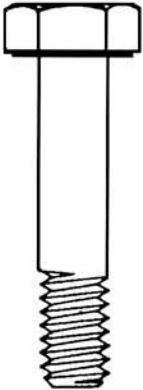
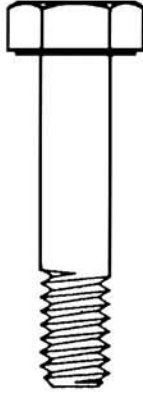


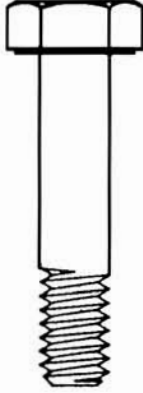
ISOMETRIC COURSE PITCH SERIES.
CLASSES 4.6



Length	M6			M8				M10				Length
	Std. Pack	Black	Zinc	Std. Pack	Black	Galv.	Zinc	Std. Pack	Black	Galv.	Zinc	
12	200	*	*									12
16	200	*	*	125	*		*					16
20	200	*	*	100	*	*	*	100	*	*	*	20
25	200	*	*	100	*	*	*	100	*	*	*	25
30	150	*	*	75	*	*	*	100	*	*	*	30
35	150	*	*	75	*	*	*	75	*	*	*	35
40	150	*	*	75	*	*	*	75	*	*	*	40
45	150	*	*	50	*	*	*	75	*	*	*	45
50	150	*	*	50	*	*	*	75	*	*	*	50
55	150	*	*	50	*	*	*	50	*	*	*	55
60	150	*	*	50	*	*	*	50	*	*	*	60
65	150	*	*	50	*	*	*	50	*	*	*	65
70	150	*	*	50	*	*	*	50	*	*	*	70
75	125	*	*	50	*	*	*	50	*	*	*	75
80	125	*	*	50	*	*	*	50	*	*	*	80
90	100	*	*	50	*	*	*	50	*	*	*	90
100	100	*	*	50	*	*	*	50	*	*	*	100
110	100		*	50	*	*	*	50	*	*	*	110
120				50	*	*	*	50	*	*	*	120
130				50	*	*	*	50	*	*	*	130
140				50	*	*	*	50	*	*	*	140
150				50	*	*	*	50	*	*	*	150
160								50		*		160
180								50	*	*		180
200								25	*	*		200
220								25	*	*		220
240								25	*	*		240
260								25	*	*		260
280												280
300								50	*	*		300
Dia.	M12					M16				Dia.		
Length	Std. Pack	Black	Galv.	Zinc	Std. Pack	Black	Galv.	Zinc	Length			
25	75	*	*	*	25	*	*	*	25			
30	75	*	*	*	25	*	*	*	30			
35	50	*	*	*	25	*	*	*	35			
40	50	*	*	*	25	*	*	*	40			
45	50	*	*	*	25	*	*	*	45			
50	50	*	*	*	25	*	*	*	50			
55	25	*	*	*	25	*	*	*	55			
60	25	*	*	*	25	*	*	*	60			
65	25	*	*	*	20	*	*	*	65			
70	25	*	*	*	20	*	*	*	70			
75	25	*	*	*	20	*	*	*	75			
80	25	*	*	*	20	*	*	*	80			
90	25	*	*	*	20	*	*	*	90			
100	25	*	*	*	15	*	*	*	100			
110	25	*	*	*	15	*	*	*	110			
120	25	*	*	*	15	*	*	*	120			
130	25	*	*	*	15	*	*	*	130			
140	25	*	*	*	15	*	*	*	140			
150	25	*	*	*	15	*	*	*	150			
160	25	*	*	*	15	*	*	*	160			
180	25	*	*	*	15	*	*	*	180			
190									190			
200	20	*	*	*	15	*	*	*	200			
220	20	*	*	*	15	*	*	*	220			
230									230			
240	20	*	*	*	15	*	*	*	240			
260	20	*	*	*	15	*	*	*	260			
280	50	*	*	*	25	*	*	*	280			
300	50	*	*	*	25	*	*	*	300			
325	50	*	*	*	25	*	*	*	325			
350	50	*	*	*	25	*	*	*	350			
375	50	*	*	*	25	*	*	*	375			
400	50	*	*	*	25	*	*	*	400			
425					25	*	*	*	425			
450					25	*	*	*	450			
475									475			
500					25	*	*	*	500			
525									525			
550					25	*	*	*	550			
575									575			
600									600			



ISOMETRIC COURSE PITCH SERIES.
CLASSES 4.6

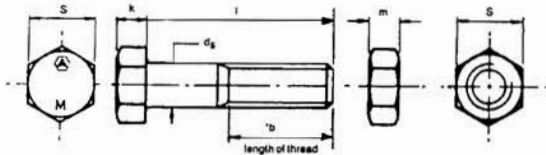


Dia. Length	M20			M24			Dia. Length
	Std. Pack	Black	Galv.	Std. Pack	Black	Galv.	
40	15	*	*				40
45	15	*	*				45
50	15	*	*	50	*	*	40
55	15	*	*				55
60	10	*	*	50	*	*	60
65	10	*	*	50	*	*	65
70	10	*	*				70
75	10	*	*	25	*	*	75
80	10	*	*	25	*	*	80
90	10	*	*	25	*	*	90
100	10	*	*	25	*	*	100
110	10	*	*	25	*	*	110
120	10	*	*				120
130	10	*	*				130
140	10	*	*				140
150	10	*	*	25	*	*	150
160	10	*	*				160
180	10	*	*	25	*	*	180
200	10	*	*	25	*	*	200
220	10	*	*				220
240	10	*	*				240
260	10	*	*				260
280	20	*	*				280
300	20	*	*				300
325	20	*	*				325
350	20	*	*				350
375	20	*	*				375
400	20	*	*				400
425							425
450							450
475							475
500							500
525							525
550							550
560							560
575							575
600							600
700							700
800							800

Metric Commercial Hexagon Bolts & Nuts and Set Screws

Metric Commercial Hexagon Bolts & Nuts and Set Screws. ISO Metric Coarse Pitch Series. Threads, Class 8g. Property Classes 4.6 Relevant Australian Standards Bolts and Set Screws AS 1111., Nuts AS 1112.

1. DIMENSIONS



All dimensions in millimetres

Nominal Dia.	Pitch of Thread	Shank Diameter d_s		Width Across Flats S		Head Thickness k		Nut Thickness m	
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
M6	1.0	6.48	5.52	10.0	9.64	4.38	3.62	5.20	4.90
M8	1.25	8.58	7.42	13.0	12.57	5.68	4.92	6.80	6.44
M10	1.5	10.58	9.42	16.0	15.57	6.85	5.95	8.40	8.04
M12	1.75	12.70	11.30	18.0	17.57	7.95	7.05	10.80	10.37
M16	2.0	16.70	15.30	24.0	23.16	10.75	9.25	14.80	14.10
M20	2.5	20.84	19.16	30.0	29.16	13.40	11.60	18.00	16.90
M24	3.0	28.84	23.16	36.0	35.00	15.90	14.10	21.50	20.20
M30	3.5	30.84	29.16	46.0	45.00	19.75	17.65	25.60	24.30
M36	4.0	37.00	35.00	55.0	53.80	23.55	21.45	31.00	29.40

THREAD LENGTH b.

Nominal Length of Bolt	Min. Length of Thread b
Up to and including 125mm	2D + 6mm
Over 125mm up to and including 200mm	2D + 12mm
Over 200mm	2D + 25mm

Where D = Nominal Diameter in millimetres

Hexagon Head Screws are threaded to within 2 1/2 Pitches of the underside of the head.

2) MECHANICAL PROPERTIES.

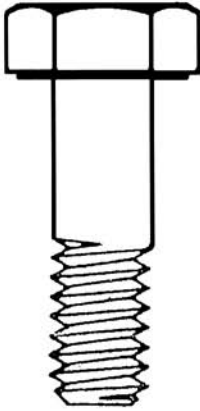
PROPERTY CLASS 4.6

Tensile Strength
400 MPa (N/mm²) min.
58,000 lb/in²) min.
25.9 ton f/in² min.

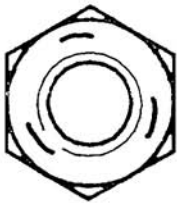
Proof Load Stress
225 MPa (N/mm²) min.
32,800 lb/in² min.
14.6 tonf/in² min.



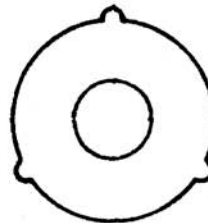
HIGH STRENGTH STRUCTURAL ISOMETRIC



Dia.	M16		M20		M24		Dia.
Length	Std. Pack	Galvanised	Std. Pack	Galvanised	Std. Pack	Galvanised	Length
40	100	*	75	*			40
45	100	*	75	*			45
50	100	*	50	*	30	*	50
55	100	*	50	*	30	*	55
60	100	*	50	*	30	*	60
65	75	*	50	*	30	*	65
70	75	*	50	*	30	*	70
75	75	*	50	*	30	*	75
80	75	*	50	*	30	*	80
85			50	*	30	*	85
90	75	*	50	*	30	*	90
100	75	*	50	*	30	*	100
110			40	*	20	*	110
120			40	*	20	*	120
130			40	*	20	*	130
140			30	*	20	*	140
150			30	*	20	*	150
Dia.	M30		M36				Dia.
Length	Std. Pack	Galvanised	Std. Pack	Galvanised			Length
75	15	*					75
80	15	*					80
85	15	*					85
90	15	*	8	*			90
100	15	*	8	*			100
110	15	*					110
120	15	*	8	*			120
130	10	*	8	*			130
140	10	*	8	*			140
150	10	*	8	*			150
160	10	*	5	*			160
170	10	*	5	*			170
180	10	*	5	*			180
190	8	*					190
200	8	*	5	*			200



STRUCTURAL NUTS ISO METRIC COARSE		
Dia	Std. Pack	Galvanised
16	450	*
20	250	*
24	100	*
30	50	*
36	25	*

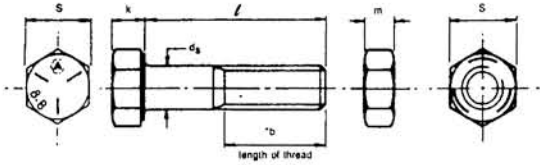


STRUCTURAL WASHERS ISO METRIC METRIC		
Dia	Std. Pack	Galvanised
16	800	*
20	500	*
24	350	*
30	250	*
36	200	*



Metric High Strength Structural Bolts & Nuts.
General Grade. (ISO Property Class 8.8) ISO
Metric Coarse Pitch Series Threads. Class 6g.
Relevant Australian Standard, 1252

1. DIMENSIONS



All dimensions in millimetres

Nominal Diameter D	Pitch of Thread P	Shank Dia d _s		Across Flats S		Head Thickness k		Nut Thickness m	
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
M16	2.0	16.70	15.30	27	26.16	10.75	9.25	17.1	16.00
M20	2.5	20.84	19.16	32	31.00	13.90	12.10	21.3	20.00
M22	2.5	22.84	21.16	36	35.00	14.90	13.10	23.30	22.00
M24	3.00	24.84	23.16	41	40.00	15.90	14.10	25.3	24.00
M30	3.5	30.84	29.16	50	49.00	19.75	17.65	31.3	30.00
M36	4.0	37.00	35.00	60	58.80	23.55	21.45	37.6	36.00

2. BREAKING AND PROOF LOADS

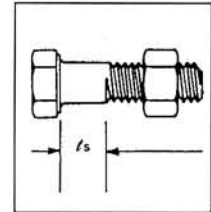
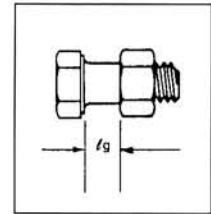
The following tables list tensile breaking and proof loads of Ajax Spurway bolts calculated from tensile on proof load stress and "Stress Area" of the thread, and nut proof loads, and are based on:

BOLTS		NUTS	
Tensile Strength	"Proof Load" Stress	Proof Load Stress	= 1075 MPa (N/mm ²)
830 MPa (N/mm ²) min.	600 MPa (N/mm ²) min.	(on stress area of corresponding bolt)	Black Nuts
120 Kips/in ² min.	87 Kips/in ² min.		Galvanised Nuts
53.6 tonf/in ² min.			= 1000 lbf

Nominal Bolt Diameter D	Tensile Stress Area of Thread mm ²	BOLTS						NUTS	
		Breaking Load Minimum			Proof Load Minimum			Proof Load Minimum	
		kN	Kips	tonf	kN	Kips	tonf	Black	Galvanised
M16	157	130	29.2	13.04	94.2	21.2	9.45	169	183
M20	245	203	45.6	20.37	147.0	33.0	14.75	263	285
M22	303	252	56.7	25.3	182	40.9	18.25	325.7	352.9
M24	353	293	65.8	29.40	212.0	47.6	21.27	279	411
M30	561	466	104.7	46.76	337.0	75.7	33.82	603	654
M36	817	678	152.4	68.04	490.0	110.1	49.17	878	952

3. LENGTHS OF STRUCTURAL BOLTS

Overall Length l	Nominal bolt diameter D											
	M16		M20		M24		M30		M36			
	l/s	l/g	l/s	l/g	l/s	l/g	l/s	l/g	l/s	l/g	l/s	l/g
40	38.75	41.25	8	14	-	-	-	-	-	-	-	-
45	43.75	46.25	8	14	10	17.5	-	-	-	-	-	-
50	48.75	51.25	8	14	10	17.5	-	-	-	-	-	-
55	53.5	56.5	11	17	10	17.5	12	21	-	-	-	-
60	58.5	61.5	16	22	10	17.5	12	21	-	-	-	-
65	63.5	66.5	21	27	11.5	19	12	21	-	-	-	-
70	68.5	71.5	26	32	16.5	24	12	21	15	25.5	-	-
75	73.5	76.5	31	37	21.5	29	12	21	15	25.5	-	-
80	78.5	81.5	36	42	26.5	34	17	26	15	25.5	-	-
85	83.25	86.75	41	47	31.5	39	22	31	15	25.5	18	30
90	88.25	91.75	46	52	36.5	44	27	36	15	25.5	18	30
95	93.25	96.75	51	57	41.5	49	32	41	18.5	29	18	30
100	98.25	101.75	56	62	46.5	54	37	46	23.5	34	18	30
110	108.25	111.75	66	72	56.5	64	47	56	33.5	44	20	32
120	118.25	121.75	76	82	66.5	74	57	66	43.5	54	30	42
130	128	132	80	86	70.5	78	61	70	47.5	58	34	46
140	138	142	90	96	80.5	88	71	80	57.5	68	44	56
150	148	152	100	106	90.5	98	81	90	67.5	78	54	66
160	156	164	-	-	-	-	91	100	77.5	88	64	76
170	166	174	-	-	-	-	101	110	87.5	98	74	86
180	176	184	-	-	-	-	111	120	97.5	108	84	96
190	186	194	-	-	-	-	121	130	107.5	118	94	106
200	196	204	-	-	-	-	131	140	117.5	128	104	116
220	216	224	-	-	-	-	138	147	124.5	135	111	123
240	236	244	-	-	-	-	158	167	144.5	155	131	143



1. Body Length (l/s)

The distance from the bearing surface of the bolt head to the last scratch of thread, or top to the extrusion angle, whichever is closer to the head.

2. Grip Length (l/g)

This distance between the bearing face of the head and the nearest face of a nut with no countersink when screwed onto the bolt as far as practicable by hand. This represents the approximate minimum thickness of materials which can be clamped, excluding the washer thickness.

3. Bolts with lengths above the heavy line have thread lengths - shorter than the nominal lengths referred to below.

4. NOMINAL THREAD LENGTHS

Nom. bolt length l	Basis for nominal length of thread b	Nominal length of thread b millimetres				
		M16	M20	M24	M30	M36
≤125	2D + 6	38	46	54	66	78
<125 ≤200	2D + 12	44	52	60	72	84
<200	2D + 25	-	65	73	85	97

Note. These thread lengths are not applicable to bolt lengths above the heavy line in the above

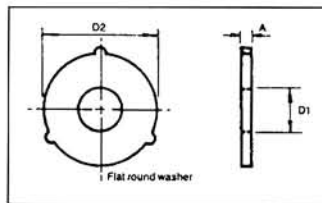
METRIC HIGH STRENGTH STRUCTURAL WASHERS

Metric High Strength Structural Washers for Metric High Strength Structural Bolts & Nuts.
Relevant Australian Standard, 1252.

1. DIMENSIONS

All Dimensions in Millimetres

Nominal Diameter of Bolt	Inside Diameter D1		Outside Diameter D2		Thickness A	
	Max.	Min.	Max.	Min.	Max.	Min.
M16	18.43	18.0	34.0	32.4	4.6	3.1
M20	22.52	22.0	39.00	37.4	4.6	3.1
M22	25.42	24.0	44.0	42.4	4.6	3.4
M24	26.52	26.0	50.0	48.4	4.6	3.4
M30	33.62	33.0	60.0	58.1	4.6	3.4
M36	39.62	39.0	72.0	70.1	4.6	3.4



2. MECHANICAL PROPERTIES

Washers are hardened and tempered to a hardness of HV345 to HV445. (Rockwell C35-C45). Hardened flat circular washers for high strength structural bolts are identified by three equispaced projections on the washer periphery.

3. APPLICATION

The washer is used under the nut or bolt head, whichever is rotated in tightening. It is to prevent galling during tightening of the softer structural steel. Prevention of galling is the primary function of the washer. The washer may be one of those required when using oversize or slotted holes or may be additional to the further washer requirements. Australian Standard 1511 - SAA High Strength Structural Bolting Code allows:

- That in the fabrication process where oversize or short slotted holes are permitted and used, hardened washers are to be installed over the exposed holes.
- Each bolt and nut shall be assembled with at least one washer, and where only one washer is used it shall be placed under the rotating component.



ISOMETRIC COMMERCIAL HEXAGON HEAD BOLTS AND NUTS Kgs per100

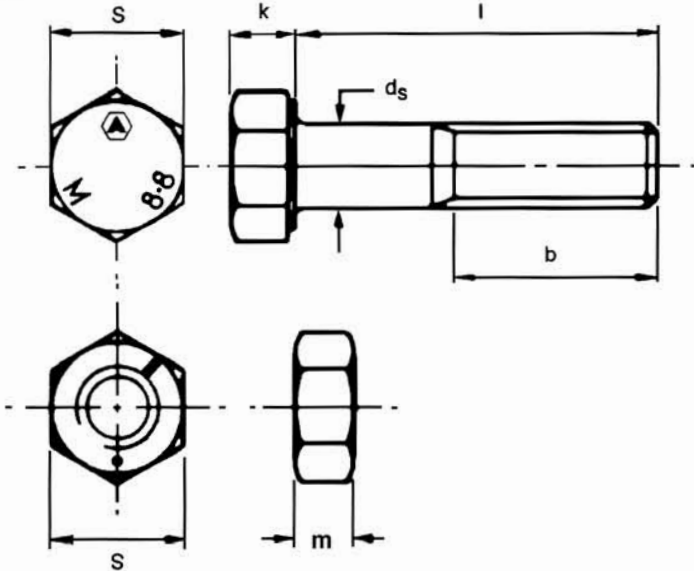
Length	M6	M8	M10	M12	M16	M20	M24	M30	M36	Length
20	0.7	1.6	3.3	4.7						20
25	0.8	1.9	3.5	5.0	9.7					25
30	0.9	2.1	3.7	5.5	10.3	19.2				30
35	1.0	2.2	4.0	5.8	11.2	20.2				35
40	1.2	2.4	4.3	6.2	12.0	21.3				40
45	1.3	2.6	4.6	6.7	12.7	22.3				45
50	1.4	2.8	4.9	7.1	14.1	23.3	39.5			50
55	1.5	3.0	5.2	7.5	14.4	24.3	39.9			55
60	1.6	3.2	5.4	7.9	15.2	25.3	41.3			60
65	1.8	3.4	5.7	8.4	16.0	26.6	42.7			65
70	1.9	3.6	6.0	8.8	16.8	27.8	44.9			70
75	2.0	3.8	6.3	9.2	17.5	29.0	46.6	84.9		75
80	2.1	4.0	6.6	9.7	18.3	30.2	48.3	87.2		80
85	2.3	4.2	6.9	10.1	19.1	31.4	50.0	89.4		85
90	2.4	4.4	7.1	10.5	19.8	32.6	51.8	91.7		90
100	2.6	4.8	7.8	11.4	20.3	35.0	55.2	96.1	163.1	100
110	2.8	5.2	8.3	12.2	21.4	37.3	58.7	100.8	171.0	100
120	3.0	5.6	8.9	13.1	22.1	39.7	62.0	105.4	179.0	120
130	3.3	6.0	9.4	14.0	22.9	42.1	65.2	110.1	186.9	130
140	3.5	6.1	10.0	14.8	23.7	44.5	68.7	114.8	194.9	140
150	3.7	6.2	10.6	15.7	24.5	46.9	72.1	119.5	202.8	150
160			11.2	16.8	27.7	49.7	76.6	127.7	210.8	160
170			11.7	17.9	30.9	52.5	81.0	736.0	218.7	170
180			12.3	18.7	32.7	54.9	82.8	141.5	226.6	180
190			12.9	19.8	34.2	57.4	84.6	147.1	234.6	190
200			13.5	20.8	35.7	59.8	86.4	152.6	242.5	200
220			14.5	21.8	38.5	64.1	88.3	163.2	250.5	220
240			15.6	23.5	41.5	69.1	90.0	173.8	258.4	240
260			16.7	25.2	44.4	74.0	107.1	184.8	266.4	260
280			17.9	29.3	47.4	78.8	114.3	195.9	274.3	280
300			19.0	31.8	50.3	83.7	121.4	207.0	282.2	300
325				32.8	54.0	89.9	128.7			325
350				33.7	57.5	96.1	138.5			350
375				35.8	61.2	102.2	148.4			375
400				38.0	64.9	108.4	157.3			400
425				40.2	70.6	114.7	166.3			425
450				42.3	72.3	121.0	175.3			450
500				46.6	79.5	137.3	193.2			500
550				51.0	85.0	150.2	211.2			550
600				55.3	90.4	158.5	229.1			600



ISOMETRIC CLASS 8.8 - HIGH TENSILE HEXAGON

Metric High Tensile, Precision Hexagon Head Bolts & Nuts and Set Screws. ISO Metric Coarse Pitch Series. Threads, Class 6g. Relevant Australian Standards.
Bolts and Set Screws AS 1110.
Nuts AS 1112.

1. DIMENSIONS



Nominal Dia D	Pitch of Thread	Shank Diameter d_s		Width Across Flats S		Head Thickness k		Nut Thickness m	
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
M6	1.0	6.0	5.82	10.0	9.78	4.15	3.85	5.20	4.90
M8	1.25	8.0	7.78	13.0	12.73	5.45	5.15	6.80	6.44
M10	1.5	10.0	9.78	16.0	15.73	6.58	6.22	8.40	8.04
M12	1.75	12.0	11.73	18.0	17.73	7.68	7.32	10.80	10.37
M16	2.0	16.0	15.73	24.0	23.67	10.18	9.82	14.80	14.10
M20	2.5	20.0	19.67	30.0	29.67	12.72	12.28	18.00	16.90
M24	3.0	24.0	23.67	36.0	35.38	15.22	14.78	21.50	20.20

Thread length b.

Nominal Length of Bolt l	Min. Length of Thread b
Up to and including 125mm	2D + 6mm
Over 125 up to and including 200mm	2D + 12mm
Over 200mm	2D + 25mm

Where D = Nominal Diameter in millimetres

* Hexagon Head Screws are threaded to within 2½ pitches of the underside of the head.

2. MECHANICAL PROPERTIES

	M6 TO M16 DIAMETER	OVER M16 DIAMETER
Tensile Strength	800MPa (N/mm ²) min. 116,000 lbf/in ² min. 51.8 tonf/in ² min.	830 MPa (N/mm ²) min. 120,000 lbf/in ² min. 53.6 tonf/in ² min.
Proof Load Stress	580MPa (N/mm ²) min. 84,400lbf/in ² min. 37.7 tonf/in ² min.	600MPa (N/mm ²) min. 87,600 lbf/in ² min. 39.1 tonf/in ² min.

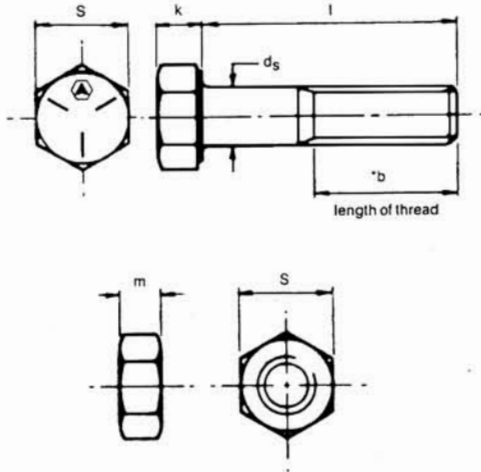
DIA Length	M6			M8			DIA Length
	STD Pack	Black	Zinc	STD Pack	Black	Zinc	
16	200		*	125		*	16
20	200	*	*	100	*	*	20
25	200	*	*	100	*	*	25
30	150	*	*	75	*	*	30
35	150		*	75		*	35
40	125	*	*	75	*	*	40
45	100		*	50		*	45
50	100	*	*	50	*	*	50
55	150		*	50	*	*	55
60	150		*	50	*	*	60
65	150			50		*	65
70				75		*	70
75				50		*	75
DIA Length	M10			M12			DIA Length
	STD Pack	Black	Zinc	STD Pack	Black	Zinc	
20	100	*	*				20
25	100	*	*	75	*	*	25
30	100	*	*	50	*	*	30
35	75	*	*	50	*	*	35
40	75	*	*	50	*	*	40
45	75		*	50	*	*	45
50	75	*	*	50	*	*	50
55	50	*	*	25		*	55
60	50	*	*	25	*	*	60
65	50		*	25	*	*	65
70	50		*	25		*	70
75	50	*	*	25		*	75
80	50		*	25		*	80
90	50		*	25	*	*	90
100				25	*	*	100
110				25		*	110
120				25		*	120
DIA Length	M16			M20			DIA Length
	STD Pack	Black	Zinc	STD Pack	Black	Zinc	
35	25		*				35
40	25	*	*	15	*	*	40
45	25	*	*				45
50	25	*	*	15	*	*	50
55	25		*	15		*	55
60	25	*	*	10	*	*	60
65	20	*	*	10	*	*	65
70	20	*	*	10	*	*	70
75	20	*	*	10	*	*	75
80	20		*	10	*	*	80
90	20		*	10	*		90
100	15	*	*	10	*	*	100
110							110
120				5	*		120
130							130
140							140
150				5	*		150



UNC/UNF GRADE 5 - HIGH TENSILE HEXAGON

Unified High Tensile Bolts & Nuts and Set Screws. UNC & UNF Threads. SAE Grade 5. Mechanical Properties Relevant Australian Standard. 2465 Dimensionally Equivalent to ANSI B 18.2.1/ANSI B 18.2.2

1. DIMENSIONS



Nominal Diameter	Threads per inch		Shank Diameter d _s		Head Thickness k		Across Flats S		Nut Thickness m	
	UNC	UNF	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1/4	20	28	.250	.245	.163	.150	.438	.428	.226	.212
5/16	18	24	.3125	.3065	.211	.195	.500	.489	.273	.258
3/8	16	24	.375	.369	.243	.226	.562	.551	.337	.320
7/16	14	20	.4375	.4305	.291	.272	.625*	.612*	.385	.365
1/2	13	20	.500	.493	.323	.302	.750	.736	.448	.427
5/8	11	18	.625	.617	.403	.378	.938	.922	.559	.535
3/4	10	16	.750	.741	.483	.455	1.125	1.100	.665	.617
7/8	9	14	.875	.866	.563	.531	1.312	1.285	.776	.724
1	8	12	1.000	.990	.627	.591	1.500	1.469	.887	.831

* Note 7/16 Nut Across Flats .688 .675

THREAD LENGTH b

For Bolt Lengths	Nominal Bolt Diameter									
	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	
Up to and including 6" Long	3/4	7/8	1	1.1/8	1.1/4	1.1/2	1.3/4	2	2.1/4	
Over 6" Long	1	1.1/8	1.1/4	1.3/8	1.1/2	1.3/4	2	2.1/4	2.1/2	

* Hexagon Head Screws are threaded to within 21/2 pitches of the underside of the Head.

2. MECHANICAL PROPERTIES

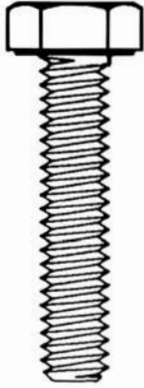
Tensile Strength 120000 lbf/in' (53.6 tonf/in')
Yield Stress 85000 lbf/in' (37.9 tonf/in')



Dia	1/4			5/16			Dia
	Length	Std. Pack	Black	Zinc	Std. Pack	Black	
1/2	200	*	*	125	*	*	1/2
5/8	200	*	*				5/8
3/4	150	*	*	125	*	*	3/4
1	150	*	*	175	*	*	1
1.1/4	150	*	*	175	*	*	1.1/4
1.1/2	125	*	*	125	*	*	1.1/2
1.3/4	125	*	*	125	*	*	1.3/4
2	100	*	*	125	*	*	2
2.1/4	100	*	*	125	*	*	2.1/4
2.1/2	125	*	*	100	*	*	2.1/2
2.3/4							2.3/4
3	100	*	*	100	*	*	3
3.1/2				75	*	*	3.1/2
4				75	*	*	4
Dia	3/8			7/16			Dia
Length	Std. Pack	Black	Zinc	Std. Pack	Black	Zinc	Length
3/4	75	*	*				3/4
1	100	*	*	75	*	*	1
1.1/4	100	*	*	75	*	*	1.1/4
1.1/2	100	*	*	75	*	*	1.1/2
1.3/4	100	*	*	50	*	*	1.3/4
2	75	*	*	50	*	*	2
2.1/4	75	*	*				2.1/4
2.1/2	75	*	*	50	*	*	2.1/2
2.3/4				50	*	*	2.3/4
3	50	*	*	50	*	*	3
3.1/4							3.1/4
3.1/2	50	*	*	25	*	*	3.1/2
4	50	*	*	25	*	*	4
4.1/2	25	*	*				4.1/2
5	25	*	*	25	*	*	5
5.1/2							5.1/2
6	25	*	*				6
Dia	1/2			5/8			Dia
Length	Std. Pack	Black	Zinc	Std. Pack	Black	Zinc	Length
1	50	*	*				1
1.1/4	50	*	*				1.1/4
1.1/2	50	*	*	25	*	*	1.1/2
1.3/4	50	*	*	25	*	*	1.3/4
2	50	*	*	25	*	*	2
2.1/4							2.1/4
2.1/2	25	*	*	25	*	*	2.1/2
2.3/4							2.3/4
3	25	*	*	20	*	*	3
3.1/2	25	*	*	20	*	*	3.1/2
4	25	*	*	15	*	*	4
4.1/2	25	*	*	15	*	*	4.1/2
5	25	*	*	15	*	*	5
5.1/2							5.1/2
6	25	*	*				6
7							7
8							8

Dia	3/4		
Length	Std. Pack	Black	Zinc
1.1/4			
1.1/2	15	*	*
1.3/4			
2	15	*	*
2.1/4			
2.1/2	15	*	*
2.3/4			
3	10	*	*
3.1/2			
4	10	*	*
4.1/2			
5			

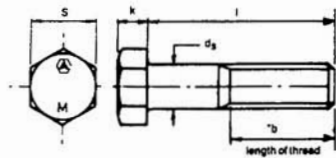
ISOMETRIC COARSE PITCH
CLASS 4.6



Dia.	M6			M8				M10				Dia.	
	Length	Std. Pack	Black	Zinc	Std. Pack	Black	Galv.	Zinc	Std. Pack	Black	Galv.		Zinc
12	200	*	*	125	*		*						12
16	200	*	*	125		*	*	100	*		*		16
20	200	*	*	100	*	*	*	100	*	*	*		20
25	200	*	*	100	*	*	*	100	*	*	*		25
30	150	*	*	75	*	*	*	100	*	*	*		30
35	150	*	*	75	*	*	*	75	*		*		35
40	150	*	*	75	*	*	*	75	*	*	*		40
45	150	*	*	50	*	*	*	75			*		45
50	150	*	*	50	*		*	75	*	*	*		50
55								50			*		55
60													60
65								50			*		65
70													70
75				50			*	50			*		75
Dia.	M12				M16				Dia.				
	Length	Std. Pack	Black	Galv.	Zinc	Std. Pack	Black	Galv.		Zinc	Length		
20	75				*							20	
25	75				*							25	
30	75		*		*	25	*		*			30	
35	50				*							35	
40	50			*	*	25		*	*			40	
45	50				*							45	
50	50		*		*	25			*		*	50	
60	25				*							60	
65	25				*							65	
75	25			*	*	20	*	*				75	

Metric Commercial Hexagon Bolts & Nuts and Set Screws. ISO Metric Coarse Pitch Series. Threads, Class 8g. Property Classes 4.6 Relevant Australian Standards Bolts and Set Screws AS 1111., Nuts AS 1112.

1. DIMENSIONS



All dimensions in millimetres

Nominal Dia.	Pitch of Thread P	Shank Diameter d _s		Width Across Flats S		Head Thickness k	
		Max.	Min.	Max.	Min.	Max.	Min.
M6	1.0	6.48	5.52	10.0	9.64	4.38	3.62
M8	1.25	8.58	7.42	13.0	12.57	5.68	4.92
M10	1.5	10.58	9.42	16.0	15.57	6.58	5.95
M12	1.75	12.70	11.30	18.0	17.57	7.95	7.05
M16	2.0	16.70	15.30	24.0	23.16	10.75	9.25
M20	2.5	20.84	19.16	30.0	29.16	13.40	11.60
M24	3.0	24.84	23.16	36.0	35.00	15.90	14.10
M30	3.5	30.84	29.16	46.0	45.00	19.75	17.65
M36	4.0	37.00	35.00	55.0	53.80	23.55	21.45

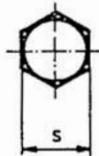
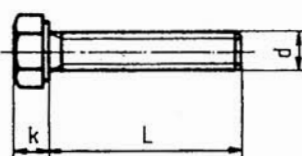
THREAD LENGTH b.

Hexagon Head Screws are threaded to within 2 1/2 Pitches of the underside of the head.

2. MECHANICAL PROPERTIES

PROPERTY CLASS 4.6
Tensile Strength
400 MPa (N/mm²) min.
58,000 lbf/in² min.
25.9 tonf/in² min.
Proof Load Stress
225 MPa (N/mm²) min.
32,800 lbf/in² min.
14.6 tonf/in² min.

DIN : 933



d	M6	M8	M10	M12	M16	M20
P	1	1,25	1,5	1,75	2	2,5
k	4	5,3	6,4	7,5	10	12,5
s	10	13	17	19	24	30

