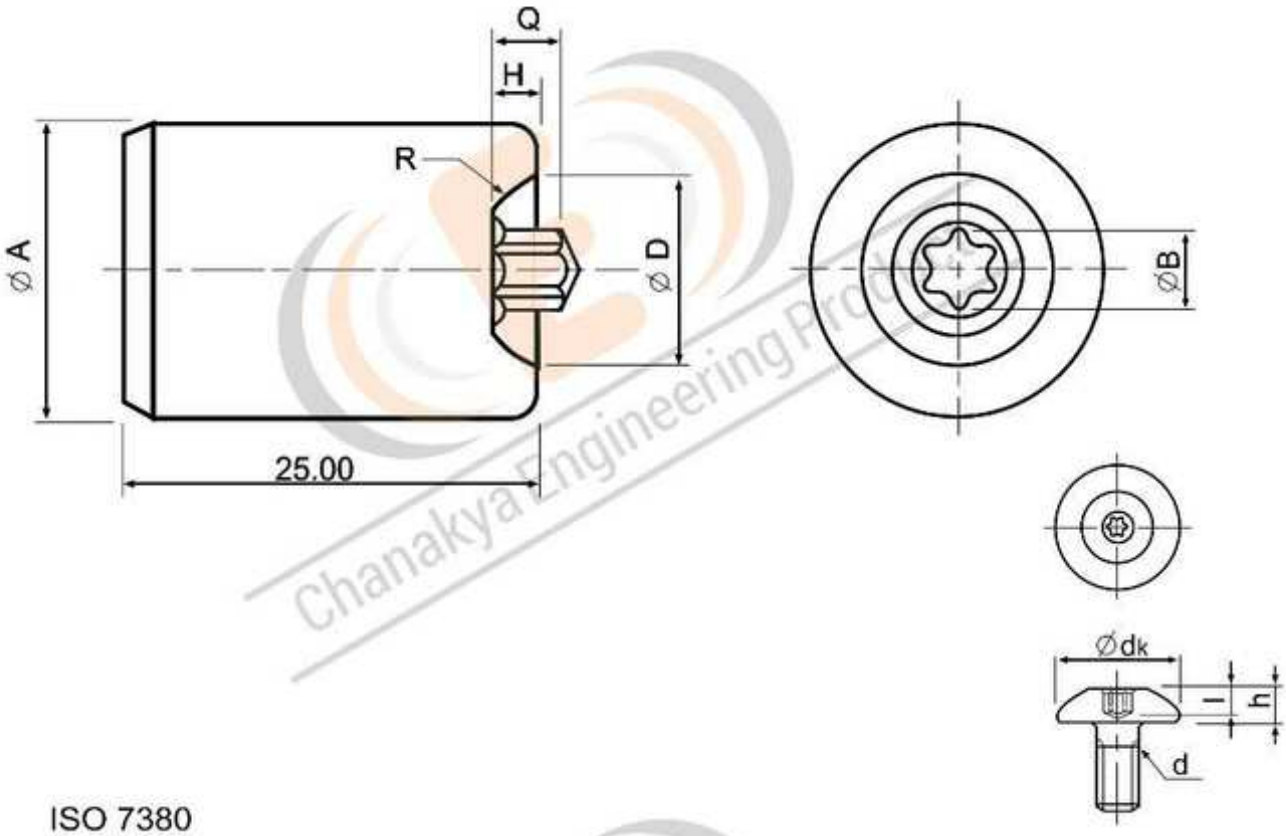




DIN 7985

d	SIX -LOBE	B	D $^{+0.10}_{-0}$	H $^{+0}_{-0.10}$	R REF	Q $^{+0.05}_{-0}$	A	dk max.	dk min.	h max.	h min.	V ref.	l min.
M20	T6	1.75	4.00	0.50	3.40	0.90	12	4.00	3.70	1.72	1.48	1.10	0.70
M25	T8	2.39	5.00	0.70	3.90	1.10	12	5.00	4.70	2.12	1.88	1.30	0.90
M30	T10	2.82	6.00	0.80	4.70	1.20	12	6.00	5.70	2.52	2.28	1.60	1.00
M35	T15	3.35	7.00	0.80	6.10	1.45	12	7.00	6.64	2.82	2.58	1.90	1.20
M40	T20	3.94	8.00	1.10	5.80	1.70	14	8.00	7.64	3.25	2.95	2.00	1.40
M50	T25	4.52	10.00	1.30	8.00	1.90	18	10.00	9.64	3.95	3.65	2.50	1.60
M60	T30	5.63	12.00	1.60	9.15	2.30	18	12.00	11.57	4.75	4.45	3.00	2.00
M80	T45	7.92	16.00	2.30	11.70	3.20	23	16.00	15.57	6.15	5.85	3.70	2.90

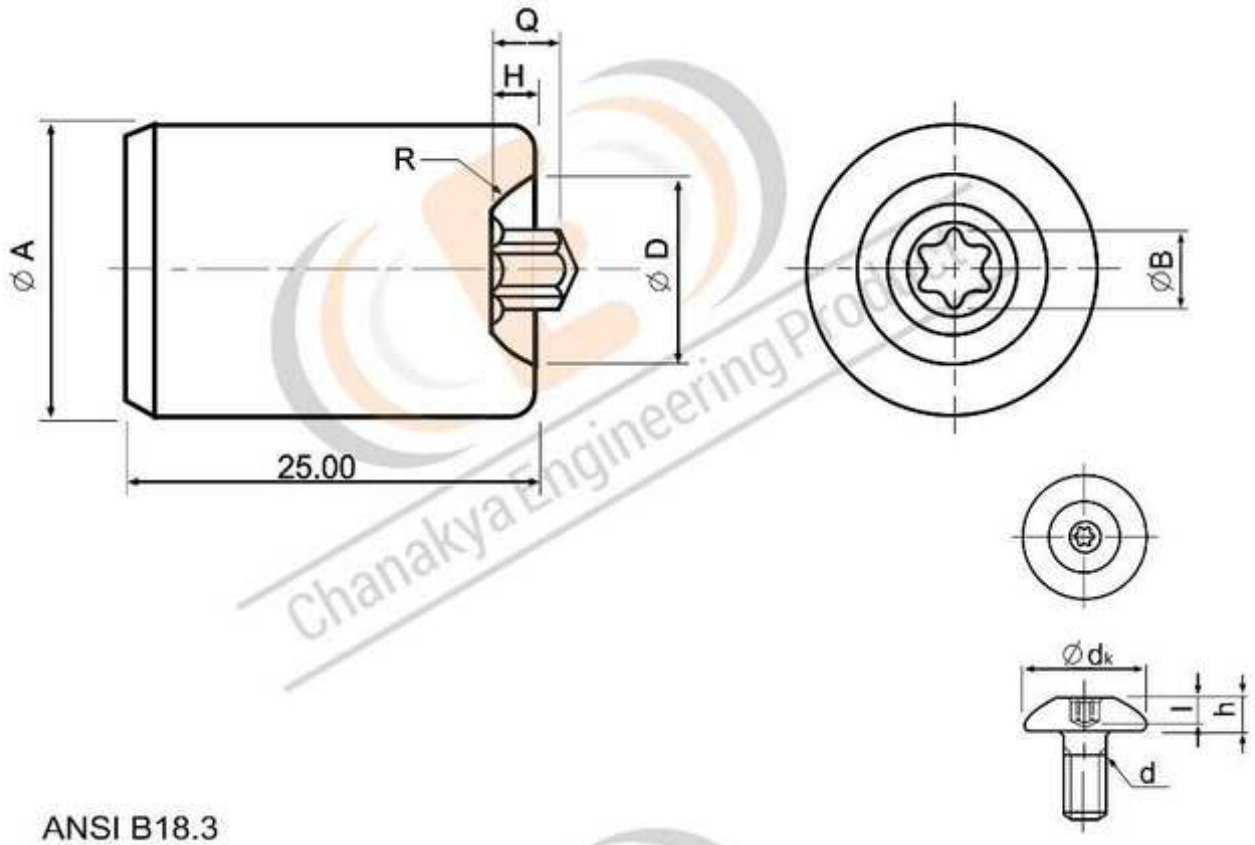
BT6L I SIX-LOBE ISO 7380 BUTTON HEAD



ISO 7380

d	SIX -LOBE	B	D $^{+0.10}_{-0}$	H $^{+0}_{-0.10}$	R REF	Q $^{+0.05}_{-0}$	A	dk max.	dk min.	h max.	h min.	l min.
M2.0	T6	1.75	3.60	0.96	1.80	0.75	12	3.50	3.30	1.30	1.16	0.65
M2.5	T8	2.39	4.80	1.16	2.50	0.90	12	4.70	4.50	1.50	1.36	0.75
M3.0	T10	2.82	5.80	1.20	3.20	0.95	12	5.70	5.40	1.65	1.40	0.80
M4.0	T20	3.94	7.80	1.75	4.20	1.30	14	7.60	7.24	2.20	1.95	1.15
M5.0	T25	4.52	9.70	2.20	5.30	1.55	18	9.50	9.14	2.75	2.50	1.41
M6.0	T30	5.63	10.70	2.60	5.60	1.85	18	10.50	10.07	3.30	3.00	1.65
M8.0	T40	6.76	14.20	3.70	7.50	2.55	23	14.00	13.57	4.40	4.10	2.35
M10.0	T50	8.94	17.70	4.70	9.30	2.75	30	17.50	17.07	5.50	5.20	2.55

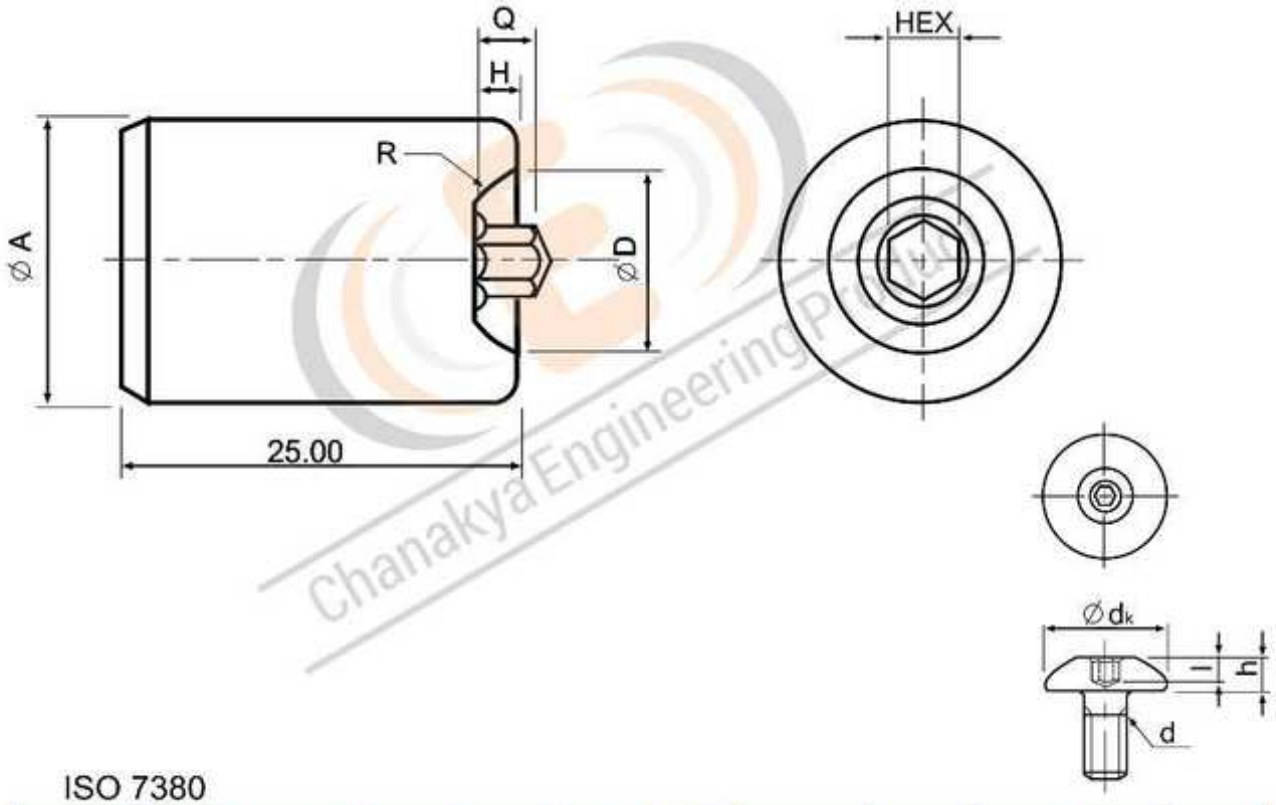
BT6L I SIX-LOBE ANSI BUTTON HEAD



ANSI B18.3

d	SIX -LOBE	B	D $^{+0.10}_{-0}$	H $^{+0}_{-0.10}$	R REF	Q $^{+0.05}_{-0}$	A	dk max.	dk min.	h max.	h min.	l min.
#2	T6	1.75	4.27	0.80	2.60	0.66	12	4.17	3.91	1.17	0.97	0.56
#4	T8	2.39	5.51	1.10	3.30	0.90	12	5.41	5.11	1.50	1.30	0.76
#6	T10	2.82	6.75	1.40	4.00	1.05	12	6.65	6.35	1.85	1.60	0.89
#8	T15	3.35	8.12	1.76	4.60	1.20	14	7.92	7.57	2.21	1.96	1.02
#10	T25	4.52	9.37	2.00	5.20	1.47	18	9.17	8.81	2.57	2.31	1.27
1/4	T27	5.08	11.30	2.70	6.20	1.72	18	11.10	10.64	3.35	3.10	1.52
5/16	T40	6.76	14.10	3.46	7.60	2.50	23	13.90	13.39	4.22	3.86	2.29
3/8	T45	7.92	16.87	4.20	9.10	2.90	30	16.67	16.15	5.05	4.70	2.67

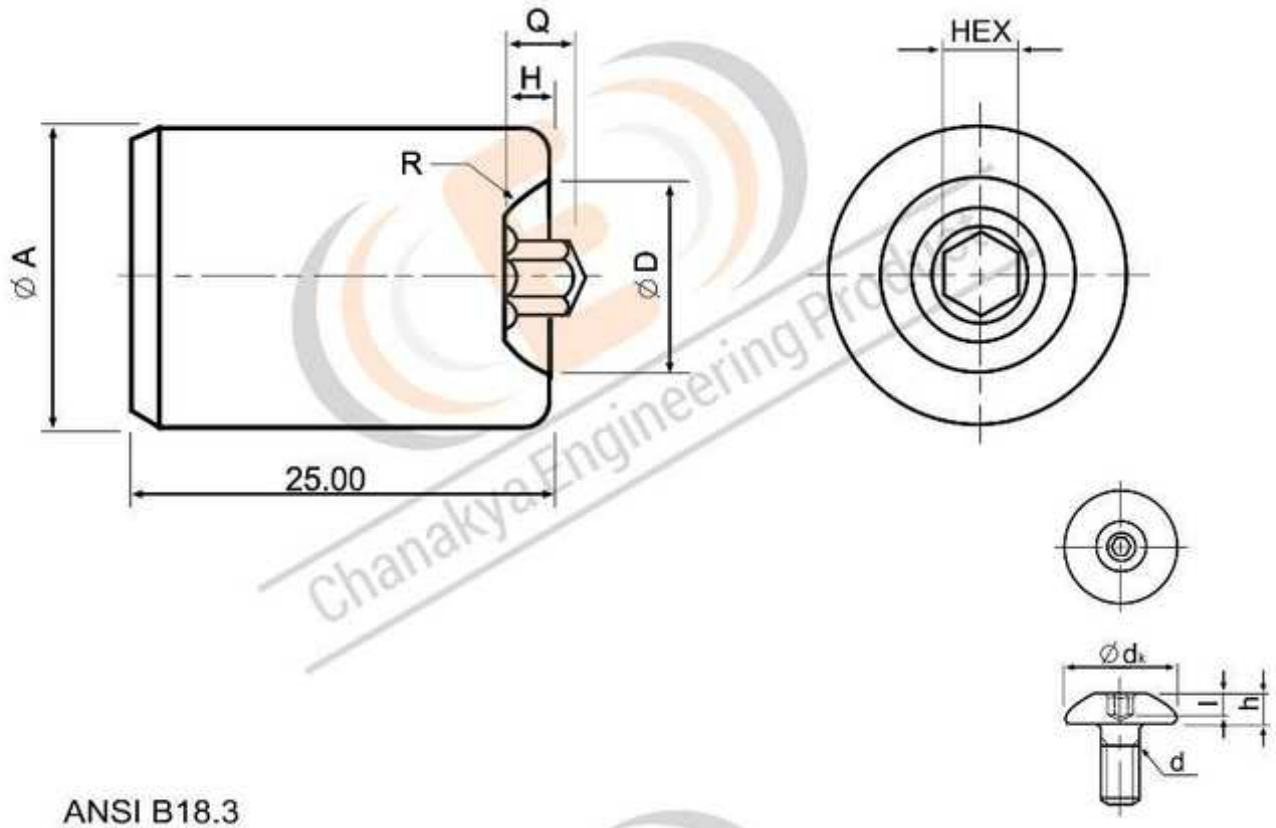
BT6H I HEX. ISO 7380 BUTTON HEAD



ISO 7380

d	HEX	$D^{+0.10}_{-0}$	$H^{+0}_{-0.10}$	R_{REF}	$Q^{+0.05}_{-0}$	A	dk max.	dk min.	h max.	h min.	l min.
M2.0	1.3	3.60	0.96	1.90	0.75	12	3.50	3.30	1.30	1.16	0.60
M2.5	1.50	4.80	1.16	2.60	0.95	12	4.70	4.50	1.50	1.36	0.80
M3.0	2.00	5.80	1.20	3.30	1.20	12	5.70	5.40	1.65	1.40	1.04
M4.0	2.50	7.80	1.75	4.50	1.45	14	7.60	7.24	2.20	1.95	1.30
M5.0	3.00	9.70	2.20	5.50	1.75	18	9.50	9.14	2.75	2.50	1.56
M6.0	4.00	10.70	2.60	5.80	2.30	18	10.50	10.07	3.30	3.00	2.08
M8.0	5.00	14.20	3.70	7.60	2.80	23	14.00	13.57	4.40	4.10	2.60
M10.0	6.00	17.70	4.70	9.60	3.45	30	17.50	17.07	5.50	5.20	3.12
M12.0	8.00	21.20	5.30	11.55	4.50	30	21.00	20.48	6.60	6.24	4.16

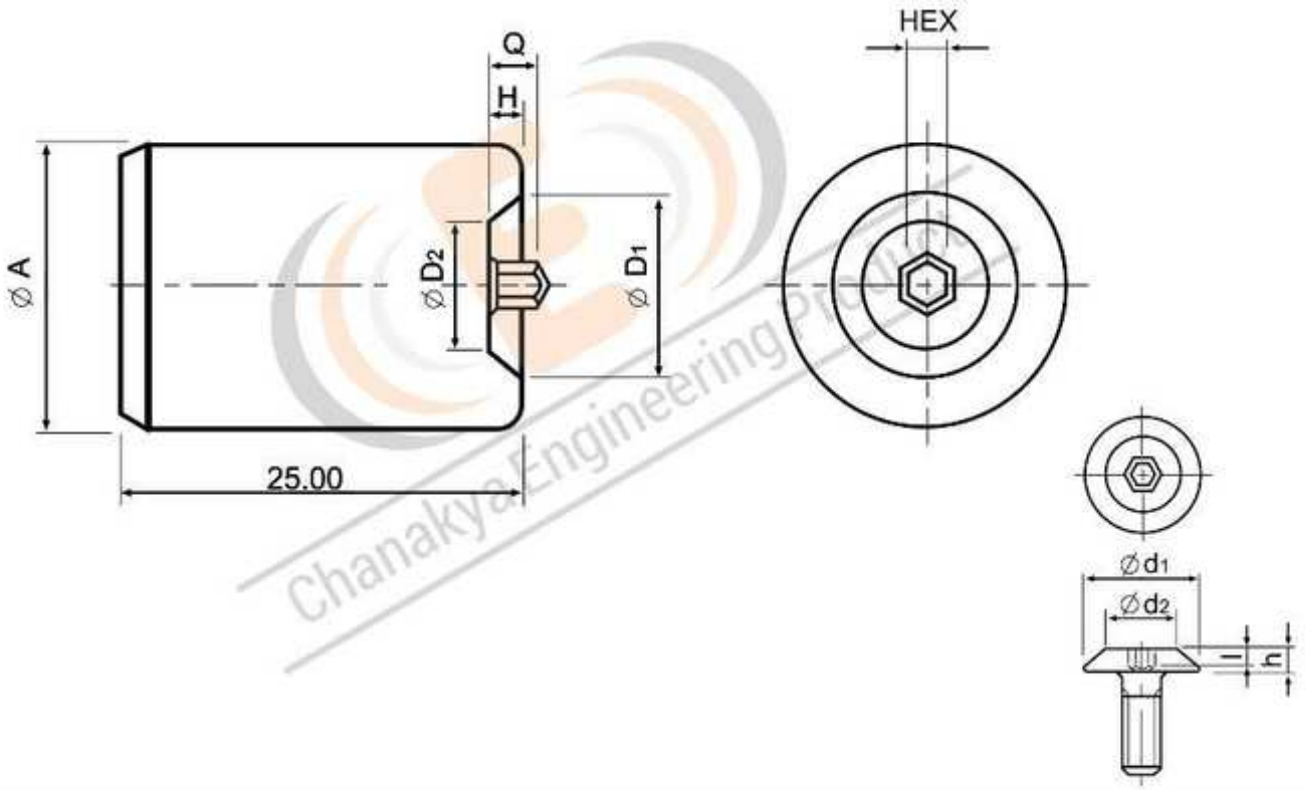
BT6H I HEX. ANSI BUTTON HEAD



ANSI B18.3

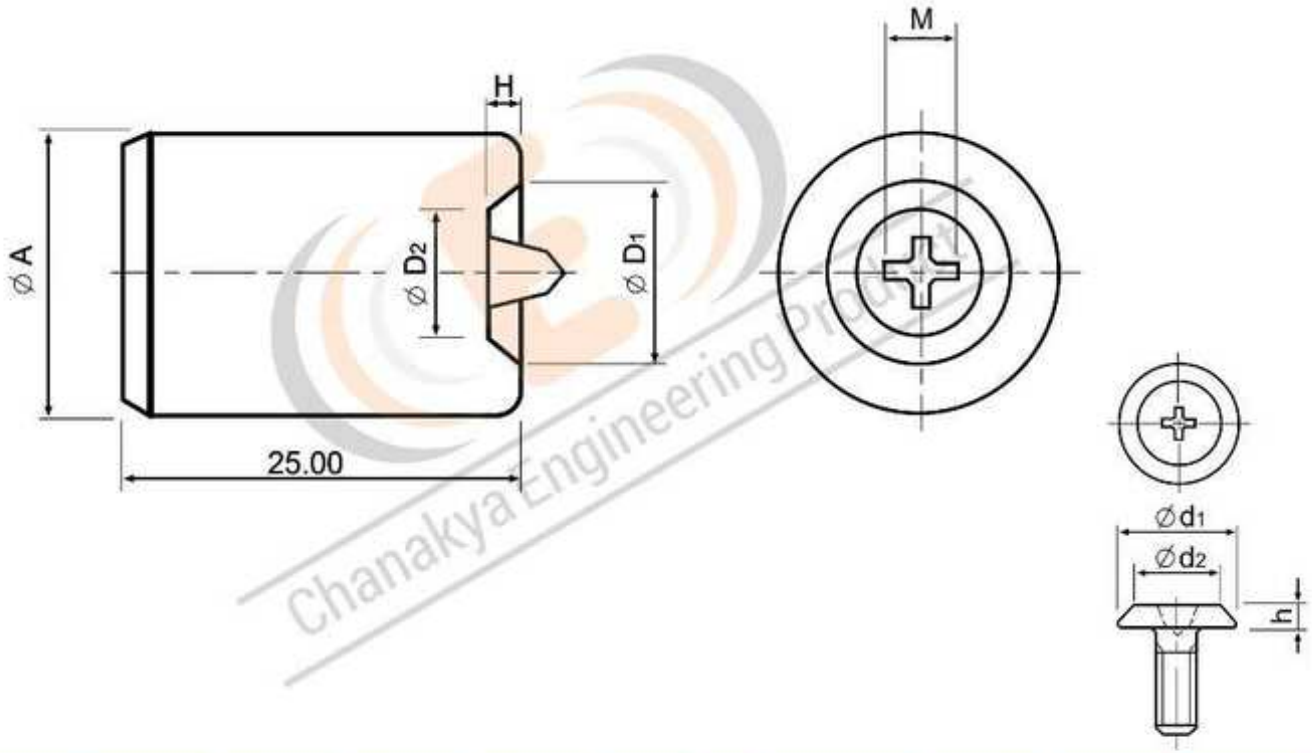
d	HEX	HEX	D $^{+0.10}_{-0}$	H $^{+0}_{-0.10}$	R REF	Q $^{+0.05}_{-0}$	A	dk max.	dk min.	h max.	h min.	l min.
#2	0.05"	1.27	4.27	0.80	2.70	0.81	12	4.17	3.91	1.17	0.97	0.71
#4	1/16"	1.57	5.51	1.10	3.40	1.00	12	5.41	5.11	1.50	1.30	0.89
#6	5/64"	1.98	6.75	1.40	4.10	1.22	12	6.65	6.35	1.85	1.60	1.12
#8	3/32"	2.39	8.12	1.76	4.80	1.42	14	7.92	7.57	2.21	1.96	1.32
#10	1/8"	3.18	9.37	2.00	5.40	1.93	18	9.17	8.81	2.57	2.31	1.78
1/4	5/32"	3.96	11.30	2.70	6.20	2.36	18	11.10	10.64	3.35	3.10	2.21
5/16	3/16"	4.78	14.10	3.46	7.80	2.82	23	13.90	13.39	4.22	3.86	2.67
3/8	7/32"	5.56	16.87	4.20	9.40	3.25	30	16.67	16.15	5.05	4.70	3.10

PF6H I HEX. PF.HEAD



d	D1 MAX	D2 ±0.10	H ±0.10	HEX	Q MIN	A	d1 max.	d2 ±0.10	h max.	l min
7-10	10.30	7.00	1.00	4.00	2.50	14	10.00	7.00	2.60	2.30
8-11	11.30	8.00	1.00	4.00	2.50	18	11.00	8.00	2.60	2.30
9-12	12.30	9.00	1.00	4.00	2.50	18	12.00	9.00	2.60	2.30
10-13	13.30	10.00	1.00	4.00	2.50	18	13.00	10.00	3.00	2.30
11-14	14.30	11.00	1.00	4.00	2.50	18	14.00	11.00	3.00	2.30
12-15	15.50	12.00	1.20	4.00	2.50	18	15.00	12.00	3.00	2.30
13-16	16.50	13.00	1.20	5.00	3.00	23	16.00	13.00	3.40	2.80
14-17	17.50	14.00	1.20	5.00	3.00	23	17.00	14.00	3.40	2.80
15-18	18.50	15.00	1.20	6.00	3.00	23	18.00	15.00	3.80	3.10

PFPH I PHILLIPS PF. HEAD



d	PHILIPS	M MAX	D1 MAX	D2 ±0.10	H ±0.10	A	PUNCH	d1 max.	d2 ±0.10	h min.
7-10	M40	4.40	10.30	7.00	1.00	14	PH#2	10.00	7.00	2.60
8-11	M45	4.80	11.30	8.00	1.00	18		11.00	8.00	2.60
9-12	M45	4.80	12.30	9.00	1.00	18		12.00	9.00	2.60
10-13	M50	5.00	13.30	10.00	1.00	18		13.00	10.00	3.00
10-13	M55	6.00	13.30	10.00	1.00	18	PH#3	13.00	10.00	3.00
11-14	M58	6.20	14.30	11.00	1.00	18		14.00	11.00	3.00
12-15	M58	6.20	15.50	12.00	1.20	18		15.00	12.00	3.00
13-16	M60	6.60	16.50	13.00	1.20	23		16.00	13.00	3.40
14-17	M60	6.60	17.50	14.00	1.20	23		17.00	14.00	3.40
15-18	M80	7.00	18.50	15.00	1.20	23		18.00	15.00	3.80