



PLANT STANDARD

HPBP TIRUCHIRAPALLI

BPS: 41238

PAGE 1 OF 4

Based on IS:1364 (Part 2)-1983

HEXAGON HEAD SCREWS, PRODUCT GRADE A (Property Class 8.8)

1.0 SCOPE

Covers the requirements of Hexagon Head Screws in the size range M6 to M16.

2.0 SPECIFICATION AND REFERENCE STANDARDS

Dimensions and preferred sizes	Table 1 of this standard	
Preferred length-size combination	Table 2 of this standard	
Tolerance	Product grade	A
	Indian Standard	IS: 1367(Part 2)
Thread	Pitch	Coarse
	Tolerance	6g
	Indian Standard	IS: 4218(Part 3,5 & 6)
Material	Steel	
Mechanical properties	Property class	8.8
	Indian Standard	IS: 1367(Part 3)
Sampling and Acceptability	Indian Standard	IS: 2614
General requirements	Screws shall comply with IS: 1364 in respect of requirements not covered in this standard	

2.1 Referred Standards (Only the relevant parts of current versions are applicable)

- IS: 1364 Specifications for hexagon head bolts, screws & nuts of product grade A&B. Part 2 Hexagon screws.
- IS: 1367 Technical supply conditions for threaded steel fasteners
- IS: 2614 Methods for sampling of fasteners
- IS: 4218 ISO Metric screw threads

REVISIONS

DATE

APPROVED

STANDARDS SECTION
ENGINEERING AND DEVELOPMENT CENTRE
HPBP TIRUCHIRAPALLI

PREPARED

HPBP TIRUCHY

ISSUED

STANDARDS
ENGG

DATE

DEC 1986

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PLANT STANDARD

HPBP TIRUCHIRAPALLI

BPS: 41238

PAGE 2 OF 4

3.0 Designation

A grade A Hexagon Head Screw to this Standard of thread size M16 and Nominal length 35mm shall be designated as:

3.1 On Drawings:

- i) Material Specification column : IS: 1364
- ii) Description column : SCRU HEX GR A 8.8 M16x35
- iii) Drawing Number column : 4123816035
- iv) Material Code column : 4123816035

3.2 Ordering description

For placing indents, issuing enquiries and on purchase order, the Ordering Description given below shall be followed.

Hexagon head screw M16x35 IS:1364 (Part 2) - 8.8.

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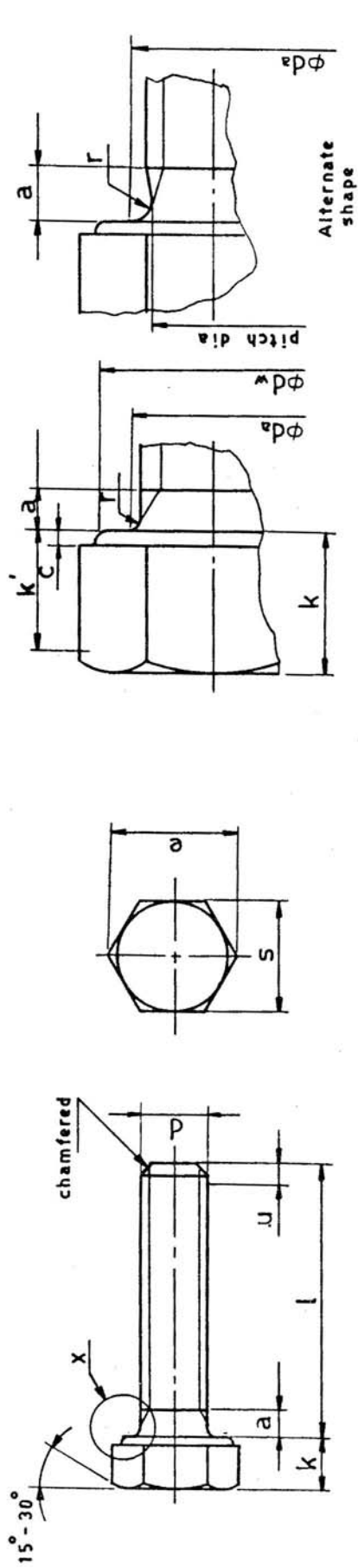
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TABLE - 1 DIMENSIONS FOR HEXAGON HEAD SCREWS



u according to CE of IS:1368. 'Dimensions of ends of bolts and screws'. **DETAIL-X** k' =Effective gauging height.

(All dimensions are in mm)

Thread size d	a*		c		da	dw		e		+		k		k'		r		s	
	Max	Min	Max	Min		+	++	Min	++	Max	Min	++	Min	Max	Min	Max	Min	++	Min
M6	3	0.15	0.5	0.6	6.8	8.9	8.7	11.05	10.89	3.85	4.15	3.76	4.24	2.63	2.63	0.25	10	9.78	9.64
M8	3.75	0.15	0.6	0.6	9.2	11.6	11.4	14.38	14.20	5.15	5.45	5.06	5.54	3.54	3.54	0.4	13	12.73	12.57
M10	4.5	0.15	0.6	0.6	11.2	14.6	14.4	17.77	17.59	6.22	6.58	6.11	6.69	4.28	4.28	0.4	16	15.73	15.57
M12	5.25	0.15	0.6	0.6	13.7	16.6	16.4	20.03	19.85	7.32	7.68	7.21	7.79	5.05	5.05	0.6	18	17.73	17.57
M16	6	0.2	0.8	0.8	17.7	22.5	22	26.75	26.17	9.82	10.18	9.71	10.29	6.8	6.8	0.6	24	23.67	23.16

* a Min - not less than $\frac{1}{4}P$ (Pitch) ; + for $l \leq 10d$ or 150mm ; ++ for $l > 10d$ or 150mm.



PLANT STANDARD

HPBP TIRUCHIRAPALLI

BPS: 41238

PAGE 4 OF 4

**TABLE - 2 PREFERRED LENGTH-SIZE COMBINATIONS
FOR HEXAGON HEAD SCREWS**

(All dimensions are in mm)

Nom	length 'l'				Thread size d				
	≤10d or 150mm		>10d or 150mm		M6	M8	M10	M12	M16
	Min	Max	Min	Max					
6	5.76	6.24							
8	7.71	8.29							
10	9.71	10.29							
12	11.65	12.35				10			
16	15.65	16.35					21.4		
20	19.58	20.42			6.3	12.5	23.4		
25	24.58	25.42				14.3	25.9	37	
30	29.58	30.42					28.9	41	78.4
35	34.5	35.5	33.75	36.25				45.4	85.1
40	39.5	40.5	38.75	41.25				49.9	92.2
45	44.5	45.5	43.75	46.25			38.2		100
50	49.5	50.5	48.75	51.25					108
55	54.4	55.6	53.5	56.5					
60	59.4	60.6	58.5	61.5					123
65	64.4	65.6	63.5	66.5					
70	69.4	70.6	68.5	71.5					
80	79.4	80.6	78.5	81.5					
90	89.3	90.7	88.25	91.75					
100	99.3	100.7	98.25	101.75					

WEIGHTS

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Note:

- 1 Preferred lengths are in between the stepped bold lines.
- 2 Weights are given in Kg per 1000 numbers only.
- 3 For stocked sizes refer BPS components book-let.