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SRI LANKA STANDARD 268 : 1974

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SPECIFICATION FOR ISO METRIC SCREW THREADS

Part II. Pitch / Diameter Combinations

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BUREAU OF CEYLON STANDARDS

SPECIFICATION FOR ISO METRIC SCREW THREADS

PART II - PITCH/DIAMETER COMBINATIONS

S. L. S. 268 : 1974

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This Standard does not purport to include all the necessary provisions of a contract.

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SRI LANKA STANDARD SPECIFICATION FOR ISO METRIC SCREW THREADS

Part II—Pitch/Diameter combinations

FOREWORD

This Sri Lanka Standard Specification was prepared by the drafting committee on Metric Screw Threads. It was approved by the Mechanical Engineering Divisional committee of the Bureau of Ceylon Standards and was authorized for adoption and publication by the Council of the Bureau on 21st May 1974.

Although this standard is not a revision of the C.S. 96: "Specification for Dimensions of Parallel Coarse Screw thread of Whitworth Form", this standard will replace it in due course.

This standard is being issued in different parts as under:

Part	I:	Basic and Design Profiles
Part	II:	Pitch/Diameter Combinations
Part	III:	Basic Dimensions for Design Profiles
Part	IV:	Tolerancing System
Part	V:	Tolerances
Part	VI:	Limit of sizes for commercial bolts and nuts

This standard (Part II) is based on ISO/R 261-1969, "ISO General purpose Metric Screw Threads—General Plan" issued by the International Organisation for Standardization.

Diameters given in the first choice should be as far as possible, considered for various applications. The diameters given in the second and third choice should be selected only if the diameters given in the first choice do not meet the requirements. The words "coarse" and "fine" are given in order to conform to usage. No concept of quality should however, be associated with it.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the results of a test shall be rounded off in accordance with C.S. 102. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

This standard (Part II) specifies a series of diameter and pitch combinations for ISO metric screw threads in the diameter range 1 to 300 mm.

2. THREAD SERIES

2.1 A thread series shall consist of a graduated series of diameters associated with suitable pitches. The recognized thread series shall be as follows:

(a) Coarse series
(b) Fine series

The "coarse" pitches are the largest metric pitches used in practice. The pitch and diameter combinations of coarse and fine series shall be as given in Table 1.

3. CHOICE OF PITCH/DIAMETER COMBINATIONS

3.1 The diameters and associated pitches shall be selected as indicated in Table 1.

3.2 The order of preference for selection of diameters and pitches shall be as follows:

(a) Diameters
  (1) 1st choice diameters
  (2) 2nd choice diameters
  (3) 3rd choice diameters

(b) Pitches
  (1) Coarse
  (2) Fine pitch series.

3.3 If pitches finer than those specified in Table 1 are found necessary, only the following pitches shall be used:

3 mm, 2 mm, 1.5 mm, 1 mm, 0.75 mm, 0.5 mm, 0.35 mm, 0.25 mm, and 0.2 mm.

3.3.1 While selecting such pitches it should be borne in mind that to comply with tolerances, difficulties will increase with diameter for the same pitch. It is suggested that diameters larger than the following may not be used with the pitches indicated:

Pitch	*Maximum Diameter*
mm	mm
0.5	22
0.75	33
1	80
1.5	150
2	200
3	300

3.4 If it is found necessary to use a screw thread with a pitch larger than 6 mm in the diameter range 150 to 300 mm, it is recommended that the pitch should be 8 mm.

4. DESIGNATION

4.1 The pitch diameter combination of an ISO metric screw thread shall be designated by the letter 'M' followed by the values of the nominal thread diameter and of the pitch, the two being separated by the sign 'X'.

Example: A pitch diameter combination of thread size 8 mm and pitch 1 mm shall be designated as:

M8 x 1

4.1.1 If there is no indication of pitch in the designation, it shall mean standard coarse pitch is implied.

Example: M8 shall designate a pitch diameter combination of thread size 8 mm and pitch 1.25 mm.

TABLE 1 — PITCH/DIAMETER COMBINATIONS

(Unit: Millimetre)

Nominal diameters			Pitches										
				fine									
Col.1 1st choice	Col.2 2nd choice	Col.3 3rd choice	coarse	3	2	1.5	1.25	1	0.75	0.5	0.35	0.25	0.2
1			0.25										0.2
1.2	1.1		0.25										0.2
			0.25										0.2
	1.4		0.3										0.2
1.6			0.35										0.2
	1.8		0.35										0.2
2			0.4									0.25	
	2.2		0.45									0.25	
2.5			0.45								0.35		
3			0.5								0.35		
	3.5		0.6								0.35		
4			0.7							0.5			
	4.5		0.75							0.5			
5			0.8							0.5			
		5.5								0.5			
6			1						0.75				
		7	1						0.75				
8			1.25					1	0.75				
		9	1.25					1	0.75				
10			1.5				1.25	1	0.75				
		11	1.5					1	0.75				
12			1.75			1.5	1.25	1					
	14		2			1.5	1.25*	1					
		15				1.5		1					
16			2			1.5		1					
		17				1.5		1					
	18		2.5		2	1.5		1					
20			2.5		2	1.5		1					
	22		2.5		2	1.5		1					
24			3		2	1.5		1					
		25			2	1.5		1					
		26				1.5							
	27		3		2	1.5		1					
		28			2	1.5		1					

* Only for spark plugs for engines.

TABLE 1 — PITCH/DIAMETER COMBINATIONS (*continued*)

Dimensions in millimetres

Nominal diameters			Pitches									
				fine								
Col. 1 1st choice	Col. 2 2nd choice	Col. 3 3rd choice	coarse	3	2	1.5	1.25	1	0.75	0.5	0.35	0.25	0.2
30		32	3.5	(3)	2	1.5		1					
					2	1.5							
	33		3.5	(3)	2	1.5							
36		35*				1.5							
			4	3	2	1.5							
		38				1.5							
	39		4	3	2	1.5							
				6		4		3		2		1.5	
42		40						3		2		1.5	
			4.5			4		3		2		1.5	
	45		4.5			4		3		2		1.5	
48			5			4		3		2		1.5	
		50						3		2		1.5	
	52		5			4		3		2		1.5	
56		55				4		3		2		1.5	
			5.5			4		3		2		1.5	
		58				4		3		2		1.5	
	60		5.5			4		3		2		1.5	
		62				4		3		2		1.5	
64			6			4		3		2		1.5	
		65				4		3		2		1.5	
	68		6			4		3		2		1.5	
		70		6		4		3		2		1.5	
72				6		4		3		2		1.5	
		75				4		3		2		1.5	
	76			6		4		3		2		1.5	
		78								2			
80				6		4		3		2		1.5	
		82								2			
	85			6		4		3		2			
90				6		4		3		2			
	95			6		4		3		2			
100				6		4		3		2			
	105			6		4		3		2			
110				6		4		3		2			

* Only for locking nuts for bearings.

Avoid as far as possible pitches in brackets.

TABLE 1 — PITCH/DIAMETER COMBINATIONS (*concluded*)

Dimensions in millimetres

Nominal diameters			Pitches					
Col. 1 1st choice	Col. 2 2nd choice	Col. 3 3rd choice	coarse	fine				
				6	4	3	2	1.5
	115		6	4	3	2	
125	120		6	4	3	2	
			6	4	3	2	
	130		6	4	3	2	
140		135	6	4	3	2	
			6	4	3	2	
		145	6	4	3	2	
	150		6	4	3	2	
		155	6	4	3		
160			6	4	3		
		165	6	4	3		
	170		6	4	3		
		175	6	4	3		
180			6	4	3		
		185	6	4	3		
	190		6	4	3		
		195	6	4	3		
200			6	4	3		
		205	6	4	3		
	210		6	4	3		
		215	6	4	3		
220			6	4	3		
		225	6	4	3		
		230	6	4	3		
		235	6	4	3		
	240		6	4	3		
		245	6	4	3		
250			6	4	3		
		255	6	4			
	260		6	4			
		265	6	4			
		270	6	4			
		275	6	4			
280			6	4			
		285	6	4			
		290	6	4			
		295	6	4			
	300		6	4			

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