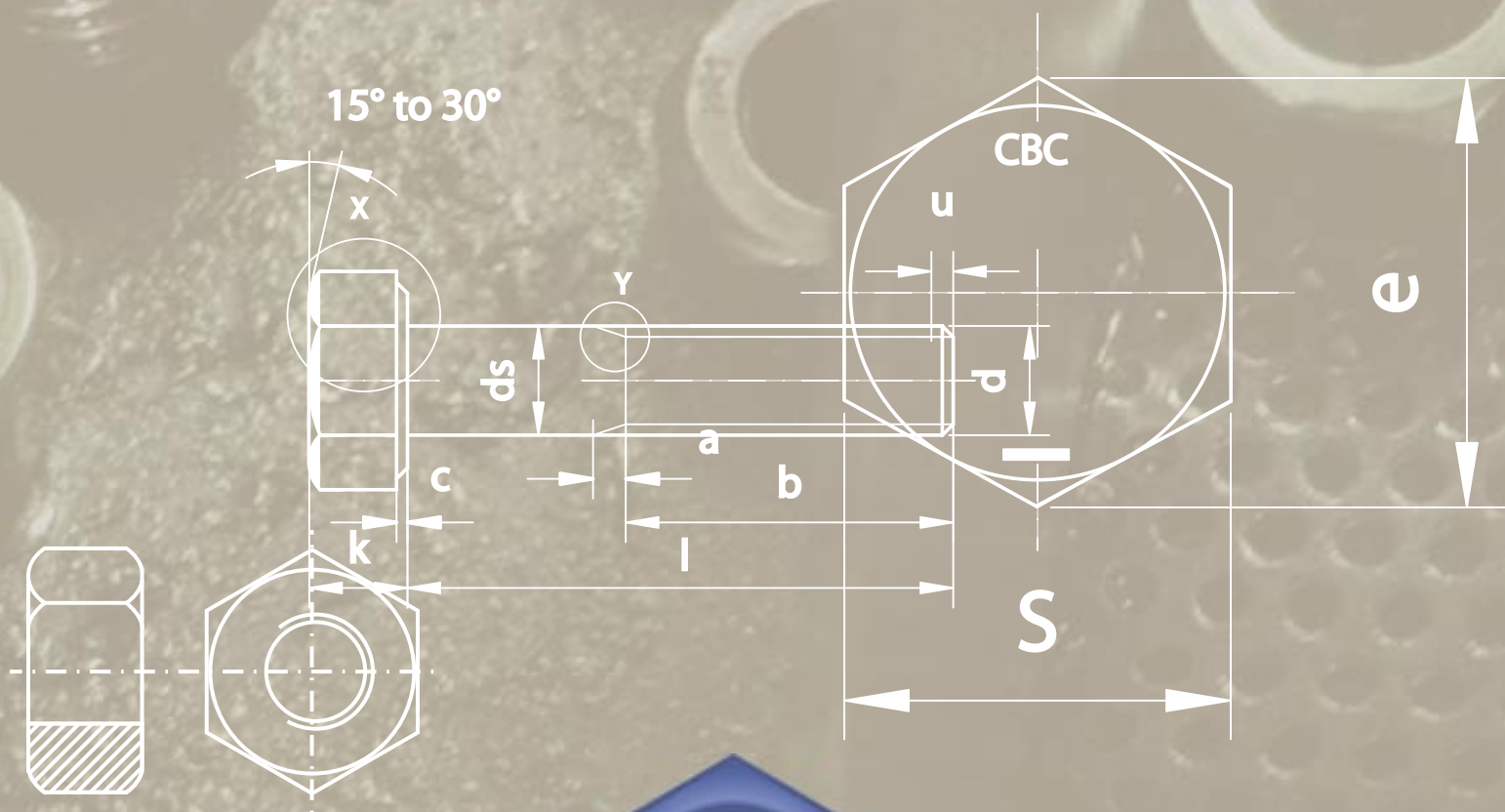


# CBC Fasteners Technical Data



FASTENERS

Export  
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Proudly Holding Industry Together



## **Mission Statement**

**We aim to better our position as the leading manufacturer and warehouse distributor of fasteners in South Africa, by providing our customers with value for money, quality products and timeous service. We will also provide a working environment that is safe and happy and where employees have mutual respect for each other.**



## **Disclaimer**

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# MECHANICAL PROPERTIES OF BOLTS, SCREWS AND STUDS - ISO 898

MECHANICAL PROPERTY		PROPERTY CLASS			
		4.8	8.8		10.9
			d ≤ 16mm	d > 16mm	
Tensile Strength (N/mm <sup>2</sup> )	nom	400	800	800	1000
	min	420	800	830	1040
Rockwell Hardness, HR	min	HRB	71,0	-	-
		HRC	-	22	23
	max	HRB	99,5	-	-
		HRC	-	32	34
Lower Yield Stress (R <sub>eL</sub> N/mm <sup>2</sup> )	nom	320	-	-	-
	min	340	-	-	-
Proof Stress (Rp0,2 N/mm <sup>2</sup> )	nom	-	640	640	900
	min	-	640	640	940
Elongation after Fracture, A	min	14	12	12	9

## TORQUE/PROOF LOAD VALUES FOR PRODUCT WITH METRIC THREADS - ISO

Thread	BOLT - TORQUE			NUTS - PROOF LOAD	
	Grade			DIN 934	ISO 4032
	4.8	8.8	10.9	GR [8]	GR 8
mm					
<b>M06</b>	5.5 N/m	10.4 N/m	15.3 N/m	16000 N	17200 N
<b>M08</b>	13.6 N/m	17.2 N/m	37.0 N/m	29000 N	31800 N
<b>M10</b>	26.6 N/m	50.0 N/m	73.0 N/m	46000 N	50500 N
<b>M12</b>	46.0 N/m	86.0 N/m	127.0 N/m	67000 N	74200 N
<b>M14</b>	73.0 N/m	137.0 N/m	201.0 N/m	92000 N	101200 N
<b>M16</b>	113.0 N/m	214.0 N/m	314.0 N/m	126000 N	138200 N
<b>M20</b>	222.0 N/m	432.0 N/m	615.0 N/m	196000 N	225400 N
<b>M24</b>	383.0 N/m	744.0 N/m	1060.0 N/m	282000 N	324800 N
<b>M30</b>	772.0 N/m	1500.0 N/m	2130.0 N/m	448000 N	516100 N



# HOT DIP GALVANIZING SPECIFICATION FOR BOLTS AND NUTS

*CBC Fasteners wishes to thank the Hot Dip Galvanizer's Association for permission to print their technical brief on Hot Dip Galvanizing for bolts and nuts. We trust that their work will be of benefit to industry.*

Corrosion protection of carbon steel fasteners is generally achieved through the application of a coating (barrier protection), be it in the form of a paint system or through the use of a metallic coating. Metallic coatings comprise of different materials, zinc is usually chosen for reason of economics, ease of application as well as the mechanism of cathodic protection provided by zinc.

Zinc is applied either by an electroplating process (electro-galvanizing) or by immersion in molten zinc (hot dip galvanizing). Corrosion protection provided by zinc is generally proportional to the coating thickness, i.e. the thicker the coating the longer the service life.

Zinc coating thicknesses achieved using the electroplating process, generally range between 6µm to 10µm (µm = micrometers), while hot dip galvanized coating thicknesses range from 45µm through to about 65µm. It is therefore imperative to specify the specific type of zinc coating required for corrosion protection. The word "galvanized" alone is insufficient and should be avoided. Corrosion protection specifications should clearly state, "electroplated, or electro-galvanized" or "hot dip galvanized".

The following specification is restricted to the requirements for Hot Dip Galvanized carbon steel fasteners, comprising bolts, nuts and washers.

## Class 4.8 and 8.8 Fasteners

Class 4.8 and 8.8 fasteners shall be hot dip galvanized by the centrifuging process. The coating shall conform to the thicknesses listed in table No.1.

*Table No. 1 - Coating thicknesses on samples that are centrifuged (Refer ISO 1461:2000)*

Fastener and Thickness	Local coating thickness (minimum) Note A: µm or gms/m <sup>2</sup>	Mean coating thickness (minimum) Note B: µm or gms/m <sup>2</sup>
≥ 20 mm diameter	45 or 325	55 or 395
≥ 6 mm to < 20 mm diameter	35 or 250	45 or 325
< 6 mm diameter	20 or 175	25 or 200

Notes:

- A. Local coating thickness obtained using a magnetic test or preferred single value from a gravimetric test.
- B. Mean coating thickness being the average value of the local thicknesses on all the articles in the control sample.
- C. Fasteners not commercially available in sizes <6mm diameter.

# HOT DIP GALVANIZING SPECIFICATION FOR BOLTS AND NUTS

## High strength fasteners - Class 10.9

(Refer unpublished SANS 10094 as at July 2004)

Class 10.9 fasteners may be hot dip galvanized, provided a certificate of compliance is issued, by the galvanizer, stating that the hot dip galvanized coating has been carried out in terms of the unpublished SANS 10094 code of practice. The two most important factors to be considered in terms of hot dip galvanizing of class 10.9 fasteners is to restrict the acid pickling time to <15minutes and to comply with the following coating thickness requirements.

Table No.2 - Coating Requirements for Class 10.9 Hot Dip Galvanized Fasteners

Threaded articles Class 10,9 Fastener Diameter	Local coating thickness (min.) µm or gms/m <sup>2</sup>	Mean coating thickness µm or gms/m <sup>2</sup>	Max. Coating thickness µm or gms/m <sup>2</sup>
≥ 20mm diameter	45 or 325	55 or 395	65 or 465
≥ 6 mm to < 20 mm	35 or 250	45 or 325	55 or 395

Excessively thick hot dip galvanized coatings, i.e. zinc immersion times >2 minutes, results in excessive growth of the hard Fe/Zn alloy layers, possible fatigue failure from crack propagation at stress raisers. Excessively thick coatings, on threads, will interfere with thread tolerances.

Threads are to be clearly defined and free from excess solidified zinc, allowing for ease of nut fitting and tensioning.

## Procedure for Hot Dip Galvanizing of Class 10.9 Fasteners

1. Components are degreased in a 5% to 6% caustic soda solution heated to a temperature of 60°C to 70°C.  
NOTE: If available, lightly wheelabrate for <5minutes in order to reduce the pickling time to a minimum. If tenacious scale or burnt oil is present on the steel surface, light abrasive blast cleaning will assist in reducing extended exposure within the acid pickling solution.
2. After a water rinse, immerse in 6% to 16% hydrochloric acid, containing an inhibitor for <15minutes. Agitate by lowering and raising the components at least 3 consecutive times.
3. Immediately following the acid pickling the components are rinsed in water, fluxed and immersed into molten zinc.
4. Thick hot dip galvanized coatings are avoided by limiting the immersion times to <2 minutes, agitating in the molten zinc and ensuring that all components are immersed for similar periods of time followed by efficient centrifuging.
5. No stripping and re-galvanizing of rejected sub-quality coatings is allowed.
6. No uncoated areas are acceptable.



# HOT DIP GALVANIZING SPECIFICATION FOR BOLTS AND NUTS

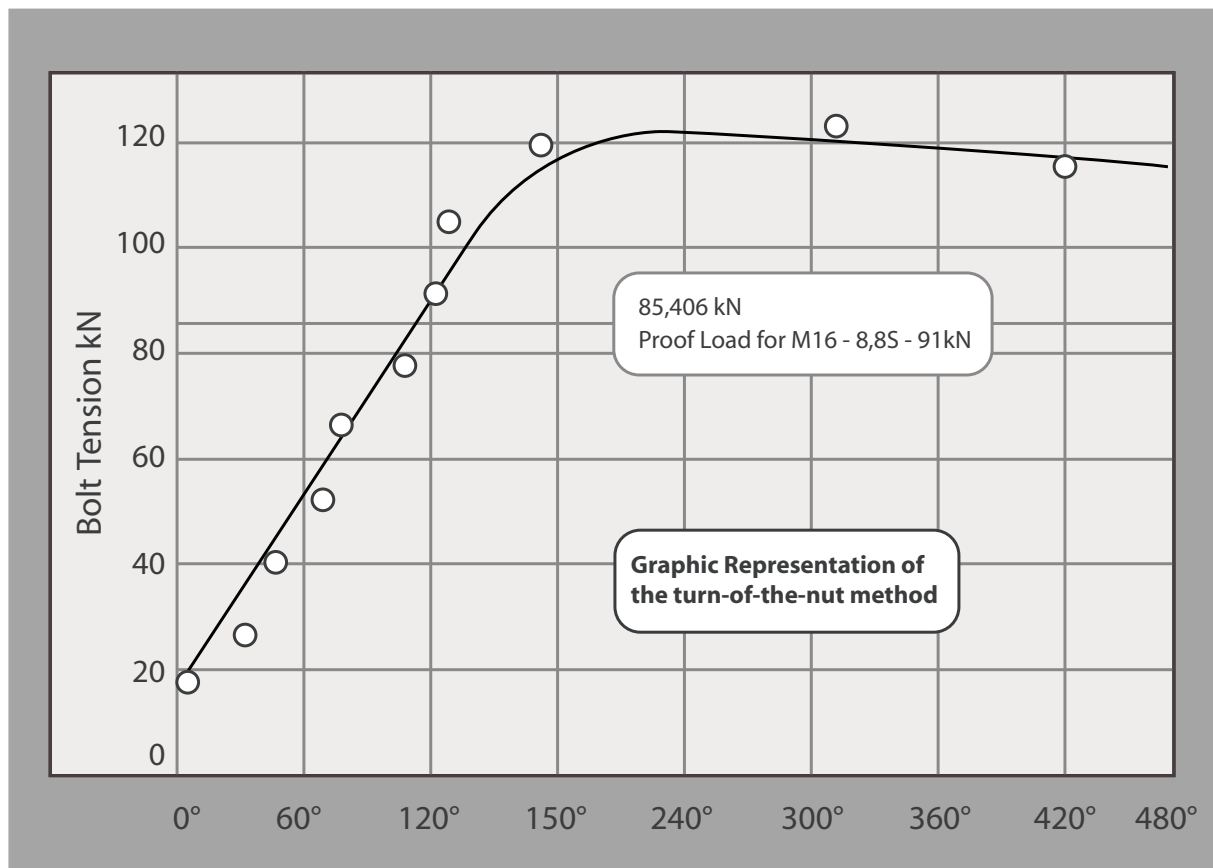
## Further requirements for Tensioning Hot Dip Galvanized High Strength Bolts and Nuts

Hot Dip Galvanized or plated bolts shall be tightened or torqued by the turn-of-the-nut or by direct-tension-indicator methods.

- a) The use of hot dip galvanized Class 10.9S bolts and nuts is permitted provided that a certificate of compliance is issued by the plater that the fasteners have been processed in terms of the unpublished SANS 10094 code of practice detailed above.
- b) In the case of high-tensile bolts, the thread and washers on which tightening is done, shall be thoroughly lubricated with molybdenum disulphide or beeswax, prior to tensioning.

NOTE: Users of fasteners shall be aware of dangers during tightening procedures if they are not applied correctly.

Figure No. 1 - Reliability of the turn-of-the-nut method.



# HOT DIP GALVANIZING SPECIFICATION FOR BOLTS AND NUTS

Figure No. 2 - Degree of nut rotation to achieve the minimum tension of fasteners after snug tightening

Nominal bolt diameter	Length of bolt, mm	
	Nut rotation ½ turn with 60° tolerance over no tolerance under	Nut rotation ¾ turn with 60° tolerance over no tolerance under
M16	up to 120mm	120mm up to 240mm
M20	up to 120mm	120mm up to 240mm
M24	up to 160mm	160mm up to 350mm
M30	up to 160mm	160mm up to 350mm
M36	up to 160mm	160mm up to 350mm

NB - Reference should also be made to SABS 1282:1982 - Table 15 Nut Rotation

## Upsize Tapping Allowance for Hot Dip Galvanized Nuts

The zinc coating on external threads shall be free from lumps and shall not have been subjected to a cutting, rolling or finishing operation that could damage the zinc coating. Hot dip galvanized nuts shall be processed as "blanks" and the oversized internal threads shall be cut after the zinc coating process in accordance with the allowances given in table No.3. Alternatively, under cutting of the bolt threads prior to hot dip galvanizing is permissible

Table No.3 – Upsize tapping allowance

Nominal size of thread	Allowance (mm)
M8 to M12	0.33
M16 to M24	0.38
> M24	0.40

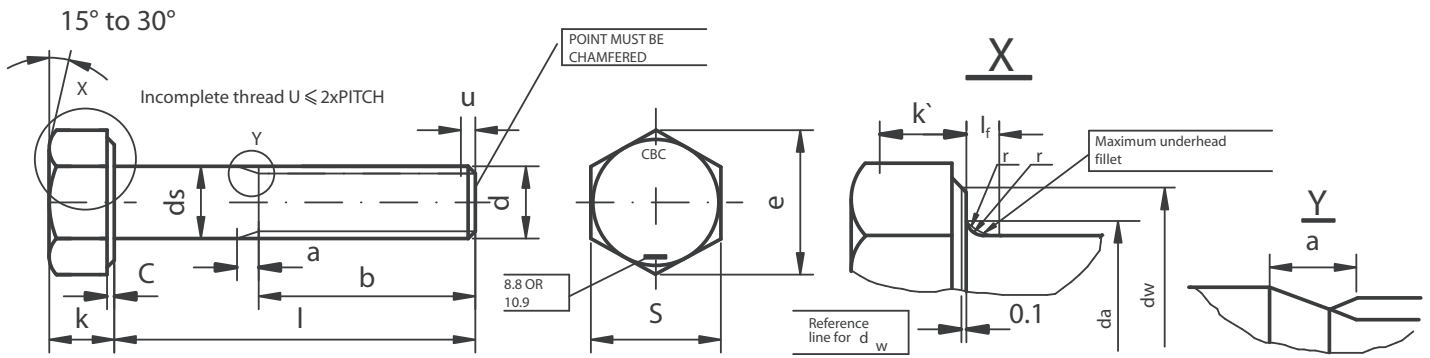
### Reference Specifications

SANS 121 (ISO 1461) - Hot dip galvanized coatings on fabricated iron and steel articles.

SANS 10094 – The use of high-strength friction-grip bolts (unpublished as at July 2004).



# METRIC HEXAGON HEAD BOLTS



d	S		k		
	min	max	min	nom	max
M6	9.78	10.00	3.85	4.00	4.15
M8	12.73	13.00	5.15	5.30	5.45
M10	▶ 16.73	▶ 17.00	6.22	6.40	6.58
M12	▶ 18.67	▶ 19.00	7.32	7.50	7.68
M14	▶ 21.67	▶ 22.00	8.62	8.80	8.98
M16	23.67	24.00	9.82	10.00	10.18
M20	29.67	30.00	12.29	12.50	12.71
M24	35.38	36.00	14.79	15.00	15.21
M30	45.00	46.00	18.44	18.70	18.96

## Dimensions for Bolt DIN 931

Grade 8.8 and 10.9  
Range M6 - M30

Dimensions in millimetres

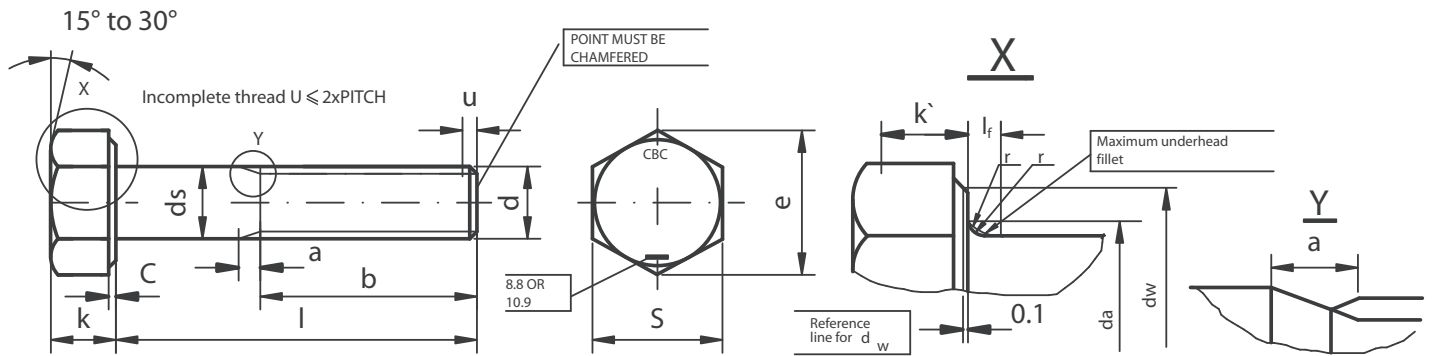
▶ Specifications differences between DIN 931 and ISO 4014

	ds (shank)		P	a	C		e	r	l <sub>f</sub>	U	da	dw	k'
	min	max	pitch	min	min	max	min	min	max	max	max	min	min
M6	5.82	6.00	1.00	2.0	0.15	0.50	11.05	0.25	1.4	1.5	6.8	8.88	2.70
M8	7.78	8.00	1.25	2.5	0.15	0.60	14.38	0.40	2.0	1.8	9.2	11.63	3.61
M10	9.78	10.00	1.50	3.5	0.15	0.60	▶ 18.90	0.40	2.0	2.2	11.2	▶ 15.63	4.35
M12	11.73	12.00	1.75	4.0	0.15	0.60	▶ 21.10	0.60	3.0	2.6	13.7	▶ 17.37	5.12
M14	13.73	14.00	2.00	4.5	0.15	0.60	▶ 24.49	0.60	3.0	3.0	15.7	▶ 20.37	6.03
M16	15.73	16.00	2.00	5.0	0.20	0.80	26.75	0.60	3.0	3.0	17.7	22.49	6.87
M20	19.67	20.00	2.50	7.0	0.20	0.80	33.53	0.80	4.0	3.5	22.4	28.19	8.60
M24	23.67	24.00	3.00	8.0	0.20	0.80	39.98	0.80	4.0	4.5	26.4	33.61	10.35
M30	29.67	30.00	3.50	8.0	0.20	0.80	50.85	1.00	6.0	5.2	33.4	42.75	12.80

	l <sub>mm</sub>	25	30	35	40	45	50	55	60	65	70	75	80	85-125	130-180	190-200	210-300
		± 0.42		± 0.50			± 0.60						± 0.70	± 0.80	± 0.92	± 0.92	
M6	b	18 + 2.0						24 + 2.0									
M8	b	22 + 2.5						28 + 2.5									
M10	b	26 + 3.0						32 + 3.0						45 + 3.0			
M12	b	30 + 3.5						36 + 3.5						49 + 3.0			
M14	b	34 + 4.0						40 + 4.0									
M16	b	38 + 4.0						44 + 4.0									
M20	b	46 + 5.0						52 + 5.0									
M24	b	54 + 6.0						60 + 6.0									
M30	b	66 + 6.0						72 + 6.0									



# METRIC HEXAGON HEAD BOLTS



## Dimensions for Bolt ISO 4014

Grade 8.8 and 10.9  
Range M6 - M30

Dimensions in millimetres

✦ Specifications differences between DIN 931 and ISO 4014

d	S		k		
	min	max	min	nom	max
<b>M6</b>	9.78	10.00	3.85	4.00	4.15
<b>M8</b>	12.73	13.00	5.15	5.30	5.45
<b>M10</b>	✦15.73	✦16.00	6.22	6.40	6.58
<b>M12</b>	✦17.67	✦18.00	7.32	7.50	7.68
<b>M14</b>	✦20.67	✦21.00	8.62	8.80	8.98
<b>M16</b>	23.67	24.00	9.82	10.00	10.18
<b>M20</b>	29.67	30.00	12.29	12.50	12.71
<b>M24</b>	35.38	36.00	14.79	15.00	15.21
<b>M30</b>	45.00	46.00	18.44	18.70	18.96

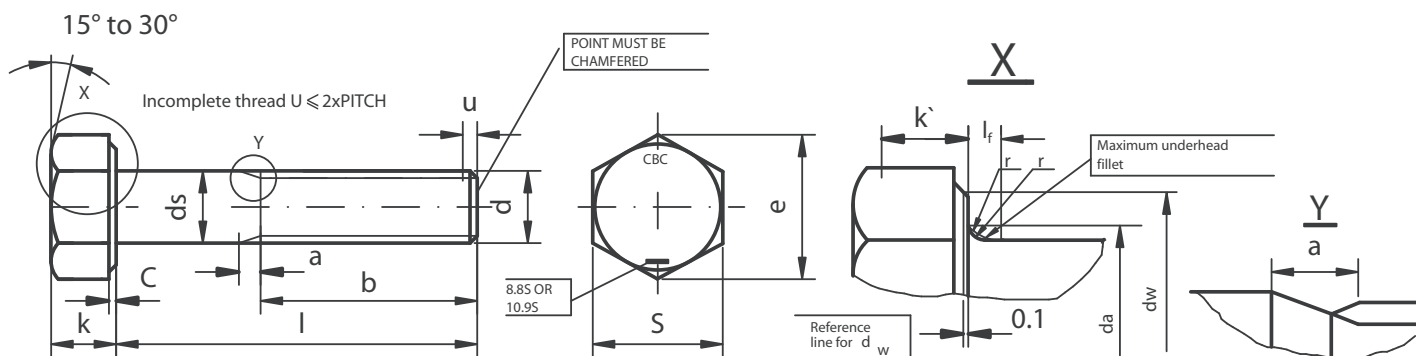
	ds (shank)		P	a	C			e	r	l <sub>f</sub>	U	da	dw	k'
	min	max	pitch	min	min	max	min	min	max	max	max	max	min	min
<b>M6</b>	5.82	6.00	1.00	2.0	0.15	0.50	11.05	0.25	1.4	1.5	6.8	8.88	2.70	
<b>M8</b>	7.78	8.00	1.25	2.5	0.15	0.60	14.38	0.40	2.0	1.8	9.2	11.63	3.61	
<b>M10</b>	9.78	10.00	1.50	3.5	0.15	0.60	✦17.77	0.40	2.0	2.2	11.2	✦14.63	4.35	
<b>M12</b>	11.73	12.00	1.75	4.0	0.15	0.60	✦20.03	0.60	3.0	2.6	13.7	✦16.63	5.12	
<b>M14</b>	13.73	14.00	2.00	4.5	0.15	0.60	✦23.36	0.60	3.0	3.0	15.7	✦19.37	6.03	
<b>M16</b>	15.73	16.00	2.00	5.0	0.20	0.80	26.75	0.60	3.0	3.0	17.7	22.49	6.87	
<b>M20</b>	19.67	20.00	2.50	7.0	0.20	0.80	33.53	0.80	4.0	3.5	22.4	28.19	8.60	
<b>M24</b>	23.67	24.00	3.00	8.0	0.20	0.80	39.98	0.80	4.0	4.5	26.4	33.61	10.35	
<b>M30</b>	29.67	30.00	3.50	8.0	0.20	0.80	50.85	1.00	6.0	5.2	33.4	42.75	12.80	

	l mm	25	30	35	40	45	50	55	60	65	70	75	80	85-120	130-180	190-200	210-300
		± 0.42		± 0.50			± 0.60						± 0.70	± 0.80	± 0.92	± 0.92	
<b>M6</b>	b	18 + 2.0											24 + 2.0				
<b>M8</b>	b	22 + 2.5											28 + 2.5				
<b>M10</b>	b	26 + 3.0											32 + 3.0		45 + 3.0		
<b>M12</b>	b	30 + 3.5											36 + 3.5		49 + 3.0		
<b>M14</b>	b	34 + 4.0											40 + 4.0				
<b>M16</b>	b	38 + 4.0											44 + 4.0				
<b>M20</b>	b	46 + 5.0											52 + 5.0				
<b>M24</b>	b	54 + 6.0											60 + 6.0				
<b>M30</b>	b	66 + 6.0											72 + 6.0				

DIMENSIONS



# METRIC HEXAGON HEAD BOLTS



## Dimensions for Friction Grip Bolt SABS 1282 (ISO 7411)

Grade 8.8S and 10.9S  
Range M12 - M24

*Dimensions in millimetres*

d	S		k		
	min	max	min	nom	max
<b>M12</b>	20.16	21.00	7.95	7.50	7.05
<b>M16</b>	26.16	27.00	9.25	10.00	10.75
<b>M20</b>	33.00	34.00	11.60	13.00	13.40
<b>M24</b>	40.00	41.00	14.10	15.00	15.90

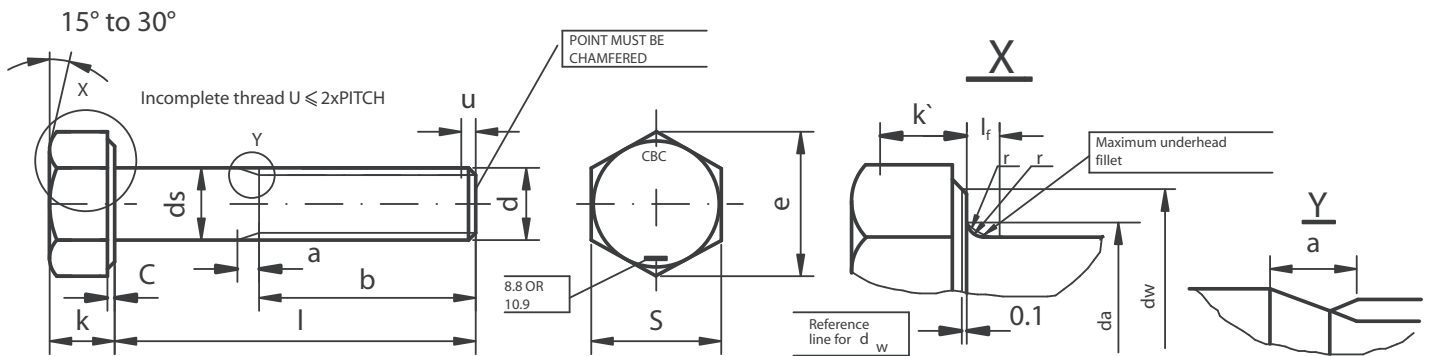
	ds		P	a	C		e	r	l <sub>f</sub>	U	da	dw	k'
	min	max	lead	max	min	max	min	min	max	max	max	min	min
<b>M12</b>	11.73	12.00	1.75	3.5	0.4	0.8	22.78	1.2	3.0	2.6	14.70	19.2	4.9
<b>M16</b>	15.73	16.00	2.00	4.0	0.4	0.8	29.56	1.2	3.0	3.0	18.70	24.9	6.5
<b>M20</b>	19.67	20.00	2.50	5.0	0.4	0.8	37.29	1.5	4.0	3.5	23.24	31.4	8.1
<b>M24</b>	23.67	24.00	3.00	6.0	0.4	0.8	45.20	1.5	4.0	4.5	27.64	38.0	9.2

	l mm	25	30	35	40	45	50	55	60	65	70	75	80	85-125	130-150	160-200
		± 1.05		± 1.25			± 1.50						± 1.75	± 2.00	± 4.00	
<b>M12</b>	b	30 + 3.5														
<b>M16</b>	b	38 + 4.0												44 + 4.0		
<b>M20</b>	b	46 + 5.0												52 + 5.0		
<b>M24</b>	b	54 + 6.0												60 + 6.0		

DIMENSIONS



# METRIC HEXAGON HEAD BOLTS



## Dimensions for Bolt DIN 960

Grade 8.8 and 10.9  
Range M8 - M24

Dimensions in millimetres

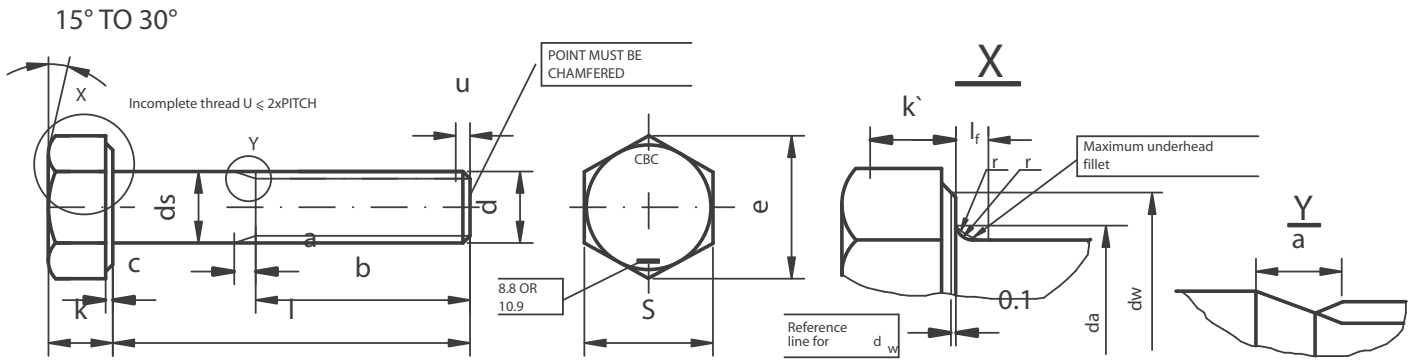
d	S		k		
	min	max	min	nom	max
<b>M8 x 1.00</b>	12.73	13.00	5.15	5.30	5.45
<b>M10 x 1.00</b>	16.73	17.00	6.22	6.40	6.58
<b>M10 x 1.25</b>	16.73	17.00	6.22	6.40	6.58
<b>M12 x 1.25</b>	18.67	19.00	7.32	7.50	7.68
<b>M12 x 1.50</b>	18.67	19.00	7.32	7.50	7.68
<b>M14 x 1.50</b>	21.67	22.00	8.62	8.80	8.98
<b>M16 x 1.50</b>	23.67	24.00	9.82	10.00	10.18
<b>M20 x 1.50</b>	29.67	30.00	12.29	12.50	12.72
<b>M24 x 2.00</b>	35.38	36.00	14.79	15.00	15.22

	ds (shank)		a	C		e	r	l <sub>f</sub>	U	da	dw	k'
	min	max	min	min	max	min	min	max	max	max	min	min
<b>M8 x 1.00</b>	7.78	8.00	2.5	0.15	0.60	14.38	0.4	2.0	1.8	9.2	11.63	3.61
<b>M10 x 1.00</b>	9.78	10.00	3.5	0.15	0.60	18.90	0.4	2.0	2.2	11.2	15.63	4.35
<b>M10 x 1.25</b>	9.78	10.00	3.5	0.15	0.60	18.90	0.4	2.0	2.2	11.2	15.63	4.35
<b>M12 x 1.25</b>	11.73	12.00	4.0	0.15	0.60	21.10	0.6	3.0	2.6	13.7	17.37	5.12
<b>M12 x 1.50</b>	11.73	12.00	4.0	0.15	0.60	21.10	0.6	3.0	2.6	13.7	17.37	5.12
<b>M14 x 1.50</b>	13.73	14.00	4.5	0.15	0.60	24.49	0.6	3.0	3.0	15.7	20.37	6.03
<b>M16 x 1.50</b>	15.73	16.00	5.0	0.20	0.80	26.75	0.6	3.0	3.0	17.7	22.49	6.87
<b>M20 x 1.50</b>	19.67	20.00	7.0	0.20	0.80	33.53	0.8	4.0	3.5	22.4	28.19	8.60
<b>M24 x 2.00</b>	23.67	24.00	8.0	0.20	0.80	39.98	0.8	4.0	4.5	26.4	33.61	10.35

	l mm	25	30	35	40	45	50	55	60	65	70	75	80	85-120	130-180	190-200	210-300
		± 0.42		± 0.50			± 0.60						± 0.70	± 0.80	± 0.92	± 0.92	
<b>M8</b>	b	22 + 2.5												28 + 2.5			
<b>M10</b>	b	26 + 3.0												32 + 3.0		45 + 3.0	
<b>M12</b>	b	30 + 3.5												36 + 3.5		49 + 3.0	
<b>M14</b>	b	34 + 4.0												40 + 4.0			
<b>M16</b>	b	38 + 4.0												44 + 4.0			
<b>M20</b>	b	46 + 5.0												52 + 5.0			
<b>M24</b>	b	54 + 6.0												60 + 6.0			



# METRIC HEXAGON HEAD BOLTS



d	S		k		
	min	max	min	nom	max
<b>M8 x 1.00</b>	12.73	13.00	5.15	5.30	5.45
<b>M10 x 1.00</b>	15.73	16.00	6.22	6.40	6.58
<b>M10 x 1.25</b>	15.73	16.00	6.22	6.40	6.58
<b>M12 x 1.25</b>	17.73	18.00	7.32	7.50	7.68
<b>M12 x 1.50</b>	17.73	18.00	7.32	7.50	7.68
<b>M14 x 1.50</b>	20.67	21.00	8.62	8.80	8.98
<b>M16 x 1.50</b>	23.67	24.00	9.82	10.00	10.18
<b>M20 x 1.50</b>	29.67	30.00	12.29	12.50	12.72
<b>M24 x 2.00</b>	35.38	36.00	14.79	15.00	15.22

## Dimensions for Bolt ISO 8765 (4014 Fine Pitch)

Grade 8.8 and 10.9  
Range M8 - M24

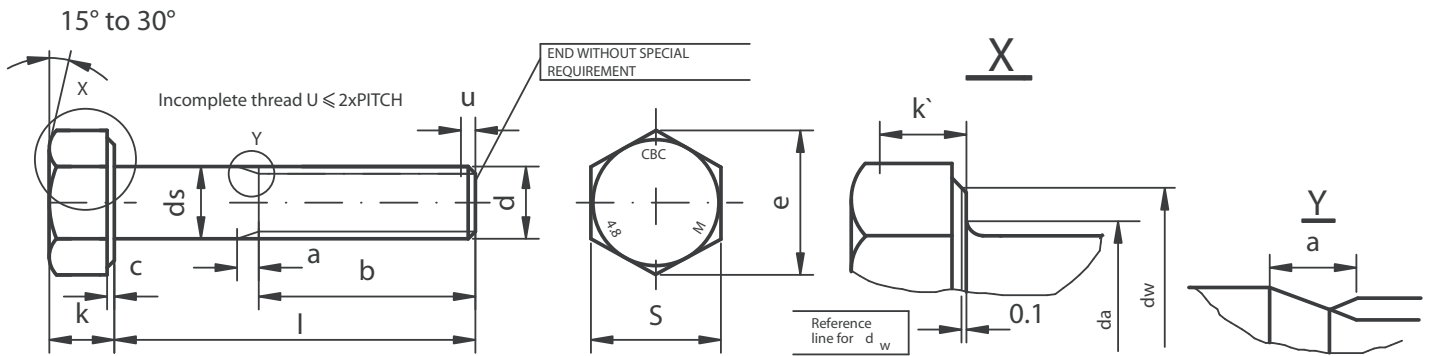
*Dimensions in millimetres*

	ds (shank)		a	C		e	r	l <sub>f</sub>	U	da	dw	k'
	min	max	min	min	max	min	min	max	max	max	min	min
<b>M8 x 1.00</b>	7.78	8.00	2.5	0.15	0.60	14.38	0.4	2.0	1.8	9.2	11.63	3.61
<b>M10 x 1.00</b>	9.78	10.00	3.5	0.15	0.60	17.77	0.4	2.0	2.2	11.2	14.63	4.35
<b>M10 x 1.25</b>	9.78	10.00	3.5	0.15	0.60	17.77	0.4	2.0	2.2	11.2	14.63	4.35
<b>M12 x 1.25</b>	11.73	12.00	4.0	0.15	0.60	20.03	0.6	3.0	2.6	13.7	16.63	5.12
<b>M12 x 1.50</b>	11.73	12.00	4.0	0.15	0.60	20.03	0.6	3.0	2.6	13.7	16.63	5.12
<b>M14 x 1.50</b>	13.73	14.00	4.5	0.15	0.60	23.36	0.6	3.0	3.0	15.7	19.37	6.03
<b>M16 x 1.50</b>	15.73	16.00	5.0	0.20	0.80	26.75	0.6	3.0	3.0	17.7	22.49	6.87
<b>M20 x 1.50</b>	19.67	20.00	7.0	0.20	0.80	33.53	0.8	4.0	3.5	22.4	28.19	8.60
<b>M24 x 2.00</b>	23.67	24.00	8.0	0.20	0.80	39.98	0.8	4.0	4.5	26.4	33.61	10.35

	l mm	25	30	35	40	45	50	55	60	65	70	75	80	85-120	130-180	190-200	210-300	
		± 0.42		± 0.50			± 0.60						± 0.70	± 0.80	± 0.92	± 0.92		
<b>M8</b>	b													22 + 2.5		28 + 2.5		
<b>M10</b>	b													26 + 3.0		32 + 3.0		45 + 3.0
<b>M12</b>	b													30 + 3.5		36 + 3.5		49 + 3.0
<b>M14</b>	b													34 + 4.0		40 + 4.0		
<b>M16</b>	b													38 + 4.0		44 + 4.0		
<b>M20</b>	b													46 + 5.0		52 + 5.0		
<b>M24</b>	b													54 + 6.0		60 + 6.0		



# METRIC HEXAGON HEAD BOLTS



## Dimensions for Bolt SABS 135 (DIN 601) (XOX)

Grade 4.8  
Range M6 - M30

Dimensions in millimetres

■ Full thread

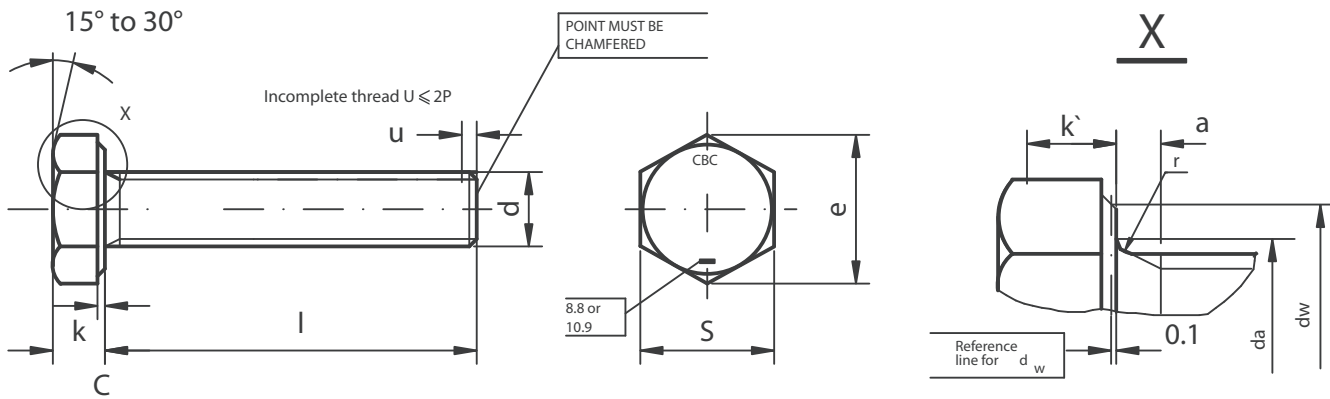
d	S		k		
	min	max	min	nom	max
M6	9.78	10.00	3.85	4.00	4.15
M8	12.73	13.00	5.15	5.30	5.45
M10	16.73	17.00	6.22	6.40	6.58
M12	18.67	19.00	7.32	7.50	7.68
M14	21.67	22.00	8.62	8.80	8.98
M16	23.67	24.00	9.82	10.00	10.18
M20	29.67	30.00	12.29	12.50	12.71
M24	35.38	36.00	14.79	15.00	15.21
M30	45.00	46.00	18.44	18.70	18.96

	ds		P	a	C		e	r	U	da	dw	k'
	min	max	lead	max	min	max	min	min	max	max	min	min
M6	5.82	6.00	1.00	2.0	0.15	0.50	11.05	0.25	1.5	6.8	8.88	2.70
M8	7.78	8.00	1.25	2.5	0.15	0.60	14.38	0.40	1.8	9.2	11.63	3.61
M10	9.78	10.00	1.50	3.5	0.15	0.60	18.90	0.40	2.2	11.2	15.63	4.35
M12	11.73	12.00	1.75	4.0	0.15	0.60	21.10	0.60	2.6	13.7	17.37	5.12
M14	13.73	14.00	2.00	4.5	0.15	0.60	24.49	0.60	3.0	15.7	20.37	6.03
M16	15.73	16.00	2.00	5.0	0.20	0.80	26.75	0.60	3.0	17.7	22.49	6.87
M20	19.67	20.00	2.50	7.0	0.20	0.80	33.53	0.80	3.5	22.4	28.19	8.60
M24	23.67	24.00	3.00	8.0	0.20	0.80	39.98	0.80	4.5	26.4	33.61	10.35
M30	29.67	30.00	3.50	8.0	0.20	0.80	50.85	1.00	5.2	33.4	42.75	12.80

	l mm	25	30	35	40	45	50	55	60	65	70	75	80	85-125	130-180	190-200	210-300
		± 0.42		± 0.50			± 0.60						± 0.70	± 0.80	± 0.92	± 0.92	
M6	b	18 + 2.0												24 + 2.0			
M8	b	22 + 2.5												28 + 2.5			
M10	b	26 + 3.0												32 + 3.0		45 + 3.0	
M12	b	30 + 3.5												36 + 3.5		49 + 3.0	
M14	b	34 + 4.0												40 + 4.0			
M16	b	24 + 4.0				38 + 4.0								44 + 4.0		57 + 4.0	
M20	b	30 + 5.0				46 + 5.0								52 + 5.0		65 + 4.0	
M24	b	36 + 6.0				54 + 6.0								60 + 6.0		73 + 4.0	
M30	b	66 + 6.0												72 + 6.0		85 + 4.0	



# METRIC HEXAGON HEAD SCREWS



d	S		k		
	min	max	min	nom	max
<b>M6</b>	9.78	10.00	3.85	4.00	4.15
<b>M8</b>	12.73	13.00	5.15	5.30	5.45
<b>M10</b>	▶▶ 16.73	▶▶ 17.00	6.22	6.40	6.58
<b>M12</b>	▶▶ 17.67	▶▶ 19.00	7.32	7.50	7.68
<b>M14</b>	▶▶ 21.67	▶▶ 22.00	8.62	8.80	8.98
<b>M16</b>	23.67	24.00	9.82	10.00	10.18
<b>M20</b>	29.67	30.00	12.29	12.50	12.71
<b>M24</b>	35.38	36.00	14.79	15.00	15.21
<b>M30</b>	45.00	46.00	18.44	18.70	18.96

## Dimensions for Screw (Set) DIN 933

Grade 8.8 and 10.9  
Range M6 - M30

Dimensions in millimetres

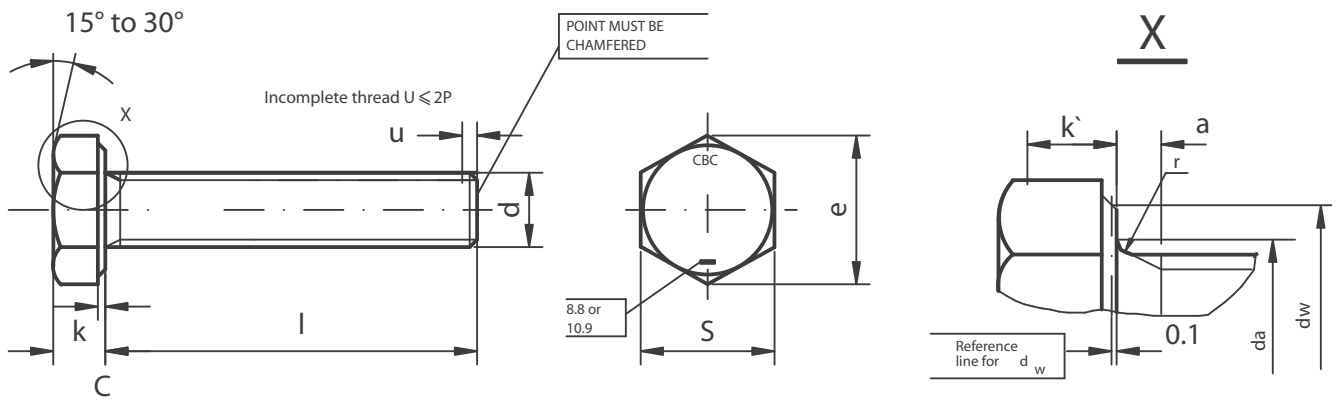
▶ Specifications differences between DIN 933 and ISO 4017

	P	a		C		e	r	U	da	dw	k'
	lead	min	max	min	max	min	min	max	max	min	min
<b>M6</b>	1.00	1.00	2.00	0.15	0.50	11.05	0.25	1.5	6.8	8.88	2.70
<b>M8</b>	1.25	1.25	2.50	0.15	0.60	14.38	0.40	1.8	9.2	11.63	3.61
<b>M10</b>	1.50	1.50	3.50	0.15	0.60	▶▶ 18.90	0.40	2.2	11.2	▶▶ 15.63	4.35
<b>M12</b>	1.75	1.75	4.00	0.15	0.60	▶▶ 21.10	0.60	2.6	13.7	▶▶ 17.37	5.12
<b>M14</b>	2.00	2.00	4.50	0.15	0.60	▶▶ 24.49	0.60	3.0	15.7	▶▶ 20.37	6.03
<b>M16</b>	2.00	2.00	5.00	0.20	0.80	26.75	0.60	3.0	17.7	22.49	6.87
<b>M20</b>	2.50	2.50	7.00	0.20	0.80	33.53	0.80	3.5	22.4	28.19	8.60
<b>M24</b>	3.00	3.00	8.00	0.20	0.80	39.98	0.80	4.5	26.4	33.61	10.35
<b>M30</b>	3.50	3.50	10.00	0.20	0.80	50.85	1.00	5.2	33.4	42.75	12.80

l <sub>mm</sub>	12	14	16	18	20	22	25	28	30	35	40	45	50	55	60	65	70	75	80	85-120
toler	± 0.35				± 0.42				± 0.50				± 0.60				± 0.70			



# METRIC HEXAGON HEAD SCREWS



## Dimensions for Screw (Set) ISO 4017

Grade 8.8 and 10.9  
Range M6 - M30

Dimensions in millimetres

✦ Specifications differences between ISO 4017 and DIN 933

d	S		k		
	min	max	min	nom	max
<b>M6</b>	9.78	10.00	3.85	4.00	4.15
<b>M8</b>	12.73	13.00	5.15	5.30	5.45
<b>M10</b>	✦15.73	✦16.00	6.22	6.40	6.58
<b>M12</b>	✦17.73	✦18.00	7.32	7.50	7.68
<b>M14</b>	✦20.67	✦21.00	8.62	8.80	8.98
<b>M16</b>	23.67	24.00	9.82	10.00	10.18
<b>M20</b>	29.67	30.00	12.29	12.50	12.71
<b>M24</b>	35.38	36.00	14.79	15.00	15.21
<b>M30</b>	45.00	46.00	18.44	18.70	18.96

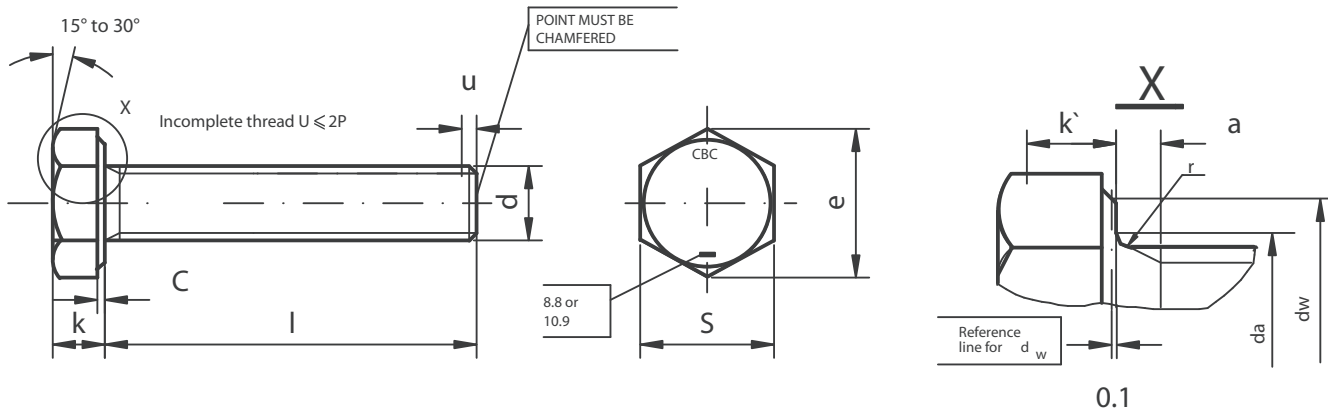
	P	a		C		e	r	U	da	dw	k'
	lead	min	max	min	max	min	min	max	max	min	min
<b>M6</b>	1.00	1.00	2.00	0.15	0.50	11.05	0.25	1.5	6.8	8.88	2.70
<b>M8</b>	1.25	1.25	2.50	0.15	0.60	14.38	0.40	1.8	9.2	11.63	3.61
<b>M10</b>	1.50	1.50	3.50	0.15	0.60	✦17.77	0.40	2.2	11.2	✦14.63	4.35
<b>M12</b>	1.75	1.75	4.00	0.15	0.60	✦20.03	0.60	2.6	13.7	✦16.63	5.12
<b>M14</b>	2.00	2.00	4.50	0.15	0.60	✦23.36	0.60	3.0	15.7	✦19.37	6.03
<b>M16</b>	2.00	2.00	5.00	0.20	0.80	26.75	0.60	3.0	17.7	22.49	6.87
<b>M20</b>	2.50	2.50	7.00	0.20	0.80	33.53	0.80	3.5	22.4	28.19	8.60
<b>M24</b>	3.00	3.00	8.00	0.20	0.80	39.98	0.80	4.5	26.4	33.61	10.35
<b>M30</b>	3.50	3.50	10.00	0.20	0.80	50.85	1.00	5.2	33.4	42.75	12.80

l <sub>mm</sub>	12	14	16	18	20	22	25	28	30	35	40	45	50	55	60	65	70	75	80	85-120
toler	± 0.35				± 0.42				± 0.50				± 0.60				± 0.70			





# METRIC HEXAGON HEAD SCREWS



d	S		k		
	min	max	min	nom	max
<b>M8 x 1.00</b>	12.73	13.00	5.15	5.30	5.45
<b>M10 x 1.00</b>	16.73	17.00	6.22	6.40	6.58
<b>M10 x 1.25</b>	16.73	17.00	6.22	6.40	6.58
<b>M12 x 1.25</b>	18.67	19.00	7.32	7.50	7.68
<b>M12 x 1.50</b>	18.67	19.00	7.32	7.50	7.68
<b>M14 x 1.50</b>	21.67	22.00	8.62	8.80	8.98
<b>M16 x 1.50</b>	23.67	24.00	9.82	10.00	10.18
<b>M20 x 1.50</b>	29.67	30.00	12.29	12.50	12.72
<b>M24 x 2.00</b>	35.38	36.00	14.79	15.00	15.22

## Dimensions for Screw (Set) DIN 961

Grade 8.8 and 10.9  
Range M8 - M24

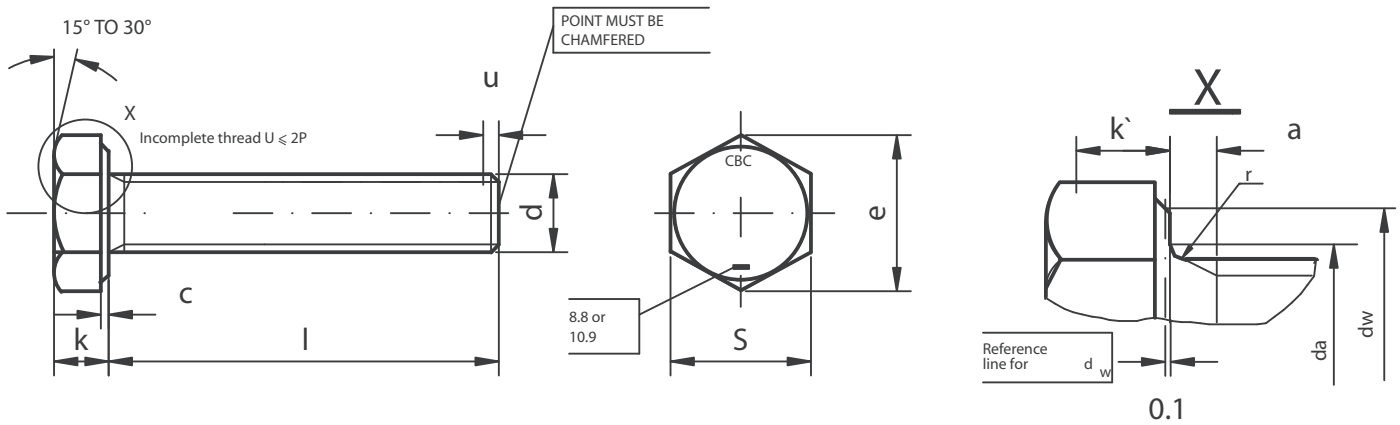
*Dimensions in millimetres*

	a		C		e	r	U	da	dw	k'
	min	max	min	max	min	min	max	max	min	min
<b>M8 x 1.00</b>	1.25	2.50	0.15	0.60	14.38	0.4	1.8	9.2	11.63	3.61
<b>M10 x 1.00</b>	1.50	3.50	0.15	0.60	18.90	0.4	2.2	11.2	15.63	4.35
<b>M10 x 1.25</b>	1.50	3.50	0.15	0.60	18.90	0.4	2.2	11.2	15.63	4.35
<b>M12 x 1.25</b>	1.75	4.00	0.15	0.60	21.10	0.6	2.6	13.7	17.37	5.12
<b>M12 x 1.50</b>	1.75	4.00	0.15	0.60	21.10	0.6	2.6	13.7	17.37	5.12
<b>M14 x 1.50</b>	2.00	4.50	0.15	0.60	24.49	0.6	3.0	15.7	20.37	6.03
<b>M16 x 1.50</b>	2.00	5.00	0.20	0.80	26.75	0.6	3.0	17.7	22.49	6.87
<b>M20 x 1.50</b>	2.50	7.00	0.20	0.80	33.53	0.8	3.5	22.4	28.19	8.60
<b>M24 x 2.00</b>	3.00	8.00	0.20	0.80	39.98	0.8	4.5	26.4	33.61	10.35

l <sub>mm</sub>	12	14	16	18	20	22	25	28	30	35	40	45	50	55	60	65	70	75	80	85-120
toler	± 0.35				± 0.42				± 0.50				± 0.60				± 0.70			



# METRIC HEXAGON HEAD SCREWS



## Dimensions for Screw (Set) ISO 8676

Grade 8.8 and 10.9  
Range M8 - M24

*Dimensions in millimetres*

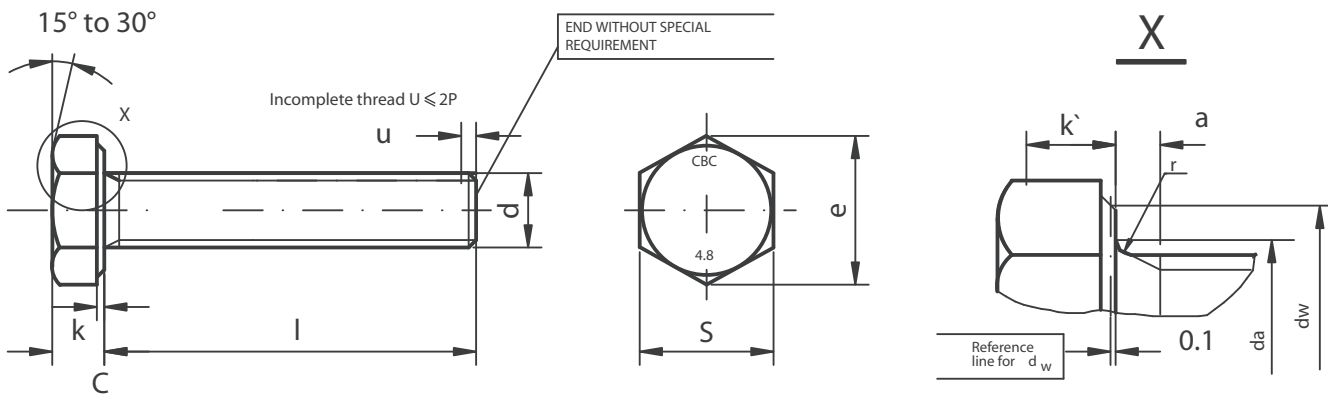
d	S		k		
	min	max	min	nom	max
<b>M8 x 1.00</b>	12.73	13.00	5.15	5.30	5.45
<b>M10 x 1.00</b>	15.73	16.00	6.22	6.40	6.58
<b>M10 x 1.25</b>	15.73	16.00	6.22	6.40	6.58
<b>M12 x 1.25</b>	17.73	18.00	7.32	7.50	7.68
<b>M12 x 1.50</b>	17.73	18.00	7.32	7.50	7.68
<b>M14 x 1.50</b>	20.67	21.00	8.62	8.80	8.98
<b>M16 x 1.50</b>	23.67	24.00	9.82	10.00	10.18
<b>M20 x 1.50</b>	29.67	30.00	12.29	12.50	12.72
<b>M24 x 2.00</b>	35.38	36.00	14.79	15.00	15.22

	a		C		e	r	U	da	dw	k'
	min	max	min	max	min	min	max	max	min	min
<b>M8 x 1.00</b>	1.25	2.50	0.15	0.60	14.38	0.4	1.8	9.2	11.63	3.61
<b>M10 x 1.00</b>	1.50	3.50	0.15	0.60	17.77	0.4	2.2	11.2	14.63	4.35
<b>M10 x 1.25</b>	1.50	3.50	0.15	0.60	17.77	0.4	2.2	11.2	14.63	4.35
<b>M12 x 1.25</b>	1.75	4.00	0.15	0.60	20.03	0.6	2.6	13.7	16.63	5.12
<b>M12 x 1.50</b>	1.75	4.00	0.15	0.60	20.03	0.6	2.6	13.7	16.63	5.12
<b>M14 x 1.50</b>	2.00	4.50	0.15	0.60	23.36	0.6	3.0	15.7	19.37	6.03
<b>M16 x 1.50</b>	2.00	5.00	0.20	0.80	26.75	0.6	3.0	17.7	22.49	6.87
<b>M20 x 1.50</b>	2.50	7.00	0.20	0.80	33.53	0.8	3.5	22.4	28.19	8.60
<b>M24 x 2.00</b>	3.00	8.00	0.20	0.80	39.98	0.8	4.5	26.4	33.61	10.35

l <sub>mm</sub>	12	14	16	18	20	22	25	28	30	35	40	45	50	55	60	65	70	75	80	85-120
toler	± 0.35				± 0.42				± 0.50				± 0.60				± 0.70			



# METRIC HEXAGON HEAD SCREWS



d	S		k		
	min	max	min	nom	max
M6	9.78	10.00	3.85	4.00	4.15
M8	12.73	13.00	5.15	5.30	5.45
M10	16.73	17.00	6.22	6.40	6.58
M12	18.67	19.00	7.32	7.50	7.68
M14	21.67	22.00	8.62	8.80	8.98
M16	23.67	24.00	9.82	10.00	10.18
M20	29.67	30.00	12.29	12.50	12.71
M24	35.38	36.00	14.79	15.00	15.21
M30	45.00	46.00	18.44	18.70	18.96

## Dimensions for Screw (Set) DIN 558

Grade 4.8  
Range M6 - M30

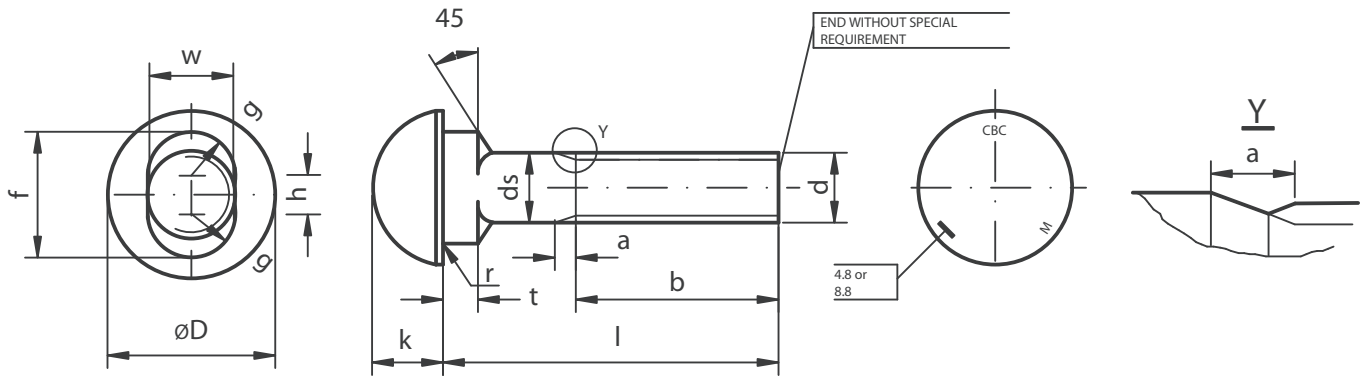
Dimensions in millimetres

	P	a		C		e	r	U	da	dw	k'
	lead	min	max	min	max	min	min	max	max	min	min
M6	1.00	1.00	2.00	0.15	0.50	11.05	0.25	1.5	6.8	8.88	2.70
M8	1.25	1.25	2.50	0.15	0.60	14.38	0.40	1.8	9.2	11.63	3.61
M10	1.50	1.50	3.50	0.15	0.60	18.90	0.40	2.2	11.2	15.63	4.35
M12	1.75	1.75	4.00	0.15	0.60	21.10	0.60	2.6	13.7	17.37	5.12
M14	2.00	2.00	4.50	0.15	0.60	24.49	0.60	3.0	15.7	20.37	6.03
M16	2.00	2.00	5.00	0.20	0.80	26.75	0.60	3.0	17.7	22.49	6.87
M20	2.50	2.50	7.00	0.20	0.80	33.53	0.80	3.5	22.4	28.19	8.60
M24	3.00	3.00	8.00	0.20	0.80	39.98	0.80	4.5	26.4	33.61	10.35
M30	3.50	3.50	10.00	0.20	0.80	50.85	1.00	5.2	33.4	42.75	12.80

l <sub>mm</sub>	12	14	16	18	20	22	25	28	30	35	40	45	50	55	60	65	70	75	80	85-120
toler	± 0.35				± 0.42				± 0.50				± 0.60				± 0.70			



# METRIC ROUND HEAD BOLTS



## Dimensions for Cup Oval SABS 916

Grade 4.8 and 8.8  
Range M12 - M20

d	D		k	
	min	max	min	max
<b>M12</b>	20.3	21.6	8.5	9.6
<b>M16</b>	27.5	28.8	11.7	12.8
<b>M20</b>	34.4	36.0	14.9	16.0

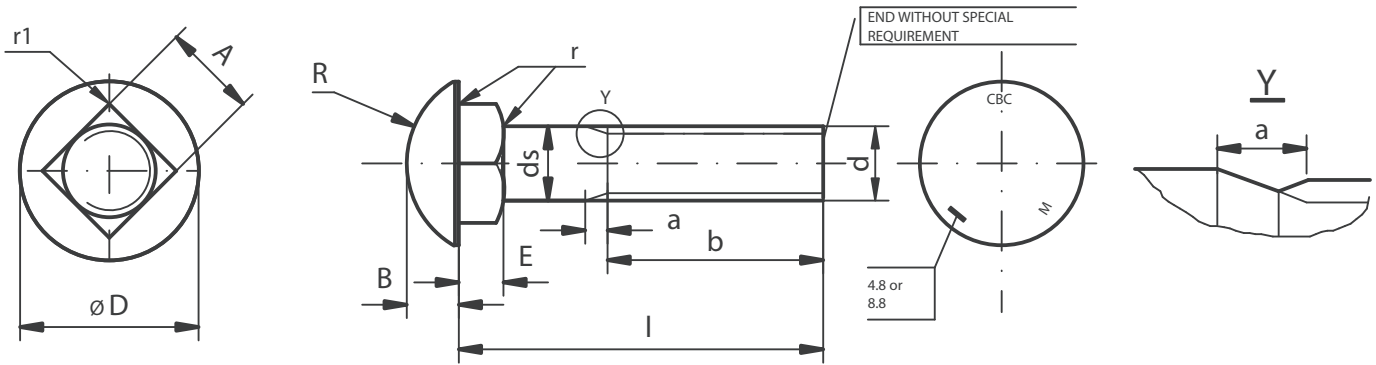
*Dimensions in millimetres*

	ds		P	a	t		r		f		h	g
	min	max	lead	max	min	max	min	max	min	max	nom	nom
<b>M12</b>	11.73	12.00	1.75	4.0	5.5	7.0	0.8	1.1	16.0	17.5	4.5	6.0
<b>M16</b>	15.73	16.00	2.00	5.0	7.5	9.0	0.8	1.1	21.5	23.0	6.0	8.0
<b>M20</b>	19.67	20.00	2.50	7.0	9.5	11.0	1.0	1.5	25.5	27.0	6.0	10.0

	l mm	l < 125
		± 0.70
<b>M12 x 50</b>	b	30 + 3.5
<b>M16 x 60</b>	b	38 + 4.0
<b>M20 x 65</b>	b	38 + 5.0
<b>M20 x 75</b>	b	46 + 5.0
<b>M20 x 90</b>	b	46 + 5.0



# METRIC ROUND HEAD BOLTS



## Dimensions for Cup Squares SABS 1143

Grade 4.8 and 8.8  
Range M8 - M16

*Dimensions in millimetres*

d	D		B	
	min	max	min	max
<b>M8</b>	16.9	18.0	4.0	4.8
<b>M10</b>	21.2	22.5	5.0	5.8
<b>M12</b>	25.7	27.0	6.0	6.8
<b>M16</b>	34.4	36.0	8.0	8.9

■ Full thread

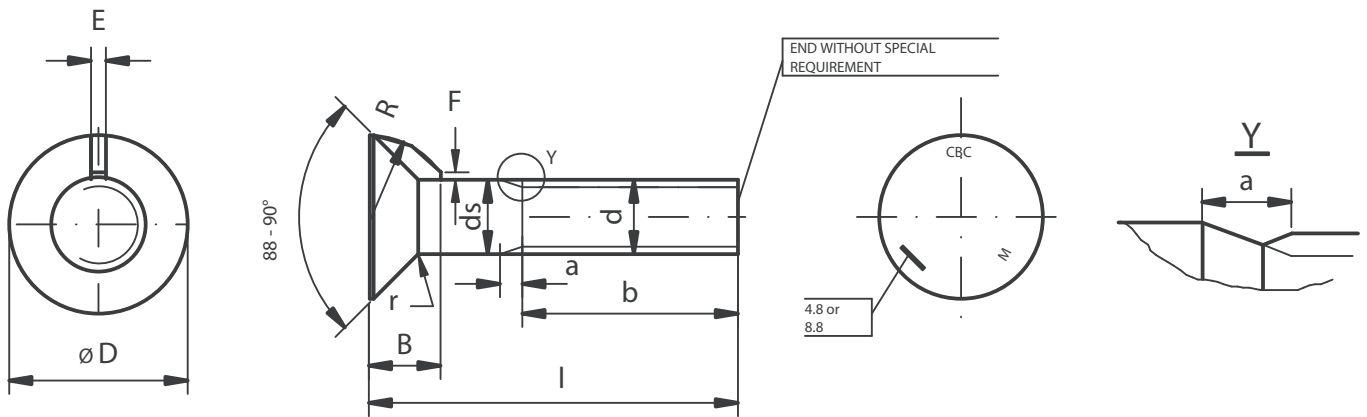
	ds		P	a	E		r1	r		R	A	
	min	max	lead	max	min	max	~	min	max	~	min	max
<b>M8</b>	7.78	8.00	1.25	2.5	4.0	4.8	1.2	0.3	0.8	12.3	7.78	8.58
<b>M10</b>	9.78	10.00	1.50	3.5	5.0	5.8	1.5	0.3	0.8	15.7	9.78	10.58
<b>M12</b>	11.73	12.00	1.75	4.0	6.0	6.8	1.8	0.3	1.3	19.5	11.73	12.70
<b>M16</b>	15.73	16.00	2.00	5.0	8.0	8.9	2.4	0.3	1.3	24.8	15.73	16.70

	l mm	25	30	35	40	45	50	55	60	65	70	75	80	85-125
		± 0.42		± 0.50			± 0.60					± 0.70		
<b>M8</b>	b					22 + 2.5								
<b>M10</b>	b					26 + 3.0								
<b>M12</b>	b					30 + 3.5								
<b>M16</b>	b					38 + 4.0								

DIMENSIONS



# METRIC ROUND HEAD BOLTS



## Dimensions for Nib Bolts SABS 1143

Grade 4.8 and 8.8  
Range M10 - M20

Dimensions in millimetres

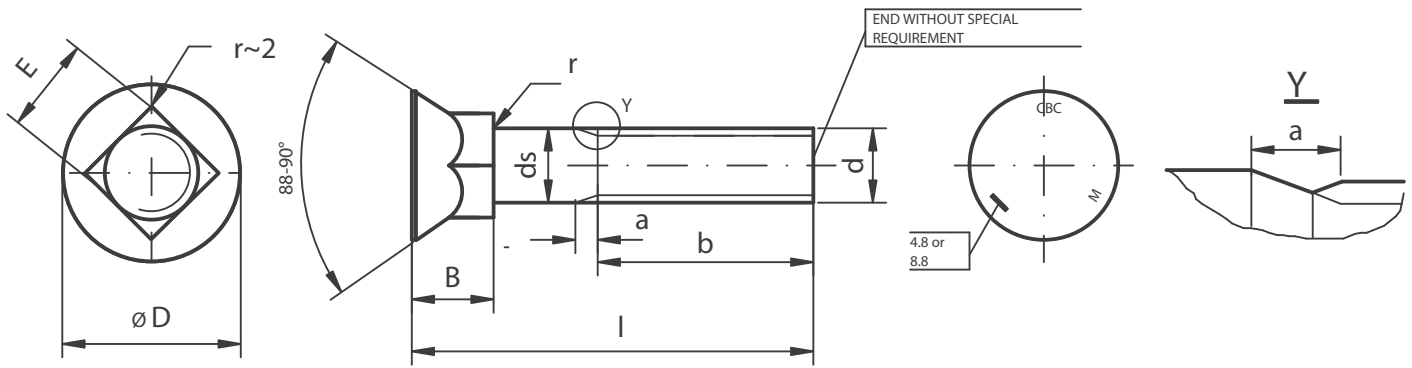
■ Full thread

d	D		B	
	min	max	min	max
<b>M10</b>	17.0	20.0	5.1	6.3
<b>M12</b>	20.4	24.0	6.2	7.5
<b>M16</b>	27.2	32.0	8.3	10.0
<b>M20</b>	34.0	40.0	10.4	12.5

	ds		P	a	E		r	F	R
	min	max	lead	max	min	max	max	±	~
<b>M10</b>	9.78	10.00	1.50	3.5	2.1	2.5	0.8	1.25	8.0
<b>M12</b>	11.73	12.00	1.75	4.0	2.6	3.0	1.3	1.50	10.0
<b>M16</b>	15.73	16.00	2.00	5.0	3.5	4.0	1.3	2.00	13.0
<b>M20</b>	19.67	20.00	2.50	7.0	4.5	5.0	1.8	2.50	16.0

	l mm	25	30	35	40	45	50	55	60	65	70	75	80	85-125	
		± 0.42		± 0.50				± 0.60					± 0.70		
<b>M10</b>	b	■				26 + 3.0									
<b>M12</b>	b	■					30 + 3.5								
<b>M16</b>	b	■						38 + 4.0							
<b>M20</b>	b	■							46 + 5.0						

# METRIC ROUND HEAD BOLTS



## Dimensions for Square Neck (Plough) Bolts SABS 1143

Grade 4.8 and 8.8  
Range M10 - M16

d	D		B	
	min	max	min	max
M10	17.0	20.0	6.0	7.5
M12	20.4	24.0	7.2	9.0
M16	27.2	32.0	9.6	12.0

Dimensions in millimetres

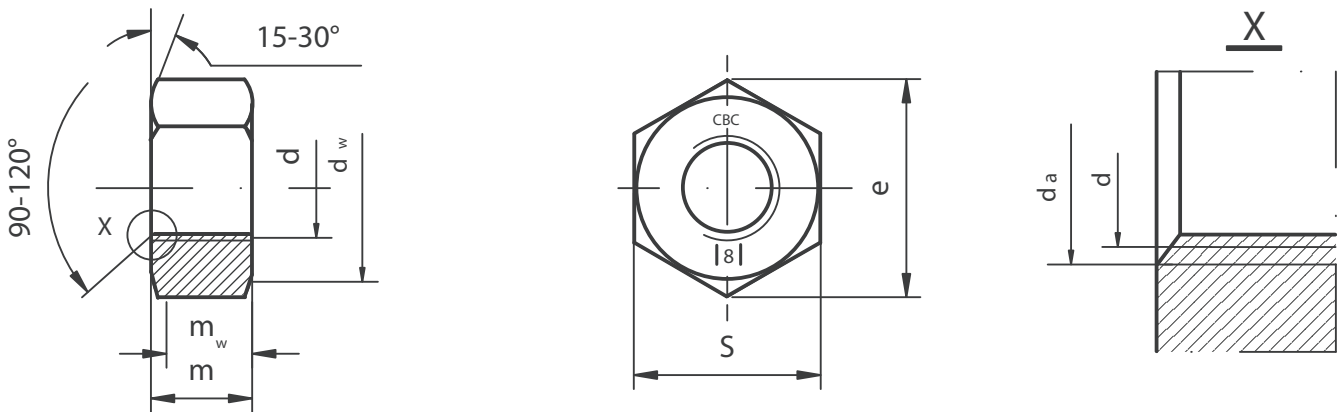
	ds		P	a	E		r
	min	max	lead	max	min	max	~
M10	9.78	10.00	1.50	3.5	9.78	10.68	0.8
M12	11.73	12.00	1.75	4.0	11.73	12.70	1.3
M16	15.73	16.00	2.00	5.0	15.73	16.70	1.3

■ Full thread

	l mm	25	30	35	40	45	50	55	60	65	70	75	80	85-125	
		± 0.42		± 0.50			± 0.60					± 0.70			
M10	b	■					26 + 3.0								
M12	b	■				30 + 3.5									
M16	b	■			38 + 4.0										



# METRIC HEXAGON NUTS



## Dimensions for Nut DIN 934

Range M6 - M30

*Dimensions in millimetres*

	P	e		bore dia.		da		dw	S		m		mw
		min	max	min	max	min	max		min	max			
<b>M6</b>	1.00	11.05	4.92	5.15	6.00	6.75	8.9	9.78	10.00	4.70	5.00	3.76	
<b>M8</b>	1.25	14.38	6.45	6.91	8.00	8.75	11.6	12.73	13.00	6.14	6.50	4.91	
<b>M10</b>	1.50	18.90	8.38	8.67	10.00	10.80	15.3	16.73	17.00	7.64	8.00	6.11	
<b>M12</b>	1.75	21.10	10.11	10.44	12.00	13.00	17.1	18.67	19.00	9.64	10.00	7.71	
<b>M14</b>	1.75	24.49	11.79	12.24	14.00	15.10	19.8	20.67	22.00	10.30	11.00	8.24	
<b>M16</b>	2.00	26.75	13.84	14.21	16.00	17.30	22.5	23.67	24.00	12.30	13.00	9.84	
<b>M20</b>	2.50	32.95	17.30	17.74	20.00	21.60	27.7	29.16	30.00	14.90	16.00	11.92	
<b>M24</b>	3.00	39.55	20.75	21.38	24.00	25.90	33.3	35.00	36.00	17.70	19.00	14.16	
<b>M30</b>	3.50	50.85	26.29	26.74	30.00	32.40	42.8	45.00	46.00	22.70	24.00	18.16	

Grade 8 for Range M6 - M20

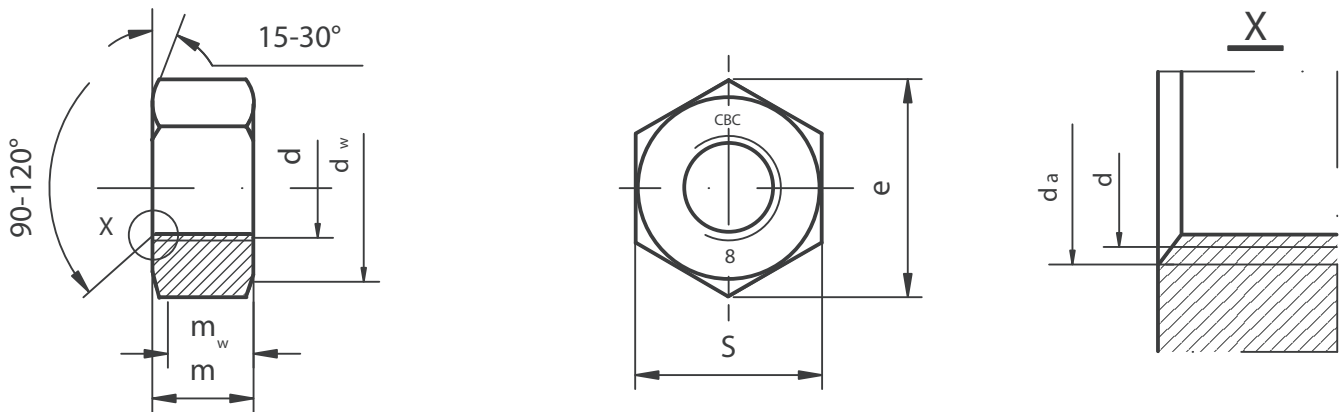
Grade 6 for M24

Grade 5 & 8 for M30





# METRIC HEXAGON NUTS



## Dimensions for Nut ISO 4032

Range M6 - M30

*Dimensions in millimetres*

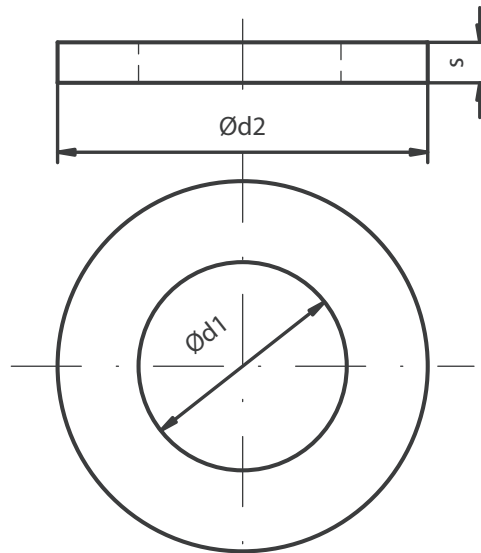
	P	e	bore dia.		da		dw	S		m		mw
			min	max	min	max		min	max	min	max	
<b>M6</b>	1.00	11.05	4.92	5.15	6.00	6.75	8.9	9.78	10.00	4.90	5.20	3.90
<b>M8</b>	1.25	14.38	6.45	6.91	8.00	8.75	11.6	12.73	13.00	6.44	6.80	5.20
<b>M10</b>	1.50	17.77	8.38	8.67	10.00	10.80	14.6	15.73	16.00	8.04	8.40	6.40
<b>M12</b>	1.75	20.03	10.11	10.44	12.00	13.00	16.6	17.73	18.00	10.37	10.80	8.30
<b>M14</b>	1.75	23.36	11.79	12.24	14.00	15.10	19.6	20.67	21.00	12.10	12.80	9.68
<b>M16</b>	2.00	26.75	13.84	14.21	16.00	17.30	22.5	23.67	24.00	14.10	14.80	11.30
<b>M20</b>	2.50	32.95	17.30	17.74	20.00	21.60	27.7	29.16	30.00	16.90	18.00	13.50
<b>M24</b>	3.00	39.55	20.75	21.38	24.00	25.90	33.3	35.00	36.00	20.20	21.50	16.20
<b>M30</b>	3.50	50.85	26.29	26.74	30.00	32.40	42.8	45.00	46.00	24.30	25.60	19.40

Grade 8 for Range M6 - M20

Grade 6 for M24

Grade 5 & 8 for M30





### Dimensions for Washers DIN 126

Range for Bolts M6 - M72

*Dimensions in millimetres*

d1	d2	s	for metric bolts
6.6	12.5	1.6	6
7.6	14.0	1.6	7
9.0	17.0	1.6	8
11.0	21.0	2.0	10
14.0	24.0	2.5	12
16.0	28.0	2.5	14
18.0	30.0	3.0	16
20.0	34.0	3.0	18
22.0	37.0	3.0	20
24.0	39.0	3.0	22
26.0	44.0	4.0	24
30.0	50.0	4.0	27
33.0	56.0	4.0	30
36.0	60.0	5.0	33
39.0	66.0	5.0	36
42.0	72.0	6.0	39
45.0	78.0	7.0	42
48.0	85.0	7.0	45
52.0	92.0	8.0	48
56.0	98.0	8.0	52
62.0	105.0	9.0	56
66.0	110.0	9.0	60
70.0	115.0	9.0	64
78.0	125.0	10.0	72



# SABS



## ertificate of Registration

This is to certify that THE QUALITY SYSTEM of

**CBC FASTENERS (PTY) LTD  
(TRADING AS CBC FASTENERS)  
FACTORIA, KRUGERSDORP**

has been assessed and found to  
satisfy the requirements of

**SABS ISO 9001:2000  
QUALITY MANAGEMENT SYSTEMS**

**ACCREDITED SCOPE SECTOR**

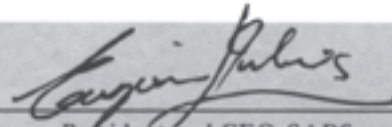
**BASIC METALS AND FABRICATED METAL PRODUCTS**

DETAILS OF THE COMMODITY OR SERVICE FOR WHICH THE QUALITY SYSTEM HAS BEEN ASSESSED AS WELL AS PARTICULARS OF PARTICIPATION IN THE SABS CERTIFICATION MARK SCHEME ARE GIVEN IN THE SCHEDULE. FURTHER CLARIFICATION REGARDING THE SCOPE OF THIS CERTIFICATE AND THE APPLICABILITY OF ISO 9001:2000 MAY BE OBTAINED BY CONSULTING THE ORGANISATION.

*The certificate and the schedules which form an integral part thereof*

- are issued without alteration;
- are identified by the applicable registration number; and
- bear the embossed seal of the SABS (in the absence of the seal, the certificate and the schedules shall be invalid).



  
President and CEO, SABS

**14 March 2003**

Effective Date

**14 March 2006**

Valid Until

**3 February 1999**

Date of Original Registration

**LS 2347**

Registration Number



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*CBC Fasteners (Pty) Ltd*

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