



PLANT STANDARD

HPBP TIRUCHIRAPPALLI

BPS 41106

Rev. No. 03

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STUD BOLTS FOR HIGH TEMPERATURE USE

(For Temperature of Medium 425°-550°C)

1.0 SCOPE:

Covers the requirements for Stud Bolts for use in temperature of medium 425°C to 550°C in the size range M12 to M33.

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	Table 1 of this Standard
	Tolerance	'T' according to TP 023 18 96
Material	Steel according to ASTM A 193 B16 Certified in heat treated condition	
Manufacture	Thread rolling upto M 24	
Mechanical Properties	As specified in ASTM A 193 B16	
Marking	All studs shall be stamped 'B16' on any one side	
General Requirements	Studs shall comply with TDC:5:164 in respect of requirements not covered in this standard except for Cadmium plating	

2.1 Referred Standards (Only current versions are applicable)

IS: 1367 (Part-2) Technical supply conditions for threaded steel fasteners.

ASTM-A193 Specification for alloy steel and stainless bolting material for high temperature service

TP 023 18 96 Tolerances for ISO metric screw threads for high temperature application-external.

TDC:5:164 TDC for studs to ASTM A193 Gr B7 and ASTM A193 Gr B16.

Revisions

Brought upto date

Approved

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3.0 DESIGNATION:

A Grade A Stud to this standard of thread size M12 and nominal length 60 mm shall be designated as:

3.1 On Drawings:

- i) Material Specification column: A 193 B-16
- ii) Description Column : STUD BOLT A T425-550 M12X60
- iii) Drawing Number Column : 4110612060
- iv) Material Code Column : 4110612060

3.2 Ordering Description:

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

Stud Bolt M12x60 BPS:41106-A-ASTM-A193-B16

4.0 ADDITIONAL INFORMATION:

4.1 Copies of the following Standards shall be enclosed along with Purchase Order.

- 1. TDC:5:164
- 2. TP 023 18 96
- 3. BPS:41106

TABLE 1 - DIMENSIONS FOR STUD BOLTS.

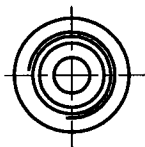
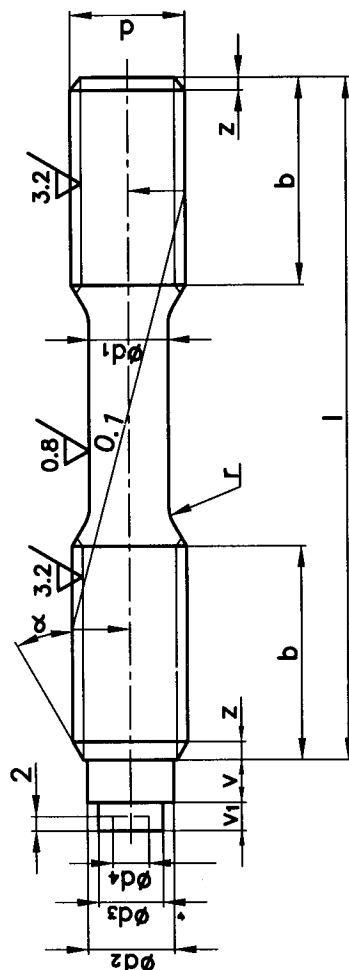


TABLE 2 - PREFERRED LENGTH SIZE COMBINATION
FOR STUD BOLTS

THREAD SIZE d	Ød1	Ød2	Ød3	Ød4	b	z MAX.	v	v1	r	α
M12	9	8	6	4	25	2.2	4	3	20	30°
M16	12.5	12	9	7	30	2.5	6	4	20	30°
M20	15.5	14	11	8	35	3	8	4	20	30°
M24	18.5	14	11	8	40	3.5	8	4	30	30°
M30	23.5	18	14	11	50	4	10	4	30	45°
(M33)	26.5	25	19	14	55	4	10	4	30	45°

NOTE:-

1. ALL DIMENSIONS ARE IN MM
2. SIZES IN BRACKETS ARE NON-PREFERRED
3. PREFERRED LENGTHS ARE BETWEEN THE BOLD STEPPED LINES.
4. WEIGHTS ARE GIVEN IN KG PER 1000 NUMBERS ONLY.
5. FOR STOCKED SIZES REFER BPS COMPONENTS BOOKLET.
6. FOR TOLERANCE FOR UNTOLERANCED DIMENSIONS, REFER TP 023 0299.

NOMINAL LENGTH l	M12	M16	M20	M24	M30	(M33)
60	41.9					
70		98.2				
80						
90						
100		127				
110			216.6			
120				332.8		
140					261.1	
160						417.2
180						
200						
220						
240						

WEIGHTS