



PRICE LIST

DFL-15, w.e.f. 1st Oct, 2021

Socket Screws	11
Durlok [®]	31
Hex Bolt, Nut & Washer	36
Construction	51
Petrochemical	63

Largest Industrial Fasteners Manufacturer in India

NOTE

Plating: All the products, unless otherwise ordered, are supplied in black thermal finish with a coat of rust preventive oil. No guarantee can be give for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.

Packing: All products are supplied in standard packing as described in respective price tables. For sizes M6 (1/4") and above - 3% extra packing charges will be applicable if the order quantity is less than one carton.

Pricing: The prices mentioned in this pricelist are in INR - Indian Rupee (₹) The price, specification and other particulars contained in this pricelist are subject to change with notice.
GST extra as applicable.

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About Unbrako



West Coast Distribution Center

Founded in 1911, Unbrako is the world leader in advancing the technology of bolted joints and meeting the needs of industry for stronger and better performing fasteners. Products such as the famous Unbrako® socket head cap screw and Durlok® fasteners are the solutions of choice for engineering applications across the world & is used by industries such as the automotive, power generation, petrochemical, heavy machinery, construction and military sectors.

With an extensive international network in 35 countries, Unbrako provides a complete range of industrial fastening hardware including bolts, screws, SEM's, nuts, studbolts, self-locking fasteners, thread forming fasteners, among others.

Unbrako products are primarily used in performance critical applications and incorporate unique design and work-manship features that meet or exceed recognized international standards, resulting in higher tensile strength, improved fatigue resistance, ease of installation, reduced total cost of maintenance and extended life cycle. .

With advanced manufacturing, engineering and logistics facilities, ISO/TS and CE certification, Unbrako is equipped to provide technical support and full-service package. Unbrako's focus is on building long - term relationships with its customers. Full-service includes engineering and design support, procurement and purchasing services, localized warehousing and transport, a variety of packaging options and choice of delivery frequencies – to provide the right answer to any customer need.



Certified Laboratory

Our Laboratory is NABL ISO/IEC 17025:2005 certified, which facilitates in maintaining consistently high quality. The fasteners go through strict quality checks at every stage of the process. Our inspection facilities are equipped with state-of-the-art equipment for testing of both physical and metallurgical aspects of fasteners for the most demanding applications:

- Tensile & Hardness testing
- Salt spray testing
- Digital profile analysis
- X-ray analysis of coating thickness
- Chemical composition analysis (Spectrometer)
- Impact Testing
- Dynamic fatigue testing
- Torque tension and friction testing
- Eddy current Testing
- Metallurgical Microscope with Image Analyzer



ISO 9001:2015



NABL
ISO/IEC 17025:2005



CE Certification
14399 & 15048

International Certifications

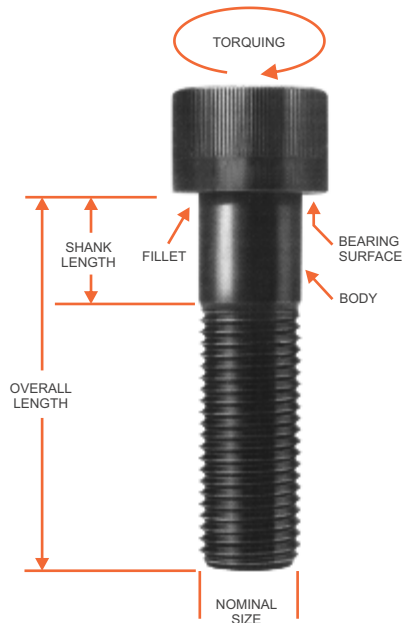
Our production facilities are ISO 9001, IATF 16949, ISO 14001 and BS OHSAS 18001 Certified. Our fasteners meet or exceed International Standards like DIN, ISO, ASTM, IS, BS etc. We have expertise not only in standard products, but also in made-to-order customized products.

Specialized Coatings

We excel in a variety of coatings, which are done in-house. These are designed to provide required protection in different environments, e.g. Hot Dip Galvanizing, Mechanical Galvanizing, Electroplating (Zinc & Copper Cadmium), PTFE Coating, Zinc-Al Flake Coating (Geomet, Delta Protekt) and Unbrako Wiscoat Coating.



Product Terminology



BODY

The unthreaded portion of the shank of a threaded fastener.

FILLET

Concave junction between the head and shank.

HEAD

A headed fastener has one end enlarged into a preformed shape.

OVERALL LENGTH

The Overall length of a headed fastener is the distance from intersection between the bearing surface & the ExtremeEnd point fastener, measured parallel to the axis of the fastener. The length of a headless fastener is the distance from one extreme end to the other end, also measured parallel to the fastener.

NOMINAL SIZE

It is the basic major diameter of the thread.

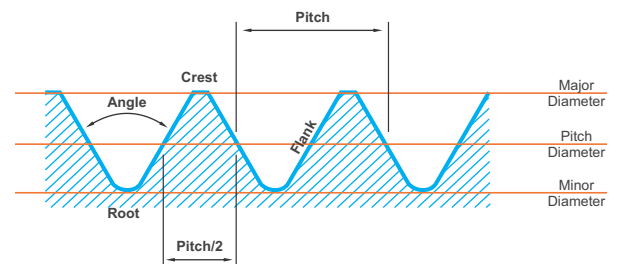
SHANK

The Shank Length is minimum length of the unthreaded cylindrical portion of the shank.

TORQUING

It is the act of tightening a fastener by turning either the bolt or nut.

Thread Terminology



CREST

The outermost tip of a male thread as seen in a thread profile.

FLANK

The thread surface connecting the crest with the root.

BEARING SURFACE

The supporting or locating surface of a fastener with respect to the part it fastens or mates.

MAJOR DIAMETER

The largest diameter of a thread.

MINOR DIAMETER

The smallest diameter of a thread.

PITCH

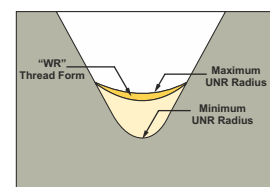
The distance from a point on a screw thread to the corresponding point on the next screw thread.

PITCH DIAMETER

Is the diameter of a theoretical cylinder that passes through the threads at a position that the width of thread ridge and thread groove are equal.

ROOT

The Root of the thread is the bottom of the groove between two flank.



Thread Terminology

THREAD LAPS

Are surface defects caused by the folding over of metal in the thread.



THREAD RUNOUT

is the area between the thread and shank or head of the fasteners. The Unbrako radiused root runout provides a smooth form that distributes stress and increases the life of the fastener considerably.

THREAD STRESS AREA

The area of a cylindrical bar of the same material and properties as the thread and capable of supporting the same ultimate tensile load.

Mechanical Terminology

CREEP

Deformation that occurs over a period of time when a fastener is subjected to a constant stress at a constant high temperature.



ELONGATION

is the increase in the thread length of a fastener that would occur during tightening or loading.



ENDURANCE LIMIT

The strength level below which a bolt or joint member will have an essentially infinite life under cyclic loading.

FATIGUE LIFE

is the number of cycles of fluctuating stress and strain of a specified nature that a fastener will sustain before failure occurs.



IMPACT TEST

A test to determine the energy absorbed in fracturing a test bar at high velocity.

PROOF LOAD

is a specified test load which a fastener must withstand without any indication of failure.

PROOF TEST

is any specified test required for a fastener to indicate that is suitable for the purpose intended.

ROCKWELL HARDNESS (Hrc)

This is a specific method of measuring the hardness of a fastener. The "c" denotes a specific size indenter which penetrates the surface of the prepared specimen.

SHEAR JOINT

A joint in which the fastener has the load applied across the axis and which tends to sever it.

SHEAR STRENGTH

This is the maximum strength of the fastener when it is subjected to shear (transverse) loading.



TENSILE STRENGTH

Is the force or stress required to break a fastener when the force or stress is applied in straight tension.



TENSION JOINT

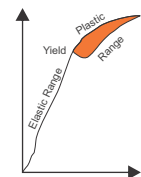
A joint in which the fastener has the load applied to the longitudinal direction and which tends to elongate it.

TORSION

is the twisting force applied to a fastener during tightening.

YIELD STRENGTH

This is the maximum force or stress that can be applied to a fastener without permanent (plastic) deformation occurring.



Quick Product Selection Guide

PRODUCT	TENSILE STRENGTH		SIZE RANGE				EQUIVALENT STANDARDS					
	Property Class		Diameter		Length							
	Psi. Min.	N/mm ²	Metric	Inch*	Metric	Inch*	IS	ISO	DIN	BS	ANSI	JIS
Socket Head Cap Screws 	190000	1,300 (12.9)	M2 to M42	1/8 to 1"	6 to 300 mm	3/16" to 10"	2269	4762	912	4168 2470	B18.3.1M	B1176
Socket Countersunk Head Screws 	160000	1,050 (12.9)	M3 to M24	3/16" to 5/16"	6 to 60 mm	3/8" to 1.1/4"	6761	--	7991	4168 2470	B18.3.5M	--
Socket Button Head Cap Screws 	--	1,050 (12.9)	M3 to M12	--	6 to 50 mm	--	--	7380	9427	4168	B18.3.4M	--
Socket Head Shoulder Screw 	--	(12.9)	M6 to M24	--	10 to 120 mm	--	--	7379	9841	4168	--	--
Socket Set Screws Knurled Cup 	Hardness HRc 45 Min.		M3 to M20	1/8" to 3/4"	3 to 85 mm	3/16" to 3"	6094	4026 4027 4028 4029	913 914 915 916	4168 2470	B18.3.6M	B1177
Durlok Bolt 	--	12.9	M6 to M20	--	12 to 100 mm	--	As Per Unbrako Specification					
Hex Wrenches 	Hardness HRc 47 Min.		1.5 to 32 mm	1/16" to 3/4"	--	--	3082	2936	911	4168 2470	B18.3.2M	B4648
Hex Head Bolts 	800/830 (8.8) 1,040 (10.9)	Grade R,S V	M4 to M42	1/4" to 2"	10 to 300 mm	1/2" to 12"	1364	4014 4017	931 933	1083 1768	B18.2.1	B1180
Hex Nuts 	Nut Grade 8/10	Nut Grade 8/5	M6 to M72	1/4" to 1-1/2"	--	--	1364	4032	934	1083 1768	B18.2.4.1M B18.2.2	B1181
High Strength Structural Bolts, Nuts, Washers 	Bolts 8.8/10.9 Nuts 8/10	--	M16 to M30	--	40 to 300 mm	--	3757 6623 6649	7412 4775 7415	6914 6915 6916	4395	B18.2.3.7M B18.2.4.6M	B1186
Stud With 2 Heavy nuts 	Stud B7 Nut 2H		M12-M56	1/2" to 2-1/4"	60 to 500 mm	2.1/4" to 27"					A193 A194	
Special Products 	--	800/830 (8.8) 1,040 (10.9)	M3 to M42	1/8" to 1"	6 to 410 mm	3/8" to 12"	As per customer specifications					

*Thread type in any of the following inch series : BSW, BA, UNC & UNF.

** Thread type in NPTF

Note : UNBRAKO standards meet, or in many instances, exceed the requirements of the standards listed.

Plating : No guarantee can be given for UNBRAKO products which have been plated by the users and / or outside plates, who may not have considered hydrogen embrittlement problem.

Thread Size Comparison

METRIC PRODUCTS							UNIFIED INCH PRODUCTS				B.S. INCH PRODUCTS					
SIZE	THREAD PITCH & T.P.I.				Major Dia		SIZE	T.P.I.		Major Dia	SIZE	T.P.I.		Major Dia	T.P.I.	Major Dia
	COARSE		FINE					UNC	UNF			inch	BSW			
	PITCH (mm)	T.P.I.	PITCH (mm)	T.P.I.	mm	Inch				inch				inch	inch	inch
M3	0.50	51	–	–	3.00	0.118	#5	40	44	0.125	1/8	40	-	0.125		
							#6	32	40	0.138	5 BA				43.1	0.126
											4 BA				38.5	0.142
M4	0.70	36	–	–	4.00	0.157	#8	32	36	0.164	3 BA	24	32	0.187	34.8	0.161
M5	0.80	32	–	–	5.00	0.197	#10	24	32	0.190	3/16					
											2 BA				31.3	0.185
											1 BA				28.2	0.209
M6	1.0	25	–	–	6.00	0.236	1/4	20	28	0.250	1/4	20	26	0.250	25.4	0.236
											0 BA					
M8	1.25	20	1.00	25	8.00	0.315	5/16	18	24	0.313	5/16	18	22	0.313		
M10	1.50	17	1.25	20	10.00	0.394	3/8	16	24	0.375	3/8	16	20	0.375		
											7/16	14	18	0.438		
M12	1.75	14.5	1.25	20	12.00	0.472	1/2	13	20	0.500	1/2	12	16	0.500		
(M14)	2.00	12.5	1.50	17	14.00	0.551										
M16	2.00	12.5	1.50	17	16.00	0.630	5/8	11	18	0.625	5/8	11	14	0.625		
(M18)	2.50	10	1.50	17	18.00	0.709										
M20	2.50	10	1.50	17	20.00	0.787	3/4	10	16	0.750	3/4	10	12	0.750		
(M22)	2.50	10	1.50	17	22.00	0.866	7/8	9	14	0.875	7/8	9	11	0.875		
M24	3.00	8.5	2.00	13	24.00	0.945	1	8	12	1.000	1	8	10	1.000		
							1-1/8	7	12	1.125	1-1/8	7	9	1.125		
(M27)	3.00	8.50	2.00	13	27.00	1.063										
M30	3.50	7.25	2.00	13	30.00	1.181	1-1/4	7	12	1.250	1-1/4	7	9	1.250		
(M33)	3.50	7.25	2.00	13	33.00	1.299	1-1/2	6	12	1.500	1-1/2	6	8	1.500		
M36	4.00	6.40	3.00	8.5	36.00	1.417										
(M39)	4.00	6.40	3.00	8.5	39.00	1.535										
M42	4.50	5.60	3.00	8.5	42.00	1.653										

Note : Sizes in brackets are non-preferred standards

Plating : No guarantee can be given for UNBRAKO products which have been plated by the users and / outside plates, who may not have considered hydrogen embrittlement problem.

Limited Warranty and Exclusive Remedy



Deepak Fasteners Ltd., through its Unbrako Division and associated companies, warrants that these products conform to industry standards specified herein and will be free from defects in materials and workmanship. This warranty is expressly given in lieu of any and all other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose, and in lieu of any other obligation on the part of Deepak Fasteners.

Deepak Fasteners will at its option, repair or replace free of charge (excluding all shipping and handling costs) any products which have not been subject to misuse, abuse, or modification and which in its sole determination were not manufactured in compliance with the warranty given above.

Deepak Fasteners makes no representations or warranties, express or implied, that anything imported, made, used, sold, or otherwise provided under any sale agreement is or will be free from infringement of patents / other proprietary rights of any third persons. Nothing in this application, or any agreement, shall be construed as giving rise to any obligation on Deepak Fasteners part to indemnify or hold harmless any Buyer from any liability relating to Buyer's purchase, use, or re-sale of Deepak Fasteners product, or the incorporation of Deepak Fasteners product into another manufactured product.

The remedy provided herein shall be the exclusive remedy for any breach of warranty or any claim arising in any way out of the manufacture, sale or use of these products. In no event shall Deepak Fasteners be liable for consequential, incidental or any other damages of any nature whatsoever except those specifically provided herein for any breach of warranty or any claim arising in any way of the manufacture, sale or use of these products. No other person is authorized by Deepak Fasteners to give any other warranty, written or oral, pertaining to the products.

Socket Screws

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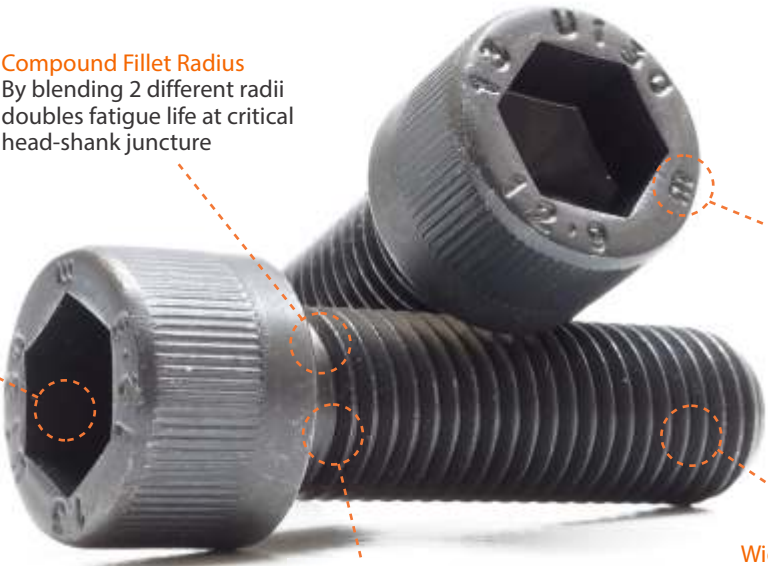
Unbrako Socket Range

Unbrako is the world's leading socket screw brand with more than 100 years experience of supplying to high-end industries, such as the automotive, aerospace, petrochemical, heavy machinery and military sectors.

Unbrako socket screws meet/exceed industry standards. Unbrako is top-grade solution for those industrial end-users who demand maximum precision, product lifespan, reliability and premium technical services.

Superior performance ultimately translates into cost savings: reduced number of parts, reduced weight and size of equipment, less equipment failure and downtime, longer product life and lower total cost.

Advantages



Compound Fillet Radius
By blending 2 different radii doubles fatigue life at critical head-shank juncture

Better installation ability
Deep, accurate socket for perfect fit and high-torque wrenching

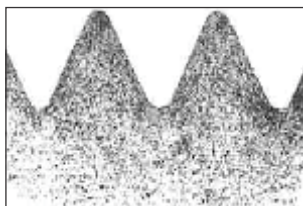
Patented E-Code™ "Lot Code" Markings
The ultimate in fastener traceability

Higher Min ULT Tensile
Unbrako Socket Screws are 10,000 PSI stronger than industry standard

3R Radiused Root Runout Thread
Increases fatigue life up to 300%

Wide Radius Threads
Fully formed radiused thread increases fatigue life 100% over flat root thread forms.

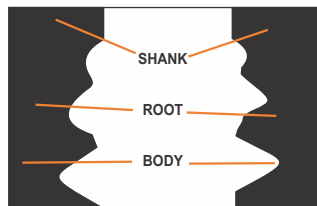
Contour flow & root radius



Contour-following flow lines provide extra shear strength in threads, resist stripping and provide high fatigue resistance.

Extra large root radius doubles fatigue life compared to flat root thread forms.

Controlled runout root radius



Unbrako's controlled runout root radius provides a smooth form that distributes stress and increases fatigue life of thread runout up to 300% for certain sizes.

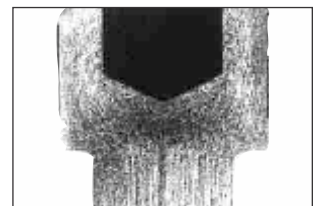
The sharp angle at the root of conventional threads results in high stress concentration and crack initiation points.

Forged heads



Controlled head forging, uniform grain flow and unbroken flow lines, make heads stronger, minimizes failure in vital fillet area, and improves fatigue strength.

Accurate socket depth



Accurate socket depth allows more wrench engagement than other screw, permitting tightening without cracking or reaming the socket while providing ample metal in the crucial fillet area for maximum head strength.



Marking*

Socket Head Cap Screw - Metric

Diameter	M2 Wrench Key Size 1.5mm			M2.5 Wrench Key Size 2mm			M3 Wrench Key Size 2.5mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
3	104151	1,674	500							
4	104152	750	500							
5	104154	763	500	104161	724	500	106218	1,181	500	
6	104155	778	500	104162	750	500	103002	1,017	500	
8	104157	790	500	104163	771	500	122097	743	500	
10	104159	805	500	104164	790	500	113583	621	500	
12	106216	830	500	104166	871	500	120870	621	500	
16							103003	619	500	
20							113623	619	500	
25							103010	679	500	
30							103013	795	500	
35							106219	994	500	
40							406027	1,138	500	
45							700034	1,259	500	

Diameter	M4 Wrench Key Size 3mm			M5 Wrench Key Size 4mm			M6 Wrench Key Size 5mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
6	106223	960	500	106224	823	500				
8	113810	678	500	122122	701	500	103042	952	200	
10	113839	541	500	122243	388	500	122111	631	200	
12	121077	487	500	121094	388	500	120872	598	200	
16	103014	508	500	103024	424	500	103044	567	200	
20	125753	544	500	113970	455	200	119790	631	200	
25	125381	597	500	121096	487	200	119937	708	200	
30	103018	708	500	103029	591	200	122121	799	200	
35	103019	775	200	115292	649	200	121090	876	200	
40	103021	856	200	103030	708	200	121075	952	200	
45	103022	977	200	103031	767	200	122087	1,030	200	
50	103023	1,121	200	103035	775	200	112624	1,123	200	
55	400835	1,802	200	103038	1,327	200	113128	1,223	200	
60	180011	2,300	200	103040	1,701	200	122088	2,261	200	
65	551167	2,978	200	106225	1,843	200	103047	2,345	200	
70				106228	1,984	200	103048	2,446	200	
75				700072	2,416	200	103049	2,675	200	
80				404774	2,552	200	103051	2,899	200	
90				181525	2,817	200	103052	3,113	200	
100				551170	3,798	200	103053	3,515	200	
110							103054	4,745	100	
120							103055	5,190	100	
130							183896	5,599	100	
140							700097	6,009	100	
150							551172	6,390	100	

*Note: "X" marking on SHCS is the internal coding for product traceability, it can be changed with any alphanumeric.
All Products of sizes smaller than M5 or 1/4" have no head marking due to space constraint

Grey highlighted items are full threaded



Marking*

Socket Head Cap Screw - Metric

Diameter	M8 Wrench Key Size 6mm			M10 Wrench Key Size 8mm			M12 Wrench Key Size 10mm			M14 Wrench Key Size 12mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
10	103056	1,224	200										
12	114972	922	200	106237	1,397	200							
16	103058	767	200	103080	1,301	200	106247	3,982	100				
20	122086	826	200	113163	1,355	200	112607	3,364	100				
25	119351	847	200	115060	1,294	100	122250	2,948	100	400528	8,104	50	
30	119383	986	200	122114	1,388	100	122251	2,799	100	400529	7,882	50	
35	122113	1,015	200	113257	1,498	100	125530	2,933	100	400530	6,627	50	
40	113143	1,162	200	100845	1,787	100	114996	2,876	100	400531	6,783	50	
45	121076	1,319	200	121088	1,977	100	115075	3,150	50	400532	6,907	50	
50	121068	1,388	200	125660	2,162	100	112360	2,991	50	120863	7,062	50	
55	103063	1,532	100	103087	2,335	100	122255	3,586	50	400533	7,150	50	
60	121070	1,648	100	122217	2,526	100	122260	3,692	50	112000	7,574	50	
65	103064	1,794	100	103088	2,730	100	122261	3,876	50	400534	7,690	50	
70	103066	1,969	100	125786	2,943	50	103098	4,082	50	400535	8,291	50	
75	103069	2,033	100	103090	3,133	50	103099	4,388	50	400536	8,779	50	
80	103070	2,934	100	103091	4,334	50	103100	5,123	50	400537	9,190	20	
90	103073	3,405	100	103094	4,956	50	103103	5,793	50	400538	9,399	20	
100	103075	4,038	100	103095	5,647	50	122142	6,400	50	400539	11,666	25	
110	103076	5,193	100	103096	6,689	50	125791	7,882	25	400540	13,031	25	
120	103077	6,065	50	103097	6,765	50	103104	9,062	25	400508	13,697	25	
130	106230	7,360	50	106240	9,209	50	103107	10,722	25	180223	15,475	25	
140	106231	7,904	50	106241	10,277	50	103108	11,957	25	180103	16,984	25	
150	106232	8,537	50	106242	11,430	50	103110	13,216	25	180225	18,150	25	
160	106233	9,361	100	106243	15,439	50	107456	21,790	25	180226	18,833	10	
170	700125	10,106	100	210001	17,023	50	181063	24,626	20	210002	20,568	10	
180	106234	10,653	100	106244	17,367	25	107458	23,957	20	180227	21,779	10	
200	106235	11,772	100	106245	18,564	25	107459	25,936	20	551663	24,581	10	
220				400517	23,850	25	400570	29,532	20	791320	27,040	10	
230							183555	36,986	20	791321	28,131	10	
240							400571	44,337	20	791322	29,361	10	
260				809653	24,500	20	400572	50,666	20	791323	31,546	10	
280				811605	26,500	20	400573	53,082	20	791324	34,005	10	

Grey highlighted items are full threaded

1. Specifications : Generally conforming to IS 2269, DIN 912, ISO 4762.
2. Threads : ISO Metric (Coarse Series) 4g6g as per IS 4218, ISO 261, ISO 965.
3. Material : Unbrako high grade alloy steel.
4. Mechanical Properties : Property Class 12.9 as per IS 1367, ISO 898 Part I.
5. Note : Upto 80mm Diameter can be manufactured against request.
6. For sizes beyond those listed, prices available on request.
7. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
8. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

*Note: "X" marking on SHCS is the internal coding for product traceability, it can be changed with any alphanumeric.
All Products of sizes smaller than M5 or 1/4" have no head marking due to space constraint



Socket Head Cap Screw - Metric

DIA	M16 Wrench Key Size 14mm			M18 Wrench Key Size 14mm			M20 Wrench Key Size 17mm			M22 Wrench Key Size 17mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
20	210003	7,536	50										
25	106248	7,331	50					210006	18,461	25			
30	103112	7,331	50	183894	20,572	20	107465	17,960	10				
35	103113	6,016	50	400541	20,830	20	107466	18,196	10				
40	125751	6,171	50	400542	18,240	20	103130	15,478	10	180408	23,409	10	
45	103115	6,427	50	400606	18,374	25	103131	16,022	10	180409	24,768	10	
50	112474	6,406	25	100844	18,517	10	103132	15,359	10	180181	22,118	10	
55	103117	6,818	25	400543	18,632	10	103136	15,809	10	180182	24,205	10	
60	112594	6,890	25	400544	18,780	10	103137	15,568	10	180183	25,575	10	
65	103118	7,496	20	400545	18,934	25	103138	16,074	10	180184	27,709	10	
70	103119	8,089	20	400546	20,220	10	103141	17,665	10	180185	29,013	10	
75	103120	8,794	20	400547	21,540	10	103142	18,284	10	210007	30,756	10	
80	125658	8,955	20	400549	21,959	10	103143	18,224	10	180186	32,326	10	
90	103122	9,980	10	400550	22,404	10	103144	19,011	10	180187	32,993	10	
100	103123	11,371	10	400551	23,503	10	103145	20,492	10	180188	35,757	10	
110	103124	12,694	20	400548	26,006	25	103146	22,682	10	180189	37,839	10	
120	103126	13,354	20	400552	28,483	15	103148	24,872	10	180190	40,893	5	
130	103127	15,219	20	180311	31,714	10	103150	27,033	10	180191	55,281	5	
140	103128	16,302	20	180229	35,209	10	103151	29,204	10	180192	62,834	5	
150	103129	17,370	20	180407	36,799	10	103152	31,981	10	180193	83,771	5	
160	103364	34,588	10	180230	39,254	10	107462	40,989	10	180194	1,01,613	5	
170	180418	38,521	10	210005	46,485	10	180495	48,175	10	791330	1,05,494	5	
180	107460	39,597	10	100231	55,218	10	107463	46,811	10	180196	1,11,764	5	
200	107448	42,567	10	551668	58,784	10	107464	48,827	10	180198	1,19,623	5	
220	400574	49,134	10	791325	64,358	10	400553	52,340	10	210008	1,27,866	5	
230	182815	55,706	10	791326	67,676	10	181001	67,186	5	791331	1,33,371	5	
240	400575	57,729	10	791327	70,329	10	400554	82,029	5	210009	1,41,876	5	
260	400576	72,881	10	791328	75,637	10	400555	1,00,625	5	210010	1,52,307	5	
280	400577	88,023	10	551667	80,945	10	400556	1,19,205	5	210011	1,58,317	5	
300	400578	94,310	10	791329	86,253	10	400557	1,27,719	5	210012	1,69,628	5	
340							796973	1,41,000	5				

Grey highlighted items are full threaded

1. Specifications : Generally conforming to IS 2269, DIN 912, ISO 4762.
2. Threads : ISO Metric (coarse series) 4g6g as per IS 4218, ISO 261, ISO 965.
3. Material : Unbrako high grade alloy steel.
4. Mechanical Properties : Property Class 12.9 as per IS 1367, ISO 898 Part I.
5. Note : Upto 80mm diameter can be manufactured against request.
6. For sizes beyond those listed, prices on application.
7. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
8. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

*Note : "X" marking on SHCS is the internal coding for product traceability, it can be changed with any alphanumeric.
All Products of sizes smaller than M5 or 1/4" have no head marking due to space constraint



Socket Head Cap Screw - Metric

Diameter	M24 Wrench Key Size 19mm			M27 Wrench Key Size 19mm			M30 Wrench Key Size 22mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
45	103153	20,615	10							
50	103155	19,748	10					551648	46,134	5
55	103157	22,225	10							
60	103158	22,844	10	180233	40,605	5	180207	41,610	5	
65	103159	24,288	10	581201	43,126	5	210014	41,324	5	
70	103160	25,911	10	180326	44,044	5	116464	45,743	5	
75	103161	27,453	10	210013	46,282	5	182283	46,335	5	
80	103162	28,874	10	406161	49,378	5	140610	48,083	5	
90	103163	30,290	10	406162	52,855	5	140611	50,512	5	
100	103165	31,943	10	406163	56,379	5	140612	56,444	5	
110	103166	33,783	10	406164	59,907	5	140613	59,966	5	
120	103167	37,544	10	400607	63,428	5	140614	63,492	5	
130	103168	39,259	5	406165	67,832	5	140615	67,899	5	
140	103170	41,982	5	406166	70,476	5	140616	72,519	5	
150	103171	44,726	5	400608	74,887	5	140617	74,967	5	
160	104143	74,424	5	400609	1,18,051	5	140618	1,16,100	4	
170				406167	1,21,935	5				
180	104146	77,693	5	406168	1,30,388	5	140620	1,28,221	4	
200	104147	83,168	5	400579	1,41,847	5	140621	1,39,483	5	
220	400560	89,009	5	180003	1,76,820	4	400622	1,73,208	3	
240	400561	94,856	5	406171	1,95,929	4	400623	1,89,818	3	
260	400562	97,823	5	406172	2,13,414	3	140624	1,99,270	2	
280	400563	1,02,773	5	406173	2,27,776	3	140625	2,12,330	2	
300	400564	1,10,117	5	406174	2,40,307	3	400626	2,25,393	2	
310	818254	1,05,171	5							
320	400565	1,08,257	5				180848	2,36,500	2	
340	400566	1,14,429	5							
370							818243	2,69,211	2	
380							182648	2,75,200	2	
400	786983	1,55,829	3				183066	2,87,200	2	

Grey highlighted items are full threaded



Socket Head Cap Screw - Metric

Diameter	M33 Wrench Key Size 24mm			M36 Wrench Key Size 27mm			M42 Wrench Key Size 32mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
75	210015	71,538	5							
80	180254	72,242	5	140629	86,776	5				
90	400649	80,599	5	140630	94,742	5	182336	1,37,739	5	
100	400628	84,221	5	140631	94,769	5	400645	1,50,892	12	
110	180255	86,347	5	400632	99,915	4	700380	1,54,993	12	
120	180256	94,255	5	140633	1,04,232	4	183113	1,68,552	10	
130	405492	1,01,429	5	400634	1,10,821	4	182331	1,72,176	10	
140	180257	1,04,846	4	140635	1,18,886	3	700383	1,86,298	9	
150	180258	1,10,133	4	140636	1,23,172	3	180960	1,90,207	9	
160	180259	1,45,814	4	140637	1,65,759	3	181289	2,66,015	9	
180	180261	1,62,102	3	140639	1,85,205	3	182059	2,82,329	8	
200	180263	1,76,197	3	140640	2,00,712	2	181290	3,05,868	7	
220	210016	2,18,358	3	180294	2,48,164	2	400647	3,83,723	7	
240	210017	2,35,231	3	140641	2,54,990	2	182510	3,99,980	6	
260	210018	2,46,078	2	140642	2,73,086	9	700390	4,26,628	6	
280	210019	2,59,624	2	180411	2,91,240	8	181291	4,53,299	6	
300	210020	2,79,896	2	140643	3,18,038	8	180863	4,79,964	6	
320				180490	3,41,714	8				
340				181287	3,60,000	8	700394	5,02,857	5	
360				183067	3,78,286	8	700395	5,28,000	5	
380				183068	3,96,571	5	700396	5,53,143	3	
400				400644	4,14,857	5	700397	5,78,286	3	
420				796957	4,87,286	5				
460				796960	5,28,429	5				
480				796961	5,49,000	3				
500				551866	5,69,572	3				
520				796963	5,90,143	3				
560				796965	6,31,286	3				
580				796966	6,51,857	2				
650				796968	7,23,857	2				

Grey highlighted items are full threaded



Socket Head Cap Screw - Inch (BSW)

Diameter	3/16 Wrench Key Size 5/32"			1/4 Wrench Key Size 3/16"			5/16 Wrench Key Size 7/32"			3/8 Wrench Key Size 5/16"			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
3/8	400056	563	200	400068	674	200							
1/2	400057	563	200	400069	655	200	400085	930	200	400101	1,408	200	
5/8	400058	497	200	400070	641	200	400086	792	200	400102	1,367	200	
3/4	400059	563	200	400071	674	200	400087	850	200	400103	1,173	200	
7/8	551219	598	200	400072	696	200	400088	862	200	400104	1,339	200	
1	400061	630	200	400073	755	200	400089	922	200	400105	1,301	200	
1 1/4	400062	697	200	400074	829	200	400090	1,057	200	400106	1,426	100	
1 1/2	400063	795	200	400075	952	200	400091	1,183	200	400107	1,588	100	
1 3/4	400064	906	200	400076	1,165	200	400092	1,398	200	400108	1,898	50	
2	400065	906	200	400077	1,134	200	400093	1,398	200	400109	1,971	100	
2 1/4	210021	1,071	200	400078	2,297	200	400094	1,679	200	400110	2,276	100	
2 1/2	400066	1,192	200	400079	2,364	200	400095	1,679	100	400111	2,445	100	
2 3/4				400080	2,764	200	404433	2,048	100	400112	2,736	100	
3				400081	2,764	200	400096	1,991	100	400113	2,736	100	
3 1/4				400082	3,315	200	701026	3,421	100	400114	4,006	50	
3 1/2				400083	3,223	200	400098	3,421	100	400115	4,103	50	
4				400084	3,651	100	400099	4,059	100	400116	4,816	50	
4 1/2							400100	6,546	100	400117	7,300	50	
5							701030	7,377	100	400118	8,661	50	
5 1/2										400181	10,409	50	
6										400119	11,019	50	

Grey highlighted items are full threaded

1. Specifications : Generally conforming to BS 2470.
2. Threads : BS Whitworth Fine, Medium as per BS 84.
3. Material : Unbrako high grade alloy steel.
4. Mechanical Properties : As per BS 2470
5. Note : Upto 4 Inch Dia can be manufactured against request.
6. Plating : No guarantee can given for unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
7. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

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All Products of sizes smaller than M5 or 1/4" have no head marking due to space constraint



Socket Head Cap Screw - Inch (BSW)

Diameter	7/16" Wrench Key Size 5/16"			1/2" Wrench Key Size 3/8"			5/8" Wrench Key Size 1/2"			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
3/4	551220	3,260	100	400130	3,589	100				
7/8	791967	3,260	100	402942	3,589	100		210033	6,972	50
1	400121	3,154	100	400131	3,049	100		400150	6,783	50
1 1/4	400122	3,154	100	400132	3,196	100		400151	5,894	50
1 1/2	400123	3,215	100	400133	3,252	50		400152	6,101	50
1 3/4	400124	3,438	100	400134	3,474	50		400153	6,490	50
2	400125	3,438	100	400135	3,631	50		400154	6,797	20
2 1/4	210025	3,951	50	400136	4,187	50		400155	7,385	20
2 1/2	701059	4,139	50	400137	4,367	50		400156	7,592	20
2 3/4	210026	4,457	50	400138	4,743	50		400157	8,108	20
3	400127	4,543	20	400139	5,157	50		400158	8,335	20
3 1/4	210027	6,042	50	400140	6,164	50		701096	9,314	10
3 1/2	400128	5,877	50	400141	6,164	20		400159	9,719	10
4	400129	6,807	20	400142	7,330	25		400160	11,546	10
4 1/2	210028	10,047	50	400143	8,759	25		400161	11,917	15
5	210029	9,775	25	400144	10,783	25		400162	13,143	15
5 1/2	210030	11,452	50	400145	11,872	20		400163	16,778	20
6	210031	11,464	25	400146	12,289	20		400164	18,283	20
6 1/2				400147	24,382	20		400165	37,780	10
7				400148	24,871	15		400166	38,833	10
7 1/2				210032	25,845	15		210035	40,323	10
8				400149	27,684	25		400167	41,666	10
8 1/2								210036	56,044	10
9								210037	54,635	10
10								210038	71,490	10

Grey highlighted items are full threaded

1. Specifications : Generally conforming to BS 2470.
2. Threads : BS Whitworth Fine, Medium as per BS 84.
3. Material : Unbrako High Grade Alloy Steel.
4. Mechanical Properties : As per BS 2470
5. Note : Upto 4 Inch Dia can be manufactured against request.
6. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
7. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

*Note : "X" marking on SHCS is the internal coding for product traceability, it can be changed with any alphanumeric.
All Products of sizes smaller than M5 or 1/4" have no head marking due to space constraint



Socket Head Cap Screw - Inch (BSW)

Diameter	3/4"			7/8"			1"		
	Wrench Key Size 9/16"			Wrench Key Size 9/16"			Wrench Key Size 5/8"		
Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
1	210039	17,398	50						
1 1/4	400168	16,926	10						
1 1/2	400169	14,928	10	400187	24,041	10	210054	22,536	15
1 3/4	400170	15,268	10	210043	25,689	10	210055	23,420	15
2	400171	15,696	10	400188	24,991	10	400194	23,869	10
2 1/4	400172	16,034	10	404637	27,672	10	404571	26,450	10
2 1/2	400173	16,034	10	400189	26,921	10	400195	26,450	10
2 3/4	400174	17,751	10	210044	31,119	10	210056	29,790	10
3	400175	18,248	10	400190	30,334	10	400196	28,980	10
3 1/4	400176	18,959	10	701133	34,389	10	210057	31,957	10
3 1/2	400177	18,443	10	400191	33,455	10	400197	31,957	10
4	400178	19,878	10	400192	35,296	10	400198	35,299	5
4 1/2	400179	23,509	10	701136	41,504	10	400199	39,542	5
5	400180	25,542	10	701137	45,833	10	400200	43,801	5
5 1/2	701121	29,053	10	210047	47,721	10	183785	45,592	5
6	400182	31,889	10	400193	52,246	10	400201	50,881	5
6 1/2	400183	40,763	10	210048	90,706	5	210059	83,710	5
7	400184	41,708	10	701139	90,706	5	400202	86,720	5
7 1/2	210040	43,847	10	210050	93,985	5	210060	89,821	5
8	400185	43,518	10	210051	93,414	5	400203	92,831	5
8 1/2	210041	51,908	10	210052	1,01,336	5	210061	1,01,514	5
9	400186	51,908	10	210053	1,01,336	5	210062	1,04,437	5
10	701127	57,675	5	551078	1,15,321	5	210063	1,16,041	5

Grey highlighted items are full threaded

1. Specifications : Generally conforming to BS 2470.
2. Threads : BS Whitworth Fine, Medium as per BS 84.
3. Material : Unbrako high grade alloy steel.
4. Mechanical Properties : As per BS 2470
5. Note : Upto 4 Inch Dia can be manufactured against request.
6. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
7. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

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All Products of sizes smaller than M5 or 1/4" have no head marking due to space constraint



Countersunk Socket Head Cap Screws (CSK) - Metric

Diameter	M3		M4		M5		M6		M8	
	Wrench Key Size 2mm		Wrench Key Size 2.5mm		Wrench Key Size 3mm		Wrench Key Size 4mm		Wrench Key Size 5mm	
Length	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
6	106283	984								
8	103303	1,161	103309	630	103318	933	103325	721		
10	103304	1,247	103311	630	103319	614	103328	727		
12	103305	1,338	103312	636	103320	669	103329	708	103337	948
14					401676	695	401678	773		
16	103306	1,516	103313	719	103321	719	103330	795	103338	921
18			401675	731	401677	727	401679	824	401681	933
20	103308	1,694	103315	741	103322	735	103331	849	103340	989
25	106284	1,875	103316	908	103323	864	103332	969	103341	1,134
30	106285	1,943	103317	1,097	103324	1,097	103333	1,115	103342	1,296
35			220001	2,278	106289	1,462	103334	1,266	103343	1,474
40			220002	2,437	220005	2,278	103335	1,490	103344	1,729
45			220003	2,742	220006	2,565	220008	2,653	106297	1,941
50			220004	3,046	220007	2,847	220009	3,319	220011	3,041
55							220010	3,650	220012	3,632
60									220013	3,960
70									106301	4,950
Qty. Per Box	200									

Diameter	M10		M12		M16		M20		M24	
	Wrench Key Size 6mm		Wrench Key Size 8mm		Wrench Key Size 10mm		Wrench Key Size 12mm		Wrench Key Size 14mm	
Length	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
12	103345	1,621								
16	103347	1,541								
20	103348	1,324	103353	2,987						
25	103349	1,537	103354	2,807						
30	103350	1,762	103355	3,215	103359	6,042				
35	103351	2,026	103356	3,457	103360	6,512	106328	14,242		
40	103352	2,321	103357	3,727	103361	6,785	106332	12,356		
45	106302	2,612	106311	4,219	106318	7,656	106334	13,256		
50	106303	2,948	103358	4,603	103362	7,693	106335	14,132	220032	23,986
55	106304	3,632	106312	5,250	106320	8,816	106336	14,999	220033	25,997
60	220014	3,960	106313	5,658	103363	9,304	106337	15,862	401689	28,005
65	220015	4,291	220020	6,435	183908	9,790	183912	16,761	220034	30,015
70	220016	4,622	220021	6,930	106321	10,278	106338	17,660	401690	32,026
75	220017	5,941	220022	7,426	220025	12,665	183913	19,197	220035	34,036
80	220018	6,337	220023	8,596	220026	13,237	106339	21,993	401691	36,044
90	220019	7,130			106325	14,469	106341	22,860	401692	40,066
100					629621	17,104	106342	28,376	401693	45,559
110							220029	31,374	701356	51,052
120							220030	34,369	183179	56,547
130							220031	37,017	701358	62,041
Qty. Per Box	100		50		25		10		5	

Quantity per box 25
Quantity per box 200

- Note : All sizes are fully threaded. 2. Specifications : Generally conforming to IS 6761, ISO 10642
- Threads : ISO Metric, 4g6g as per IS 4218. 4. Material : UNBRAKO high grade alloy steel.
- Mechanical Properties : Property Class 12.9 as per IS 1367, ISO 898 Part - I
- Bold black lines are used to indicate quantity per box.
- Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



Socket Low Head Cap Screws (LHCS) - Metric

Diameter	M4 Wrench Key Size 3mm		M5 Wrench Key Size 4mm		M6 Wrench Key Size 5mm		M8 Wrench Key Size 6mm	
	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
Length								
8	106250	1,169	106262	1,169	106263	1,169		
10	106251	902	103500	801	103508	778		
12	106255	813	103501	813	103509	781	103519	1,014
15			400790	1,102	400792	1,068	400791	1,242
16	106256	868	103502	794	103511	753	103520	921
20	106257	957	103597	842	103512	842	103521	955
25	106260	957	103503	907	103515	932	103525	1,021
30	406185	1,603	103505	1,030	103516	1,023	103526	1,148
35					103517	1,125	103528	1,244
40					103518	1,670	103529	1,340
45					106264	1,853		
Qty. Per Box	200							

DIA	M10 Wrench Key Size 8mm			M12 Wrench Key Size 10mm			M16 Wrench Key Size 12mm			M20 Wrench Key Size 14mm		
	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
Length												
16	103532	1,403	200									
20	103533	1,240	200	103549	3,450	100						
25	103534	1,371	200	103550	3,061	100						
30	103535	1,536	200	103551	2,950	100	103562	6,061	25			
35	103536	1,625	200	103552	2,983	100	103563	6,515	25			
40	103538	1,753	100	103553	3,005	50	103564	6,401	25	103578	15,248	25
45	106271	2,983	100				106277	6,061	25			
50	103541	3,241	100	103554	3,240	50	103565	6,898	25	103580	17,919	25
55	106272	3,509	100									
60				103555	4,682	50	103566	10,115	25	103581	20,591	25
90							103574	14,424	25			
100							103575	15,529	25	103599	31,943	25

Grey highlighted items are full threaded

1. Specifications : Generally conforming to Unbrako Specification DIN 7984 + 6912 (Except for Head & Socket Dims), ASME B18.3.1M
2. Threads : ISO Metric (Coarse Series) 4g6g.
3. Mechanical Properties : Property Class 10.9 as per IS 1367, ISO 898 Part I.
4. For sizes beyond those listed, prices on request.
5. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
7. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



Socket Head Shoulder Screws - Metric

Diameter	M6 (M5) Wrench Key Size 3mm			M8 (M6) Wrench Key Size 4mm			M10 (M8) Wrench Key Size 5mm			M12 (M10) Wrench Key Size 4mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
10	105364	4,613	50										
12	105365	5,005	50	105375	4,606	50							
15	401484	5,781	50	401486	5,787	50	401487	7,049	50	401485	15,304	25	
16	105366	5,781	50	105377	5,937	50	105388	7,250	50	105404	9,422	25	
20	105368	6,557	50	105379	6,663	50	105390	8,054	50	105406	10,367	25	
25	105370	7,528	50	105380	7,574	50	105392	9,065	50	105407	11,554	25	
30	105372	8,501	50	105381	8,487	50	105393	10,070	50	105410	12,740	25	
40	105373	10,025	50	105383	10,309	50	105394	12,081	50	105411	15,111	25	
50				105386	11,320	50	105395	12,688	50	105412	16,899	25	
60							105396	13,410	50	105416	19,191	25	
70							105402	15,106	50	105417	20,390	25	
80							106422	16,781	50	105420	21,318	25	
90										105427	21,573	25	
100										105433	25,428	25	

Diameter	M16 (M12) Wrench Key Size 8mm			M20 (M16) Wrench Key Size 10mm			M24 (M20) Wrench Key Size 12mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
30	105434	19,603	25							
40	105435	23,049	25	105441	53,774	10				
50	105436	26,494	25	105442	60,822	10	401488	1,85,987	5	
60	105437	29,938	25	105444	67,868	10	401489	2,03,495	5	
70	105438	33,384	25	105448	74,917	10	401490	2,21,002	5	
80	105440	35,599	25	105449	81,963	10	401491	2,38,516	5	
90	106343	36,917	25	105450	89,012	10	401492	2,56,022	5	
100	106344	43,718	25	106347	96,057	10	401493	2,73,530	5	
120	106346	67,474	25	106348	1,10,152	10	401494	3,08,550	5	

1. Specifications : Generally conforming to BS 4168, DIN 9841, ISO 7379.
2. Thread Class : 4g6g (Precision Ground to h8 tolerance on the Shoulder (Size Indicator Ground Diameter))
3. Material : Unbrako High Grade Alloy Steel.
4. Mechanical Properties : Properties Class conforming to 12.9 as per ISO 898 Part - I.
5. Method of Specifying : The nominal diameter of a shoulder screw is the diameter of the shoulder & not the thread diameter but it is recommended that both are quoted, e.g. 16mm (M12) x 70mm long to BS 4168.
6. Plating : No guarantee can be given for Unbrako products which are plated by users or by outside platers, who may not have considered hydrogen embrittlement problem.
7. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



Socket Set Screws (Grub Screws)





Knurled Cup Point

Metric

Diameter	M3		M4		M5		M6		M8	
	Wrench Key Size 1.5mm		Wrench Key Size 2mm		Wrench Key Size 2.5mm		Wrench Key Size 3mm		Wrench Key Size 4mm	
Length	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
3	104076	376								
4	103172	381	103182	312	809760	217				
5	103175	386	103185	312	103194	217				
6	103176	372	103186	316	103195	220	103207	230	180002	471
8	103177	377	103187	338	103196	220	103208	250	103224	290
10	103178	398	103188	343	103197	240	103209	282	103227	308
12	103179	423	103189	381	103198	289	103211	323	103228	351
16	103180	557	103191	519	103199	336	103212	413	103229	426
20	551093	584	103193	631	103202	412	103214	494	103230	552
25	551678	736	701961	684	103203	540	103217	582	103231	837
30			406498	1,246	103204	647	103218	761	103235	1,012
35			551679	1,657	181179	1,016	103219	1,167	103236	1,397
40			551680	2,132	551094	1,271	103220	1,320	103237	1,631
45							103221	1,458	701998	1,890
50							103222	1,714	103240	2,148
55									551095	3,357
60									551096	4,086
65									551097	4,239
Qty. Per Box	200									

1. Specification : Generally conforming to the following standards
2. Threads : ISO Metric, 4g6g as per IS 4218, ISO 261, ISO 965.
3. Material : Unbrako high grade alloy steel.
4. Mechanical Properties : Property Class 45H as per IS 1367, ISO 898 Part V.
5. NOTE : PRICE FOR SPECIAL POINTS SHOWN BELOW WILL BE 25% EXTRA (MOQ applicable).
6. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
7. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

Orders for sizes with special points will be accepted subject to our confirmation.

				
	FLAT	CONE	DOG / HALF DOG	PLAIN CUP
IS	6094	6094	6094	6094
DIN	913	914	915	916
ISO	ISO-4026	ISO-4027	ISO-4028	ISO-4029



Socket Set Screws (Grub Screws)

Knurled Cup Point

Metric

Diameter	M10 Wrench Key Size 5mm		M12 Wrench Key Size 6mm		M16 Wrench Key Size 8mm		M20 Wrench Key Size 10mm	
	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
8	180099	604						
10	103241	453	551687	890				
12	103244	527	103256	747				
16	103245	703	103258	1,073	106352	2,480		
20	103246	866	103259	1,133	103274	2,790	104149	6,700
25	103247	1,268	103260	1,554	103276	3,410	103286	7,758
30	103249	1,563	103261	1,842	103277	3,906	103287	8,969
35	103251	1,896	103262	2,438	103278	4,696	103288	10,226
40	103252	2,159	103263	3,086	103279	5,407	103289	11,019
45	103253	2,466	103269	3,798	103281	6,672	103290	15,927
50	103254	2,865	103270	4,160	103282	7,571	103292	17,361
55	551098	4,247	103271	7,157	103283	10,164	103293	19,406
60	183091	5,581	103272	6,404	103284	10,632	103294	20,621
65	551099	5,829	551100	9,301	551102	15,501	551105	23,239
70			551101	10,800	182790	21,701	551106	24,532
75					551103	24,281	551107	26,671
80					551104	24,802	793979	29,528
Qty. Per Box	100				50			

1. Specifications : Generally conforming to the following standards

//// Quantity per box 200

2. Threads : ISO Metric, 4g6g as per IS 4218, ISO 261, ISO 965.

3. Material : Unbrako high grade alloy steel.

4. Mechanical Properties : Property Class 45H as per IS 1367, ISO 898 Part V.





5. NOTE : PRICE FOR SPECIAL POINT SHOWN BELOW WILL BE 25% EXTRA (MOQ applicable).

6. Bold black lines are used to indicate quantity per box.

7. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.

8. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

Orders for sizes with special points will be accepted subject to our confirmation.

				
	FLAT	CONE	DOG / HALF DOG	PLAIN CUP
IS	6094	6094	6094	6094
DIN	913	914	915	916
ISO	ISO-4026	ISO-4027	ISO-4028	ISO-4029



Socket Set Screws (Grub Screws)

Knurled Cup Point

Inch

Diameter	3/16"		1/4"		5/16"		3/8"	
	Wrench Key Size 3/32"		Wrench Key Size 1/8"		Wrench Key Size 5/32"		Wrench Key Size 3/16"	
Length	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
3/16	400949	235						
1/4	400951	229	400961	272				
5/16	400952	241	400963	287	400986	287		
3/8	400953	249	400965	300	400977	300	400988	402
1/2	400954	286	400967	306	400978	363	400989	475
5/8	551209	322	400969	398	400979	387	400990	561
3/4	400956	395	400970	605	400980	507	400991	837
1	400957	560	400972	590	400982	710	400993	1,116
1 1/4			400973	686	400984	837	400994	1,217
1 1/2			400974	1,161	400983	1,701	400995	2,418
1 3/4			551108	1,737	551109	1,817	400996	2,604
2			180730	1,553	400985	2,151	400997	3,075
Qty. Per Box	200						100	

Diameter	1/2"		5/8"		3/4"	
	Wrench Key Size 1/4"		Wrench Key Size 5/16"		Wrench Key Size 3/8"	
Length	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
1/2	401003	802				
5/8	401005	900	401015	2,124		
3/4	401006	1,272	401016	2,189	401024	4,851
1	401008	1,999	401017	2,527	401025	5,841
1 1/4	401009	1,958	401018	3,905	551110	7,196
1 1/2	401010	4,544	401019	6,158	401026	10,007
1 3/4	401012	5,918	401020	8,303	401027	11,781
2	401013	6,474	401021	7,550	401028	13,860
2 1/2	401014	8,152	401022	11,001	401029	16,968
3	702408	9,995	401023	15,782	401030	24,157
Qty. Per Box	100		50			

1. Specifications : As per standard ASME/ANSI B18.3.
2. Threads : BS Whitworth, Medium as per BS 84
3. Material : Unbrako high grade alloy steel.
4. Mechanical Properties : As per BS 2470.
5. NOTE : PRICES FOR SPECIAL POINTS 25% EXTRA (MOQ applicable).
6. Socket set screws with BSF/UNC/UNF threads can also be manufactured subject to MOQ. Price on request.
7. Bold black lines are used to indicate quantity per box.
8. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
9. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



Button Head Socket Screws - Metric

Diameter	M3 Wrench Key Size 2mm			M4 Wrench Key Size 2.5mm			M5 Wrench Key Size 3mm			M6 Wrench Key Size 4mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
5	180248	810	200										
6	106353	810	200	180200	585	200	180398	1,117	200				
8	106354	657	200	106360	585	200	180175	1,107	200	180249	2,109	200	
10	106357	754	200	106361	585	200	106365	585	200	106372	769	200	
12	106358	838	200	106363	642	200	106366	642	200	106373	782	200	
15				401218	782	200	401219	754	200	401222	894	200	
16	106359	1,061	200	106364	782	200	106367	754	200	106374	894	200	
18							406269	1,648	200	401223	894	200	
20							106368	894	200	106375	964	200	
22							401220	1,927	200				
25							106369	1,061	200	106376	1,005	200	
30							106370	1,201	200	106378	1,048	200	

Diameter	M8 Wrench Key Size 5mm			M10 Wrench Key Size 6mm			M12 Wrench Key Size 8mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
10	106379	1,286	200							
12	106380	1,090	200							
15	401226	1,117	200							
16	106382	1,117	200	106392	2,233	200	106403	3,770	100	
20	106384	1,144	200	106393	1,521	200	106404	4,049	100	
25	106385	1,341	200	106396	1,746	200	106405	4,217	100	
30	106386	1,536	200	106399	1,956	200	106406	4,719	100	
35	106389	1,871	200	106401	2,193	200	106407	5,223	100	
40	106390	2,095	200	106402	2,430	100	106408	5,724	50	
50							106413	6,730	50	

1. Specifications : Generally conforming to BS 4168.
2. Thread : ISO Metric (Coarse Series) 4g6g.
3. Material : Unbrako High Grade Alloy Steel.
4. Mechanical Properties : Properties Class conforming to 12.9 as per BS 6104, ISO 898 Part - I.
5. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
6. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

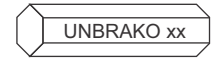


Flange Button Head Socket Screws - Metric

Diameter	M3 Wrench Key Size 2mm			M4 Wrench Key Size 2.5mm			M5 Wrench Key Size 3mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
6	404977	1,379	200							
8				404982	1,215	200				
10				404983	1,411	200	404988	1,256	200	
12				404984	1,564	200	404989	1,367	200	
16				404986	1,806	200	404991	1,648	200	
20							404992	1,732	200	
25							404994	1,843	200	

Diameter	M6 Wrench Key Size 4mm			M8 Wrench Key Size 5mm			M10 Wrench Key Size 6mm			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
10	180079	1,802	200	405005	3,827	200				
12	404997	1,773	200	405007	1,732	200				
16	404999	2,080	200	405009	2,010	200	405016	3,491	200	
20	405001	2,378	200	405011	2,262	200	405017	3,910	200	
25	405003	2,752	200	405012	2,612	200	405018	4,441	200	
30	405004	3,128	200	405013	2,961	200	405019	4,985	200	
40				405015	3,631	200				

1. Specification : Generally conforming to Unbrako specification.
2. Thread : ISO Metric (Coarse Series) 4g6g.
3. Material : Unbrako high grade alloy steel.
4. Mechanical Properties : Properties Class conforming to 12.9 as per ISO 898 Part - I.
5. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
6. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.





XX-Size

Marking*

Hexagon Wrenches

Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Length	Part No.	₹ Price/ 100 Pcs	Box Qty
1/16	108468	1,256	100	1.5	125648	1,256	100
5/64	110164	1,385	100	2	122263	1,256	100
3/32	110180	1,385	100	2.5	122270	1,256	100
1/8	110213	1,385	100	3	121093	1,385	100
5/32	110246	1,641	100	4	119953	2,174	100
3/16	115915	2,125	100	5	122245	2,652	100
7/32	115948	2,890	50	6	121066	3,776	50
1/4	115981	4,186	50	8	115557	7,110	50
5/16	115997	6,954	25	10	120859	11,867	25
3/8	116013	10,286	25	12	120806	22,324	25
1/2	116046	23,732	10	14	111100	32,836	25
9/16	116063	30,365	10	17	138487	51,932	10
5/8	116080	44,339	10	19	111133	71,663	10
3/4	116096	71,697	10	22	402603	1,12,951	5
				24	402604	1,51,865	5
				27	402605	2,55,666	2
				32	402606	4,49,617	2

Hex Wrench Sets

STANDARD (METRIC)				
Sets	Wrenches Box Set	Part No.	₹ Price/100 Pcs	Box Qty
Standard (Metric)	 1.5mm, 2mm, 2.5mm, 3mm, 4mm, 5mm, 6mm, 8mm, 10mm, Set of 9	402616	38,989	50
STANDARD (INCH)				
Sets	Wrenches Box Set	Part No.	₹ Price/100 Pcs	Box Qty
Standard (Inch)	 1/16", 5/64", 3/32", 1/8", 5/32", 3/16" 7/32", 1/4", 5/16", 3/8", Set of 10	402615	40,899	50

1. Specifications :

- A. Inch Series : BS 2470 B. Metric Series : IS 3082, DIN 911.
2. Material : UNBRAKO high grade alloy steel.
3. Mechanical Properties : Hardness : HRC 47 (Min).
4. Plating : No guarantee can given for Unbrako Products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
5. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



Dowel Pins

Metric

Diameter	M2			M3		
Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
8	407831	1,015	40			
10	407832	1,028	40	115001	1,170	40
12	407833	1,042	40	115002	1,183	40
14						
16	407835	1,067	40	115003	1,234	40
18	407836	1,067	40	402118	1,260	40
20	407837	1,080	40	115004	1,272	40
24						
28				402120	1,415	40
30				115007	1,478	40
32				402121	1,542	40
36				406345	1,672	40
40				402124	1,800	40

Diameter	M4			M5		
Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
10	115010	1,299	40	402133	1,362	40
12	115011	1,337	40	115021	1,401	40
14				402134	1,441	40
16	115012	1,415	40	115022	1,478	40
18						
20	115015	1,478	40	115024	1,568	40
24	407127	1,556	40	407128	1,645	40
28	402128	1,672	40	402137	1,786	40
30	115017	1,749	40	115026	1,876	40
32				402138	1,955	40
36				406347	2,121	40
40				115028	2,289	40
50	402132	2,558	40	115031	2,752	40

1. Specifications : Generally conforming to DIN 6325.

2. Material : Unbrako high grade alloy steel.

Unbrako dowel pins are through hardened and precision ground from nominal to 0.0002" over size on Inch sizes and a surface finish of 0.15 micrometers max. On both Metric and Inch products.

Genuine Unbrako Dowel Pins should only be supplied against these List Prices.

CAUTION: Unbrako advise that correct tools should be used for the application.

Safety goggles should be worn for your security and protection.

3. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.



Dowel Pins

Metric

Diameter	M6			M8			M10		
Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
12	402141	1,710	40						
16	115032	1,825	40						
18	402143	1,876	40						
20	115034	1,941	40	115049	2,725	40	115063	3,755	40
24	115037	2,056	40	406349	2,931	40	406351	4,075	40
28	402145	2,224	40	402150	3,187	40			
30	115038	2,328	40	115053	3,342	40	115066	4,679	40
32	402146	2,430	40	402151	3,484	40			
36	406348	2,635	40	406350	3,780	40	406352	5,322	40
40	115043	2,842	40	115055	4,063	40	115070	5,759	40
45				115056	4,487	40	115071	6,376	40
50	115046	3,393	40	115057	4,859	40	402161	6,928	40
55				402153	5,245	40			
60	115047	3,908	40	115058	5,617	40	402163	8,048	40
70							402164	9,166	40
90							402167	11,415	40
100							402169	12,559	40

Diameter	M12			M16		
Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
24	406353	5,193	40			
30	402174	6,004	40			
32				406218	11,725	20
36	406354	6,865	40			
40	402178	7,442	40	406220	14,064	20
50	402180	8,973	40			
60	402182	10,452	40			
70	402183	11,929	40	406225	23,191	20
80	402184	13,408	40	406226	26,224	20
90				406227	29,285	20
100	402186	16,415	40			

1. Specifications : Generally conforming to DIN 6325.

2. Material : Unbrako high grade alloy steel.

Unbrako dowel pins are through hardened and precision ground from nominal to 0.0002" over size on Inch sizes and a surface finish of 0.15 micrometers max. On both Metric and Inch products.

Genuine Unbrako Dowel Pins should only be supplied against these List Prices.

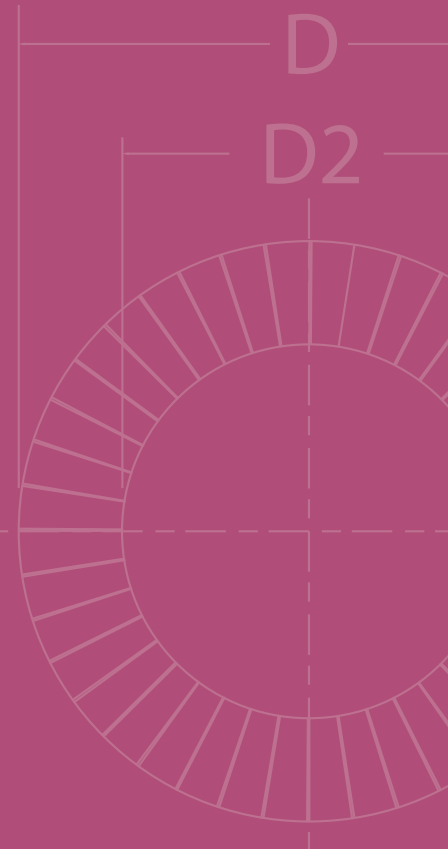
CAUTION: Unbrako advise that correct tools should be used for the application.

Safety goggles should be worn for your security and protection.

3. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.

Durlok

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35	Durlok® Washers



Durlok[®] Anti-Vibration self-locking fasteners

Will not loosen or unscrew even under the most severe transverse jarring and vibration.

Effectiveness at elevated temperatures upto 300° C is ensured.

Reusability is guaranteed with locking ability maintained.



Unique head design ensures absence of 'notch-effect' after assembly

Embedding is no greater than with standard types of fasteners.

Closely controlled manufacturing for extra safety and reliability.

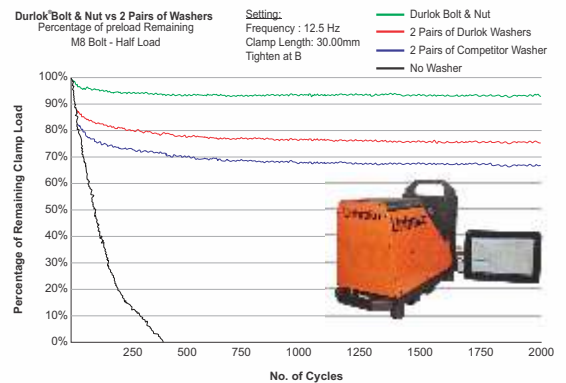
Advantages

During the 1960's, Dr. Junker while working in Unbrako's Koblenz facility in Germany completed his seminal work on the self-loosening behavior of bolted joints. This in turn led to the design of the original Durlok[®] anti-vibration nuts & bolts. The Durlok 12.9 nuts & bolts are designed for high-performance critical applications and do not require a washer. However, our industrial OEM customers requested a Durlok product in washer form for applications where it was deemed desirable to use a washer in the joint design. Thus we began researching and developed Unbrako's new Durlok locking wedge washer.

The Durlok[®] washer when used in combination with standard hex helps achieve self-locking properties. It is an anti-vibration solution that not only prevents bolted joint failure, but also enables the bolted joint to retain its pre-load, thus reducing maintenance requirements. The test regime highlighted this feature (fig 1).



Vibration Resistance Testing / Junker Test



Durlok[®] Applications

Automotive Engines
Power Unit Accessories
Transmission Units
Frames and Chassis Units
Bodywork
Vibratory Feeders
Shaking Chutes, Hoppers

Electrical equipments
Construction Machinery and Ancillary Equipments
Agriculture Machinery
Percussion Drilling Tools & Power Wrenches
Domestic Appliance





Durlok® Screws - Metric

The Durlok 12.9 nuts & Screws are designed for high-performance critical anti-vibration applications and do not require a washer.

Diameter	M6			M8			M10			M12			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
12	190540	3,212	200	190570	3,296	200							
16	190560	2,457	200	190590	2,905	200	190620	3,841	200				
20	190160	2,709	200	190210	3,142	200	190270	3,002	200	183640	5,529	100	
25	190170	3,017	200	190220	3,464	200	190280	3,268	200	190320	5,669	100	
30	190180	3,323	200	190230	3,770	200	190290	3,561	200	190330	5,724	100	
35				190600	4,104	200	190630	4,441	200	190660	5,866	100	
40				190240	4,412	200	190300	4,776	100	190340	6,312	50	
45				408127	5,166	200	190640	5,110	100	190670	6,730	50	
50				190610	5,529	100	190310	5,446	100	190350	7,149	50	
55										190680	7,568	50	
60				407393	6,208	200				190360	8,406	50	
70										190700	9,300	50	
80										190710	10,166	50	

Diameter	M14			M16			M20			
	Length	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty	Part No.	₹ Price/ 100 Pcs	Box Qty
25	190730	10,975	25							
30	190370	11,450	25	190410	24,520	25				
35	190740	12,149	25	190420	24,520	25				
40	190380	12,288	25	190430	24,520	25	190875	40,494	25	
45	190750	12,651	25	190820	19,241	25	405793	35,608	25	
50	190760	13,405	25	190440	19,772	25				
55				405105	20,806	25				
60	190770	14,410	25	190450	22,258	25	190885	39,936	25	
70				190460	24,351	25	190890	41,890	25	
80				190855	25,415	25	190900	45,522	25	
90				190860	27,452	25	190910	49,151	25	
100				190870	29,464	25				

1. Specification : Conforming to Unbrako Standard. (Separate catalogue available on request).
2. Thread : Conforming to DIN 13 Medium Fit (6g)
3. Material : Unbrako high grade alloy steel.
4. Mechanical Properties : Property Class 12.9 as per 898 part - I.
5. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.



Durlok® Nuts

Length	Part No.	₹ Price/100 Pcs	Box Qty
M6	404916	912	200
M8	404917	1,371	200
M10	405202	2,072	200
M12	404918	3,811	100
M14	405240	5,835	50
M16	404915	7,027	50
M20	403618	14,887	50

1. Specification: conforming to Unbrako Standard. 2. Thread: According to DIN 13 6H.
3. Material: Unbrako high grade alloy steel. 4. Mechanical Properties: Property Class 12.

Durlok® Washers



Durlok Washers are used with standard Hex bolt & nut for self-locking anti-vibration properties.

Length	Part No.	₹ Price/100 Pcs	Box Qty	Length	Part No.	₹ Price/100 Pcs	Box Qty
M6	551087	2,616	200	M18	550262	10,256	100
M6L	551088	3,411	200	M18L	550263	18,097	100
M8	551089	3,411	200	M20	550264	10,256	100
M8L	550253	4,619	200	M20L	550265	18,097	100
M10	550254	4,619	200	M22	550266	14,175	100
M10L	550255	4,826	200	M22L	550267	26,843	100
M12	550256	4,826	200	M24	550268	18,097	100
M12L	550257	7,088	100	M24L	550269	32,574	50
M14	550258	7,088	100	M27	550270	26,089	50
M14L	550259	10,256	100	M27L	550271	32,574	50
M16	550260	6,636	100	M30	550272	28,050	50
M16L	550261	10,256	100	M30L	550273	41,321	25

1. Note: L = Larger Outer Dia
2. Inch series available on request.
3. Stainless Steel prices available on request.
4. Plating: No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.

Hex Bolts

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49	Nylock Nut Blue Ring ISO 7040 - Grade 8 /10
49	All Metal Prevailing Torque Nut DIN 980M & DIN 980V
50	Spring Washer - Square Section
50	Spring Washer - Flat Section
50	Hardened Washer



Hex Head Bolts / Screws

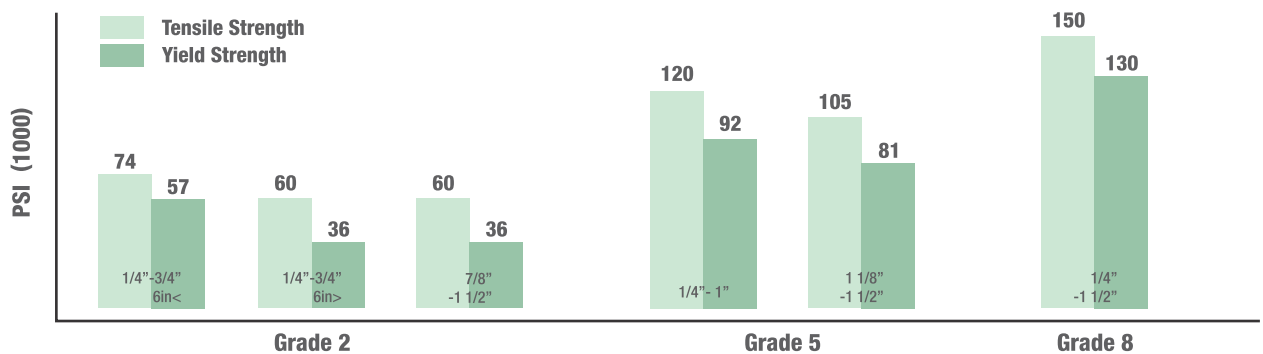
In-house Destructive And Non destructive Testing:

- Chemical product check analysis
- Heat treatment tests
- Room temprature tension tests (or at 0° C)
- Low temperature impact tests (upto -196° c)
- X-Ray Fluorescence Analysis
- Hardness tests
- UTS test
- Proof load test
- Macrotech tests
- Microtech tests
- Grains size
- Decarburization tests
- Ultra soud testing
- M.P.I tests
- Stress rupture tests

- **ROLLED THREADS** : Rolling threads results in best quality highest -strength thread because of; (1) more accurate and uniform thread dimensions, giving a better fit between threaded parts and fewer concentrated loads at points of misfit; (2) smoother thread surfaces &, thus, fewer scratches and other markings to initiate cracks, or galling; and (3) higher yield, tensile, & shear properties to better withstand service loads.
- **ECONOMY** : Fewer high strength bolts are required than M. S. bolts and rivets. Drilling of close holes is not required. Overall weight the structure will be very light.
- **SIMPLICITY** : A minimum of skill is required in tightening and the operators need only to follow a few simple rules.



Comparison of Different Grades





10.9 Hex Head Bolts/Screws - Metric

DIA	M4			M5			M6			M8			
	Length	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty
8	550616	382	500					550628	599	500			
10	170001	341	500	170013	361	500	170029	469	500	550642	823	500	
12	170002	354	500	170014	368	500	170030	494	500	170049	674	500	
16	170003	581	500	170015	580	500	170031	512	500	170050	684	200	
18	170004	581	500	170016	595	500	170032	519	500	170051	634	200	
20	170005	502	500	170017	479	500	170033	512	500	170052	616	200	
22	170006	510	500	170018	509	500	170034	527	500	170053	696	200	
25	170007	510	500	170019	502	500	170035	529	500	170054	695	200	
30	170008	509	500	170020	542	500	170036	554	500	170055	778	200	
35	170009	523	500	170021	548	500	170037	594	200	170056	886	200	
40	170010	555	500	170022	581	500	170038	622	200	170057	969	200	
45	170011	624	500	170023	635	500	170039	661	200	170058	1,015	200	
50	170012	694	500	170024	764	500	170040	708	200	170059	1,106	200	
55	240001	764	500	170025	805	500	170041	778	200	170060	1,212	100	
60	240002	834	500	170026	877	200	170042	850	200	170061	1,366	100	
65				170027	996	200	170043	922	100	170062	1,438	100	
70				170028	1,074	200	170044	994	100	170063	1,522	100	
75				240003	1,152	200	170045	1,003	100	170064	1,570	100	
80							170046	1,056	100	170065	1,676	100	
90							170047	1,191	100	170066	2,167	100	
100							170048	1,324	100	170067	2,533	50	
110							551178	2,035	100	240010	3,571	50	
120							550866	2,213	100	240011	3,939	50	
130							550867	2,384	100	240012	4,311	50	
140							550868	2,560	100	550872	4,771	50	
150							550869	2,734	100	550873	5,076	50	
160										787951	5,529	50	
170										787952	5,815	50	
180										787953	5,965	50	
190										787954	6,430	50	
200										787955	6,730	50	

Grey highlighted items are full threaded

1. Specifications : Generally conforming to IS 1364, ISO 4014/4017.
2. Threads : ISO Metric 6g as per IS 4218.
3. Material and Mechanical Properties : Property Class 10.9 as per IS 1367.
4. Note : Prices for fully threaded screws beyond shaded sizes will cost 10% extra.
5. Orders for Property class 8.8 can be accepted subject to our confirmation on the basis of item wise quantities. Price list for 8.8 available separately.
6. Upto 80mm Diameter can be manufactured against request.
7. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
8. Bolts/Screws as per DIN 931/933 will be manufactured against specific order with minimum order quantity of each size.
9. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



10.9 Hex Head Bolts/Screws - Metric

DIA	M10			M12			M14			M16			
	Length	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty
16	170068	1,188	200	550673	2,148	100							
18	170069	1,180	200										
20	170070	1,114	200	170093	1,829	100					170142	4,136	50
22	170071	1,225	200								170143	4,136	50
25	170072	1,203	200	170094	1,928	100	170121	3,158	50	170144	4,165	25	
30	170073	1,300	100	170095	1,914	100	170122	3,405	50	170145	4,563	25	
35	170074	1,367	100	170096	2,020	100	170123	3,540	25	170146	4,563	25	
40	170075	1,659	100	170097	2,300	100	170124	3,787	25	170147	4,517	25	
45	170076	1,925	100	170098	2,551	50	170125	4,088	25	170148	4,790	25	
50	170077	1,972	100	170099	2,728	50	170126	4,534	25	170149	5,144	25	
55	170078	2,052	100	170100	2,927	50	170127	4,633	25	170150	5,719	25	
60	170079	2,254	100	170101	3,052	50	170128	4,841	25	170151	6,034	25	
65	170080	2,375	50	170102	3,190	50	170129	5,107	25	170152	6,186	25	
70	170081	2,498	50	170103	3,606	50	170130	5,418	25	170153	6,601	25	
75	170082	2,669	50	170104	3,737	50	170131	5,681	25	170154	7,080	25	
80	170083	3,073	50	170105	3,963	50	170132	6,014	25	170155	8,125	25	
90	170084	3,407	50	170106	4,270	25	170133	6,589	25	170156	8,681	25	
100	170085	3,917	50	170107	4,988	25	170134	7,582	25	170157	9,010	15	
110	170086	4,520	50	170108	5,611	25	170135	8,245	25	170158	9,995	15	
120	170087	4,921	25	170109	5,946	25	170136	9,152	25	170159	11,417	15	
130	170088	5,528	50	170110	6,286	25	170137	9,907	25	170160	13,426	15	
140	170089	6,133	50	170111	7,458	25	170138	12,830	25	170161	13,609	15	
150	170090	6,571	30	170112	9,965	25	170139	14,161	25	170162	15,490	15	
160	170091	7,007	25	170113	10,752	20	170140	15,812	25	170163	16,822	15	
180	170092	7,882	25	170114	11,357	20	170141	16,964	25	170164	18,920	15	
200	550876	8,760	25	170115	15,007	25	550887	18,849	25	170165	20,481	10	
220				170116	22,210	25	550888	25,727	20	170166	26,472	10	
240				170117	22,758	20	550889	27,828	20	170167	28,490	10	
260				170118	23,248	20	550890	29,927	20	170168	29,067	10	
280				170119	25,389	18	550891	32,225	18	170169	32,089	10	
300				170120	27,202	18	550892	34,391	18	170170	41,249	10	

Grey highlighted items are full threaded

1. Specifications : Generally conforming to IS 1364, ISO 4014/4017.
2. Threads : ISO Metric 6g as per IS 4218.
3. Material and Mechanical Properties : Property Class 10.9 as per IS 1367.
4. Note : Prices for fully threaded screws beyond shaded sizes will cost 10% extra.
5. Orders for Property class 8.8 can be accepted subject to our confirmation on the basis of item wise quantities. Price list for 8.8 available separately.
6. Upto 80mm Diameter can be manufactured against request.
7. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
8. Bolts/Screws as per DIN 931/933 will be manufactured against specific order with minimum order quantity of each size.
9. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



10.9 Hex Head Bolts/Screws - Metric

DIA	M18			M20			M22			
	Length	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty
30				550751	9,402	25				
35	550735	7,541	25	170190	9,077	25				
40	170171	8,109	25	170191	9,077	25	550775	12,299	10	
45	170172	8,452	25	170192	9,508	25	550776	13,061	10	
50	170173	8,713	25	170193	9,439	25	170215	13,460	10	
55	170174	9,309	25	170194	10,722	25	170216	14,494	10	
60	170175	9,600	25	170195	10,872	25	170217	14,969	10	
65	170176	9,925	25	170196	11,005	10	170218	16,030	10	
70	170177	10,841	25	170197	11,136	10	170219	16,588	10	
75	170178	11,473	10	170198	12,356	10	170220	17,158	10	
80	170179	11,496	10	170199	12,721	10	170221	17,856	10	
90	170180	12,212	10	170200	13,517	10	170222	19,019	10	
100	170181	13,531	10	170201	14,396	10	170223	20,285	10	
110	170182	14,264	10	170202	16,203	10	170224	22,083	10	
120	170183	15,741	10	170203	17,248	10	170225	23,604	10	
130	170184	16,459	10	170204	18,768	10	170226	24,871	10	
140	170185	17,178	10	170205	20,028	10	170227	26,116	10	
150	170186	18,394	10	170206	19,684	10	170228	27,343	10	
160	170187	19,809	10	170207	23,436	10	170229	31,191	5	
180	170188	21,977	10	170208	27,439	10	170230	33,873	5	
200	170189	23,744	10	170209	29,571	10	170231	36,598	5	
220	240020	26,879	10	170210	42,222	5	170232	57,852	5	
240	240021	29,326	10	170211	44,339	5	170233	62,666	5	
260	240022	31,770	10	170212	46,457	6	170234	65,076	5	
280	240023	34,215	8	170213	50,681	6	170235	72,329	5	
300	240024	36,659	8	170214	54,884	6	170236	77,498	5	

Grey highlighted items are full threaded

1. Specifications : Generally conforming to IS 1364, ISO 4014/4017.
2. Threads : ISO Metric 6g as per IS 4218.
3. Material and Mechanical Properties : Property Class 10.9 as per IS 1367.
4. Note : Prices for fully threaded screws beyond shaded sizes will cost 10% extra.
5. Orders for Property class 8.8 can be accepted subject to our confirmation on the basis of item wise quantities. Price list for 8.8 available separately.
6. Upto 80mm Diameter can be manufactured against request.
7. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
8. Bolts/Screws as per DIN 931/933 will be manufactured against specific order with minimum order quantity of each size.
9. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



10.9 Hex Head Bolts/Screws - Metric

DIA	M24			M27			M30			
	Length	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty
40	550791	18,917	10							
45	550792	20,080	10							
50	170237	16,475	10	170259	35,005	5	170281	45,089	5	
55	170238	15,764	10	170260	35,005	5	170282	45,089	5	
60	170239	17,151	10	170261	35,005	5	170283	45,089	5	
65	170240	17,748	10	170262	35,005	5	170284	45,089	5	
70	170241	18,812	10	170263	35,005	5	170285	45,089	5	
75	170242	19,490	10	170264	37,646	5	170286	45,089	5	
80	170243	21,311	10	170265	39,394	5	170287	46,922	5	
90	170244	22,757	10	170266	42,888	5	170288	50,934	5	
100	170245	24,613	10	170267	46,403	5	170289	54,813	5	
110	170246	25,726	5	170268	50,037	5	170290	60,293	5	
120	170247	26,999	10	170269	51,306	5	170291	61,624	5	
130	170248	28,475	5	170270	52,994	5	170292	64,400	5	
140	170249	29,829	5	170271	56,350	5	170293	68,393	5	
150	170250	31,287	5	170272	59,705	5	170294	72,235	3	
160	170251	37,360	5	170273	65,939	5	170295	81,726	3	
170	240025	38,989	5	550941	69,443	5	550947	85,852	3	
180	170252	40,619	5	170274	72,948	5	170296	90,004	3	
190	240026	42,220	5							
200	170253	43,821	5	170275	79,460	5	170297	98,184	5	
220	170254	66,592	5	170276	1,09,502	4	170298	1,21,911	3	
240	170255	68,977	5	170277	1,18,078	4	170299	1,30,489	3	
260	170256	71,366	4	170278	1,25,822	3	170300	1,39,085	3	
280	170257	78,486	4	170279	1,33,546	3	170301	1,47,663	2	
300	170258	95,949	4	170280	1,39,812	3	170302	1,56,222	2	
310	813503	95,949	4							
340							551125	1,78,286	2	
400							550952	2,06,880	2	

Grey highlighted items are full threaded

1. Specifications : Generally conforming to IS 1364, ISO 4014/4017.
2. Threads : ISO Metric 6g as per IS 4218.
3. Material and Mechanical Properties : Property Class 10.9 as per IS 1367.
4. Note : Prices for fully threaded screws beyond shaded sizes will cost 10% extra.
5. Orders for Property class 8.8 can be accepted subject to our confirmation on the basis of item wise quantities. Price list for 8.8 available separately.
6. Upto 80mm Diameter can be manufactured against request.
7. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
8. Bolts/Screws as per DIN 931/933 will be manufactured against specific order with minimum order quantity of each size.
9. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



10.9 Hex Head Bolts/Screws - Metric

DIA	M33			M36			M42			M48			
	Length	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty
70				550845	80,377	5							
75	170303	63,695	5	550846	79,051	5	631194	1,15,882	4				
80	170304	67,349	5	170320	80,573	5	550858	1,20,024	3				
90	170305	71,439	5	170321	86,708	3	170336	1,27,153	3				
100	170306	76,502	5	170322	90,202	3	170337	1,34,460	2	787845	1,81,699	2	
110	170307	82,261	4	170323	96,337	4	170338	1,41,807	2	787846	1,91,684	2	
120	170308	84,227	4	170324	98,204	3	170339	1,42,900	2	787847	1,92,810	2	
130	170309	88,753	4	170325	1,03,348	3	170340	1,48,934	10	787848	2,00,845	2	
140	170310	94,254	4	170326	1,09,244	3	170341	1,57,223	10	550980	2,24,361	2	
150	170311	99,653	4	170327	1,15,100	3	170342	1,65,493	9	787849	2,34,513	2	
160	170312	1,04,300	4	170328	1,26,477	3	170343	1,73,773	9	787850	2,44,738	2	
180	170313	1,14,208	3	170329	1,46,669	2	170344	1,89,558	8	550981	2,65,113	2	
200	170314	1,24,234	3	170330	1,58,982	2	170345	1,98,134	7	550982	2,74,747	2	
220	170315	1,50,248	3	170331	1,90,611	2	170346	2,54,147	7	550983	3,49,234	2	
240	170316	1,61,325	2	170332	2,04,342	9	170347	2,73,009	6	550984	3,72,506	2	
260	170317	1,73,416	2	170333	2,18,052	8	170348	2,91,931	6	787851	3,95,776	2	
280	170318	1,85,448	2	170334	2,31,791	8	170349	3,10,816	6	551123	4,19,047	2	
300	170319	1,97,461	2	170335	2,78,249	7	170350	3,29,687	6	551143	4,42,318	2	

Grey highlighted items are full threaded

1. Specifications : Generally conforming to IS 1364, ISO 4014/4017.
2. Threads : ISO Metric 6g as per IS 4218.
3. Material and Mechanical Properties : Property Class 10.9 as per IS 1367.
4. Note : Prices for fully threaded screws beyond shaded sizes will cost 10% extra.
5. Orders for Property class 8.8 can be accepted subject to our confirmation on the basis of item wise quantities. Price list for 8.8 available separately.
6. Upto 80mm Diameter can be manufactured against request.
7. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
8. Bolts/Screws as per DIN 931/933 will be manufactured against specific order with minimum order quantity of each size.
9. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

Important * long delivery items-subject to extended deliveries (3 to 4 months).
Users are advised to plan their requirements in advance.



Gr. 8 Hex Head Bolts/Screws - Inch (UNC)

DIA	1/4			5/16			3/8			1/2			
	Length	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty
1/2	170351	582	500	170364	776	500	170381	1,213	200				
5/8	170352	722	500	170365	743	500	170382	1,213	200				
3/4	170353	657	500	170366	715	200	170383	1,058	200	170400	2,278	100	
7/8	170354	592	200	170367	782	200	170384	1,278	200	170401	2,262	100	
1	170355	646	200	170368	778	200	170385	1,044	200	170402	2,401	100	
1 1/4	170356	661	200	550992	857	200	170386	1,166	200	170403	2,679	100	
1 1/2	170357	733	200	170370	1,043	200	170387	1,318	100	170404	2,858	50	
1 3/4	170358	802	200	170371	1,168	200	170388	1,538	100	170405	3,072	25	
2	170359	880	200	170372	1,244	200	170389	1,689	100	170406	3,345	25	
2 1/4	170360	967	200	170373	1,368	100	170390	1,850	100	170407	3,694	25	
2 1/2	170361	1,077	200	170374	1,503	100	170391	2,030	100	170408	3,933	25	
2 3/4	170362	1,184	200	170375	1,625	100	170392	2,262	100	170409	4,257	25	
3	170363	1,294	200	170376	1,709	100	170393	2,396	100	170410	4,775	25	
3 1/4	240027	1,491	200	170377	1,824	100	170394	2,649	50	170411	5,122	25	
3 1/2	240028	1,507	100	170378	1,965	100	170395	2,723	50	170412	5,297	25	
3 3/4	240029	1,608	100	170379	2,427	100	170396	3,337	25	170413	5,574	25	
4	240030	1,725	100	170380	2,681	100	170397	3,587	25	170414	5,807	25	
4 1/4				551064	2,860	100	170398	3,990	25	170415	6,167	25	
4 1/2	787956	1,921	100	551065	3,016	100	170399	4,223	25	170416	6,718	25	
5	551063	2,123	100	551066	3,350	100	240034	4,690	50	170417	7,337	25	
5 1/2				787957	3,659	100	240035	5,161	50	170418	8,958	25	
6				787958	3,967	100	240036	5,630	50	170419	10,877	25	
6 1/2										240037	13,362	25	
7										170420	16,343	20	
7 1/2										170421	17,514	25	
8										170422	18,681	25	

Grey highlighted items are full threaded

1. Specifications : Generally conforming to ANSI B 18.2.1
2. Threads : Unified Coarse, 2A as per ANSI B1.1.
3. Material & Mechanical Properties : Grade 8 as per SAE J 429
4. Note : Non-shaded sizes if required in full thread will cost 10% extra.
: Upto 4 Inch Dia can be manufactured against request.
5. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
6. For Hex Bolt/Screws BSW, above prices will apply.
7. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



Gr. 8 Hex Head Bolts/Screws - Inch (UNC)

DIA	5/8			3/4			7/8			1			
	Length	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty
1	170423	4,195	25										
1 1/4	170424	4,684	25	551032	8,341	25							
1 1/2	170425	4,913	25	170445	8,874	25	551044	19,232	10	170487	18,839	10	
1 3/4	170426	5,242	25	170446	9,210	25	787988	21,126	10	170488	18,839	10	
2	170427	5,507	25	170447	9,813	25	170467	23,202	10	170489	19,802	10	
2 1/4	170428	5,995	25	170448	10,778	25	170468	23,202	10	170490	20,570	10	
2 1/2	170429	6,560	25	170449	11,307	25	170469	18,708	10	170491	21,514	10	
2 3/4	170430	7,090	25	170450	12,334	10	170470	18,708	10	170492	22,937	10	
3	170431	7,642	25	170451	12,818	10	170471	19,600	10	170493	25,122	10	
3 1/4	170432	8,137	25	170452	13,380	10	170472	21,614	10	170494	26,095	10	
3 1/2	170433	8,620	25	170453	14,464	10	170473	21,614	10	170495	27,192	10	
3 3/4	170434	9,534	25	170454	15,525	10	170474	23,189	10	170496	29,932	10	
4	170435	9,786	25	170455	16,245	10	170475	24,295	10	170497	29,932	10	
4 1/4	170436	10,127	25	170456	16,643	10	170476	25,755	10	170498	33,002	10	
4 1/2	170437	10,505	25	170457	17,414	10	170477	26,982	10	170499	33,002	5	
5	170438	11,825	25	170458	18,524	10	170478	29,033	10	170500	36,824	5	
5 1/2	170439	13,604	20	170459	20,802	10	170479	30,587	10	170501	39,800	5	
6	170440	14,262	10	170460	21,355	10	170480	32,465	10	170502	41,643	5	
6 1/2	170441	16,638	10	170461	23,076	10	170481	34,261	5	170503	45,161	5	
7	170442	17,918	10	170462	23,076	10	170482	37,818	5	170504	48,674	5	
7 1/2	170443	19,197	10	170463	24,795	10	170483	39,774	5	170505	52,080	5	
8	170444	19,548	10	170464	27,170	10	170484	41,528	5	170506	54,492	5	
9	551069	21,990	10	170465	28,405	10	170485	47,187	5	170507	63,066	5	
10	551070	24,437	10	170466	31,957	8	170486	49,372	5	170508	69,156	4	
11				240038	33,966	8				170509	72,617	4	
12				551222	37,054	8				170510	79,215	4	

Grey highlighted items are full threaded

1. Specifications : Generally conforming to ANSI B 18.2.1

2. Threads : Unified Coarse, 2A as per ANSI B1.1.

3. Material & Mechanical Properties : Grade 8 as per SAE J 429

4. Note : Non-shaded sizes if required in full thread will cost 10% extra.

: Upto 4 Inch Dia can be manufactured against request.

5. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.

6. For Hex Bolt/Screws BSW, above prices will apply.

7. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



Gr. 8 Hex Head Bolts/Screws - Inch (UNC)

DIA	1 1/8			1 1/4			1 3/8		
Length	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty
1	170511	21,776	5						
1 1/4	170512	23,616	5						
1 1/2	170513	25,771	10						
1 3/4	170514	26,644	10						
2	170515	28,691	10						
2 1/4	170516	30,751	5	551302	40,680	5			
2 1/2	170517	32,507	5	170534	43,050	5	170551	52,128	5
2 3/4	170518	34,261	5	170535	45,096	5	170552	54,468	5
3	170519	36,307	5	551062	47,142	5	170553	57,105	5
3 1/4	170520	38,366	5	170537	49,783	5	170554	60,324	5
3 1/2	170521	40,118	5	170538	52,128	5	170555	63,257	5
3 3/4	170522	42,166	5	170539	54,758	5	170556	66,475	5
4	170523	44,212	5	170540	57,105	4	170557	69,405	5
4 1/4	170524	46,268	5	170541	59,443	5	170558	72,626	4
4 1/2	170525	48,316	5	170542	62,082	4	170559	75,556	4
5	170526	52,128	5	170543	67,058	5	170560	81,706	4
5 1/2	170527	56,222	5	170544	71,742	3	170561	87,855	3
6	170528	60,035	5	170545	76,728	4	170562	94,006	3
6 1/2				551072	82,537	3			
7	170529	67,942	3	170546	86,390	3	170563	1,06,016	3
7 1/2	170530	71,742	5	170547	91,077	3	170564	1,12,166	3
8	170531	75,845	3	170548	96,052	3	170565	1,18,315	3
9	170532	1,06,016	4	170549	1,06,016	3	170566	1,30,613	2
10	170533	91,659	3	170550	1,15,674	3	170567	1,42,914	2

Grey highlighted items are full threaded

1. Specifications : Generally conforming to ANSI B 18.2.1
2. Threads : Unified Coarse, 2A as per ANSI B1.1.
3. Material & Mechanical Properties : Grade 8 as per SAE J 429
4. Note : Non-shaded sizes if required in full thread will cost 10% extra.
: Upto 4 Inch Dia can be manufactured against request.
5. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
6. For Hex Bolt/Screws BSW, above prices will apply.
7. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



Gr. 8 Hex Head Bolts/Screws - Inch (UNC)

DIA	1 1/2			1 3/4			2		
	Length	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs	Box Qty	Part No.	₹ Price/ 100 pcs
2 1/2	170568	65,592	5	170585	1,05,933	3	170602	1,48,306	2
2 3/4	170569	68,814	5	170586	1,10,419	3	170603	1,54,397	2
3	170570	72,045	5	170587	1,14,918	3	170604	1,60,182	2
3 1/4	170571	74,963	4	170588	1,19,734	2	170605	1,66,274	2
3 1/2	170572	78,777	4	170589	1,24,220	2	170606	1,72,378	2
3 3/4	170573	82,288	4	170590	1,29,037	2	170607	1,78,479	2
4	170574	86,098	3	170591	1,34,501	2	170608	1,84,573	2
4 1/4	170575	89,612	3	170592	1,39,957	2	170609	1,90,677	2
4 1/2	170576	93,422	3	170593	1,45,411	2	170610	1,97,736	2
5	170577	1,00,737	3	170594	1,56,332	2	170611	2,12,188	2
5 1/2	170578	1,08,062	3	170595	1,67,242	2	170612	2,26,306	2
6	170579	1,15,387	2	170596	1,78,163	2	170613	2,40,757	2
7	170580	1,29,441	2	170597	1,99,341	2	170614	2,68,038	2
7 1/2	170581	1,36,764	3	170598	2,09,933	2	170615	2,82,490	2
8	170582	1,44,087	2	170599	2,21,169	2	170616	2,96,927	2
9	170583	1,58,727	2	170600	2,42,999	2	170617	3,25,179	2
10	170584	1,73,372	2	170601	2,64,829	2	170618	3,54,068	2

Grey highlighted items are full threaded

1. Specifications : Generally conforming to ANSI B 18.2.1
2. Threads : Unified Coarse, 2A as per ANSI B1.1.
3. Material & Mechanical Properties : Grade 8 as per SAE J 429
4. Note : Non-shaded sizes if required in full thread will cost 10% extra.
: Upto 4 Inch Dia can be manufactured against request.
5. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
6. For Hex Bolt/Screws BSW, above prices will apply.
7. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



Marking*

Hex Nuts - ISO 4032 - Class 8/10

Size (mm)	Grade	Part No.	₹ Price/100 pcs	Pcs. Per Box	Pcs. Per Carton
M4 X 0.7	8	793230	106	1000	18000
M5 X 0.8	8	793201	131	700	12600
M6 X 1	8	550303	182	500	9000
M8 X 1.25	8	550304	234	200	2400
M10 X 1.5	8	550305	480	200	2400
M12 X 1.75	8	550306	709	200	1600
M16 X 2	8	550307	1,560	100	800
M6 X 1	10	170619	211	500	9000
M8 X 1.25	10	170620	277	200	2400
M10 X 1.5	10	170621	534	200	2400
(M12) X 1.5	10	170623	831	200	2400
M12 X 1.75	10	170622	807	200	2400
(M14) X 1.5	10	170625	1,396	100	800
M14 X 2	10	170626	1,437	100	800
M16 X 2	10	170627	1,829	100	800
(M18) X1.5	10	170629	2,745	100	600
M18 X 2.5	10	170630	2,745	100	600
(M20)X 1.5	10	170631	3,412	50	300
M20 X 2.5	10	170632	3,412	50	300
M22 X 2.5	10	170633	4,784	50	200
M24 X 3	10	170634	6,042	50	200
M27 X 3	10	170635	10,040	25	150
M30 X 3.5	10	170636	14,457	25	150
M33 X 3.5	10	170637	19,890	10	80
M36 X 4	10	170638	25,675	10	80
M39 X 4	10	170639	35,021	10	40
M42 X 4.5	10	170640	43,016	10	40
M45 X 4.5	10	170641	51,390	10	40
M48 X 5	10	170642	61,912	10	40
M52 X 5	10	170643	69,155	4	16
M56 X 5.5	10	170644	94,750	4	16
M60 X 5.5	10	550301	1,72,625	3	12
M64 X 6	10	170645	1,78,771	3	12
M72 X 6	10	550302	3,29,677	2	8

1. Specifications : Nuts with Metric Threads IS 1364, ISO 4032
2. Threads : ISO Metric 6H as per IS 4218, ISO 261, ISO 965.
3. Material Mechanical Properties : Property Class as tabulated as per IS 1367, ISO 898, Part-II.
4. Note : Size in brackets are non-preferred standards.
5. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
6. Nuts as per DIN934 will be manufactured against specific order with minimum order quantity of each size
7. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

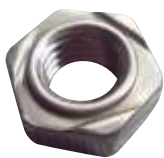


Marking*

Hex Nuts

Size	Grade	Part No	₹ Price/100 pcs	Pcs. Per Box	Pcs. Per Carton
1/4	8	170646	194	500	9000
5/16	8	170647	267	500	9000
3/8	8	170648	396	200	2400
7/16	8	170658	880	200	1600
1/2	8	170649	880	200	1600
5/8	8	170650	1,883	200	1600
3/4	8	170651	3,317	50	400
7/8	8	170652	4,471	50	200
1	8	170653	6,627	50	200
1-1/8	8	170654	9,640	25	150
1-1/4	8	170655	14,072	25	100
1-3/8	8	170656	16,956	25	100
1-1/2	8	170657	23,059	10	40

1. Specifications : For Nuts with UNC Threads : (ANSI B 18.2.2).
2. Threads : Unified Coarse, 2B As Per ANSI B1.1.
3. Material Mechanical Properties : Grade as tabulated as per SAE J 995.
4. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
5. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



Hexagon Weld Nut

Size (mm)	Part No.	₹ Price/ 100 pcs	Pcs. Per Box	Pcs. Per Carton
M6	136004	148	500	9000
M8	136001	282	200	2400
M10	136002	519	200	2400
M12	136003	739	200	1600

1. Specifications : Generally conforming to DIN 929. Grade 6
2. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
3. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.
4. No head marking.



Nylock Nut
(Nylon Ring Insert) (Duly White Zinc Plated)

DIN 985 **Grade-8**

Size (mm)	Part No.	₹ Price/ 100 pcs	Pcs. Per Box	Pcs. Per Carton
M6	290001	139	500	9000
M8	290002	277	200	2400
M10	290003	601	200	2400
M12	290004	880	200	2400
M12 X1.5	290005	944	200	2400
M14	290006	1,446	100	800
M16	560957	1,946	100	800
M16X1.5	630379	1,993	100	800
M20	630380	4,200	50	300
M20 X1.5	630381	4,493	50	300
M24	791270	8,630	50	200

DIN 985 **Grade-10**

Size (mm)	Part No.	₹ Price/ 100 Pcs.	Pcs. Per Box	Pcs. Per Carton
M10	630305	711	200	2400
M12	630306	1,050	200	2400
M16	290007	2,240	100	800
M16 X 1.5	290008	2,315	100	800
M20	290009	4,460	50	300
M24	290010	9,068	50	200



All Metal Prevailing Torque Nut
DIN 980V / ISO7042
(Duly White Zinc Plated)

Grade-10

Size (mm)	Part No. DIN	Part No. ISO	₹ Price/ 100 pcs	Pcs. Per Box	Pcs. Per Carton
M6	796311		422	500	9000
M8	796314		818	200	2400
M10	816933	796315	1,424	200	2400
M12	816934	796313	2,249	200	2400
M16	796312		4,267	100	800
M20	796310		8,209	50	300
M24	787170		15,527	50	300



Nylock Nut
(Nylon Ring Insert) (Duly White Zinc Plated)

ISO 7040 **Grade-8**

Size (mm)	Part No.	₹ Price/ 100 pcs	Pcs. Per Box	Pcs. Per Carton
M6	630448	201	500	9000
M8	630449	360	200	2400
M10	630450	797	200	2400
M12	630451	1,141	200	2400
M12X1.5	630452	1,211	200	2400
M14	630453	1,856	100	800
M16	630454	2,400	100	800
M16X1.5	630455	2,457	100	800
M20	630456	4,872	50	300
M20X1.5	630457	5,212	50	300
M24	630768	9,924	50	200

ISO 7040 **Grade-10**

Size (mm)	Part No.	₹ Price/ 100 pcs	Pcs. Per Box	Pcs. Per Carton
M10	630458	921	200	2400
M12	630459	1,329	200	2400
M16	630460	2,749	100	800
M16 X1.5	630461	2,860	100	800
M20	630462	5,168	50	300
M24	630463	11,500	50	200



Metal Insert Prevailing Torque Nut - DIN 980M
(Duly White Zinc Plated)

Grade-10

Size (mm)	Part No.	₹ Price/ 100 pcs	Pcs. Per Box	Pcs. Per Carton
M6	815003	1,194	500	9000
M8	815004	1,326	200	2400
M10	815005	1,472	200	2400
M12	815006	2,145	200	2400
M14	815013	3,250	100	800
M16	814419	4,291	100	800
M20	814420	8,996	50	300
M22	815007	12,873	50	300
M24	814421	19,456	50	300

1. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.



Spring Washer - Square Section

Size (mm)	Part No.	₹ Price/ 100 pcs	Pcs. Per Box	Pcs. Per Carton	Size (mm)	Part No.	₹ Price/ 100 pcs	Pcs. Per Box	Pcs. Per Carton
3MM	171758	16	2000	160000	18MM	171767	247	100	2400
4MM	171759	19	2000	90000	20MM	171768	457	100	1500
5MM	171760	22	2000	48000	22MM	171769	512	50	1000
6MM	171761	24	1000	30000	24MM	171770	681	50	1200
8MM	171762	42	1000	24000	27MM	171771	781	50	700
10MM	171763	75	500	12000	30MM	171772	1,208	50	500
12MM	171764	90	500	7000	33MM	171773	1,423	25	400
14MM	171765	149	200	4800	36MM	171774	2,068	25	350
16MM	171766	224	100	3000	39MM	171775	2,239	25	250



1. Specifications : Generally conforming to IS 6735/1972 & DIN 7980

Spring Washer - Flat Section

Size (mm)	Part No.	₹ Price/ 100 pcs	Pcs. Per Box	Pcs. Per Carton	Size (mm)	Part No.	₹ Price/ 100 pcs	Pcs. Per Box	Pcs. Per Carton
3MM	171776	16	2000	140000	18MM	171785	398	100	1800
4MM	171777	18	2000	120000	20MM	171786	593	100	1400
5MM	171778	23	2000	60000	22MM	171787	643	50	800
6MM	171779	41	1000	32000	24MM	171788	961	50	700
8MM	171780	68	1000	14000	27MM	171789	1,072	50	700
10MM	171781	98	500	7000	30MM	171790	1,731	50	500
12MM	171782	146	500	5000	33MM	171791	2,770	25	200
14MM	171783	226	200	3200	36MM	171792	2,900	25	350
16MM	171784	342	100	3000	39MM	171793	3,044	25	250



1. Specifications : Generally conforming to DIN 127 B, IS 3063 & BS 4464

Hardened Washer for 10.g Bolts



Size (mm)	Part No.	₹ Price/ 100 pcs	Pcs. Per Box	Pcs. Per Carton
M12	551111	549	500	4000
M16	551112	961	200	1600
M20	551113	1,456	100	800
M22	631368	1,755	100	800
M24	551114	2,054	100	600
M27	630476	3,446	100	400
M30	630477	4,308	100	400
M36	796066	7,023	100	400



1. Specifications : Generally conforming to 300HV minimum. For Unbrako Hardened Washer 10.9 Bolts

2. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.

3. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

Construction

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Construction Fasteners

Arc Welding Stud

*Prices available on request.



The UNBRAKO ARC Welding Stud also known as Shear Connector is used in the construction of tall buildings, bridges and steel structures. Drawn-arc process is used for stud welding. It improves the strength of the structure.

Product Range :
Metric: M13, M16, M19, M22, M25 – Any Length

Inch: 1/2", 5/8", 3/4", 7/8", 1" – Any Length

Direct Tension Indicator



UNBRAKO Direct Tension Indicators, also known as Auto Torque Indicators, are single-use mechanical load cells designed to indicate the magnitude of preload in the assembly. It shows if the bolt is properly tensioned, very useful while tensioning High Strength Structural Bolts.

Product Range :
Metric: M16 – M36 as per BS EN 14399-9
Unbrako Feeler Gauge is available to check if the required torque is achieved.

High Strength Structural Bolt Assembly



Compared to the conventional methods of riveting or welding, UNBRAKO Pre-load bolts maintain the permanent strength of the joint due to reduced stress concentration. Hence, it does not permit loosening, making it most ideal where vibration is involved.

Product Range :
Metric: M12 to M36
Any Length

As per BS EN 15048-1/2 & 14399-3/4 or as per IS 3757

Auto Torque Check Bolt Assembly (TC Bolt)



Unbrako
Electric
Shear Wrench

UNBRAKO Auto Torque Check Bolt also known as Tension Control Bolt is an easy to install Heavy Duty Bolt used in Steel Frame Construction. It has its own built-in torque control device. The outer socket of wrench rotates the nut until the torque control groove in the spline shears off on achieving proper bolt tension.

Product Range :
Metric: M12 – M36 (any length) – As Per BS EN 14399 - 10

Unbrako Electric Shear Wrench is also Available.

Rebar Coupler

The Rebar COUPLER system is a threaded connection of two bars through a threaded sleeve that guarantees an ultimate tensile strength of the splice (joint) greater than that of the parent bar. It is suitable for joining reinforcement bars end to end.



Total Solution Bolt Assembly Tamper Proof



The Innovative 6 wedge shaped design acts to convert radial force into axial force, increasing pressure onto the contact surface of the application. Even under extreme vibration, bolt does not loosen.



IS 3757 High Strength Structural Bolts - Metric

DIA	M16			M20			M22			
	Length	International Part No.	₹ Price/ 100 pcs	Box Quantity	International Part No.	₹ Price/ 100 pcs	Box Quantity	International Part No.	₹ Price/ 100 pcs	Box Quantity
40	300001	5,184	25	300021	9,581	25				
45	300002	5,647	25	300022	10,311	25				
50	300003	5,941	25	300023	10,782	25	300041	14,624	10	
55	300004	6,135	25	300024	11,261	25	300042	15,039	10	
60	300005	6,542	25	300025	12,034	20	300043	15,655	10	
65	300006	6,901	25	300026	12,563	20	300044	17,087	10	
70	300007	7,293	25	300027	13,013	10	300045	17,900	10	
75	300008	7,806	25	300028	13,509	10	300046	18,459	10	
80	300009	8,572	25	300029	13,891	10	300047	19,109	10	
90	300010	8,989	25	300030	14,764	10	300048	21,008	10	
100	300011	9,751	25	300031	15,616	10	300049	21,485	10	
110	300012	10,530	25	300032	16,220	10	300050	23,193	10	
120	300013	11,612	15	300033	17,594	10	300051	24,727	10	
130	300014	13,333	10	300034	18,921	10	300052	26,107	10	
140	300015	13,546	10	300035	19,505	10	300053	27,301	10	
150	300016	16,061	10	300036	20,557	10	300054	28,627	10	
160	300017	17,383	10	300037	24,486	10	300055	32,484	5	
170	300018	18,459	10	300038	25,523	10	300056	33,848	5	
180	300019	19,535	10	300039	26,564	10	300057	35,207	5	
200	300020	22,034	10	300040	29,789	10	300058	37,846	5	
220				630603	40,543	10				

1. Specifications : Bolts IS 3757.
2. Threads : Bolts ISO Metric 6g as per IS 4218.
3. Material and Mechanical Properties: Bolts - Property Class 10.9S as per IS 1367.
4. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
5. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



IS 3757 High Strength Structural Bolts - Metric

DIA	M24			M27			M30			M36		
	International Part No.	₹ Price/ 100 pcs	Box Quantity	International Part No.	₹ Price/ 100 pcs	Box Quantity	International Part No.	₹ Price/ 100 pcs	Box Qty	International Part No.	₹ Price/ 100 pcs	Box Qty
55	300059	19,044	10									
60	300060	19,717	10	300076	40,150	5						
65	300061	21,356	10	300077	42,026	5						
70	300062	21,684	10	300078	41,743	5						
75	300063	23,588	10	300079	44,609	5	300092	53,882	5			
80	300064	24,044	10	300080	46,614	5	300093	55,790	5			
90	300065	26,567	5	300081	49,525	5	300094	57,331	5			
100	300066	28,535	5	300082	53,172	5	300095	61,479	5			
110	300067	29,235	5	300083	55,359	5	300096	66,924	5			
120	300068	30,381	5	300084	56,899	5	300097	68,223	5	581151	1,20,608	5
130	300069	31,699	5	300085	58,528	5	300098	71,500	5	581153	1,27,500	4
140	300070	33,060	5	300086	62,047	5	300099	75,738	5	581155	1,34,193	4
150	300071	34,554	5	300087	65,528	5	300100	79,824	5	581157	1,41,151	4
160	300072	39,265	5	300088	72,174	5	300101	90,138	4	581159	1,47,778	4
170	300073	42,557	5	300089	79,649	5	300102	99,090	4	581161	1,54,405	4
180	300074	44,479	5	300090	79,472	5	300103	98,931	4	581163	1,61,297	4
200	300075	47,787	5	300091	86,246	5	300104	1,07,626	4	581167	1,74,285	3
220	792919	58,401	5				581122	1,16,323	3	581171	1,87,538	3
240							581126	1,25,020	3	581175	2,00,793	3
260	786800	68,640	4				581130	1,33,718	3	581179	2,14,709	3
280										581183	2,27,963	3
300										581186	2,41,217	3

IS 6623 High Strength Structural Nuts

Metric

Diameter	M16	M20	M22	M24	M27	M30	M36
International Part No.	131001	131002	131003	131004	131005	131006	581348
₹ Price/100 pcs	2,533	5,130	5,990	8,596	13,906	17,601	30,351
Box Quantity	100	50	50	25	10	10	10

IS 6649 Structural Washer

Metric

Diameter	M16	M20	M22	M24	M27	M30	M36
International Part No.	132001	132002	132003	132004	132005	132006	581349
₹ Price/100 pcs	1,604	2,008	2,859	3,023	4,859	6,045	9,211
Box Quantity	200	100	100	100	100	100	10

1. Specifications : Bolts IS 3757, Nuts IS 6623, Washers IS 6649.
2. Threads : Bolts ISO Metric 6g as per IS 4218.
3. Material and Mechanical Properties : Bolts - Property Class 10.9S as per IS 1367.
Nuts: Property Class 10S as per IS 1367. Washer: Hardness: HRC 38-45 as per IS 6649
4. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
5. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



High Tensile Track Shoe Bolts & Square Nuts

Suitable for BEML (KOMATSU) Earthmovers

Equivalent O.E. Part No. (For Ref. Only)	Size	Description	Model	International Part No.	₹ Price/ 100 pcs
130.32.11212	M16 x 1.5 x 57	T.S. Bolt	D50, D50A 15	330001	7,692
130.32.11220	M16 x 1.5	T.S. Sq. Nut	D50, D50A 15	330002	2,909
130.32.11212/130.32.11220	M16 x 1.5 x 57	T.S. Bolt & Sq. Nut	D50, D50A 15	550287	10,601
205.32.51210	M18 x 1.5 x 58	T.S. Bolt	PC220	330003	9,467
01803.01824	M18 x 1.5	T.S. Sq. Nut	Pc220	330004	3,428
205.32.51210/01803.01824	M18 x 1.5 x 58	T.S. Bolt & Sq. Nut	PC220	550288	12,895
150.32.11210	M19 x 1.5 x 65	T.S. Bolt	D80, D80A 12	330005	11,835
150.32.11210/150.32.21311	M19 x 1.5 x 65	T.S. Bolt & Sq. Nut	D80, D80A 12	550289	15,834
113CT51096	M19 x 1.5 x 62	T.S. Bolt	D80, D80A 12	330006	11,835
113CT51096/150.32.21311	M19 x 1.5 x 62	T.S. Bolt & Sq. Nut	D80, D80A 12	550290	15,834
150.32.21311	M19 x 1.5	T.S. Sq. Nut	D80, D80A 12	330007	3,999
207.32.11350	M20 x 1.5 x 63	T.S. Bolt	PC300	330008	13,215
-----	M20 x 1.5	T.S. Sq. Nut	PC300	550308	4,259
207.32.11350	M20 x 1.5 x 63	T.S. Bolt & Sq. Nut	PC300	550291	17,474
176.32.11210	M24 x 1.5 x 78.5	T.S. Bolt	D155	330009	21,105
178.32.11220	M24 x 1.5	T.S. Sq. Nut	D155	330010	6,960
176.32.11210/178.32.11220	M24 x 1.5 x 78.5	T.S. Bolt & Sq. Nut	D155	550292	28,065
195.32.11210	M27 x 1.5 x 82.5	T.S. Bolt	D355	330011	27,614
195.32.11221	M27 x 1.5	T.S. Sq. Nut	D355	330012	11,115
195.32.11210/195.32.11221	M27 x 1.5 x 82.5	T.S. Bolt & Sq. Nut	D355	550294	38,729

Suitable for L & T Poclair Earthmovers

Equivalent O.E. Part No. (For Ref. Only)	Size	Description	Model	International Part No.	₹ Price/ 100 pcs
W 00 330.71	5/8" UNFx2.1/4"	T.S. Bolt	90 CK	330017	7,692
K 01345.36	5/8" UNF	T.S. Sq. Nut	90 CK	330018	3,894
W 00 330.71/K 01345.36	5/8" UNFx2.1/4"	T.S. Bolt & Sq. Nut	90 CK	550296	11,587
U 02330-77	7/8" UNFx2.66"	T.S. Bolt	300 CK	330014	16,175
Z 02345-07	7/8" UNF	T.S. Sq. Nut	300 CK	330015	6,861
U 02330-77/Z 02345-07	7/8" UNFx2.66"	T.S. Bolt & Sq. Nut	300 CK	550298	23,036

1. Specifications : Forged from high grade alloy steel.
2. Mechanical Properties : Track Shoe Bolt Grade 12.9, Square Nut HRC 32-38
3. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
4. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



High Tensile Track Shoe Bolts & Square Nuts

Suitable for Caterpillar Earthmovers

Equivalent O.E. Part No. (For Ref. Only)	Size	Description	Model	International Part No.	₹ Price/ 100 pcs
7H 3597	5/8" UNF x 2.3/32"	T.S. Bolt	D4, D5	330016	7,298
5M 8756	5/8" UNF x 2.1/4"	T.S. Bolt	D4, D5	330017	7,692
1M 1408	5/8" UNF	T.S. Sq. Nut	D4, D5	330018	3,894
7H 3597/1M 1408	5/8" UNF x 2.3/32"	T.S. Bolt & Sq. Nut	D4, D5	550295	11,193
5M 8756/1M 1408	5/8" UNF x 2.1/4"	T.S. Bolt & Sq. Nut	D4, D5	550296	11,587
7 H3598	3/4" UNF x 2.3/8"	T.S. Bolt	D6, D7	330019	11,638
1S1860	3/4" UNF	T.S. Sq. Nut	D6, D7	330020	4,823
7 H3598/1S1860	3/4" UNF x 2.3/8"	T.S. Bolt & Sq. Nut	D6, D7	550297	16,460
7H 3599	7/8" UNF x 2.66" (2 21/32)	T.S. Bolt	D8	330014	16,175
2S2140	7/8" UNF (2 21/32)	T.S. Sq. Nut	D8	330015	6,861
7H 3599/2S2140	7/8" UNF x 2.66"	T.S. Bolt & Sq. Nut	D8	550298	23,036
9M 7445	1" UNS x 2.94" (2 15/16)	T.S. Bolt	D8	330021	23,077
1S6421	1" UNS	T.S. Sq. Nut	DS9	330022	9,458
9M 7445/1S6421	1" UNS x 2.94" (2 15/16)	T.S. Bolt & Sq. Nut	DS9	550299	32,536

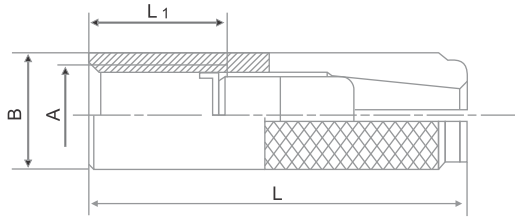
Suitable for HM-TEREX & HM DEMAG Earthmovers

Equivalent O.E. Part No. (For Ref. Only)	Size	Description	Model	International Part No.	₹ Price/ 100 pcs
01801340	3/4" x UNF x 2.3/4"	T.S. Bolt	H31, H36, H41	630419	12,967
06400140	3/4" UNF	T.S. Sq. Nut	H36	330020	4,823
01801340/06400140	3/4" x UNF x 2.3/4"	T.S. Bolt & Sq. Nut	H31, H36, H41	816932	17,789
06327940	7/8" UNF x 3.11/32" (84.9 mm)	T.S. Bolt	H51, H55	330023	19,133
06400240	7/8" UNF	T.S. Sq. Nut	H51	330015	6,861
06327940/06400240	7/8" UNF x 3.11/32" (84.9 mm)	T.S. Bolt & Sq. Nut	H51, H55	550300	25,994

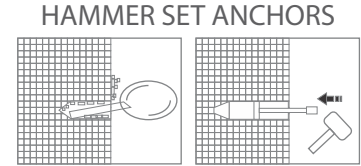
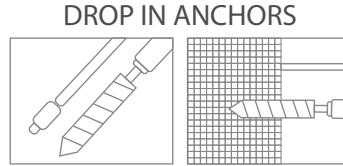
1. Specifications : Forged from high grade alloy steel.
2. Mechanical Properties : Track Shoe Bolt Grade 12.9, Square Nut HRC 32-38
3. Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
4. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.



Drop In Anchors



Raw Material:
Special steel developed by UNBRAKO USA



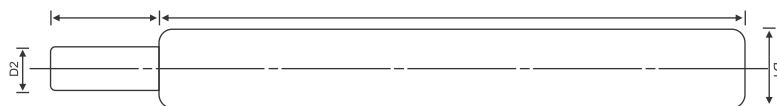
Value Are In KN

Main Technical Index	M6 x 25	M8 x 30	M10 x 40	M12 x 50	M16 x 60
Design tensile breaking strength	3.3	5.3	7.0	11.9	16.1
Design breaking shearing force	4.1	6.7	7.8	14.3	18.1
Safety Tensile breaking strength	2.4	3.8	5.0	8.5	11.5
Safety breaking shearing force	2.9	3.9	5.6	10.2	12.9

Drop In Anchors

Code	International Part No.	Size (A)	External Diameter (B)	Thread Length (L1)	Body Length (L)	Box Quantity	Carton Quantity	₹ Price/ 100 pcs
DANCH0625ZP	551654	M6	8.0	10	25	100	3600	668
DANCH0830ZP	551655	M8	10.0	13	30	100	1800	872
DANCH1040ZP	551656	M10	12.0	15	40	50	1000	1,357
DANCH1250ZP	530269	M12	16.0	20	50	50	600	3,214
DANCH1660ZP	551657	M16	20.0	25	60	25	300	5,416

ONE ANCHOR SETTING TOOL FREE WITH PACK OF 100 ANCHOR SETS



Drop In Anchors Setting Tools

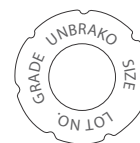
Code	SIZE	D1	D2	L1	L2
ANCHT06	6	9.900	4.700	97.790	17.000
ANCHT08	10	12.700	7.950	114.300	25.400
ANCHT10	12	15.875	9.525	127.000	31.750
ANCHT12	16	19.050	12.700	139.700	38.100



Direct Tension Indicator BS EN 14399-9

(Auto Torque Indicator) For 8.8 S Bolt Assembly
(Duly Mechanical Zinc Plated)

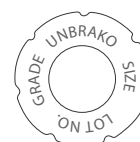
Size	International Part No.	₹ Price/100 pcs	Pcs/Box	Pcs/Carton
M16	630330	3,007	100	1200
M20	370002	5,374	100	800
M22	370003	6,505	50	400
M24	370004	8,712	50	400
M27	370005	11,031	50	300



Direct Tension Indicator BS EN 14399-9

(Auto Torque Indicator) For 10.9 S Bolt Assembly
(Duly Mechanical Zinc Plated)

Size	International Part No.	₹ Price/100 pcs	Pcs/Box	Pcs/Carton
M24	370006	8,712	50	400
M27	370007	11,031	50	300
M30	370008	16,092	25	200
M36	370009	23,114	25	150



1. Specification : Generally conforming to BS EN 14399-9

Note : Separate catalogue can be provided on request.

2. Products can be supplied with Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

Unbrako Upset Parallel Threaded Coupler

DIA	International Part No.	Bar Designation No. [mm]	Outer Dia [mm]	Length in mm	Thread size	₹ Price/ 100 pcs	Carton
12	787739	4 [13]	20	28	M14x2	7,821	400
16	787740	5 [16]	26	40	M20x2.5	12,708	200
20	787741	6 [19]	34	48	M24x3	16,944	100
25	787743	8 [25]	42	60	M30x3.5	26,068	60
28	787744	9 [29]	48	66	M33x3.5	39,101	40
32	787745	10 [32]	53	72	M36x4	47,247	28
36	787746	11 [36]	60	84	M42x4.5	75,596	23
40	787747	14 [43]	65	90	M45x4.5	97,428	20



1. Specifications: ASTM A615, A706, A775, IS 1786, 16172

2. Material and Mechanical Properties: as per Unbrako Spec.

3. Finish: Self/Plain

Separate Construction Catalogue available on request

TWIST-OFF TYPE TENSION CONTROL STRUCTURAL BOLT

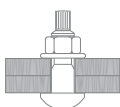
Tension control structural bolt is an easy to install heavy duty bolt used in steel frame construction. The combination of high tensile strength and ductility results in a structural bolt that can be employed in almost all steel work connections. This high strength positive tension shear bolt has its own built in torque control device.

Unbrako electric shear wrench is used for tightening the bolt. The outer socket rotates the nut until the torque control groove in the spline shears off, thereby achieving proper bolt tension. This shear area is designed to facilitate the ideal seating torque requirements for the installation of the bolt. No specialist operator expertise is required as the correct installation is automatically realized through the design of the bolt.

Installation Procedure:

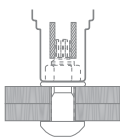
(Step 1)

- Place bolt through hole in the joining members. Attach washer & run up nut finger tight to the working members.



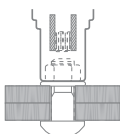
(Step 2)

- Fit the inner socket of the drive unit firmly over the bolt tip (spline).
- Engage the outer socket over the nut by pushing the shear wrench.
- Pull lever switch to on. The outer socket rotates the nut. As the tensile load increases the torque tension in the bolt also increases until the bolt reaches its designed shear strength and shears in the designated portion of the bolt.



(Step 3)

- Turn off wrench when bolt tip (Spline) shears off.



(Step 4)

- Pull the shear wrench back to remove outer socket from the nut.
- Pull the eject lever on the wrench to discharge the severed bolt tip (Spline) from the inner socket



Unbrako Electric Torque/Shear Wrench

	EXTENSION SOCKETS						
	M12	M16	M20	M22	M24	M27	M30
UNB-16E	●	●					
UNB-20E	●	●	●				
UNB-22E	●	●	●	●			
UNB-24E		●	●	●	●		
UNB-27E		●	●	●	●	●	
UNB-30E						●	●

Unbrako Electric wrenches are available with various socket extensions to match different sizes of Unbrako Tension Control Bolts, allowing easy & accurate installation.

Advantages of Tension Control Bolts

- Quick, safe and easy to Install
- Speed of Installation.
- Visual inspection.
- Substantial cost savings.
- Consistent Tension is assured in application.
- No specialist torque wrenches or gauges required.
- No specialist operator expertise required for installation.
- Single operator installation & Reduced operator fatigue.



Applications

- Stadium
- Bridges
- Buildings
- Airport / Railway Station
- Gantry Advertisement
- Rivet Replacement





Pre-Load Tension Control Structural Bolts System HRC - BS EN 14399-10

Metric

DIA	M12			M16			M20		
	International Part No.	₹ Price/ 100 pcs	Box Quantity	International Part No.	₹ Price/ 100 pcs	Box Quantity	International Part No.	₹ Price/ 100 pcs	Box Quantity
30	550001	3,152	50						
35	550002	3,434	50						
40	550003	3,717	50	550009	6,605	25	797881	13,097	25
45	550004	4,006	50	550010	7,110	25	797882	13,740	25
50	550005	4,289	50	550011	7,402	25	550037	13,459	25
55	550006	4,585	50	550012	7,616	25	550038	13,979	25
60	550007	4,873	50	550013	8,104	25	550039	14,773	25
65	550008	5,169	50	550014	8,563	25	550040	15,360	20
70	550231	5,457	50	550015	9,076	25	550041	15,932	10
75				550016	9,739	25	550042	16,525	10
80				550017	10,689	25	550043	17,020	10
85				550018	11,132	25	550044	17,952	10
90				550019	11,042	25	550045	18,319	10
95				550020	11,817	25	550046	19,458	10
100				550021	12,169	25	550047	19,592	10
110				550023	12,986	25	550049	20,273	10
120				550025	14,293	15	550051	21,916	10
130				550027	15,862	15	550053	23,456	10
140				550029	15,886	10	550055	24,094	10
150				550031	18,671	10	550057	25,348	10
160				550033	20,004	10	550059	29,711	10
170				550035	21,075	10	550061	30,626	10
180				550236	22,140	5	550063	31,637	10
190				550237	23,532	5	550065	33,637	10
200				550238	24,619	5	550067	34,788	10

1. Specifications : Bolts BS EN 14399-10
2. Material and Mechanical Properties: Bolts - Property Class 10.9 HRC
3. Finish: Black Oxide

NOTE:

- Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
- Products also available in Zinc-Flake and KoteEnviroGrin® coating. Prices available on request.
- Tension Control Structural Bolt with Hex Head also available on request, prices will remain same.



***Unbrako Electric Shear Wrench**

For assembly & installation of Tension Control Structural Bolt at site Unbrako electric shear wrench can be made available for hire/sale.



Pre-Load Tension Control Structural Bolts System HRC - BS EN 14399-10

Metric

DIA	M22			M24			M27		
	International Part No.	₹ Price/ 100 pcs	Box Quantity	International Part No.	₹ Price/ 100 pcs	Box Quantity	International Part No.	₹ Price/ 100 pcs	Box Quantity
Length									
50	797884	19,201	10						
55				795192	25,839	10			
60	550069	19,621	10	550098	25,809	10	797885	49,623	5
65	550070	20,924	10	550099	27,856	10	797886	51,749	5
70	550071	22,227	10	550100	28,121	10	550144	51,624	5
75	550072	22,954	10	550101	30,520	10	550145	54,968	5
80	550073	23,680	10	550102	31,006	10	550146	57,105	5
85	550074	24,870	10	550103	32,779	10	550147	58,707	5
90	550075	26,058	10	550104	34,133	10	550148	60,671	5
95	550076	26,362	10	550105	35,178	10	550149	63,127	5
100	550077	26,680	10	550106	36,542	10	550150	64,717	5
110	550079	28,756	10	550108	37,366	10	550152	68,005	5
120	550081	30,561	10	550110	38,554	5	550154	69,904	5
130	550083	32,178	10	550112	40,206	5	550156	71,686	5
140	550085	33,609	10	550114	41,793	5	550158	76,623	5
150	550087	35,281	5	550116	43,533	5	550160	80,192	5
160	550089	38,915	5	550118	49,384	5	550162	88,608	5
170	550091	40,089	5	550120	53,341	5	550164	97,764	5
180	550093	41,214	5	550122	55,433	5	550166	97,609	5
190	550095	42,483	5	550124	57,764	5	550168	1,01,956	5
200	550097	43,689	5	550126	56,545	5	550170	1,02,271	5

1. Specifications : Bolts BS EN 14399-10
2. Material and Mechanical Properties: Bolts - Property Class 10.9 HRC
3. Finish: Black Oxide

NOTE:

- Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
- Products also available in Zinc-Flake and KoteEnviroGrin® coating. Prices available on request.
- Tension Control Structural Bolt with Hex Head also available on request, prices will remain same.



***Unbrako Electric Shear Wrench**

For assembly & installation of Tension Control Structural Bolt at site Unbrako electric shear wrench can be made available for hire/sale.



Pre-Load Tension Control Structural Bolts System HRC - BS EN 14399-10

DIA	M30			M36		
	International Part No.	₹ Price/ 100 pcs	Box Quantity	International Part No.	₹ Price/ 100 pcs	Box Quantity
60	795195	61,598	5			
70	550251	67,104	5	797889	1,15,892	4
75	797888	66,491	5	797890	1,19,070	4
80	550188	68,729	5	797891	1,22,248	4
85	550189	69,255	5	797892	1,21,625	4
90	550190	69,935	5	797893	1,25,734	4
95	550191	72,680	5	797894	1,27,815	4
100	550192	75,178	5	797895	1,31,859	4
110	550194	82,315	5	797896	1,39,140	3
120	550196	83,503	5	797897	1,47,128	3
130	550198	87,063	5	797898	1,55,218	3
140	550200	92,336	5	797899	1,63,307	3
150	550202	97,645	5	797900	1,71,397	3
160	550204	1,10,276	4	797901	1,79,487	3
170	550206	1,21,231	4	797902	1,87,575	3
180	550208	1,20,945	4	797903	1,95,665	3
190	550210	1,27,157	3	797904	2,03,654	3
200	550212	1,31,614	4	797905	2,11,743	3

1. Specifications : Bolts BS EN 14399-10
2. Material and Mechanical Properties: Bolts - Property Class 10.9 HRC
3. Finish: Black Oxide

NOTE:

- Plating : No guarantee can given for Unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
- Products also available in Zinc-Flake and KoteEnviroGrin® coating. Prices available on request.
- Tension Control Structural Bolt with Hex Head also available on request, prices will remain same.

Nut - BS EN 14399-10 (HRD) k-class K1

Metric

Diameter	M12	M16	M20	M22	M24	M27	M30	M36
International Part No.	798047	798048	798049	630627	798050	798051	630628	798052
₹ Price/100 pcs	1,272	2,819	4,840	6,322	8,147	13,142	16,605	32,653
Box Quantity	100	100	50	50	25	10	10	10

Washer - BS EN 14399-6

Metric

Diameter	M12	M16	M20	M22	M24	M27	M30	M36
International Part No.	625773	625774	625775	630632	625776	802087	625777	625778
₹ Price/100 pcs	802	1,514	2,132	3,034	3,004	4,966	5,933	10,796
Box Quantity	200	200	100	100	100	100	50	50

Washer - JIS B 1186

Metric

Diameter	M12	M16	M20	M22	M24	M27	M30	M36
International Part No.	819318	819319	819320	819321	819322	819323	819324	819325
₹ Price/100 pcs	1,066	2,175	3,117	5,724	5,830	8,174	12,227	17,678
Box Quantity	200	200	100	100	100	100	50	50

Petrochemical

Page Contents

66 Studbolt - Metric

69 Studbolt - Inch

72 Heavy Hex Nut



Petrochemical Fasteners

Wide Range of Unbrako Studbolts and Nuts for Gas, Petroleum & Chemical Industries.
ISO 9001:2008 and ISO/TS 16949:2002 Quality Assured.

Product Capability Coatings

- Plain (Self Colour)
- Hot Dipped Galvanized
- Mechanically Plated
- Zinc Plated
- PTFE
- Xylan™
- Molybond™
- Cadmium
- Phosphate and Oil



Size Range

Diameter Range	Inch : 3/8" to 4"
	Metric : M10 to M100
Length Range	Inch : upto 10 feet
	Metric : upto 3 meters



STUDBOLTS (ASTM Spec)	Screw Fastening Material (generic)	Material	COMPATIBLE NUTS (ASTM Spec)
A193 Grade B7	Cr - Mo	4140 / 4142 / 4145	A194 Grade 2H
A193 Grade B7M	Cr - Mo	4140 / 4142 / 4145	A194 Grade 2HM
A193 Grade B8	18 Cr - 8 Ni	304	A194 Grade 8
A320 Grade B8M	18 Cr - 10 Ni - 2 Mo	316	A194 Grade 8M
A193 Grade B16	Cr MoV	EN 40CrMoV4	A194 Grade 4 or 7
A320 Grade L7	Cr - Mo	4140 / 4142 / 4145	A194 Grade 4 or 7
A320 Grade L7M	Cr - Mo	4140 / 4142 / 4145	A194 Grade 4M or 7M
A193 Grade B5	5 Cr	501	A194 Grade 3
A193 Grade B6	12 Cr	410	A194 Grade 6
A193 Grade B8T	18 Cr - 10 Ni - Ti	321	A194 Grade 8T

* Grey Highlighted items can be made-to-order. Not all material is stocked, however is available on request



Stud Bolt - Metric without nuts

DIA	M12		M16		M18		M20		M22	
	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
60	552001	1,948	552013	3,580						
70	552002	2,273	552014	4,176	552033	5,410				
80	552003	2,597	552015	4,773	552034	6,183	552055	7,469		
90	552004	2,922	552016	5,370	552035	6,957	552056	8,403	552078	10,358
100	552005	3,247	552017	5,966	552036	7,730	552057	9,335	552079	11,509
110	552006	3,571	552018	6,562	552037	8,502	552058	10,269	552080	12,661
120	552007	3,897	552019	7,159	552038	9,275	552059	11,203	552081	13,812
130	552008	4,221	552020	7,756	552039	10,048	552060	12,137	552082	14,962
140	552009	4,545	552021	8,353	552040	10,822	552061	13,070	552083	16,113
150	552010	4,871	552022	8,950	552041	11,594	552062	14,004	552084	17,264
160	552011	5,195	552023	9,546	552042	12,367	552063	14,938	552085	18,415
170	552012	5,519	552024	10,142	552043	13,140	552064	15,871	552086	19,567
180			552025	10,739	552044	13,913	552065	16,804	552087	20,717
190			552026	11,336	552045	14,685	552066	17,738	552088	21,868
200			552027	11,932	552046	15,459	552067	18,672	552089	23,019
210			552028	12,529	552047	16,232	552068	19,605	552090	24,170
220			552029	13,126	552048	17,005	552069	20,539	552091	25,320
230			552030	13,723	552049	17,777	552070	21,472	552092	26,471
240			552031	14,318	552050	18,550	552071	22,406	552093	27,623
250			552032	14,915	552051	19,323	552072	23,339	552094	28,774
260					552052	20,097	552073	24,273	552095	29,925
270					552053	20,869	552074	25,207	552096	31,075
280					552054	21,642	552075	26,141	552097	32,226
290							552076	27,073	552098	33,377
300							552077	28,007	552099	34,528
320									552100	36,830

1. Studbolt Specification : Generally conforming to ASTM A193 / Grade B7.
2. Note : Prices for ASTM Grade B7M, L7, L7M, L43, B16, B8, B8M. Check availability in stock at the time of order.
3. Plating : No guarantee can given for unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
4. Products can be supplied with Yellow Zinc Cr6+, Xylan® PTFE, Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

**Note: Above prices are only for the Fully Stud Bolt without Nuts.
For Nuts please follow the prices on Page no. 71**



Stud Bolt - Metric without nuts

DIA	M24		M27		M30		M33		M36	
	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
90	552101	12,193								
100	552102	13,548								
110	552103	14,903	552126	19,435						
120	552104	16,257	552127	21,202	552151	26,144				
130	552105	17,612	552128	22,969	552152	28,322	552180	35,211		
140	552106	18,967	552129	24,736	552153	30,500	552181	37,920	552208	44,751
150	552107	20,321	552130	26,502	552154	32,680	552182	40,629	552209	47,947
160	552108	21,677	552131	28,269	552155	34,858	552183	43,337	552210	51,144
170	552109	23,032	552132	30,036	552156	37,036	552184	46,045	552211	54,340
180	552110	24,386	552133	31,803	552157	39,216	552185	48,755	552212	57,537
190	552111	25,741	552134	33,570	552158	41,394	552186	51,463	552213	60,733
200	552112	27,096	552135	35,336	552159	43,572	552187	54,171	552214	63,930
210	552113	28,450	552136	37,103	552160	45,752	552188	56,880	552215	67,127
220	552114	29,805	552137	38,870	552161	47,930	552189	59,589	552216	70,323
230	552115	31,160	552138	40,637	552162	50,108	552190	62,297	552217	73,519
240	552116	32,514	552139	42,404	552163	52,288	552191	65,006	552218	76,715
250	552117	33,869	552140	44,171	552164	54,466	552192	67,714	552219	79,912
260	552118	35,225	552141	45,937	552165	56,644	552193	70,423	552220	83,108
270	552119	36,580	552142	47,704	552166	58,824	552194	73,132	552221	86,305
280	552120	37,934	552143	49,471	552167	61,002	552195	75,840	552222	89,501
290	552121	39,289	552144	51,238	552168	63,180	552196	78,549	552223	92,698
300	552122	40,644	552145	53,005	552169	65,360	552197	81,257	552224	95,894
320	552123	43,353	552146	56,538	552170	69,716	552198	86,674	552225	1,02,288
340	552124	46,062	552147	60,072	552171	74,074	552199	92,092	552226	1,08,681
360	552125	48,772	552148	63,606	552172	78,430	552200	97,508	552227	1,15,074
380			552149	67,139	552173	82,788	552201	1,02,926	552228	1,21,466
400			552150	70,673	552174	87,146	552202	1,08,343	552229	1,27,859
420					552175	91,502	552203	1,13,760	552230	1,34,252
440					552176	95,860	552204	1,19,177	552231	1,40,645
460					552177	1,00,218	552205	1,24,595	552232	1,47,038
480					552178	1,04,574	552206	1,30,011	552233	1,53,431
500					552179	1,08,932	552207	1,35,429	552234	1,59,824

1. Studbolt Specification : Generally conforming to ASTM A193 / Grade B7.
2. Note : Prices for ASTM Grade B7M, L7, L7M, L43, B16, B8, B8M. Check availability in stock at the time of order.
3. Plating : No guarantee can given for unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
4. Products can be supplied with Yellow Zinc Cr6+, Xylan® PTFE, Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

Note: Above prices are only for the Fully Stud Bolt without Nuts.

For Nuts please follow the prices on Page no. 71



Stud Bolt - Metric without nuts

DIA	M39		M42		M45		M48		M52		M56	
	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
150	552235	57,607										
160	552236	61,447	552261	70,554								
170	552237	65,288	552262	74,963	552286	87,984						
180	552238	69,128	552263	79,373	552287	93,159	552310	1,04,685				
190	552239	72,968	552264	83,783	552288	98,335	552311	1,10,501	552333	1,32,679		
200	552240	76,809	552265	88,193	552289	1,03,510	552312	1,16,317	552334	1,39,662		
210	552241	80,649	552266	92,603	552290	1,08,686	552313	1,22,132	552335	1,46,645	823506	1,74,431
220	552242	84,489	552267	97,012	552291	1,13,862	552314	1,27,948	552336	1,53,628	823507	1,82,739
230	552243	88,330	552268	1,01,422	552292	1,19,037	552315	1,33,765	552337	1,60,611	823508	1,91,045
240	552244	92,170	552269	1,05,831	552293	1,24,213	552316	1,39,580	552338	1,67,594	823509	1,99,351
250	552245	96,011	552270	1,10,241	552294	1,29,388	552317	1,45,396	552339	1,74,578	823510	2,07,657
260	552246	99,851	552271	1,14,651	552295	1,34,564	552318	1,51,211	552340	1,81,561	823511	2,15,963
270	552247	1,03,691	552272	1,19,060	552296	1,39,739	552319	1,57,027	552341	1,88,543	823512	2,24,270
280	552248	1,07,532	552273	1,23,470	552297	1,44,915	552320	1,62,844	552342	1,95,527	823513	2,32,576
290	552249	1,11,372	552274	1,27,879	552298	1,50,091	552321	1,68,659	552343	2,02,510	823514	2,40,882
300	552250	1,15,212	552275	1,32,289	552299	1,55,266	552322	1,74,475	552344	2,09,493	823515	2,49,188
320	552251	1,22,893	552276	1,41,108	552300	1,65,617	552323	1,86,106	552345	2,23,460	823516	2,65,801
340	552252	1,30,574	552277	1,49,927	552301	1,75,967	552324	1,97,739	552346	2,37,425	823517	2,82,414
360	552253	1,38,255	552278	1,58,747	552302	1,86,319	552325	2,09,370	552347	2,51,392	823518	2,99,026
380	552254	1,45,937	552279	1,67,566	552303	1,96,670	552326	2,21,002	552348	2,65,358	823519	3,15,638
400	552255	1,53,617	552280	1,76,385	552304	2,07,021	552327	2,32,633	552349	2,79,324	823520	3,32,252
420	552256	1,61,298	552281	1,85,204	552305	2,17,372	552328	2,44,265	552350	2,93,290	823521	3,48,864
440	552257	1,68,979	552282	1,94,023	552306	2,27,723	552329	2,55,897	552351	3,07,257	823522	3,65,476
460	552258	1,76,660	552283	2,02,843	552307	2,38,074	552330	2,67,528	552352	3,21,222	823523	3,82,089
480	552259	1,84,340	552284	2,11,662	552308	2,48,425	552331	2,79,159	552353	3,35,189	823524	3,98,701
500	552260	1,92,021	552285	2,20,481	552309	2,58,777	552332	2,90,792	552354	3,49,156	823525	4,15,314

1. Studbolt Specification : Generally conforming to ASTM A193 / Grade B7.
2. Note : Prices for ASTM Grade B7M, L7, L7M, L43, B16, B8, B8M. Check availability in stock at the time of order.
3. Plating : No guarantee can given for unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
4. Products can be supplied with Yellow Zinc Cr6+, Xylan® PTFE, Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

**Note: Above prices are only for the Fully Stud Bolt without Nuts.
For Nuts please follow the prices on Page no. 71**



Stud Bolt - Inch without nuts

DIA	1/2		5/8		3/4		7/8		1	
Length	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
2 1/4	552375	2,208								
2 3/4	552376	2,572	552388	4,084						
3	552377	2,935	552389	4,630	552404	6,755				
3 1/2	552378	3,299	552390	5,176	552405	7,619	823540	10,459		
4	552379	3,662	552391	5,722	552406	8,483	823541	11,641	823545	15,081
4 1/2	823526	4,027	552392	6,267	552407	9,347	552421	12,824	823546	16,627
4 3/4	823527	4,391	552393	6,813	552408	10,211	552422	14,006	823547	18,173
5	552382	4,754	552394	7,359	552409	11,075	552423	15,189	823548	19,719
5 1/2	823528	5,118	552395	7,904	552410	11,939	552424	16,371	552438	21,266
6	552384	5,481	552396	8,450	552411	12,803	552425	17,553	552439	22,811
6 1/2	823529	6,209	823532	9,769	552412	14,532	552426	19,327	552440	25,903
7	823530	6,573	552398	10,315	552413	15,122	552427	21,100	552441	27,450
7 1/2	823531	6,937	823533	10,905	823537	15,986	552428	22,055	552442	29,269
8			552400	12,043	552415	16,805	552429	23,192	823549	31,542
8 1/2			823534	12,633	823538	17,624	552430	24,920	823550	33,361
9			823535	13,179	552417	19,306	823542	26,647	552445	35,180
9 1/2			823536	13,770	823539	20,124	823543	27,830	552446	36,090
10							823544	28,967	823551	39,273
10 1/2									823552	40,637
11									823553	42,456
11 1/2									823554	43,820

1. Studbolt Specification : Generally conforming to ASTM A193 / Grade B7.
2. Note : Prices for ASTM Grade B7M, L7, L7M, L43, B16, B8, B8M. Check availability in stock at the time of order.
3. Plating : No guarantee can given for unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
4. Products can be supplied with Yellow Zinc Cr6+, Xylan® PTFE, Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

**Note: Above prices are only for the Fully Stud Bolt without Nuts.
For Nuts please follow the prices on Page no. 71**



Marking*

Stud Bolt - Inch without nuts

DIA	1 1/8		1 1/4		1 1/2		1 5/8	
Length	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
4 1/2	823555	21,910						
4 3/4	823556	23,729	823570	29,806				
5	823557	26,003	823571	32,080				
5 1/2	823558	27,822	823572	34,354	823587	52,254		
6	823559	29,641	823573	37,082	823588	55,892	823614	64,449
6 1/2	815620	33,733	552476	42,084	823589	63,168	823615	73,089
7	815621	35,552	823574	44,358	823590	66,805	823616	77,182
7 1/2	815622	37,371	552478	46,632	823591	70,898	823617	81,274
8	815623	40,555	552479	51,634	823592	78,174	823618	89,915
8 1/2	812570	43,283	815624	54,362	823593	81,812	823619	94,007
9	815627	45,102	815625	56,181	823594	85,450	823620	98,555
9 1/2	823560	47,376	823575	58,910	823595	89,542	823621	1,02,647
10	823561	51,014	823576	63,912	552504	96,818	823622	1,10,833
10 1/2	823562	53,287	823577	66,185	823596	1,00,456	823623	1,15,380
11	823563	55,106	552485	68,914	823597	1,02,730	823624	1,19,473
11 1/2	823564	56,925	823578	71,187	552507	1,05,004	823625	1,23,565
12	823565	61,018	823579	75,963	823598	1,12,279	823626	1,32,660
12 1/2	823566	62,837	823580	78,463	823599	1,15,917	823627	1,37,207
13	823567	64,884	823581	80,965	823600	1,19,555	823628	1,41,528
13 1/2	823568	68,976	823582	85,967	823601	1,26,831	823629	1,50,168
14	823569	71,022	823583	88,468	823602	1,30,469	823630	1,54,488
14 1/2			823584	90,969	823603	1,34,107	823631	1,58,808
15			823585	93,470	823604	1,37,745	823632	1,63,128
15 1/2			823586	98,472	823605	1,44,566	823633	1,71,313
16					823606	1,48,204	823634	1,75,634
16 1/2					823607	1,51,842	823635	1,79,953
17					823608	1,55,480	823636	1,84,274
17 1/2					823609	1,62,756	823637	1,92,914
18					823610	1,66,394	823638	1,97,233
18 1/2					823611	1,70,031	823639	2,01,554
19					823612	1,77,307	823640	2,10,194
19 1/2					823613	1,80,945	823641	2,14,513
20							823642	2,18,834
20 1/2							823643	2,23,153
21							823644	2,31,339
22							823645	2,39,979

1. Studbolt Specification : Generally conforming to ASTM A193 / Grade B7.
2. Note : Prices for ASTM Grade B7M, L7, L7M, L43, B16, B8, B8M. Check availability in stock at the time of order.
3. Plating : No guarantee can given for unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
4. Products can be supplied with Yellow Zinc Cr6+, Xylan® PTFE, Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

Note: Above prices are only for the Fully Stud Bolt without Nuts.

For Nuts please follow the prices on Page no. 71



Stud Bolt - Inch without nuts

DIA	1 3/4		1 7/8		2		2 1/4	
Length	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs	Part No.	₹ Price/ 100 Pcs
6 1/2	823646	85,739	823677	99,092				
7	823647	90,741	823678	1,04,549				
7 1/2	823648	95,743	823679	1,10,460				
8	823649	1,05,748	823680	1,22,284				
8 1/2	823650	1,10,750	823681	1,27,741	823708	1,46,054		
9	823651	1,15,752	823682	1,33,652	823709	1,52,421	823737	1,95,580
9 1/2	823652	1,20,754	552593	1,39,564	823710	1,59,242	823738	2,04,220
10	823653	1,31,213	823683	1,50,932	823711	1,72,429	823739	2,21,500
10 1/2	823654	1,36,215	823684	1,56,844	823712	1,79,250	823740	2,30,140
11	823655	1,41,217	823685	1,62,301	823713	1,85,617	823741	2,38,780
11 1/2	823656	1,46,220	823686	1,68,212	823714	1,92,438	823742	2,47,420
12	823657	1,56,224	823687	1,79,809	823715	2,05,853	823743	2,64,700
12 1/2	823658	1,61,226	823688	1,85,493	823716	2,12,446	823744	2,73,340
13	823659	1,66,228	823689	1,91,404	823717	2,19,041	823745	2,81,980
13 1/2	823660	1,76,006	823690	2,03,001	823718	2,32,228	823767	2,99,260
14	823661	1,80,780	823691	2,08,684	823719	2,38,821	823768	3,07,900
14 1/2	823662	1,85,782	552603	2,14,369	823720	2,45,415	823748	3,16,540
15	823663	1,90,784	823692	2,20,053	823721	2,52,009	823749	3,25,180
15 1/2	823664	2,00,788	823693	2,32,786	815626	2,65,651	823750	3,38,823
16	823665	2,05,791	823694	2,38,470	823722	2,72,017	823751	3,47,463
16 1/2	823666	2,10,793	823695	2,44,154	823723	2,78,384	823752	3,56,103
17	823667	2,16,023	823696	2,49,839	823724	2,84,978	552667	3,64,516
17 1/2	823668	2,25,344	823697	2,61,434	823725	2,98,165	823753	3,81,568
18	823669	2,29,437	823698	2,67,346	823726	3,04,758	823754	3,90,208
18 1/2	823670	2,35,349	823699	2,73,031	552640	3,11,353	823755	3,98,621
19	823671	2,46,262	823700	2,84,626	823727	3,24,540	823756	4,15,447
19 1/2	823672	2,51,265	823701	2,90,538	823728	3,31,133	823757	4,23,859
20	823673	2,56,267	823702	2,96,449	823729	3,37,728	823758	4,32,044
20 1/2	823674	2,61,269	823703	3,02,361	823730	3,44,321	823759	4,40,684
21	823675	2,71,273	823704	3,13,729	823731	3,57,508	823760	4,57,965
22	823676	2,81,277	823705	3,25,553	823732	3,71,151	823761	4,74,790
23			823706	3,42,833	823733	3,90,932	823762	4,93,434
24			823707	3,54,429	823734	4,04,120	823763	5,17,309
25					823735	4,24,355	823764	5,42,546
26					823736	4,37,088	823765	5,59,372
27							823766	5,85,065

1. Studbolt Specification : Generally conforming to ASTM A193 / Grade B7.
2. Note : Prices for ASTM Grade B7M, L7, L7M, L43, B16, B8, B8M. Check availability in stock at the time of order.
3. Plating : No guarantee can given for unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
4. Products can be supplied with Yellow Zinc Cr6+, Xylan® PTFE, Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

Note: Above prices are only for the Fully Stud Bolt without Nuts.

For Nuts please follow the prices on Page no. 71



Marking*

Heavy Hex Nuts (ASTM A194 GR2H)

Metric			
Size	Part No.	₹ Price/100 Pcs	Box Quantity
M12	551700	1,246	200
M16	270001	2,349	150
M18	270002	3,072	100
M20	270003	4,494	75
M22	270004	5,597	50
M24	270005	7,759	50
M27	270006	11,151	25
M30	270007	14,416	25
M33	270008	18,953	20
M36	270009	24,817	10
M39	270010	31,659	10
M42	270011	41,157	8
M45	270012	50,493	5
M48	270013	61,606	5
M52	270014	1,01,710	4
M56	270015	1,15,807	4

Inch			
Size	Part No.	₹ Price/100 Pcs	Box Quantity
1/2"	470001	1,443	200
5/8"	470002	2,610	125
3/4"	470003	4,253	75
7/8"	470004	6,530	50
1"	470005	9,339	30
1 1/8"	470006	13,013	25
1 1/4"	470007	18,022	15
1 3/8"	470008	23,381	15
1 1/2"	470009	30,044	10
1 5/8"	470010	37,166	8
1 3/4"	470011	46,801	6
1 7/8"	470012	55,297	6
2"	470013	1,13,120	5
2 1/4"	812801	1,32,125	5

1. Nut Specification : Generally conforming to ASTM A194 / Grade 2H
2. Note : Prices for ASTM Grade 2HM, 4, 7, L43, B16, B8, B8M. Check availability in stock at the time of order.
3. Plating : No guarantee can given for unbrako products which are plated by users or by outside plates, who may not have considered hydrogen embrittlement problem.
4. Products can be supplied with Yellow Zinc Cr6+, Xylan® PTFE, Hot Dip Galvanized and Electro Galvanized Plating. Prices available on request.

Prestigious Petrochemical Clientele



Separate Petrochemical Catalogue available on request

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All offers for delivery from stocks are subject to goods remaining unsold at the time of receipt of order. For forward delivery, dates are given without any guarantee and no responsibility can be accepted by the company for delay in delivery or failure to deliver due to circumstances beyond the company's control.

Infringement of patent and trade mark:

When products are forged to customer's drawings and / or specifications, the responsibility to ensure that these do not result in infringement of any patent or trademark will lie entirely with customer concerned and the customer will be solely responsible for the consequence in case of any such infringement.

Order confirmation:

The company accepts no responsibility for orders booked by the company's salesman or representatives, till it is confirmed in writing by the company.

Acceptance and return:

Wrong dispatches should be notified to the company within 15days from the date of receipt of goods and the Company's consent should be obtained in writing before return of such goods.

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The company shall not be responsible for failure or delay in delivering the goods or any part thereof (or any consequential damages) due to acts of God, enemies of the Government of India, wars, revolution, embargo, riots, civil or political disturbances, strikes, lock-outs, or work stoppages.

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Comparison of Different Strength Grades

SAE	B.S.	IS 1.S.D. DIN	ULTIMATE TENSILE STRENGTH			HARDNESS		
			Tonnes/In ² (Kgf/mm ²)	Newtons/mm ² Min. (Kgf/mm ²)	Pounds/In ² Min. (Kgf/mm ²)	BHN	HRb	HRc
		4.6		400 (40.8)		114 209	67 95	
GRADE 1					60,000 (42.3)	(121) (241)	70 100	
		4.8		420 (42.8)		124 209	71 95	
		5.6		500 (51.0)		147 209	79 95	
GRADE 2					74,000 (52.1)	(154) (241)	80 100	
		5.8		520 (53.0)		152 209	82 95	
	P		35/45 (55.2/71.0)			152 207		
		6.8		600 (61.2)		181 238	89 99	
	R		45/55 (71.0/86.8)			201 285		
	S		50/60 (78.9/94.7)			223 310		(20/33)
		8.8		800 ≤ M16 830 > M16 (81.6) (84.6)		219/285 242/319		20/30 23/34
GRADE 5					1,20,000 (84.6)	(266) (318)		25/34
	T		55/65 (86.8/102.6)			248 335		(24/36)
	U		60/70 (94.7/110.5)			269 331		(28/36)
	V		65/75 (102.6/118.4)			293 370		(31/40)
GRADE 8					1,50,00 (105.7)	(311) (362)		33/39
		10.9		1,040 (106.0)		295 362		31/39
	W		70/80 (110.5/126.3)			311 375		(33/41)
	X		75/85 (118.4/134.2)			341 410		(37/44)
		12.9		1,220 (124.4)		353 412		38/44
	Y		80/90 (126.3/142.0)			363 429		(39/46)
	Z		100 Min (157.8)			444		(47)

Note : 1. : 1Kgf=9.81 Newtons 1Kgf/mm²=1421.7 Psi 2. : Values in brackets are approximate conversions

How Identify Unbrako Products

PRODUCT		Marking	PRODUCT		Marking
Socket Head Cap Screw	Metric : M5 to M24		Nylock Nut M6 to M24 Grade : 8 and 10		
	Inch : 1/4" to 1" BSW			Hardened Washer (Type A) M16 to M36	
Socket Countersunk Cap Screw M5 & M24			High Strength Structural Bolt M16 to M36		
Socket Low Head Cap Screw M5 to M20				High Strength Structural Nut M16 to M36	
Socket Head Shoulder Screw M6 to M24			High Strength Structural Washer 		
Button Head Socket Screw M5 to M12			Track Shoe Bolt and Square Nut Metric : M16 to M27 Inch : 5/8" to 1"		
Flange Button Head Socket Screw M5 to M10					
Hexagon Wrench Set	Metric : 4 A/F to 32 A/F		Direct Tension Indicator Washer M16 to M27 		
	Inch : 5/32" A/F to 3/4" A/F		Stainless Steel Socket Head Cap Screw M5 to M30 		
Durlok Bolt & Nut M6 to M20			Stainless Steel Hex Head Bolt/Screws M5 to M30 SS-304/316 		
Hex Head Bolt/Screw	Metric : M5 to M48		Stainless Steel Hex Nut M5 to M30 SS-304/316 		
	Inch : All Sizes		Stainless Steel Plain Washer 		
Hex Nut	Metric : M6 to M72, Inch : 1/4" to 1 1/2" Grade 8 - UNC		Studbolt and Nuts Metric : M12 to M56 Inch : 1/2" to 2 1/4" 		

According to stamping area on the Product either Unbrako or U130 marking will be used
 Note : "X" marking on SHCS is the internal coding for product traceability, it can be changed with any alphanumeric.
 All Products of sizes smaller than M5 or 1/4" have no head marking due to space constraint



Specialized Coating

A Product's lifespan and performance is not only measured by it's quality, grade and and specification, but also by it's surface finish. Choosing the correct coating for the application will prevent corrosion, enhance aesthetic value and add strength to the fastener, extending it's life and performance. .

Unbrako excels in a variety of coatings done in-house, designed specifically to provide the required protection in such harsh environment. Technical information of a few of these coatings is set out below:

MAIN COATINGS		ELECTROLYTIC COATINGS ZINC / CADMIUM	HOT-DIP GALVANISATION	METALLIC COATING ZINC FLAKE	PTFE
Type of material		All metals	Steels	All metals	All metals
Process temperature		Bath temp. 90°C max. Baking temp. 200°C max.	460°C - 550°C	Bath temp. 20°C max. Baking temp. 300°C max.	Bath temp. 30°C max. Baking temp. 300°C max.
Maximum service temperature without damage of coating		70°C max	300°C max	300°C max	300°C max
Usual thickness		3 µm to 15 µm	min. Individual - 43µm min. Average - 54µm	min. 5 µm max. Subject to required SST Life	15 µm min
Average Friction Coefficient	without lubrication	0.16 - 0.22	Seizure risks when bolt stress is >40% YS	0.12 - 0.25	0.08 - 0.16
	with lubrication	0.08 - 0.12	0.10 - 0.16	0.08 - 0.16	no additional lubrication required
Salt spray test (SST) (red corrosion)		Zinc 5 to 7µm : 48 h min Zinc chromating 5 to 7 µm : 96 h min Reinforced chromating : 200 h min	70µm : 400 h min	500 Hrs. to 1000 Hrs. Subjected to coating Thickness	1000h min
Hydrogen embrittlement		Descaling with inhibitor imperative baking for 100 Mpa steels	Descaling with inhibitor No risk process	No risk process	No risk process
Aspect		Bright	Matt or glossy	Matt aluminum	Matt Blue

NOTE:- Specialist assistance is recommended when selecting these coatings.

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