



STAINLESS STEEL

**General
Information**

GROUPS AND GRADES OF STAINLESS STEELS

In ISO 3506, reference is made to steel grades A1 to A5, C1 to C4 and F1, covering steels of the following groups:

- Austenitic Steel A1 to A5;
- Martensitic Steel C1 to C4;
- Ferritic Steel F1.

Steel Group A (austenitic structure)

Steel Grade A1

Steels of grade A1 are specially designed for machining. Due to high sulfur content, the steels within this grade have lower resistance to corrosion than corresponding steels with normal sulfur content.

Steel Grade A2

Steels of grade A2 are the most frequently used stainless steels. They are used for kitchen equipment and apparatus for the chemical industry. Steels within this grade are not suitable for use in non-oxidizing acid and agents with chloride content, i.e. in swimming pools and sea water.

Steel Grade A3

Steels of grade A3 are stabilized "stainless steels" with properties of steels of grade A2.

Steel Grade A4

Steels of grade A4 are "acid proof steels", which are molybdenum alloyed and give a considerably better resistance to corrosion. A4 is used to a great extent by the cellulose industry, as this steel grade is developed for boiling sulfuric acid. (hence the name "acid proof") and is, to a certain extent, also suitable in an environment with chloride content. A4 is also frequently used by the food industry and by the shipbuilding industry.

Steel Grade A5

Steels of grade A5 are stabilized "acid proof steels" with properties of steels of grade A4.

Steel Group F (ferritic structure)

Steel Grade F1

Steels of grade F1 are normally used for simpler equipment with the exception of the superferrites, which have extremely low C and N contents. The steels within grade F1 can, if need be, replace steels of grades A2 and A3 and be used in an environment with a higher chloride content.

Steel Group C (martensitic structure)

Steel Grade C1

Steels of grade C1 have limited resistance to corrosion. They are used in turbines, pumps and knives.

Steel Grade C3

Steels of grade C3 have limited resistance to corrosion, though better resistance than C1. They are used in pumps and valves.

Steel Grade C4

Steels of grade C4 have limited resistance to corrosion. They are intended for machining, otherwise they are similar to steels to grade C1.

STAINLESS STEEL STRENGTH GRADE DESIGNATION SYSTEM

The designation of the material consists of two blocks, which are separated by a hyphen. The first block designates the steel grade and the second block, the property class.

The designation of the steel grade (first block) consists of one of the letters

- A for austenitic steel
- C for martensitic steel
- F for ferritic steel

which indicates the group of steel and a digit, which indicates a range of chemical compositions within this steel group.

For Stainless Steel Screws, Bolts & Studs

The designation of the property class (second block) consists of two or three digits representing 1/10 of the tensile strength of the fastener.

Example:

A2-70 indicates: austenitic steel, cold worked, minimum 700MPa tensile strength.

For Stainless Steel Nuts

The designation of the property class (second block) consists of two digits representing 1/10 of the stress under proof load.

Example:

A2-70 indicates: austenitic steel, cold worked, minimum 700MPa stress under proof load.

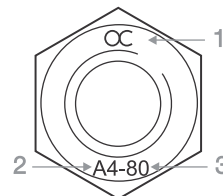
Marking

Key:

- 1 manufacturer's identification mark
- 2 steel grade
- 3 property class



Bolts and Screws

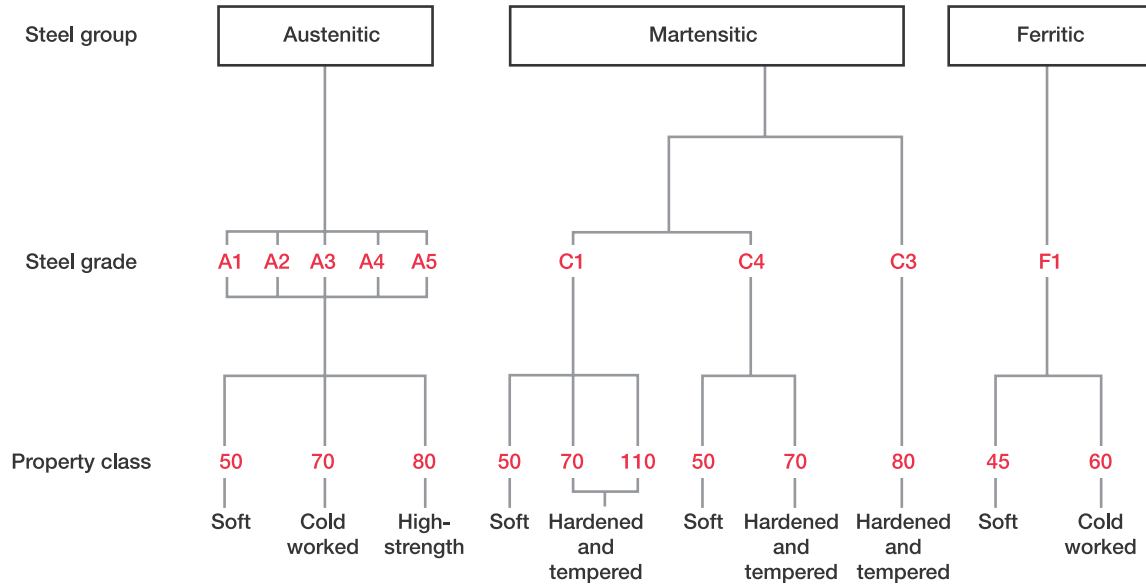


Nuts

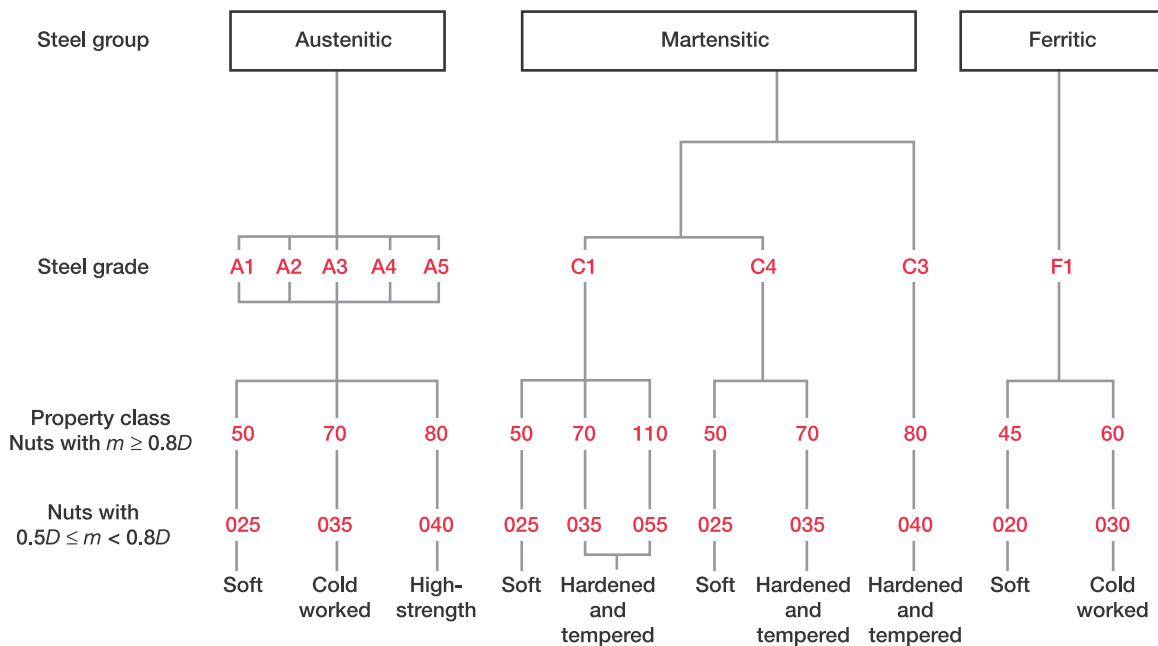


STAINLESS STEEL STRENGTH GRADE DESIGNATION SYSTEM

Designation System for Stainless Steel Grades and Property Classes For Bolts, Screws and Studs



Designation System for Stainless Steel Grades and Property Classes For Nuts



CORROSION OF METALS AND ALLOYS

Types of Corrosion

Electrochemical Corrosion

Corrosion involving at least one anodic reaction and one cathodic reaction

Chemical Corrosion

Corrosion not involving electrochemical reaction

Gaseous Corrosion

Corrosion with dry gas as the only corrosive environment and without any liquid phase on the surface of the metal

Atmospheric Corrosion

Corrosion with the earth's atmosphere at ambient temperature as the corrosive environment

Marine Corrosion

Corrosion with sea water as the main agent of the corrosive environment

Underground Corrosion

Corrosion of buried metals, soil being the corrosive environment

Microbial Corrosion

Corrosion associated with the action of micro-organisms present in the corrosion system

Bacterial Corrosion

Microbial corrosion due to the action of bacteria

General Corrosion

Corrosion proceeding over the whole surface of the metal exposed to the corrosive environment

Localized Corrosion

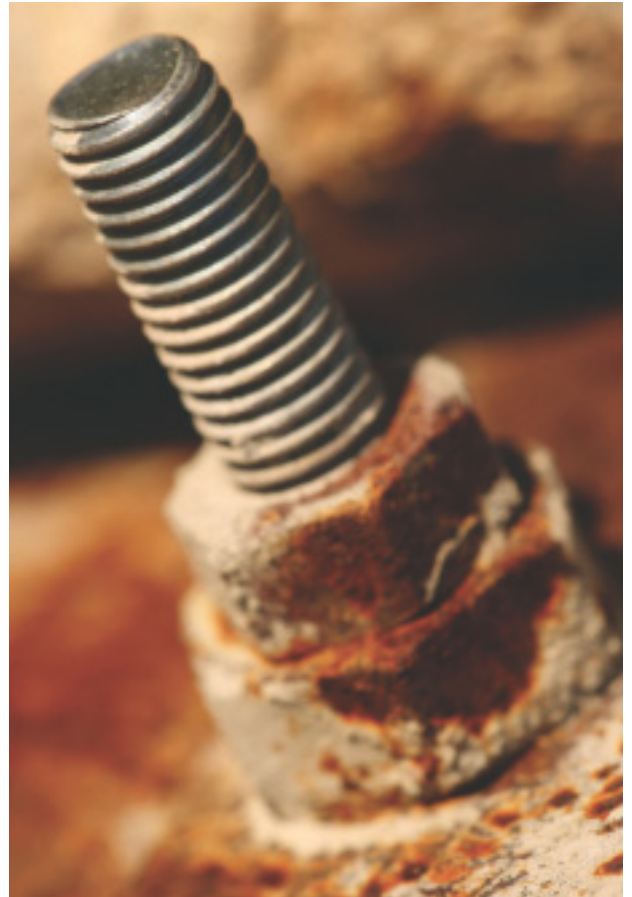
Corrosion preferentially concentrated on discrete sites of the metal surface exposed to the corrosive environment

Uniform Corrosion

General corrosion proceeding at almost the same rate over the whole surface

Galvanic Corrosion

Corrosion due to the action of a corrosion cell



Types of Corrosion

Impressed Current Corrosion

Electrochemical corrosion due to the action of an external source of electric current

Stray-Current Corrosion

Impressed current corrosion caused by current flowing through paths other than the intended circuits

Pitting Corrosion

Localized corrosion resulting in pits, i.e. cavities extending from the surface into the metal

Crevice Corrosion

Localized corrosion associated with, and taking place in, or immediately around, a narrow aperture or clearance formed between the metal surface and another surface (metallic or non-metallic)

Deposit Corrosion

Localized corrosion associated with, and taking place under, or immediately around, a deposit of corrosion products or other substance

Water-line Corrosion

Corrosion along, and as a consequence of the presence of, a gas/liquid boundary

Selective Corrosion

Corrosion of an alloy whereby the components react in proportions that differ from their proportions in the alloy

Dezincification of Brass

Selective corrosion of brass resulting in preferential removal of zinc

Graphite Corrosion

Selective corrosion of grey cast iron, resulting in partial removal of metallic constituents, leaving graphite

Intergranular Corrosion

Corrosion in or adjacent to the grain boundaries of a metal

Weld Corrosion

Corrosion associated with the presence of a welded joint and taking place in the weld or its vicinity

Knife-line Corrosion

Corrosion resulting in a narrow slit in or adjacent to the filler/parent boundary of a welded or brazed joint



Types of Corrosion

Layer Corrosion

Corrosion of internal layers of wrought metal, occasionally resulting in exfoliation, i.e. detachment of unattacked layers

Erosion Corrosion

Process involving conjoint corrosion and erosion

Cavitation Corrosion

Process involving conjoint corrosion and cavitation

Fretting Corrosion

Process involving conjoint corrosion and oscillatory slip between two vibrating surfaces in contact

Wear Corrosion

Process involving conjoint corrosion and friction between two sliding surfaces in contact

Corrosion Fatigue

Process involving conjoint corrosion and alternating straining of the metal, often leading to cracking

Stress Corrosion

Process involving conjoint corrosion and straining of the metal due to applied or residual stress

Stress Corrosion Cracking

Cracking due to stress corrosion

Hydrogen Embrittlement

Process resulting in a decrease of the toughness or ductility of a metal due to absorption of hydrogen

Blistering

Process resulting in dome-shaped defect visible on the surface of an object and arising from localized loss of cohesion below the surface





STAINLESS STEEL

Ordering
Code

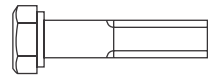
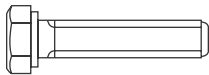


ORDERING CODE:

Ordering code consists of 11 digits

EXAMPLE	product code	diameter	length
CODE	2 9 4 0	0 0 6	0 0 3 0
PRODUCT	A4-70 Stainless Steel Hex. Head Screw	M6	30mm long
EXAMPLE	product code	diameter	length
CODE	2 9 5 0	0 2 4	0 1 0 0
PRODUCT	A4-70 Stainless Steel Hex. Head Bolt	M24	100mm long

STAINLESS STEEL HEX. HEAD SCREW / HEX. HEAD BOLT



- | | |
|---|--|
| 2800 A2 Stainless Steel Hex. Head Screw
<small>Product Code</small> A2 Stainless Steel to BS EN ISO 3506-1:2009 | 2810 A2 Stainless Steel Hex. Head Bolt
A2 Stainless Steel to BS EN ISO 3506-1:2009 |
| 2840 A2-70 Stainless Steel Hex. Head Screw
A2 Stainless Steel to BS EN ISO 3506-1:2009 | 2850 A2-70 Stainless Steel Hex. Head Bolt
A2 Stainless Steel to BS EN ISO 3506-1:2009 |
| 2900 A4 Stainless Steel Hex. Head Screw
A4 Stainless Steel to BS EN ISO 3506-1:2009 | 2910 A4 Stainless Steel Hex. Head Bolt
A4 Stainless Steel to BS EN ISO 3506-1:2009 |
| 2940 A4-70 Stainless Steel Hex. Head Screw
A4 Stainless Steel to BS EN ISO 3506-1:2009 | 2950 A4-70 Stainless Steel Hex. Head Bolt
A4 Stainless Steel to BS EN ISO 3506-1:2009 |
| 2960 A4-80 Stainless Steel Hex. Head Screw
A4 Stainless Steel to BS EN ISO 3506-1:2009 | 2970 A4-80 Stainless Steel Hex. Head Bolt
A4 Stainless Steel to BS EN ISO 3506-1:2009 |
| 2801 BS EN ISO 4017:2000 A2 Stainless Steel
Hex. Head Screw
A2 Stainless Steel to BS EN ISO 3506-1:2009 | 2811 BS EN ISO 4014:2000 A2 Stainless Steel
Hex. Head Bolt
A2 Stainless Steel to BS EN ISO 3506-1:2009 |
| 2841 BS EN ISO 4017:2000 A2-70 Stainless Steel
Hex. Head Screw
A2 Stainless Steel to BS EN ISO 3506-1:2009 | 2851 BS EN ISO 4014:2000 A2-70 Stainless Steel
Hex. Head Bolt
A2 Stainless Steel to BS EN ISO 3506-1:2009 |
| 2901 BS EN ISO 4017:2000 A4 Stainless Steel
Hex. Head Screw
A2 Stainless Steel to BS EN ISO 3506-1:2009 | 2911 BS EN ISO 4014:2000 A4 Stainless Steel
Hex. Head Bolt
A4 Stainless Steel to BS EN ISO 3506-1:2009 |
| 2941 BS EN ISO 4017:2000 A4-70 Stainless Steel
Hex. Head Screw
A4 Stainless Steel to BS EN ISO 3506-1:2009 | 2951 BS EN ISO 4014:2000 A4-70 Stainless Steel
Hex. Head Bolt
A4 Stainless Steel to BS EN ISO 3506-1:2009 |
| 2961 BS EN ISO 4017:2000 A4-80 Stainless Steel
Hex. Head Screw
A4 Stainless Steel to BS EN ISO 3506-1:2009 | 2971 BS EN ISO 4014:2000 A4-80 Stainless Steel
Hex. Head Bolt
A4 Stainless Steel to BS EN ISO 3506-1:2009 |

ORDERING CODE:

Ordering code consists of 11 digits

EXAMPLE	product code	diameter	length
CODE	3 2 6 5	0 2 4	3 0 0 0
PRODUCT	A4-80 Stainless Steel Fully Threaded Rod	M24	3000mm long

EXAMPLE	product code	diameter	length
CODE	3 2 6 5	0 2 4	1 1 0 0
PRODUCT	A4-80 Stainless Steel Fully Threaded Rod	M24	1100mm long

STAINLESS STEEL FULLY THREADED ROD



- | | |
|--|--|
| <p>3200 A2 Stainless Steel Fully Threaded Rod
<small>Product Code</small> A2 Stainless Steel to BS EN ISO 3506-1:2009</p> <p>3210 A2-70 Stainless Steel Fully Threaded Rod
A2 Stainless Steel to BS EN ISO 3506-1:2009</p> <p>3215 A2-80 Stainless Steel Fully Threaded Rod
A2 Stainless Steel to BS EN ISO 3506-1:2009</p> | <p>3250 A4 Stainless Steel Fully Threaded Rod
A4 Stainless Steel to BS EN ISO 3506-1:2009</p> <p>3260 A4-70 Stainless Steel Fully Threaded Rod
A4 Stainless Steel to BS EN ISO 3506-1:2009</p> <p>3265 A4-80 Stainless Steel Fully Threaded Rod
A4 Stainless Steel to BS EN ISO 3506-1:2009</p> |
|--|--|

ORDERING CODE:

Ordering code consists of 11 digits

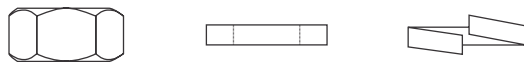
EXAMPLE	product code	diameter	
CODE	4 8 2 0	0 2 0	0 0 0 0

PRODUCT **A2-70 Stainless Steel** **M20**
Hex. Nut

EXAMPLE	product code	diameter	
CODE	4 9 3 0	0 2 0	0 0 0 0

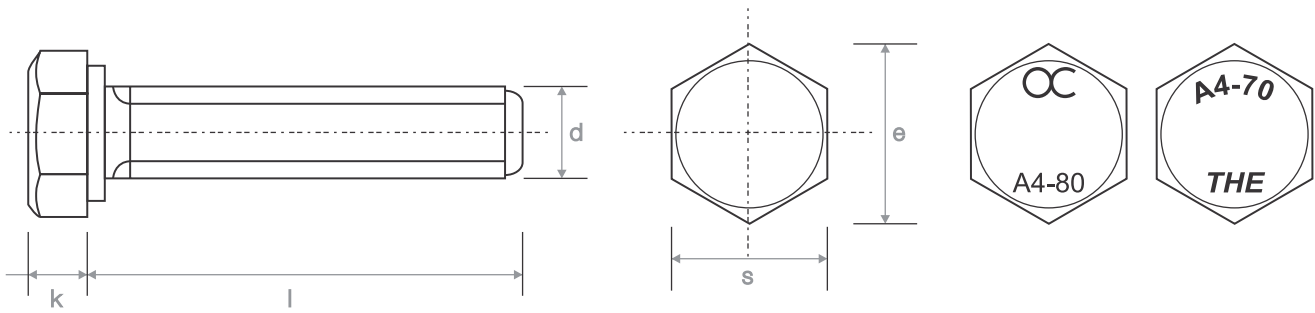
PRODUCT **A4-80 Stainless Steel** **M20**
Hex. Nut

STAINLESS STEEL HEX NUT & WASHER



- | | |
|--|---|
| 4800 A2 Stainless Steel Hex. Nut
<small>Product Code</small> A2 Stainless Steel to BS EN ISO 3506-2:2009 | 4801 BS EN ISO 4032:2001 A2 Stainless Steel Hex. Nut
A2 Stainless Steel to BS EN ISO 3506-2:2009 |
| 4820 A2-70 Stainless Steel Hex. Nut
A2 Stainless Steel to BS EN ISO 3506-2:2009 | 4821 BS EN ISO 4032:2001 A2-70 Stainless Steel Hex. Nut
A2 Stainless Steel to BS EN ISO 3506-2:2009 |
| 4900 A4 Stainless Steel Hex. Nut
A4 Stainless Steel to BS EN ISO 3506-2:2009 | 4901 BS EN ISO 4032:2001 A4 Stainless Steel Hex. Nut
A4 Stainless Steel to BS EN ISO 3506-2:2009 |
| 4930 A4-80 Stainless Steel Hex. Nut
A4 Stainless Steel to BS EN ISO 3506-2:2009 | 4931 BS EN ISO 4032:2001 A4-80 Stainless Steel Hex. Nut
A4 Stainless Steel to BS EN ISO 3506-2:2009 |
| 5510 BS 4320:1968 Form A Flat Washer
A2/304 Stainless Steel | 5610 BS 4320:1968 Form A Flat Washer
A4/316 Stainless Steel |
| 5550 BS 4320:1968 Form C Flat Washer
A2/304 Stainless Steel | 5650 BS 4320:1968 Form C Flat Washer
A4/316 Stainless Steel |
| 5630 BS 4320:1968 Form A Flat Washer
A4/316S33 Stainless Steel | 5660 BS 4320:1968 Form C Flat Washer
A4/316S33 Stainless Steel |
| 5635 BS 4320:1968 Form A Flat Washer
A4/316S31 Stainless Steel | 5665 BS 4320:1968 Form C Flat Washer
A4/316S31 Stainless Steel |
| 5980 Spring Washer
A2/304 Stainless Steel | 5990 Spring Washer
A4/316 Stainless Steel |
| 5700 BS 4320:1968 Form A Flat Washer
Nylon | 5720 BS 4320:1968 Form C Flat Washer
Nylon |

STAINLESS STEEL HEXAGON HEAD SCREWS



EXAMPLE

product code

diameter

length

CODE

2 9 4 0

0 0 6

0 0 3 0

PRODUCT

A4-70 Stainless Steel
Hex. Head Screw

M6

30mm long

Available product codes: 2800, 2840, 2900, 2940, 2960

nominal size and thread diameter	pitch of thread	width across flats		width across corners	height of head	
d		s		e	k	
		min	max	min	min	max
M1.6	0.35	3.02	3.2	3.41	0.98	1.22
M2	0.4	3.82	4	4.32	1.28	1.52
M2.5	0.45	4.82	5	5.45	1.58	1.82
M3	0.5	5.32	5.5	6.01	1.88	2.12
(M3.5)	0.6	5.82	6	6.58	2.28	2.52
M4	0.7	6.78	7	7.66	2.68	2.92
M5	0.8	7.78	8	8.79	3.35	3.65
M6	1	9.78	10	11.05	3.85	4.15
(M7)	1	10.73	11	12.12	4.65	4.95
M8	1.25	12.73	13	14.38	5.15	5.45
M10	1.5	16.73	17	18.9	6.22	6.56
M12	1.75	18.67	19	21.1	7.32	7.68
(M14)	2	21.67	22	24.49	8.62	8.98
M16	2	23.67	24	26.75	9.82	10.18
(M18)	2.5	26.67	27	30.14	11.28	11.72
M20	2.5	29.67	30	33.53	12.28	12.72
(M22)	2.5	31.61	32	35.72	13.78	14.22
M24	3	35.38	36	39.98	14.78	15.22
(M27)	3	40	41	45.2	16.65	17.35
M30	3.5	45	46	50.85	18.28	19.12
(M33)	3.5	49	50	55.37	20.58	21.42
M36	4	53.8	55	60.79	22.08	22.92
(M39)	4	58.8	60	66.44	24.58	25.42
M42	4.5	63.1	65	71.3	25.58	26.42
(M45)	4.5	68.1	70	76.95	27.58	28.42
M48	5	73.1	75	82.6	29.58	30.42
(M52)	5	78.1	80	88.25	32.5	33.5

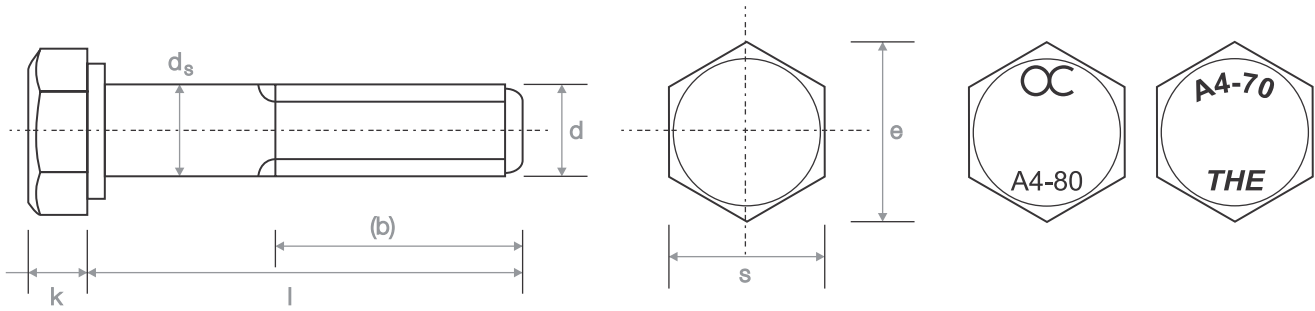
nominal length	M1.6	M2	M2.5	M3	(M3.5)	M4	M5	M6	(M7)	M8	M10	M12	(M14)	M16	(M18)	M20	(M22)	M24	(M27)	M30	(M33)	M36	(M39)	M42	(M45)	M48	(M52)
2	X																										
3	X	X	X																								
4	X	X	X	X																							
5	X	X	X	X	X	X																					
6	X	X	X	X	X	X	X	X																			
(7)	X	X	X	X	X	X	X	X	X																		
8	X	X	X	X	X	X	X	X	X	X	X																
10	X	X	X	X	X	X	X	X	X	X	X	X	X														
12	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
(14)		X	X	X	X	X	X	X	X	X	X	X	X	X													
16		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
(18)			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
20			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
(22)			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
25			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
(28)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
30				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
35					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
40						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
45						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
50						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
55						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
60						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
65						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
70						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(75)							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
80							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(85)								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
90									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
(95)									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
100									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
110										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
120											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
130											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
140											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
150											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
160														X	X	X	X	X	X	X	X	X	X	X	X	X	X
(170)															X	X	X	X	X	X	X	X	X	X	X	X	X
180															X	X	X	X	X	X	X	X	X	X	X	X	X
(190)															X	X	X	X	X	X	X	X	X	X	X	X	X
200															X	X	X	X	X	X	X	X	X	X	X	X	X

Use of values given in brackets should be avoided where possible

STANDARD LENGTH TABLE
(M1.6-M52)



STAINLESS STEEL HEXAGON HEAD BOLTS (M1.6 - M39)



EXAMPLE

product code

diameter

length

CODE

2 9 5 0

0 2 4

0 1 0 0

PRODUCT

A4-70 Stainless Steel
Hex. Head Bolt

M24

100mm long

Available product codes: 2810, 2850, 2910, 2950, 2970

nominal size and thread diameter d	pitch of thread	width across flats s		width across corners e	height of head k		diameter of unthreaded shank d _s		Thread of Length		
		min	max	min	min	max	min	max	(1)	(2)	(3)
M1.6	0.35	3.02	3.2	3.41	0.98	1.22	1.46	1.6	9	-	-
M2	0.4	3.82	4	4.32	1.28	1.52	1.86	2	10	-	-
M2.5	0.45	4.82	5	5.45	1.58	1.82	2.36	2.5	11	-	-
M3	0.5	5.32	5.5	6.01	1.88	2.12	2.86	3	12	-	-
(M3.5)	0.6	5.82	6	6.58	2.28	2.52	3.32	3.5	13	-	-
M4	0.7	6.78	7	7.66	2.68	2.92	3.82	4	14	-	-
M5	0.8	7.78	8	8.79	3.35	3.65	4.82	5	16	22	-
M6	1	9.78	10	11.05	3.85	4.15	5.82	6	18	24	-
(M7)	1	10.73	11	12.12	4.65	4.95	6.78	7	20	26	-
M8	1.25	12.73	13	14.38	5.15	5.45	7.78	8	22	28	-
M10	1.5	16.73	17	18.9	6.22	6.58	9.78	10	26	32	45
M12	1.75	18.67	19	21.1	7.32	7.68	11.73	12	30	36	49
(M14)	2	21.67	22	24.49	8.62	8.98	13.73	14	34	40	53
M16	2	23.67	24	26.75	9.82	10.18	15.73	16	38	44	57
(M18)	2.5	26.67	27	30.14	11.28	11.72	17.73	18	42	48	61
M20	2.5	29.67	30	33.53	12.28	12.72	19.67	20	46	52	65
(M22)	2.5	31.61	32	35.72	13.78	14.22	21.67	22	50	56	69
M24	3	35.38	36	39.98	14.78	15.22	23.67	24	54	60	73
(M27)	3	40	41	45.2	16.65	17.35	26.48	27	60	66	79
M30	3.5	45	46	50.85	18.28	19.12	29.48	30	66	72	85
(M33)	3.5	49	50	55.37	20.58	21.42	32.38	33	72	78	91
M36	4	53.8	55	60.79	22.08	22.92	35.38	36	78	84	97
(M39)	4	58.8	60	66.44	24.58	25.42	38.38	39	84	90	103

(1) l A 125mm; (2) 125mm < l A 200mm; (3) l > 200mm (l: nominal length of bolt)
Use of values given in brackets should be avoided where possible

unit in mm

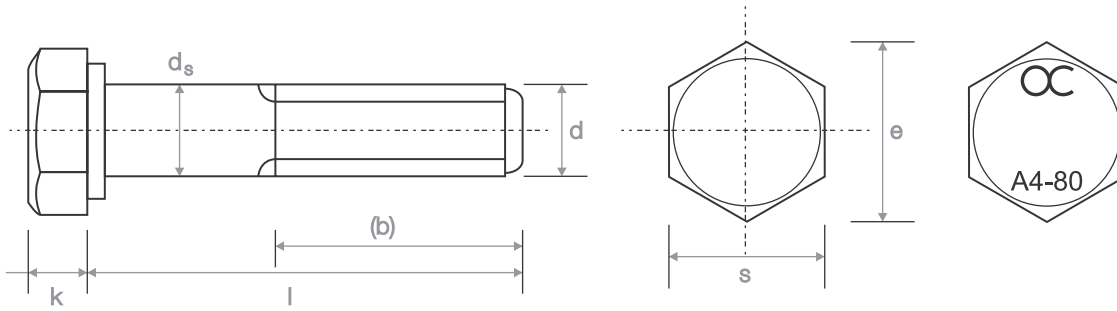
nominal length	M1.6	M2	M2.5	M3	(M3.5)	M4	M5	M6	(M7)	M8	M10	M12	(M14)	M16	(M18)	M20	(M22)	M24	(M27)	M30	(M33)	M36	(M39)
12	X																						
(14)	X																						
16	X	X	X																				
(18)		X	X																				
20		X	X	X																			
(22)			X	X																			
25			X	X	X	X	X																
(28)				X	X	X	X																
30				X	X	X	X	X	X														
35					X	X	X	X	X	X													
40						X	X	X	X	X	X												
45							X	X	X	X	X	X											
50							X	X	X	X	X	X	X										
55								X	X	X	X	X	X	X									
60								X	X	X	X	X	X	X									
65									X	X	X	X	X	X	X	X							
70									X	X	X	X	X	X	X	X	X						
(75)									X	X	X	X	X	X	X	X	X						
80									X	X	X	X	X	X	X	X	X	X					
(85)										X	X	X	X	X	X	X	X	X					
90											X	X	X	X	X	X	X	X	X	X			
(95)											X	X	X	X	X	X	X	X	X	X	X		
100											X	X	X	X	X	X	X	X	X	X	X	X	
110												X	X	X	X	X	X	X	X	X	X	X	X
120												X	X	X	X	X	X	X	X	X	X	X	X
130													X	X	X	X	X	X	X	X	X	X	X
140													X	X	X	X	X	X	X	X	X	X	X
150														X	X	X	X	X	X	X	X	X	X
160														X	X	X	X	X	X	X	X	X	X
(170)															X	X	X	X	X	X	X	X	X
180															X	X	X	X	X	X	X	X	X
(190)																X	X	X	X	X	X	X	X
200																X	X	X	X	X	X	X	X
220																	X	X	X	X	X	X	X
240																		X	X	X	X	X	X
260																			X	X	X	X	X
280																				X	X	X	X
300																				X	X	X	X

**STANDARD LENGTH TABLE
(M1.6-M39)**

Use of values given in brackets should be avoided where possible



STAINLESS STEEL HEXAGON HEAD BOLTS (M42 - M68)



EXAMPLE

product code

diameter

length

CODE

2 9 1 0

0 4 2

0 1 5 0

PRODUCT

A4 Stainless Steel
Hex. Head Bolt

M42

150mm long

Available product codes: 2810, 2850, 2910, 2950, 2970

nominal size and thread diameter	pitch of thread	width across flats		width across corners	height of head		diameter of unthreaded shank		Thread of Length		
		min	max	e	min	max	min	max	(1)	(2)	(3)
d		s		e	k		d _s		(b)		
M42	4.5	63.1	65	71.3	25.58	26.42	41.61	42	90	96	109
(M45)	4.5	68.1	70	76.95	27.58	28.42	44.38	45	96	102	115
M48	5	73.1	75	82.60	29.58	30.42	47.38	48	102	108	121
(M52)	5	78.1	80	88.25	32.5	33.5	51.26	52	-	116	129
M56	5.5	82.8	85	93.56	34.5	35.5	55.26	56	-	124	137
(M60)	5.5	87.8	90	99.21	37.5	38.5	59.26	60	-	132	145
M64	6	92.8	95	104.86	39.5	40.5	63.26	64	-	140	153
(M68)	6	97.8	100	110.51	42.5	43.5	67.26	68	-	148	161

STANDARD LENGTH TABLE (M42-M68)

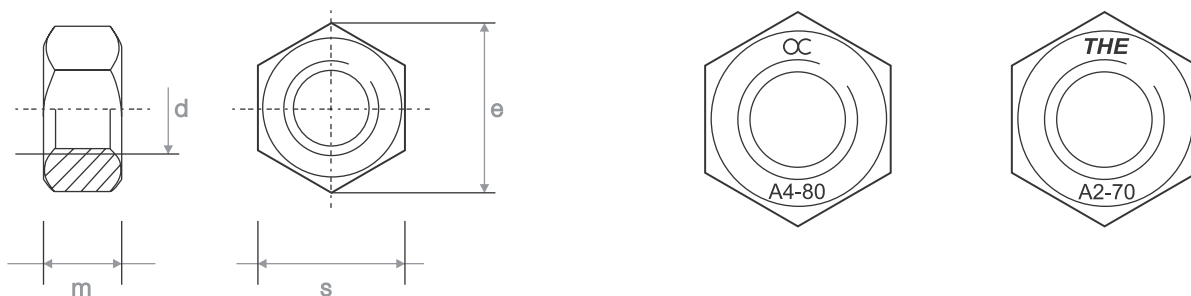
nominal length	M42	(M45)	M48	(M52)	M56	(M60)	M64	(M68)
130	X	X						
140	X	X	X					
150	X	X	X	X				
160	X	X	X	X	X			
(170)	X	X	X	X	X	X		
180	X	X	X	X	X	X	X	
(190)	X	X	X	X	X	X	X	X
200	X	X	X	X	X	X	X	X
220	X	X	X	X	X	X	X	X
240	X	X	X	X	X	X	X	X
260	X	X	X	X	X	X	X	X
280	X	X	X	X	X	X	X	X
300	X	X	X	X	X	X	X	X
320			X	X	X	X	X	X
340			X	X	X	X	X	X
360					X	X	X	X
380								X

(1) l A 125mm; (2) 125mm < l A 200mm; (3) l > 200mm (l: nominal length of bolt)

Use of values given in brackets should be avoided where possible

unit in mm

STAINLESS STEEL HEXAGON NUTS



EXAMPLE

product code

diameter

CODE

4 9 3 0

0 2 0

0 0 0 0

PRODUCT

A4-80 Stainless Steel
Hex. Nut

M20

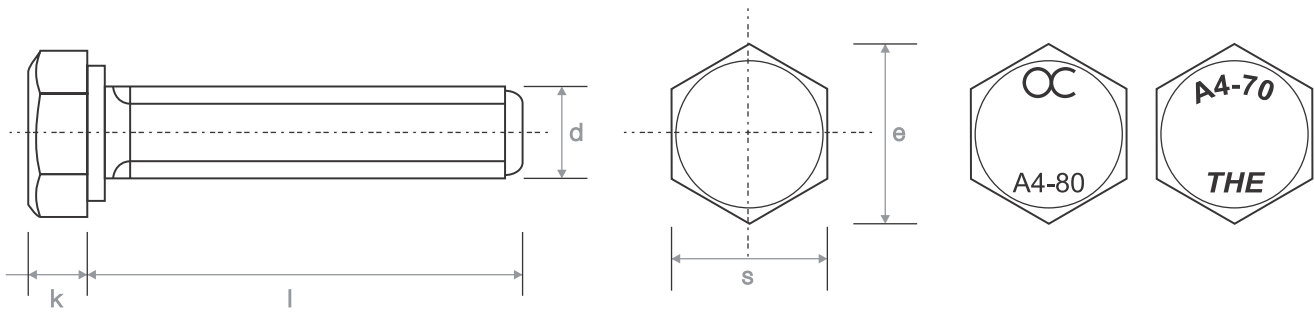
Available product codes: 4800, 4820, 4900, 4930

nominal size and thread diameter	pitch of thread	width across flats		width across corners	Thickness	
d		s		e	m	
		min	max	min	min	max
M1	0.25	2.4	2.5	2.71	0.55	0.8
M1.2	0.25	2.9	3	3.28	0.75	1
M1.4	0.3	2.9	3	3.28	0.95	1.2
M1.6	0.35	3.02	3.2	3.41	1.05	1.3
M2	0.4	3.82	4	4.32	1.35	1.6
M2.5	0.45	4.82	5	5.45	1.75	2
M3	0.5	5.32	5.5	6.01	2.15	2.4
(M3.5)	0.6	5.82	6	6.58	2.55	2.8
M4	0.7	6.78	7	7.66	2.9	3.2
M5	0.8	7.78	8	8.79	3.7	4
M6	1	9.78	10	11.05	4.7	5
(M7)	1	10.73	11	12.12	5.2	5.5
M8	1.25	12.73	13	14.38	6.14	6.5
M10	1.5	16.73	17	18.9	7.64	8
M12	1.75	18.67	19	21.1	9.64	10
(M14)	2	21.67	22	24.49	10.3	11
M16	2	23.67	24	26.75	12.3	13
(M18)	2.5	26.16	27	29.56	14.3	15
M20	2.5	29.16	30	32.95	14.9	16
(M22)	2.5	31	32	35.03	16.9	18
M24	3	35	36	39.55	17.7	19
(M27)	3	40	41	45.2	20.7	22
M30	3.5	45	46	50.85	22.7	24
(M33)	3.5	49	50	55.37	24.7	26
M36	4	53.8	55	60.79	27.4	29
(M39)	4	58.8	60	66.44	29.4	31
M42	4.5	63.1	65	71.3	32.4	34
(M45)	4.5	68.1	70	76.95	34.4	36
M48	5	73.1	75	82.6	36.4	38
(M52)	5	78.1	80	88.25	40.4	42
M56	5.5	82.8	85	93.56	43.4	45
(M60)	5.5	87.8	90	99.21	46.4	48
M64	6	92.8	95	104.86	49.1	51
(M68)	6	97.8	100	110.51	52.1	54

Use of values given in brackets should be avoided where possible

unit in mm

BS EN ISO 4017 STAINLESS STEEL HEXAGON HEAD SCREWS



EXAMPLE

product code

diameter

length

CODE

2 9 4 1

0 0 6

0 0 3 0

PRODUCT

A4-70 Stainless Steel
BS EN ISO 4017 Hex. Head Screw

M6

30mm long

Available product codes: 2801, 2841, 2901, 2941, 2961

nominal size and thread diameter	pitch of thread	width across flats		width across corners		height of head	
		s		e		k	
d		min	max	min		min	max
M1.6	0.35	3.02	3.20	3.41		0.975	1.225
M2	0.4	3.82	4.00	4.32		1.275	1.525
M2.5	0.45	4.82	5.00	5.45		1.575	1.825
M3	0.5	5.32	5.50	6.01		1.875	2.125
(M3.5)	0.6	5.82	6.00	6.58		2.275	2.525
M4	0.7	6.78	7.00	7.66		2.675	2.925
M5	0.8	7.78	8.00	8.79		3.35	3.65
M6	1	9.78	10.00	11.05		3.85	4.15
M8	1.25	12.73	13.00	14.38		5.15	5.45
M10	1.5	15.73	16.00	17.77		6.22	6.58
M12	1.75	17.73	18.00	20.03		7.32	7.68
(M14)	2	20.67	21.00	23.36		8.62	8.98
M16	2	23.67	24.00	26.75		9.82	10.18
(M18)	2.5	26.67	27.00	30.14		11.285	11.715
M20	2.5	29.67	30.00	33.53		12.285	12.715
(M22)	2.5	33.38	34.00	37.72		13.785	14.215
M24	3	35.38	36.00	39.98		14.785	15.215
(M27)	3	40	41	45.2		16.65	17.35
M30	3.5	45	46	50.85		18.28	19.12
(M33)	3.5	49	50	55.37		20.58	21.42
M36	4	53.8	55.0	60.79		22.08	22.92
(M39)	4	58.8	60.0	66.44		24.58	25.42
M42	4.5	63.1	65.0	71.3		25.58	26.42
(M45)	4.5	68.1	70.0	76.95		27.58	28.42
M48	5	73.1	75.0	82.6		29.58	30.42
(M52)	5	78.1	80.0	88.25		32.5	33.5
M56	5.5	82.8	85.0	93.56		34.5	35.5
(M60)	5.5	87.8	90.0	99.21		37.5	38.5
M64	6	92.8	95.0	104.86		39.5	40.5

Values in brackets are non-preferred threads

unit in mm

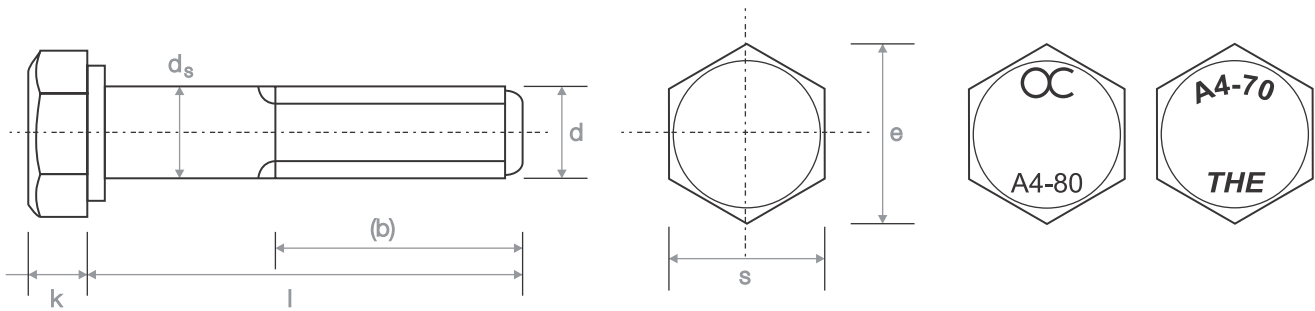
nominal length	M1.6	M2	M2.5	M3	(M3.5)	M4	M5	M6	M8	M10	M12	(M14)	M16	(M18)	M20	(M22)	M24	(M27)	M30	(M33)	M36	(M39)	M42	(M45)	M48	(M52)	M56	(M60)	M64	
2	X																													
3	X																													
4	X	X																												
5	X	X	X																											
6	X	X	X	X																										
8	X	X	X	X	X	X																								
10	X	X	X	X	X	X	X																							
12	X	X	X	X	X	X	X	X																						
16	X	X	X	X	X	X	X	X	X																					
20		X	X	X	X	X	X	X	X	X																				
25			X	X	X	X	X	X	X	X	X																			
30				X	X	X	X	X	X	X	X	X	X																	
35					X	X	X	X	X	X	X	X	X	X																
40						X	X	X	X	X	X	X	X	X	X															
45							X	X	X	X	X	X	X	X	X	X														
50							X	X	X	X	X	X	X	X	X	X	X													
55								X	X	X	X	X	X	X	X	X	X	X												
60								X	X	X	X	X	X	X	X	X	X	X	X											
65									X	X	X	X	X	X	X	X	X	X	X	X										
70									X	X	X	X	X	X	X	X	X	X	X	X	X									
80									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
90										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
100										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
110											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
120											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
130												X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
140												X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
150													X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
160													X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
180														X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
200														X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

**BS EN ISO 4017
STANDARD LENGTH TABLE
(M1.6-M64)**

Use of values given in brackets should be avoided where possible



BS EN ISO 4014 STAINLESS STEEL HEXAGON HEAD BOLTS



EXAMPLE

product code

diameter

length

CODE

2 9 5 1

0 2 4

0 1 0 0

PRODUCT

A4-70 Stainless Steel
BS EN ISO 4014 Hex. Head Bolt

M24

100mm long

Available product codes: 2811, 2851, 2911, 2951, 2971

nominal size and thread diameter	pitch of thread	width across flats		width across corners	height of head		diameter of unthreaded shank		Thread of Length		
		s	s	e	k	k	d _s	d _s	(b)	(b)	(b)
d		min	max	min	min	max	min	max	(1)	(2)	(3)
M1.6	0.35	3.02	3.20	3.41	0.975	1.225	1.46	1.60	9	15	28
M2	0.4	3.82	4.00	4.32	1.275	1.525	1.86	2.00	10	16	29
M2.5	0.45	4.82	5.00	5.45	1.575	1.825	2.36	2.50	11	17	30
M3	0.5	5.32	5.50	6.01	1.875	2.125	2.86	3.00	12	18	31
(M3.5)	0.6	5.82	6.00	6.58	2.275	2.525	3.32	3.50	13	19	32
M4	0.7	6.78	7.00	7.66	2.675	2.925	3.82	4.00	14	20	33
M5	0.8	7.78	8.00	8.79	3.35	3.65	4.82	5.00	16	22	35
M6	1	9.78	10.00	11.05	3.85	4.15	5.82	6.00	18	24	37
M8	1.25	12.73	13.00	14.38	5.15	5.45	7.78	8.00	22	28	41
M10	1.5	15.73	16.00	17.77	6.22	6.58	9.78	10.00	26	32	45
M12	1.75	17.73	18.00	20.03	7.32	7.68	11.73	12.00	30	36	49
(M14)	2	20.67	21.00	23.36	8.62	8.98	13.73	14.00	34	40	53
M16	2	23.67	24.00	26.75	9.82	10.18	15.73	16.00	38	44	57
(M18)	2.5	26.67	27.00	30.14	11.285	11.715	17.73	18.00	42	48	61
M20	2.5	29.67	30.00	33.53	12.285	12.715	19.67	20.00	46	52	65
(M22)	2.5	33.38	34.00	37.72	13.785	14.215	21.67	22.00	50	56	69
M24	3	35.38	36.00	39.98	14.785	15.215	23.67	24.00	54	60	73
(M27)	3	40	41	45.2	16.65	17.35	26.48	27.00	60	66	79
M30	3.5	45	46	50.85	18.28	19.12	29.48	30.00	66	72	85
(M33)	3.5	49	50	55.37	20.58	21.42	32.38	33.00	-	78	91
M36	4	53.8	55.0	60.79	22.08	22.92	35.38	36.00	-	84	97
(M39)	4	58.8	60.0	66.44	24.58	25.42	38.38	39.00	-	90	103
M42	4.5	63.1	65.0	71.3	25.58	26.42	41.38	42.00	-	96	109
(M45)	4.5	68.1	70.0	76.95	27.58	28.42	44.38	45.00	-	102	115
M48	5	73.1	75.0	82.6	29.58	30.42	47.38	48.00	-	108	121
(M52)	5	78.1	80.0	88.25	32.5	33.5	51.26	52.00	-	116	129
M56	5.5	82.8	85.0	93.56	34.5	35.5	55.26	56.00	-	-	137
(M60)	5.5	87.8	90.0	99.21	37.5	38.5	59.26	60.00	-	-	145
M64	6	92.8	95.0	104.86	39.5	40.5	63.26	64.00	-	-	153

(1) l ≤ 125mm; (2) 125mm < l ≤ 200mm; (3) l > 200mm (l: nominal length of bolt)

Values in brackets are non-preferred threads

unit in mm

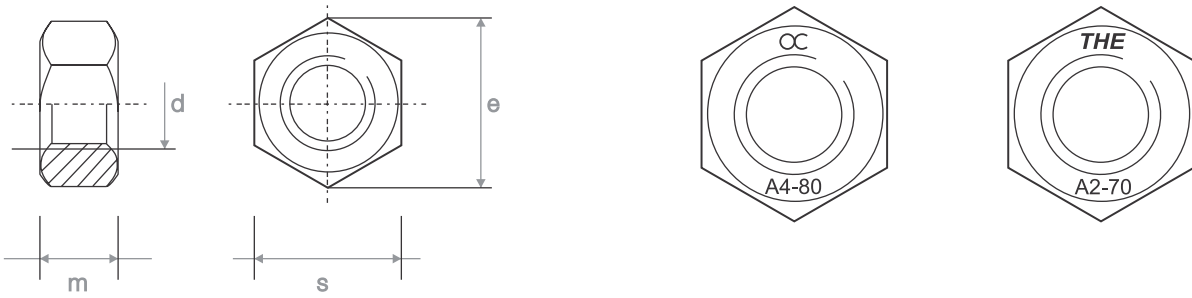
nominal length	M1.6	M2	M2.5	M3	(M3.5)	M4	M5	M6	M8	M10	M12	(M14)	M16	(M18)	M20	(M22)	M24	(M27)	M30	(M33)	M36	(M39)	M42	(M45)	M48	(M52)	M56	(M60)	M64
12	X																												
16	X	X	X																										
20		X	X	X	X																								
25			X	X	X	X	X																						
30				X	X	X	X	X																					
35					X	X	X	X																					
40						X	X	X	X																				
45							X	X	X	X																			
50								X	X	X	X																		
55									X	X	X	X																	
60									X	X	X	X	X																
65										X	X	X	X	X															
70										X	X	X	X	X	X														
80										X	X	X	X	X	X	X													
90											X	X	X	X	X	X	X												
100											X	X	X	X	X	X	X	X											
110												X	X	X	X	X	X	X	X										
120												X	X	X	X	X	X	X	X	X									
130													X	X	X	X	X	X	X	X	X								
140													X	X	X	X	X	X	X	X	X	X							
150														X	X	X	X	X	X	X	X	X	X						
160															X	X	X	X	X	X	X	X	X	X					
180																X	X	X	X	X	X	X	X	X	X	X			
200																X	X	X	X	X	X	X	X	X	X	X	X		
220																	X	X	X	X	X	X	X	X	X	X	X	X	
240																		X	X	X	X	X	X	X	X	X	X	X	
260																			X	X	X	X	X	X	X	X	X	X	X
280																				X	X	X	X	X	X	X	X	X	X
300																				X	X	X	X	X	X	X	X	X	X
320																					X	X	X	X	X	X	X	X	X
340																						X	X	X	X	X	X	X	X
360																						X	X	X	X	X	X	X	X
380																							X	X	X	X	X	X	X
400																								X	X	X	X	X	X
420																								X	X	X	X	X	X
440																								X	X	X	X	X	X
460																								X	X	X	X	X	X
480																									X	X	X	X	X
500																										X	X	X	X

**BS EN ISO 4014
STANDARD LENGTH TABLE
(M1.6-M64)**

Values in brackets are non-preferred threads



BS EN ISO 4032 STAINLESS STEEL HEXAGON NUTS



EXAMPLE

product code

diameter

length

CODE

4 9 3 1

0 2 0

0 0 0 0

PRODUCT

A4-80 Stainless Steel
BS EN ISO 4032 Hex. Nut

M20

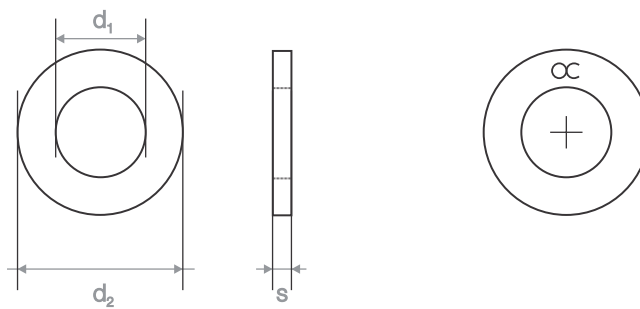
Available product codes: 4801, 4821, 4901, 4931

nominal size and thread diameter	pitch of thread	width across flats		width across corners	Thickness	
		s		e	m	
d		min	max	min	min	max
M1.6	0.35	3.02	3.20	3.41	1.05	1.30
M2	0.4	3.82	4.00	4.32	1.35	1.60
M2.5	0.45	4.82	5.00	5.45	1.75	2.00
M3	0.5	5.32	5.50	6.01	2.15	2.40
(M3.5)	0.6	5.82	6.00	6.58	2.55	2.80
M4	0.7	6.78	7.00	7.66	2.9	3.2
M5	0.8	7.78	8.00	8.79	4.4	4.7
M6	1	9.78	10.00	11.05	4.9	5.2
M8	1.25	12.73	13.00	14.38	6.44	6.80
M10	1.5	15.73	16.00	17.77	8.04	8.40
M12	1.75	17.73	18.00	20.03	10.37	10.80
(M14)	2	20.67	21.00	23.36	12.1	12.8
M16	2	23.67	24.00	26.75	14.1	14.8
(M18)	2.5	26.16	27.00	29.56	15.1	15.8
M20	2.5	29.16	30.00	32.95	16.9	18.0
(M22)	2.5	33	34	37.29	18.1	19.4
M24	3	35	36	39.55	20.2	21.5
(M27)	3	40	41	45.2	22.5	23.8
M30	3.5	45	46	50.85	24.3	25.6
(M33)	3.5	49	50	55.37	27.4	28.7
M36	4	53.8	55.0	60.79	29.4	31.0
(M39)	4	58.8	60.0	66.44	31.8	33.4
M42	4.5	63.1	65.0	71.3	32.4	34.0
(M45)	4.5	68.1	70.0	76.95	34.4	36.0
M48	5	73.1	75.0	82.6	36.4	38.0
(M52)	5	78.1	80.0	88.25	40.4	42.0
M56	5.5	82.8	85.0	93.56	43.4	45.0
(M60)	5.5	87.8	90.0	99.21	46.4	48.0
M64	6	92.8	95.0	104.86	49.1	51.0

Values in brackets are non-preferred threads

unit in mm

BS 4320 FORM A STAINLESS STEEL FLAT WASHERS



EXAMPLE

product code

diameter

CODE

5 6 1 0

0 3 0

0 0 0 0

PRODUCT

A4 Stainless Steel
BS 4320 Form A Flat Washer

M30

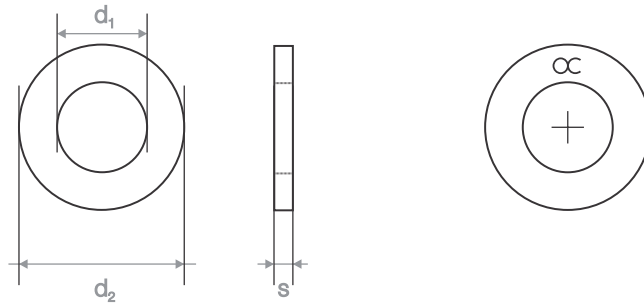
Available product codes: 5510, 5610, 5630, 5635

nominal size of bolt or screw	inside diameter		outside diameter		thickness	
	d ₁		d ₂		s	
	min	max	min	max	min	max
M1.0	1.1	1.25	2.3	2.5	0.2	0.4
M1.2	1.3	1.45	2.8	3.0	0.2	0.4
(M1.4)	1.5	1.65	2.8	3.0	0.2	0.4
M1.6	1.7	1.85	3.7	4.0	0.2	0.4
M2.0	2.2	2.35	4.7	5.0	0.2	0.4
(M2.2)	2.4	2.55	4.7	5.0	0.4	0.6
M2.5	2.7	2.85	6.2	6.5	0.4	0.6
M3	3.2	3.4	6.7	7	0.4	0.6
(M3.5)	3.7	3.9	6.7	7	0.4	0.6
M4	4.3	4.5	8.7	9	0.7	0.9
(M4.5)	4.8	5.0	8.7	9	0.7	0.9
M5	5.3	5.5	9.7	10	0.9	1.1
M6	6.4	6.7	12.1	12.5	1.4	1.8
(M7)	7.4	7.7	13.6	14	1.4	1.8
M8	8.4	8.7	16.6	17	1.4	1.8
M10	10.5	10.9	20.5	21	1.8	2.2
M12	13.0	13.4	23.5	24	2.3	2.7
(M14)	15.0	15.4	27.5	28	2.3	2.7
M16	17.0	17.4	29.5	30	2.7	3.3
(M18)	19.0	19.5	33.2	34	2.7	3.3
M20	21	21.5	36.2	37	2.7	3.3
(M22)	23	23.5	38.2	39	2.7	3.3
M24	25	25.5	43.2	44	3.7	4.3
(M27)	28	28.5	49.2	50	3.7	4.3
M30	31	31.6	55.0	56	3.7	4.3
(M33)	34	34.6	59.0	60	4.4	5.6
M36	37	37.6	65.0	66	4.4	5.6
(M39)	40	40.6	71.0	72	5.4	6.6

Sizes shown in brackets are non-preferred

unit in mm

BS 4320 FORM C STAINLESS STEEL FLAT WASHERS



EXAMPLE

product code

diameter

CODE

5 6 5 0

0 3 0

0 0 0 0

PRODUCT

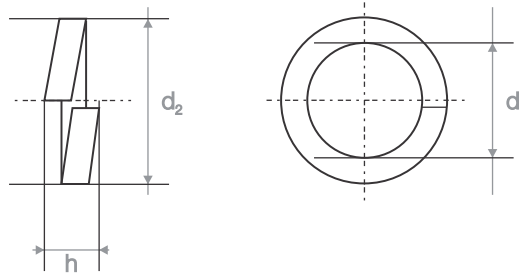
A4 Stainless Steel
BS 4320 Form C Flat Washer

M30

Available product codes: 5550, 5650, 5660, 5665

nominal size of bolt or screw	inside diameter		outside diameter		thickness	
	d_1		d_2		s	
	min	max	min	max	min	max
M4	4.3	4.5	9.7	10.0	0.7	0.9
M5	5.3	5.5	12.1	12.5	0.9	1.1
M6	6.4	6.7	13.6	14	1.4	1.8
M8	8.4	8.7	20.5	21	1.4	1.8
M10	10.5	10.9	23.5	24	1.8	2.2
M12	13.0	13.4	27.5	28	2.3	2.7
(M14)	15	15.4	29.5	30	2.3	2.7
M16	17	17.4	33.2	34	2.7	3.3
(M18)	19	19.5	36.2	37	2.7	3.3
M20	21	21.5	38.2	39	2.7	3.3
(M22)	23	23.5	43.2	44	2.7	3.3
M24	25	25.5	49.2	50	3.7	4.3
(M27)	28	28.5	55	56	3.7	4.3
M30	31	31.6	59	60	3.7	4.3
(M33)	34	34.6	65	66	4.4	5.6
M36	37	37.6	71	72	4.4	5.6
(M39)	40	40.6	76	77	5.4	6.6

STAINLESS STEEL SPRING WASHERS



EXAMPLE

product code

diameter

CODE

5 9 9 0

0 3 0

0 0 0 0

PRODUCT

A4 Stainless Steel
Spring Washer

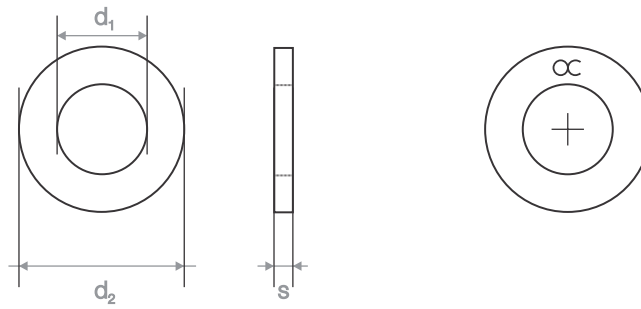
M30

Available product codes: 5980, 5990

nominal size of bolt or screw	inside diameter		outside diameter	height	
	d ₁		d ₂	h	
	min	max	max	min	max
M2	2.1	2.4	4.4	1	1.2
M2.2	2.3	2.6	4.8	1.2	1.4
M2.5	2.6	2.9	5.1	1.2	1.4
M3	3.1	3.4	6.2	1.6	1.9
M3.5	3.6	3.9	6.7	1.6	1.9
M4	4.1	4.4	7.6	1.8	2.1
M5	5.1	5.4	9.2	2.4	2.8
M6	6.1	6.5	11.8	3.2	3.8
M7	7.1	7.5	12.8	3.2	3.8
M8	8.1	8.5	14.8	4	4.7
M10	10.2	10.7	18.1	4.4	5.2
M12	12.2	12.7	21.1	5	5.9
M14	14.2	14.7	24.1	6	7.1
M16	16.2	17	27.4	7	8.3
M18	18.2	19	29.4	7	8.3
M20	20.2	21.2	33.6	8	9.4
M22	22.5	23.5	35.9	8	9.4
M24	24.5	25.5	40	10	11.8
M27	27.5	28.5	43	10	11.8
M30	30.5	31.7	48.2	12	14.2
M33*	33.5	34.7	53.2	12	14.2
M36	36.5	37.7	58.2	12	14.2
M39	39.5	40.7	61.2	12	14.2
M42	42.5	43.7	68.2	14	16.5
M45	45.5	46.7	71.2	14	16.5
M48	49	50.5	75	14	16.5
M52	53	54.5	83	16	18.9
M56	57	58.5	87	16	18.9
M60	61	62.5	91	16	18.9
M64	65	66.5	95	16	18.9
M68	69	70.5	99	16	18.9
M72	73	74.5	103	16	18.9
M80	81	82.5	111	16	18.9
M90	91	92.5	121	16	18.9
M100	101	102.5	131	16	18.9

* size not included in standard

BS 4320 FORM A NYLON FLAT WASHERS



EXAMPLE

product code

diameter

CODE

5 7 0 0

0 3 0

0 0 0 0

PRODUCT

Nylon Flat Washer
BS 4320 Form A

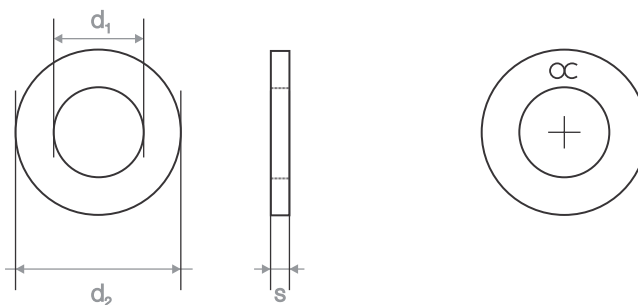
M30

nominal size of bolt or screw	inside diameter		outside diameter		thickness	
	d_1		d_2		s	
	min	max	min	max	min	max
M1.0	1.1	1.25	2.3	2.5	0.2	0.4
M1.2	1.3	1.45	2.8	3.0	0.2	0.4
(M1.4)	1.5	1.65	2.8	3.0	0.2	0.4
M1.6	1.7	1.85	3.7	4.0	0.2	0.4
M2.0	2.2	2.35	4.7	5.0	0.2	0.4
(M2.2)	2.4	2.55	4.7	5.0	0.4	0.6
M2.5	2.7	2.85	6.2	6.5	0.4	0.6
M3	3.2	3.4	6.7	7	0.4	0.6
(M3.5)	3.7	3.9	6.7	7	0.4	0.6
M4	4.3	4.5	8.7	9	0.7	0.9
(M4.5)	4.8	5.0	8.7	9	0.7	0.9
M5	5.3	5.5	9.7	10	0.9	1.1
M6	6.4	6.7	12.1	12.5	1.4	1.8
(M7)	7.4	7.7	13.6	14	1.4	1.8
M8	8.4	8.7	16.6	17	1.4	1.8
M10	10.5	10.9	20.5	21	1.8	2.2
M12	13.0	13.4	23.5	24	2.3	2.7
(M14)	15.0	15.4	27.5	28	2.3	2.7
M16	17.0	17.4	29.5	30	2.7	3.3
(M18)	19.0	19.5	33.2	34	2.7	3.3
M20	21	21.5	36.2	37	2.7	3.3
(M22)	23	23.5	38.2	39	2.7	3.3
M24	25	25.5	43.2	44	3.7	4.3
(M27)	28	28.5	49.2	50	3.7	4.3
M30	31	31.6	55.0	56	3.7	4.3
(M33)	34	34.6	59.0	60	4.4	5.6
M36	37	37.6	65.0	66	4.4	5.6
(M39)	40	40.6	71.0	72	5.4	6.6

Sizes shown in brackets are non-preferred

unit in mm

BS 4320 FORM C NYLON FLAT WASHERS



EXAMPLE

product code

diameter

CODE

5 7 2 0

0 3 0

0 0 0 0

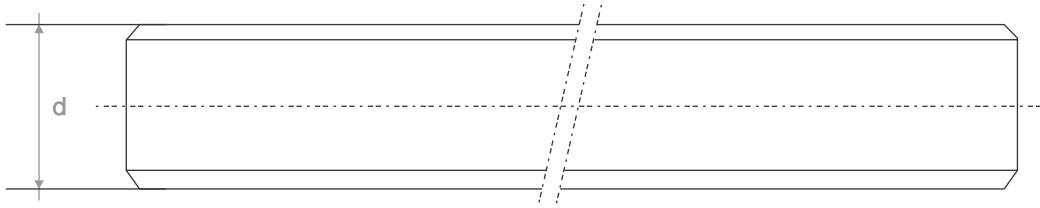
PRODUCT

Nylon Flat Washer
BS 4320 Form C

M30

nominal size of bolt or screw	inside diameter		outside diameter		thickness	
	d_1		d_2		s	
	min	max	min	max	min	max
M4	4.3	4.5	9.7	10.0	0.7	0.9
M5	5.3	5.5	12.1	12.5	0.9	1.1
M6	6.4	6.7	13.6	14	1.4	1.8
M8	8.4	8.7	20.5	21	1.4	1.8
M10	10.5	10.9	23.5	24	1.8	2.2
M12	13.0	13.4	27.5	28	2.3	2.7
(M14)	15	15.4	29.5	30	2.3	2.7
M16	17	17.4	33.2	34	2.7	3.3
(M18)	19	19.5	36.2	37	2.7	3.3
M20	21	21.5	38.2	39	2.7	3.3
(M22)	23	23.5	43.2	44	2.7	3.3
M24	25	25.5	49.2	50	3.7	4.3
(M27)	28	28.5	55	56	3.7	4.3
M30	31	31.6	59	60	3.7	4.3
(M33)	34	34.6	65	66	4.4	5.6
M36	37	37.6	71	72	4.4	5.6
(M39)	40	40.6	76	77	5.4	6.6

STAINLESS STEEL THREADED RODS



EXAMPLE

product code

diameter

length

CODE

3 2 6 5

0 2 4

3 0 0 0

PRODUCT

A4-80 Stainless Steel
Fully Threaded Rod

M24

3000mm long

Available product codes: 3200, 3210, 3215, 3250, 3260, 3265

nominal size and thread diameter	pitch of thread	nominal size and thread diameter	pitch of thread
d		d	
M2	0.4	M20	2.5
M2.5	0.45	(M22)	2.5
M3	0.5	M24	3
(M3.5)	0.6	(M27)	3
M4	0.7	M30	3.5
M5	0.8	(M33)	3.5
M6	1	M36	4
M8	1.25	(M39)	4
M10	1.5	M42	4.5
M12	1.75	(M45)	4.5
(M14)	2	M48	5
M16	2	(M52)	5
(M18)	2.5		