Unilok

Socket Countersunk Head Screws

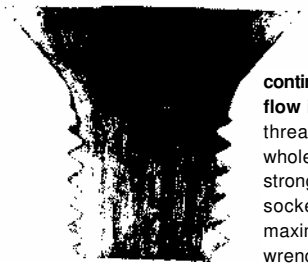
When it comes to Socket Countersunk Head Screws, insist on "UNILOK"

Here's why :

"UNILOK" Socket Countersunk Head Screws are widely used for fastening of plates, strips, mouldings and other thin section parts in modern equipment and machinery requiring strong, reliable joints, and hence, strong, reliable fasteners to hold the parts together. This requirements for dependability also holds true for fasteners used to hold thin section metals together in applications that also require a neat, smooth surface. "UNILOK" Socket Countersunk Head Screws not only provide reliable fastening but also a smooth, attractive flush mounting that enhances the appearance of the product on which they are used.

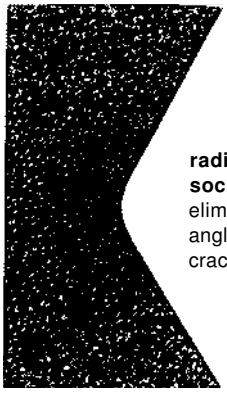
Feature for feature the superior Socket Countersunk Head Screw

- Provides more clamping force.
- Manufactured from high grade alloy steel.
- Held to exacting tolerances to ensure the highest degree of dimensional uniformity.
- Closely controlled head angle assures flush seating and close all-round head contact by initially contacting at the upper portion of the head bearing area in the countersunk hole.
- Closely controlled threads result in tighter and more secure fit and stronger assemblies.
- Deep accurate non-slip sockets provide maximum hex wrench' engagement for full tightening without marring the surrounding surface.



continuous grain flow in head, shank threads makes whole screw stronger. Deep socket provides maximum hex wrench engagement.

threads are fully formed to maintain continuous grain and prevent shearing. Controlled radius at root adds strength.



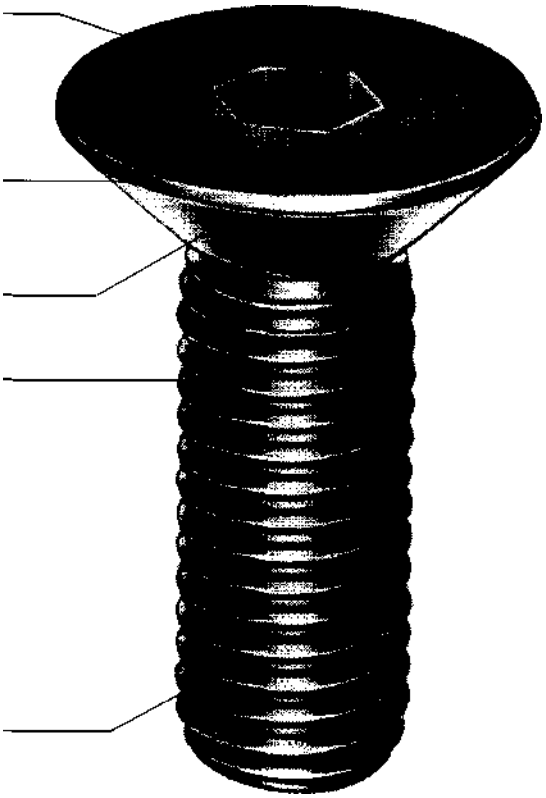
radiused socket corners eliminate sharp angles where cracks start.

DEEP ACCURATE SOCKETS : — Provide maximum wrench engagement, while the radiused socket corners eliminate sharp angles where cracks could start.

CONTROLLED HEAD FORGING Forms uniform grain flow with unbroken flow lines; makes head stronger.

UNIFORM UNDERHEAD ANGLE : - Gives maximum contact with side walls.

CLOSELY ROLLED THREADS Provide closest fit possible without selective assembly, gives maximum cross-sectional areas for strength; makes part fit better to utilise full strength of screw.



HEAT TREATED ALLOY STEEL For maximum strength without brittleness.

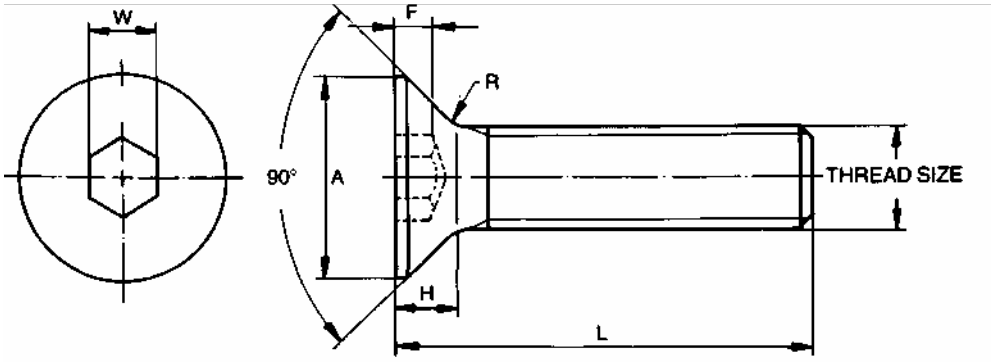
Socket Countersunk Head Screws

Metric Series

Dimensions - Physical Properties - Tightening Torques

Notes :

1. The screws will generally conform to IS 6761 DIN : 7991 for dimensions
2. Threads will conform to class 4g6g of IS: 4218, ISO-261/965, Coarse Series
3. Material : "UNILOK" High Grade Alloy Steel.
4. Heat Treatment : HRc 38-44.
5. Property Class : 12.9.
   (Because of their head configurations, these screws may not meet the minimum ultimate tensile load for Property Class 12.9)
6. The Screws will be threaded to head.
7. Maxm. lengths available will be as tabulated
8. All dimensions are in millimeters.



Thread Size	M3	M4	M5	M6	M8	M10	M12	M16	M20
Pitch	0.50	0.70	0.80	1.00	1.25	1.50	1.75	2.00	2.50
A Max.	6.0	8.0	10.0	12.0	16.0	20.0	24.0	30.0-	36.0
FMin.	1.05	1.49	1.86	2.16	2.85	3.60	4.30	4.89	5.60
HRef.	1.7	2.3	2.8	3.3	4.4	5.5	6.5	7.5	8.5
RRef.	0.50	0.70	0.70	0.85	1.20	1.50	1.85	1.85	1.85
WNom.	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0
LMax.	30	30	35	40	45	55	60	70	100

Physical Properties

Ultimate tensile strength, Min.	1,220 N/mm^2	124 kgf/mm^2
Yield strength, 0.2% offset, Min.	1,100N/mm^2	112 kgf/mm^2
Shear strength, Min.	730 N/mm^2	74.6 kgf/mm^2
Elongation % on GL = 5.65 √A" Where A = Cross sectional area.	9% Min.	

Typical Tightening Torque (Max.) and Induced load

Thread Size	Stress Area	Tightening Torque		Induced Load	
		Unplated*			
	mm^2	Nm	Kgfm	N	Kgf
M3	5.03	1.2	0.122	2,113	215.4
M4	8.78	2.8	0.285	3,688	376.0
MS	14.20	5.5	0.561	5,964	608.0
M6	20.10	9.5	0.968	8,442	861.0
M8	36.60	24.0	2.450	15,372	1,567.0
M10	58.00	47.0	4.790	24,360	2,483.0
M12	84.30	82.0	8.360	35,406	3,609.0
M16	157.00	205.0	20.900	65,940	6,722.0
M20	245.00	400.0	40.770	1 ,02,900	10,490.0

Note:
The tightening torque calculated to induce 420 N/mm^2 stress in screw threads.

* Torque values listed are for plain screws. For Cadmium plated screws, multiply listed values by 0.75. For Zinc plated screws, multiply listed values by 1.40.