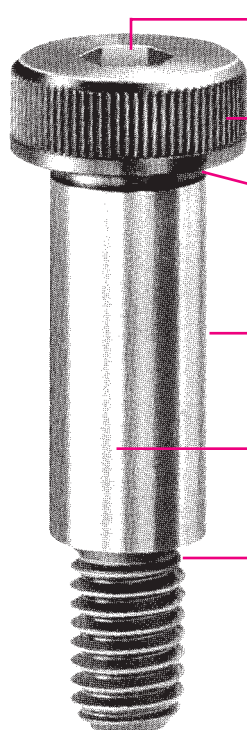


### SHOULDER SCREWS ■ Dimensions ■ Mechanical Properties ■ Seating Torques



Precision hex socket for maximum wrenching strength

Knurled head for sure finger grip and fast assembly

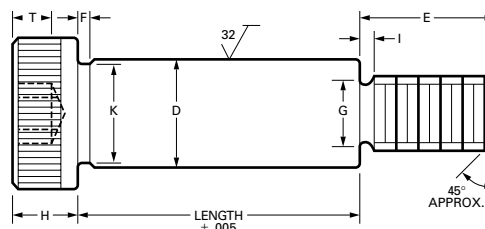
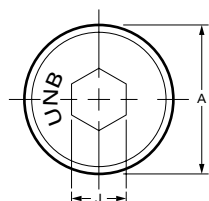
Neck to allow assembly with minimal chamfering

Controlled concentricity between head and body for easier, more accurate assembly

Shoulder diameter held to .002 inch tolerance

Concentricity controlled between body and thread  
Finished threads close to body for maximum holding power

Head sidewall may have straight knurls at mfrs. option



### DIMENSIONS

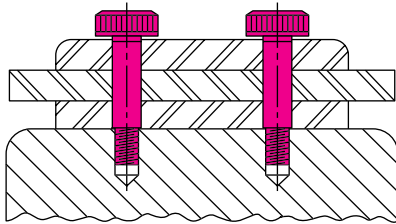
nom. shoulder diameter	thread size	threads per inch UNRC	A		D		T	H		J	K	G	
			max.	min.	max.	min.	min.	max.	min.	nom.	min.	max.	min.
1/4	.190	24	.375	.357	.248	.246	.094	.188	.177	.125	.227	.142	.133
5/16	.250	20	.438	.419	.3105	.3085	.117	.219	.209	.156	.289	.193	.182
3/8	.312	18	.562	.543	.373	.371	.141	.250	.240	.188	.352	.249	.237
1/2	.375	16	.750	.729	.498	.496	.188	.312	.302	.250	.477	.304	.291
5/8	.500	13	.875	.853	.623	.621	.234	.375	.365	.312	.602	.414	.397
3/4	.625	11	1.000	.977	.748	.746	.281	.500	.490	.375	.727	.521	.502
1	.750	10	1.312	1.287	.998	.996	.375	.625	.610	.500	.977	.638	.616
1-1/4	.875	9	1.750	1.723	1.248	1.246	.469	.750	.735	.625	1.227	.750	.726
1-1/2	1.125	7	2.125	2.095	1.498	1.496	.656	1.000	.980	.875	1.478	.964	.934
1-3/4	1.250	7	2.375	2.345	1.748	1.746	.750	1.125	1.105	1.000	1.728	1.089	1.059
2	1.500	6	2.750	2.720	1.998	1.996	.937	1.250	1.230	1.250	1.978	1.307	1.277

**NOTE:** Performance data listed are for standard production items only. Non-stock items may vary due to variables in methods of manufacture. It is suggested that the user verify performance on any non-standard parts for critical applications.

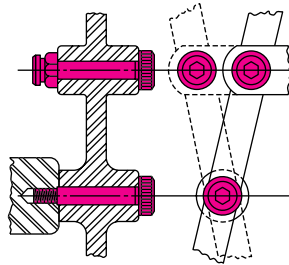
# SHOULDER SCREWS

Dimensions ■ Mechanical Properties ■ Seating Torques

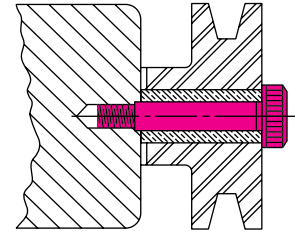
## APPLICATIONS



stationary guide



moving shaft or pivot



pulley shaft uses

Shoulder screws have an undercut portion between the thread and shoulder, allowing a close fit. They're used for a wide range of punch and die operations, such as the location and retention of stripper plates, and act as a guide in blanking and forming presses. Other applications for shoulder screws include: bearing pins for swing arms, links and levers, shafts for cam rolls and other rotating parts, pivots, and stud bolts. Shoulder screws are sometimes referred to as stripper bolts, resulting from their use with stripper plates and springs.

## MECHANICAL PROPERTIES AND SEATING TORQUES

E thread length	F max.	I max.	T +.000 -.020	ult. tensile strength lbs. min.	single shear strength of body lbs. min.	recom.-* mended seating torque inch-lbs.
.375	.093	.083	.094	2,220	4,710	45
.438	.093	.100	.117	4,160	7,360	112
.500	.093	.111	.141	7,060	10,500	230
.625	.093	.125	.188	10,600	18,850	388
.750	.093	.154	.234	19,810	29,450	990
.875	.093	.182	.281	31,670	42,410	1,975
1.000	.125	.200	.375	47,680	75,400	3,490
1.125	.125	.222	.469	66,230	117,800	5,610
1.500	.125	.286	.656	110,000	169,500	12,000
1.750	.125	.286	.750	141,000	231,000	16,000
2.000	.125	.333	.937	205,000	301,500	30,000

### NOTES

**Material:** ANSI/ASME B18.3, ASTM A574 – alloy steel

**Heat treatment:** Rockwell C 36-43; 160,000 psi tensile strength.

**Dimensions:** ANSI/ASME B18.3

**Concentricity:** Head to body – within .005 T.I.R. when checked in "V" block equal to or longer than body length. Pitch diameter to body – within .004 T.I.R. when held in threaded bushing and checked at a distance of 3/16" from shoulder at threaded end.

Shoulder must rest against face of shoulder of standard "GO" ring gage. Bearing surface of head – perpendicular to axis of body with in 2° maximum deviation.

Tensile strength based on minimum neck area "G." Shear strength based on shoulder diameter "D."

**Thread class:** 3A

**Screw point chamfer:** The point shall be flat or slightly concave, and chamfered. The plane of the point shall be approximately normal to the axis of the screw. The chamfer shall extend slightly below the root of the thread, and the edge between flat and chamfer may be slightly rounded. The included angle of the point should be approximately 90°.

\*See Note, page 1