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**GB** 

#### NATIONAL STANDARD OF THE

#### PEOPLE'S REPUBLIC OF CHINA

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GB/T 196-2003

Replacing GB/T 196-1981

# General Purpose Metric Screw Threads – Basic Dimensions

(ISO 724:1993, ISO general purpose metric screw threads -

**Basic dimensions, MOD)** 

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#### **Foreword**

This standard is modified in relation to ISO 724:1993 " ISO general purpose metric screw threads- basic dimensions". There is no technical differences between this standard and ISO standard.

There are differences between GB/T 14791-1993 "The terms of screw threads" and the ISO 5408:1983 "The terms of cylindrical thread". The screw threads can be categorized into: cylindrical thread and tapered thread; pressurized thread and non-pressurized thread; mechanical binding thread and transmission thread; symmetric V-thread and asymmetric V-thread. For the time being, the ISO 5408 only specifies the terms for the cylindrical thread (part of the mechanical binding thread and part of transmission thread), which is far beyond the functioning demand of the real production. On the basis of the practices in Japan, the United States and Russia, a standard of the thread terms which is applicable to various screw threads is formulated in China. The technical content of this standard is much more comprehensive and that of the ISO thread terms is also included.

This standard replaces GB/T 196-1981 "General purpose metric screw threads-Basic dimensions".

Compared with GB/T 196-1981, in this standard, there are some changes on the specifications of the thread. The specific changes on specification are given in GB/T 193-2003.

This standard specifies the standard for basic dimensions. This series of general purpose metric screw threads-related standards include:

- GB/T 192-2003 General purpose metric screw threads Basic profile;
- GB/T 193-2003 General purpose metric screw threads General plan;
- GB/T 9144-2003 General purpose metric screw threads Preferable plan;
- GB/T 1414-2003 General purpose metric screw threads The plan for pipe systems;
- GB/T 196-2003 General purpose metric screw threads Basic dimensions;
- GB/T 197-2003 General purpose metric screw threads Tolerance;
- GB/T 2516-2003 General purpose metric screw threads Limit deviations;
- GB/T 15756-1995 General purpose metric screw threads Limits of size;
- GB/T 9145-2003 General purpose metric screw threads Limits of sizes for the

# General purpose metric screw threads – Basic dimensions

#### 1 Scope

This standard specifies the requirements of the basic dimensions for the general purpose metric screw threads according to GB/T 192-2003 and GB/T 193-2003.

This standard is applicable to the connection of general-purpose mechanical binding threads whose screw thread does not have stopping property.

#### 2 Normative References

The following standards contain the provisions which, through reference in this text, constitute the provisions of this standard. For dated reference, the subsequent modification or revisions of these publications do not apply. However, all parties who reach an agreement according to this standard are encouraged to study whether the latest edition of these documents is applicable. For undated references, the latest edition of the normative document is applicable to this standard.

GB/T192-2003 General purpose metric screw threads - Basic profile (ISO 68-1:1998, ISO general purpose screw threads - Basic profile - Part 1: Metric screw threads, MOD)

GB/T193-2003 General purpose metric screw threads - General plan (ISO 261:1998, ISO general purpose metric screw - Threads - General plan, MOD)

GB/T14791 The terms of screw threads (neg ISO 5408:1983)

#### 3 Terms and Definitions

The terms and definitions specified in GB/T 14791 are applicable to this standard.

#### 4 Code Names

- D Basic major diameter (nominal diameter) of the internal thread;
- d Basic major diameter (nominal diameter) of the external thread;
- D<sub>2</sub> Basic pitch diameter of the internal thread;

	0.2	0.870	0.783
4.4	0.25	0.938	0.829
1.1	0.2	0.970	0.883
4.0	0.25	1.038	0.929
1.2	0.2	1.070	0.983
	0.3	1.205	1.075
1.4	0.2	1.270	1.183
4.0	0.35	1.373	1.221
1.6	0.2	1.470	1.383
4.0	0.35	1.573	1.421
1.8	0.2	1.670	1.583
	0.4	1.740	1.567
2	0.25	1.838	1.729
	0.45	1.908	1.713
2.2	0.25	2.038	1.929
	0.45	2.208	2.013
2.5	0.35	2.273	2.121
	0.5	2.675	2.459
3	0.35	2.773	2.621
	0.6	3.110	2.850
3.5	0.35	3.273	3.121
,	0.7	3.545	3.242
4	0.5	3.675	3.459
4.	0.75	4.013	3.688
5	0.5	4.175	3.959
_	0.8	4.480	4.134
5	0.5	4.675	4.459
5.5	0.5	5.175	4.959
_	1	5.350	4.917
6	0.75	5.513	5.188
	,	6.350	
7	1	6.51	5.917
	0.75	3	6.188
	1.25	7.188	6.647
8	1	7.350	6.917
	0.75	7.513	7.188
	1.25	8.188	7.647
9	1	8.350	7.917
	0.75	8.513	8.188
	0.70		
	1.5	9.026	8.376
40			8.376 8.647
10	1.5	9.026	

	1.5	27.026	26.376
	1	27.350	26.917
	3.5	27.727	26.211
	3	28.051	26.752
30	2	28.701	27.835
	1.5	29.026	28.376
	1	29.350	28.917
00	2	30.701	29.835
32	1.5	31.026	30.376
	3.5	30.727	29.211
00	3	31.051	29.752
33	2	31.701	30.835
	1.5	32.026	31.376
35	1.5	34.026	33.376
	4	33.402	31.670
00	3	34.051	32.752
36	2	34.701	33.835
	1.5	35.026	34.376
38	1.5	37.026	36.376
	4	36.402	34.670
20	3	37.051	35.752
39	2	37.701	36.835
	1.5	38.026	37.376
	3	38.051	36.752
40	2	38.701	37.835
	1.5	39.026	38.376
	4.5	39.077	37.129
	4	39.402	37.670
42	3	40.051	38.752
	2	40.701	39.835
	1.5	41.026	40.376
	4.5	42.077	40.129
	4	42.402	40.670
45	3	43.051	41.752
	2	43.701	42.835
	1.5	44.026	43.376
	5	44.752	42.587
	4	45.402	43.670
48	3	46.051	44.752
	2	46.701	45.835
	1.5	47.026	46.376
50	3	48.051	46.752
JU	2	48.701	47.835

	4	67.402	65.670
	3	68.051	66.752
	2	68.701	67.835
	1.5	69.026	68.376
	6	68.103	65.505
	4	69.402	67.670
72	3	70.051	68.752
	2	70.701	69.835
	1.5	71.026	70.376
	4	72.402	70.670
75	3	73.051	71.752
73	2	73.701	72.835
	1.5	74.026	73.376
	6	72.103	69.505
	4	73.402	71.670
76	3	74.051	72.752
	2	74.701	73.835
	1.5	75.026	74.376
78	2	76.700	75.835
	6	76.103	73.505
	4	77.402	75.670
80	3	78.051	76.752
	2	78.701	77.835
	1.5	79.026	78.376
82	2	80.701	79.835
	6	81.103	78.505
0.5	4	82.402	80.670
85	3	83.051	81.752
	2	83.701	82.835
	6	86.103	83.505
90	4	87.402	85.670
90	3	88.051	86.752
	2	88.701	87.835
	6	91.103	88.505
05	4	92.402	90.670
95	3	93.051	91.752
	2	93.701	92.835
	6	96.103	93.505
400	4	97.402	95.670
100	3	98.051	96.752
	2	98.701	97.835
405	6	101.103	98.505
105	4	102.402	100.670
	•		

	6	156.103	153.505
	4	157.402	155.670
	3	158.051	156.752
	6	161.103	158.505
165	4	162.402	160.670
	3	163.051	161.752
	8	164.804	161.340
	6	166.103	163.505
170	4	167.402	165.670
	3	168.051	166.752
	6	171.103	168.505
175	4	172.402	170.670
	3	173.051	171.752
	8	174.804	171.340
	6	176.103	173.505
180	4	177.402	175.670
	3	178.051	176.752
	6	181.103	178.505
185	4	182.402	180.670
	3	183.051	181.752
	8	184.804	181.340
	6	186.103	183.505
190	4	187.402	185.670
	3	188.051	186.752
	6	191.103	188.505
195	4	192.402	190.670
100	3	193.051	191.752
	8	194.804	191.340
	6	196.103	193.505
200	4	197.402	195.670
	3		196.752
		198.051	
005	6	201.103	198.505
205	4	202.402	200.670
	3	203.051	201.752
	8	204.804	201.340
210	6	206.103	203.505
	4	207.402	205.670
	3	208.051	206.752
	6	211.103	208.505
215	4	212.402	210.670
	3	213.051	211.752
220	8	214.804	211.340
220	6	216.103	213.505

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6	296.103	293.505
4	297.402	295.670

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