

Inch

Pouce



Torque Data - 1960 Series

Valeurs de serrage – série 1960

SOCKET HEAD CAP SCREWS - TORQUE DATA - 1960 SERIES

TORQUE-TENSION

TIGHTENING TORQUE DATA

NOMINAL SIZE	BASIC SCREW DIAMETER	TENSION INDUCED IN SCREWS TORQUED AS RECOMMENDED (LBS.)		RECOMMENDED TIGHTENING TORQUE (INCH/LBS.)*	
		UNRC	UNRF	UNRC	UNRF
0	0.0600	–	190	–	2.6
1	0.0730	280	290	4.5	4.8
2	0.0860	390	410	7.5	8.0
3	0.0990	510	550	11.0	12.0
4	0.1120	630	690	16.0	18.0
5	0.1250	830	870	24.0	24.0
6	0.1380	950	1,070	30.0	34.0
8	0.1640	1,460	1,550	55.0	58.0
10	0.1900	1,840	2,100	79.0	90.0
1/4"	0.2500	3,530	4,040	200.0	230.0
5/16"	0.3125	5,820	6,450	415.0	460.0
3/8"	0.3750	8,620	9,770	740.0	845.0
7/16"	0.4375	11,830	13,180	1,190.0	1,305.0
1/2"	0.500	15,760	17,800	1,800.0	2,065.0
5/8"	0.6250	23,740	26,890	3,400.0	3,800.0
3/4"	0.7500	35,080	39,150	6,000.0	6,750.0
7/8"	0.8750	41,590	45,830	8,250.0	9,200.0
1"	1.0000	54,350	59,662	12,500.0	13,000.0
1-1/4"	1.2500	87,225	96,600	25,000.0	27,750.0
1-1/2"	1.5000	126,450	142,280	43,500.0	49,000.0



**B**

\*These tightening torque values are 75% of the torque required to yield the screw, and apply only for the conditions listed below. Different percentages of torque-to-yield values are also commonly used for special conditions.

NOTES FOR CHART

These are average values for standard Holo-Krome 1960 Series Alloy Steel Socket Cap Screws with black finish, tested with hardened steel plates, and hardened nuts with the threads and bearing areas lubricated with plain, medium viscosity machine oil.

The relationship between the torque and the induced tension (preload) can be expressed by the empirical formula  $T = KDP$ , in which T is the tightening torque in inch pounds; D is the nominal diameter of the screw; P is the tension (in pounds) induced in the screw; and K is the torque coefficient. The torque coefficient is not constant but varies with the material, surface finish and lubricity of the threads and head bearing area of the screws and parts fastened.

For the conditions shown above (standard alloy steel black finished screws clamping hardened steel parts), K will range from 0.19 to 0.25. For cadmium plated screws with steel parts, K will usually fall between 0.13 and 0.17. For zinc plated screws K may fall between 0.30 and 0.34. When the thread and head bearing surfaces are covered with certain types of lubricants, or with anti-seize compounds, K can drop as low as 0.05. At the other extreme, combinations of certain materials, such as austenitic stainless steel screws and parts not lubricated or coated, can result in K values as high as 0.35, or more.

Because the induced tension can vary considerably from one type of assembly to another for any given torque, the above data should be used with caution – particularly in applications where the control of preload is critical and must be obtained by the torque wrench method. For such applications, the

relationship between torque and induced tension should be determined experimentally for the actual parts and lubrication practice involved.

TIGHTENING TORQUES. At the tightening torques listed standard Holo-Krome alloy steel 1960 Series screws, used under the conditions described, will be preloaded to approximately 75% of the tension induced at yield. The bearing stress under the head at these preloads will be approximately 80,000 psi, so indentation should not occur when the parts clamped are of steel or cast iron with a hardness equal to or in excess of Rockwell B 85. With softer materials, washers may be required under the heads of the screws to avoid indentation.

**In applications where screws are subject to fatigue from dynamic loading, the importance of proper preloading during assembly cannot be overemphasized.** The proper preload is especially important for rigid-type (metal-to-metal) joints, where it has been found that the use of a preload greater than the external load will usually eliminate the possibility of fatigue failure. For this reason, the preferred practice for such assemblies is to preload to 75% of the induced tension at yield.

FOR FLEXIBLE TYPE JOINTS, HOWEVER, AND FOR ASSEMBLIES EXPOSED TO ELEVATED TEMPERATURES, MUCH LOWER PRELOADS MAY BE REQUIRED. No general recommendations are possible for such assemblies or service conditions. Each application must be analysed individually, because the preload requirements may vary considerably from one application to another. Users who desire suggestions for the preload or tightening torque to be used for a specific application are invited to contact your Spenaaur Sales Representative.

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SPAENAUR

Socket Head Cap Screws

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Socket Head Cap Screws

See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers

UNRC COARSE THREAD SERIES - 1960 SERIES

HEAT TREATED ALLOY STEEL • UNIFIED 3A THREAD FIT  
MEETS ASME B18.3 AND ASTM A574

For Thread Lengths see chart on page B183.

Sold in full packages only.

DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.
#2 - 56 5/64" Key	3/16"	HK358-001	100	#8 - 32 9/64" Key	1/4"	HK358-029	100	5/16" - 18 1/4" Key	5/8"	HK358-068	100
	1/4"	HK358-002	100		5/16"	HK358-641	100		3/4"	HK358-069	100
	3/8"	HK358-003	100		3/8"	HK358-030	100		7/8"	HK358-070	100
	1/2"	HK358-004	100		1/2"	HK358-031	100		1-3/4"	HK358-074	100
#3 - 48 5/64" Key	3/16"	HK358-005	100		5/8"	HK358-032	100		1"	HK358-075	100
	1/4"	HK358-006	100		3/4"	HK358-033	100		2-1/4"	HK358-076	100
	3/8"	HK358-007	100		7/8"	HK358-034	100		2-1/2"	HK358-077	100
	1/2"	HK358-008	100		1"	HK358-035	100		2-3/4"	HK358-078	100
#4 - 40 3/32" Key	3/16"	HK358-632	100		1-1/4"	HK358-036	100		3"	HK358-079	100
	1/4"	HK358-009	100		1-1/2"	HK358-037	100		3-1/4"	HK358-080	50
	5/16"	HK358-633	100		1-3/4"	HK358-642	100		3-1/2"	HK358-081	50
	3/8"	HK358-010	100		2"	HK358-643	100		3-3/4"	HK358-652	50
	1/2"	HK358-011	100	2-1/2"	HK358-644	100	4"	HK358-082	50		
	5/8"	HK358-012	100	#10 - 24 5/32" Key	1/4"	HK358-645	100	3/8" - 16 5/16" Key	5/8"	HK358-084	100
	3/4"	HK358-013	100		1/2"	HK358-039	100		3/4"	HK358-085	100
	7/8"	HK358-634	100		5/8"	HK358-040	100		7/8"	HK358-086	100
1"	HK358-014	100	3/4"		HK358-041	100	1-1/4"		HK358-088	100	
1-1/4"	HK358-635	100	7/8"		HK358-042	100	1-1/2"		HK358-089	100	
#5 - 40 3/32" Key	1/4"	HK358-015	100		1"	HK358-043	100		1-3/4"	HK358-090	50
	5/16"	HK358-636	100		1-1/4"	HK358-044	100		2"	HK358-091	50
	3/8"	HK358-016	100		1-1/2"	HK358-045	100		2-1/4"	HK358-092	50
	1/2"	HK358-017	100	1-3/4"	HK358-046	100	2-3/4"	HK358-094	50		
#6 - 32 7/64" Key	3/4"	HK358-019	100	2-1/4"	HK358-048	100	3"	HK358-095	50		
	3/16" Key	5/16"	HK358-638	100	2-1/2"	HK358-049	100	3-1/4"	HK358-096	50	
					3"	HK358-646	100	4"	HK358-098	50	
					1/4"	HK358-648	100	4-1/2"	HK358-099	50	
					3/8"	HK358-050	100	5"	HK358-100	50	
					1/2"	HK358-051	100	5-1/2"	HK358-654	50	
					5/8"	HK358-052	100	6"	HK358-101	50	
					3/4"	HK358-053	100				
					1"	HK358-055	100				
					1-1/4"	HK358-056	100				
					1-1/2"	HK358-057	100				
					2"	HK358-059	100				
2-1/2"					HK358-061	100					
2-3/4"	HK358-062	100									
3"	HK358-063	100									
3-1/4"	HK358-649	100									
3-1/2"	HK358-064	100									
4"	HK358-065	100									
4-1/2"	HK358-651	50									

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Socket Head Cap Screws

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Continued from Previous Page											
HOLO-KROME, UNRC COARSE THREAD, 1960 SERIES ASME B18.3											
DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.
7/16"- 14 3/8" Key	3/4"	HK358-104	100	5/8"- 11 1/2" Key	1"	HK358-141	25	1"- 8 3/4" Key	1-3/4"	HK358-662	10
	7/8"	HK358-105	100		1-1/4"	HK358-142	25		2"	HK358-193	10
	1"	HK358-106	100		1-3/4"	HK358-144	25		2-1/4"	HK358-194	10
	1-1/4"	HK358-107	50		2-1/4"	HK358-146	25		2-1/2"	HK358-195	10
	1-3/4"	HK358-109	50		2-1/2"	HK358-147	25		2-3/4"	HK358-196	10
	2"	HK358-110	50		2-3/4"	HK358-148	25		3"	HK358-197	10
	2-1/4"	HK358-111	50		3"	HK358-149	25		3-3/4"	HK358-663	10
	2-1/2"	HK358-112	50		3-1/4"	HK358-150	25		4"	HK358-200	10
	2-3/4"	HK358-113	25		3-1/2"	HK358-151	25		4-1/2"	HK358-201	10
	3"	HK358-114	25		4-1/2"	HK358-153	20		5-1/2"	HK358-203	10
	3-1/2"	HK358-116	25		5"	HK358-154	20		6"	HK358-204	10
	4"	HK358-117	25		5-1/2"	HK358-155	10		6-1/2"	HK358-205	10
	4-1/2"	HK358-655	25		6"	HK358-156	10		7"	HK358-206	10
	5"	HK358-656	25		6-1/2"	HK358-157	10		7-1/2"	HK358-664	10
					7"	HK358-158	10		8"	HK358-207	10
					8"	HK358-159	10				
1/2"- 13 3/8" Key	1/2"	HK358-118	50	3/4"- 10 5/8" Key	1-1/4"	HK358-160	25	1-1/4"- 7 7/8" Key	3"	HK358-209	1
	5/8"	HK358-119	50		1-1/2"	HK358-161	25		3-1/2"	HK358-210	1
	3/4"	HK358-120	50		2-1/4"	HK358-164	25		4"	HK358-211	1
	7/8"	HK358-121	50		2-1/2"	HK358-165	25		4-1/2"	HK358-212	1
	1"	HK358-122	50		3"	HK358-167	25		5"	HK358-213	1
	1-1/4"	HK358-123	50		3-1/4"	HK358-168	25		5-1/2"	HK358-214	1
	1-1/2"	HK358-124	50		3-3/4"	HK358-660	25		6"	HK358-215	1
	1-3/4"	HK358-125	50		4"	HK358-170	25		6-1/2"	HK358-216	1
	2-1/4"	HK358-127	25	4-1/2"	HK358-171	20	7"		HK358-217	1	
	2-1/2"	HK358-128	25	5"	HK358-172	20	8"		HK358-218	1	
	2-3/4"	HK358-129	25	5-1/2"	HK358-173	10	9"		HK358-219	1	
	3"	HK358-130	25	6"	HK358-174	10	10"		HK358-220	1	
	3-1/4"	HK358-131	25	6-1/2"	HK358-175	10	11"		HK358-665	1	
	3-1/2"	HK358-132	25	7"	HK358-176	10					
	3-3/4"	HK358-657	25	7-1/2"	HK358-661	10					
	4"	HK358-133	25	8"	HK358-177	10					
	4-1/2"	HK358-134	25	7/8"- 9 3/4" Key	2"	HK358-178	10	1-1/2"- 6	3-1/2"	HK358-223	1
	5"	HK358-135	25		2-1/4"	HK358-179	10		4"	HK358-224	1
	5-1/2"	HK358-136	25		2-1/2"	HK358-180	10		4-1/2"	HK358-225	1
	6"	HK358-137	25		2-3/4"	HK358-181	10		5"	HK358-226	1
6-1/2"	HK358-138	10	3"		HK358-182	10	5-1/2"		HK358-227	1	
7"	HK358-139	10	3-1/4"		HK358-183	10	6"		HK358-228	1	
7-1/2"	HK358-658	10	3-1/2"		HK358-184	10	6-1/2"		HK358-229	1	
8"	HK358-140	10	4"		HK358-185	10	7"		HK358-230	1	
			4-1/2"	HK358-186	10	8"	HK358-231	1			
			5"	HK358-187	10						
			5-1/2"	HK358-188	10						
			6"	HK358-189	10						
			7"	HK358-191	10						
			8"	HK358-192	10						

**B**

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See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers

Socket Head Cap Screws

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Socket Head Cap Screws

UNRF FINE THREAD SERIES • 1960 SERIES

HEAT TREATED ALLOY STEEL • UNIFIED 3A THREAD FIT  
MEETS ASME B18.3 AND ASTM A574

See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers

For Thread Lengths see chart on page B183.

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DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.			
#0 - 80 .050" Key	3/16"	HK358-236	100	1/4"-28	2-1/2"	HK358-670	100	1/2" - 20 3/8" Key	1-3/4"	HK358-305	50			
	1/4"	HK358-237	100		3"	HK358-671	100		2"	HK358-306	50			
	3/8"	HK358-238	100		4"	HK358-672	100		2-1/4"	HK358-307	25			
#1 - 72 1/16" Key	1/4"	HK358-241	100	5/16"- 24 1/4" Key	1/2"	HK358-275	100	3/8" Key	2-1/2"	HK358-308	25			
	3/8"	HK358-242	100		5/8"	HK358-276	100		2-3/4"	HK358-687	25			
#6 - 40 7/64" Key	1/4"	HK358-243	100	1/4" Key	3/4"	HK358-277	100		5/8" - 18 1/2" Key	3"	HK358-309	25		
	3/8"	HK358-244	100		7/8"	HK358-278	100			3-1/2"	HK358-688	25		
	1/2"	HK358-245	100		1-3/4"	HK358-282	100			4"	HK358-689	25		
	5/8"	HK358-246	100		2"	HK358-283	100			4-1/2"	HK358-690	25		
#8 - 36 9/64" Key	3/8"	HK358-248	100	3/8"- 24 5/16" Key	2-1/4"	HK358-284	100			3/4" - 16 5/8" Key	5"	HK358-691	25	
	1/2"	HK358-249	100		2-1/2"	HK358-285	100				1"	HK358-310	25	
	3/4"	HK358-250	100		3"	HK358-673	100				1-1/4"	HK358-311	25	
#10 - 32 5/32" Key	1/4"	HK358-666	100		3/8"- 24 5/16" Key	3-1/2"	HK358-674				50	3/4" - 16 5/8" Key	1-1/2"	HK358-312
	3/8"	HK358-251	100			4"	HK358-675	50			1-1/4"		HK358-311	25
	5/16"	HK358-667	100			1/2"	HK358-286	100			1-1/2"		HK358-312	25
	5/8"	HK358-253	100			3/4"	HK358-288	100	1-3/4"		HK358-313		25	
	3/4"	HK358-254	100			7/8"	HK358-289	100	2"		HK358-314		25	
	7/8"	HK358-255	100			1-1/4"	HK358-291	100	2-1/4"		HK358-694		25	
	1"	HK358-256	100			1-1/2"	HK358-292	100	2-1/2"		HK358-315		25	
	1-1/4"	HK358-257	100	1-3/4"		HK358-293	50	2-3/4"	HK358-695	25				
	1-1/2"	HK358-258	100	2-1/4"		HK358-295	50	3"	HK358-696	25				
	2"	HK358-260	100	2-1/2"		HK358-296	50	3-1/2"	HK358-697	25				
	2-1/4"	HK358-261	100	2-3/4"		HK358-676	50	4"	HK358-698	25				
	2-1/2"	HK358-262	100	3"		HK358-297	50	4-1/2"	HK358-699	20				
2-3/4"	HK358-668	100	3-1/2"	HK358-677	50	5"	HK358-784	20						
3"	HK358-263	100	4"	HK358-678	50	3/4" - 16 5/8" Key	1-1/4"	HK358-785	25					
1/4" - 28 3/16" Key	1/4"	HK358-669	100	4-1/2"	HK358-679		50	1-1/2"	HK358-786	25				
	3/8"	HK358-264	100	5"	HK358-680		50	1-3/4"	HK358-787	25				
	5/8"	HK358-266	100	5-1/2"	HK358-681		50	2"	HK358-788	25				
	3/4"	HK358-267	100	6"	HK358-682		50	2-1/4"	HK358-789	25				
	7/8"	HK358-268	100	7/16"- 20 3/8" Key	1"		HK358-298	100	2-1/2"	HK358-790	25			
	1"	HK358-269	100		1-1/4"		HK358-299	50	2-3/4"	HK358-791	25			
	1-1/4"	HK358-270	100		1-1/2"		HK358-300	50	3"	HK358-792	25			
	1-1/2"	HK358-271	100		2"		HK358-301	50	3-1/2"	HK358-793	25			
	1-3/4"	HK358-272	100		2-1/2"		HK358-683	50	3-3/4"	HK358-1633	25			
	2"	HK358-273	100		3"		HK358-684	25	4"	HK358-794	25			
	2-1/4"	HK358-274	100	3-1/2"	HK358-685		25	4-1/2"	HK358-795	25				
					1/2" - 20	3/4"	HK358-686	50	5"	HK358-796	25			
				3/8" Key	1"	HK358-302	50	5-1/2"	HK358-797	10				
					1-1/4"	HK358-303	50	6"	HK358-798	10				
					1-1/2"	HK358-304	50	7"	HK358-799	10				
								8"	HK358-800	10				

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**Mechanical Properties / Socket Head Cap Screws**

**Propriétés mécaniques / Vis d'assemblage à tête creuse**

Standard Holo-Krome Alloy Steel Socket Head Cap Screws are manufactured from Holo-Krome analysis high grade alloy steel hardened and tempered to provide the following mechanical properties.



NOMINAL SIZES	TENSILE STRENGTH psi MIN.	YIELD STRENGTH psi MIN.	ELONGATION* IN 2 INCHES PERCENT MIN.	REDUCTION OF AREA* PERCENT MIN.	MINIMUM HARDNESS ROCKWELL C
0 to 1/2	180,000	162,000	8	35	39
Over 1/2	170,000	153,000	10	40	37

\* The values for elongation and reduction of area apply only to cylindrical test specimens. Values are based on ASTM A-574

**CAUTION: IMPROPER LOADING OF THESE FASTENERS WILL CAUSE FAILURES**

**TENSILE, YIELD AND SHEAR STRENGTH**

NOMINAL SIZE	BASIC SCREW DIAMETER	THREAD STRESS AREA		STRAIGHT TENSILE STRENGTH (POUNDS MIN.)		STRAIGHT YIELD STRENGTH (POUNDS MIN.)		SINGLE SHEAR STRENGTH (POUNDS MIN.)		
		UNRC	UNRF	UNRC	UNRF	UNRC	UNRF	BODY SECTION	THREAD SECTION	
									UNRC	UNRF
0	0.0600	—	0.00180	—	320	—	290	305	—	205
1	0.0730	0.00263	0.00278	475	500	425	450	450	290	315
2	0.0860	0.00370	0.00394	665	710	600	635	625	405	445
3	0.0990	0.00487	0.00523	875	940	790	845	830	535	595
4	0.1120	0.00604	0.00661	1,090	1,190	975	1,070	1,060	665	750
5	0.1250	0.00796	0.00830	1,430	1,490	1,290	1,345	1,325	875	940
6	0.1380	0.00909	0.01015	1,640	1,825	1,470	1,645	1,615	1,000	1,150
8	0.1640	0.0140	0.01474	2,520	2,650	2,270	2,385	2,280	1,535	1,670
10	0.1900	0.0175	0.0200	3,150	3,600	2,835	3,240	3,060	1,920	2,270
1/4	0.2500	0.0318	0.0364	5,725	6,550	5,150	5,900	5,295	3,495	4,130
5/16	0.3125	0.0524	0.0580	9,430	10,440	8,490	9,395	8,285	5,750	6,575
3/8	0.3750	0.0775	0.0878	13,950	15,805	12,555	14,225	11,910	8,510	9,950
7/16	0.4375	0.1063	0.1187	19,135	21,365	17,220	19,230	16,200	11,650	13,445
1/2	0.5000	0.1419	0.1599	25,540	28,780	22,990	25,905	21,175	15,656	18,105
5/8	0.6250	0.226	0.256	38,400	43,500	34,550	39,150	31,300	23,450	27,400
3/4	0.7500	0.334	0.373	56,750	63,400	51,100	57,050	45,050	34,650	39,650
7/8	0.8750	0.462	0.509	78,500	86,500	70,700	77,850	61,350	47,900	54,500
1	1.0000	0.606	0.663	103,000	112,700	92,700	101,450	80,100	62,850	71,000
1-1/4	1.2500	0.969	1.073	164,700	182,400	148,250	164,150	125,100	100,500	114,900
1-1/2	1.5000	1.405	1.581	238,800	268,800	214,950	241,900	180,200	145,700	169,300

**NOTES FOR CHART**

The mechanical properties listed are for standard screws tested at normal room temperatures. In applications where the temperatures are considerably above or below room temperature the effect of the temperature on the screw strength must be considered. Short time tensile, creep and stress relaxation should be considered for applications where the temperature exceeds 400°F (204°C). Lower ductility, impact strength and fatigue life must be considered for screws subject to temperatures below -20°F (-29°C).

The materials and heat treatment used for standard Holo-Krome Alloy Socket Head Cap Screws were selected to provide products that would have optimum tensile strength, impact strength and fatigue life. For specific applications, screws can be supplied to higher hardness levels so that their tensile strength will exceed values listed. However, such screws will have lower ductility, impact strength and fatigue life at higher stress levels than will standard screws.

CATALOG 14 SPAENAUR

**Socket Head Cap Screws**

Vis à tête à six pans creux



Inch  
Pouce

B



**Socket Head Cap Screws  
Zinc and Clear Chromate - UNRC**

For Thread Lengths see chart on page B183.

HEAT TREATED ALLOY STEEL  
Meets ASME B18.3 and  
ASTM A574 Before Plating  
Sold in full packages only.

DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	
#4 - 40  3/32" Key	1/4"	HK358-700	100	5/16" - 18  1/4" Key	1/2"	HK358-760	100	
	3/8"	HK358-701	100		5/8"	HK358-761	100	
	1/2"	HK358-702	100		3/4"	HK358-762	100	
	5/8"	HK358-703	100		7/8"	HK358-808	100	
	3/4"	HK358-704	100		1"	HK358-763	100	
#6 - 32  7/64" Key	1/4"	HK358-710	100		1-1/4"	HK358-764	100	
	3/8"	HK358-711	100		1-1/2"	HK358-765	100	
	1/2"	HK358-712	100		1-3/4"	HK358-766	100	
	5/8"	HK358-713	100		2"	HK358-767	100	
	3/4"	HK358-714	100		2-1/4"	HK358-768	100	
#8 - 32  9/64" Key	7/8"	HK358-715	100		2-1/2"	HK358-769	100	
	1"	HK358-801	100		3"	HK358-770	100	
	1/4"	HK358-716	100		3-1/2"	HK358-771	50	
	3/8"	HK358-717	100		3/8" - 16  5/16" Key	1/2"	HK358-772	100
	1/2"	HK358-718	100			3/4"	HK358-774	100
5/8"	HK358-719	100	7/8"	HK358-811		100		
1"	HK358-722	100	1-1/4"	HK358-776		100		
1-1/4"	HK358-802	100	1-1/2"	HK358-777		100		
1-1/2"	HK358-803	100	2"	HK358-779		50		
#10 - 24  5/32" Key	3/8"	HK358-723	100	2-1/4"		HK358-780	50	
	1/2"	HK358-724	100	2-1/2"		HK358-781	50	
	5/8"	HK358-725	100	3"		HK358-782	50	
	3/4"	HK358-726	100	4"		HK358-814	50	
	1"	HK358-728	100	1/2" - 13  3/8" Key	1"	HK358-836	50	
1-1/4"	HK358-729	100	1-1/4"		HK358-837	50		
1-1/2"	HK358-730	100	1-1/2"		HK358-838	50		
1/4" - 20  3/16" Key	1/4"	HK358-804	100		2"	HK358-840	50	
	3/8"	HK358-746	100		2-1/2"	HK358-842	25	
	1/2"	HK358-747	100		3"	HK358-844	25	
	5/8"	HK358-748	100		4"	HK358-847	25	
	3/4"	HK358-749	100		4-1/2"	HK358-848	25	
	7/8"	HK358-750	100		5/8" - 11  1/2" Key	1-1/4"	HK358-856	25
	1"	HK358-751	100			1-1/2"	HK358-857	25
	1-1/4"	HK358-752	100	2"		HK358-859	25	
	1-1/2"	HK358-753	100	2-1/2"		HK358-861	25	
	1-3/4"	HK358-754	100	4"		HK358-866	25	
2"	HK358-755	100						
2-1/4"	HK358-756	100						
2-1/2"	HK358-757	100						
3"	HK358-758	100						
4"	HK358-807	100						

For Hex Keys see pages P2-P12.

See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers.

Inch

Pouce



Socket Head Cap Screws

Vis à tête à six pans creux



**Flat Head  
Cap Screws**  
  
**UNRC  
COARSE THREAD**

**Thread Length Chart**

Screw Dia.	Thread Lengths		Screw Dia.	Thread Lengths	
	Min.	Max.		Min.	Max.
#2	0.62	0.80	7/16"	1.38	2.17
#3	0.62	0.83	1/2"	1.50	2.38
#4	0.75	0.99	5/8"	1.75	2.82
#5	0.75	1.00	3/4"	2.00	3.25
#6	0.75	1.05	7/8"	2.25	3.69
#8	0.88	1.19	1"	2.50	4.12
#10	0.88	1.27	1-1/8"	2.82	4.65
1/4"	1.00	1.50	1-1/4"	3.12	5.09
5/16"	1.12	1.71	1-3/8"	3.44	5.65
3/8"	1.25	1.94	1-1/2"	3.75	6.08

HEAT TREATED ALLOY STEEL • UNIFIED 3A THREAD FIT  
MEETS ASME B18.3 AND ASTM F835

Sold in full packages only.

DIA., Threads per Inch and Key Size	Overall LENGTH	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	Overall LENGTH	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	Overall LENGTH	SPAENAUR No.	PKG QTY.	
#4 - 40  1/16" Key	1/4"	HK358-348	100	1/4" - 20  5/32" Key	3/8"	HK358-375	100	7/16" - 14  1/4" Key	3/4"	HK358-405	100	
	3/8"	HK358-349	100		5/8"	HK358-377	100		1"	HK358-406	100	
	1/2"	HK358-350	100		3/4"	HK358-378	100		1-1/4"	HK358-407	50	
	5/8"	HK358-351	100		1-1/4"	HK358-380	100		1-1/2"	HK358-408	50	
	3/4"	HK358-352	100		1-3/4"	HK358-382	100		1/2" - 13  5/16" Key	3/4"	HK358-409	50
#5 - 40  5/64" Key	1/4"	HK358-353	100	5/16" - 18  3/16" Key	1/2"	HK358-384	100	1"		HK358-410	50	
	3/8"	HK358-354	100		5/8"	HK358-385	100	1-1/4"		HK358-411	50	
	1/2"	HK358-355	100		3/4"	HK358-386	100	1-1/2"		HK358-412	50	
	5/8"	HK358-356	100		1"	HK358-387	100	1-3/4"		HK358-413	50	
	3/4"	HK358-357	100		1-1/2"	HK358-389	100	2"	HK358-414	50		
#6 - 32  5/64" Key	1/4"	HK358-358	100	1-3/4"	1-3/4"	HK358-390	100	2-1/4"	2-1/4"	HK358-415	25	
	3/8"	HK358-359	100		2"	HK358-391	100		5/8" - 11  3/8" Key	1-1/4"	HK358-418	25
	1/2"	HK358-360	100		2-1/4"	HK358-392	100			1-1/2"	HK358-419	25
	5/8"	HK358-361	100		2-1/2"	HK358-393	100			1-3/4"	HK358-420	25
	3/4"	HK358-362	100		3/8" - 16  7/32" Key	5/8"	HK358-395			100	2"	HK358-421
#8 - 32  3/32" Key	3/8"	HK358-363	100	3/4"		HK358-396	100	3/4" - 10  1/2" Key		1-1/4"	HK358-422	25
	5/8"	HK358-365	100	1-1/4"		HK358-398	100		1-1/2"	HK358-423	25	
	3/4"	HK358-366	100	1-1/2"		HK358-399	100		3"	HK358-424	25	
	1"	HK358-367	100	1-3/4"		HK358-400	50		1-1/2"	1-1/2"	HK358-426	25
	#10 - 24  1/8" Key	3/8"	HK358-368	100	2"	HK358-401	50			1-3/4"	HK358-427	25
1/2"		HK358-369	100	2-1/4"	HK358-402	50	2"	HK358-428		25		
5/8"		HK358-370	100	2-1/2"	HK358-403	50	2-1/2"	HK358-430		25		
3/4"		HK358-371	100	3"	HK358-404	50	3"	HK358-431		25		
1"		HK358-372	100									
1-1/4"	HK358-373	100										
1-1/2"	HK358-374	100										

See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers

CATALOG 14 SPAENAUR

# Socket Head Cap Screws

Vis à tête à six pans creux



Inch  
Pouce

## Socket Head Cap Screws Zinc and Clear Chromate - UNRF

See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers

B

HEAT TREATED ALLOY STEEL  
Meets ASME/ANSI B18.3 and  
ASTM A574 Before Plating

DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.
#10 - 32 5/32" Key	3/8"	HK358-733	100
	1/2"	HK358-734	100
	5/8"	HK358-735	100
	3/4"	HK358-736	100
	7/8"	HK358-737	100
	1"	HK358-738	100
	1-1/4"	HK358-739	100
	1-1/2"	HK358-740	100
	2"	HK358-742	100



Sold in full packages only.

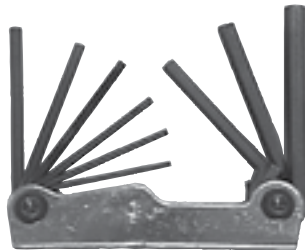
For Drive Bits and Hex Keys See Pages P2-P12

### EASY TO USE - HARD TO LOSE...

Holder handles are designed to fit the hand and are deburred and chrome plated for comfort and durability. The most popular folding hex key set. Often copied, but never equalled in quality or performance.

3" Blades

4" Handle



### Medium Handle Folding Deluxe Hex Key Set

The ideal size group by popular demand. The perfect set for tradesman or technician, do-it-yourselfer, or mechanic.

SPAENAUR No. 130-322 9-Blade Set – Inch Sizes

Set contains sizes 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32" & 1/4" across flat blades.

PKG QTY. - 1 SET

### HEX DRIVERS with Ball End

All dimensions in Inches

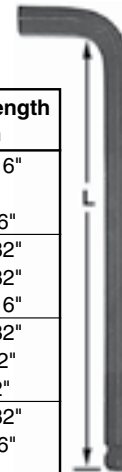


SPAENAUR No.	KEY SIZE Width A/F	Blade Lgth.	O/A Lgth.
876-1673	5/64"	3-1/2"	5-5/16"
876-F05-1Y	7/64"	2-29/32"	5-3/32"
876-1676	1/8"	3-3/32"	5-5/16"
876-1677	9/64"	3-5/16"	6-3/32"
876-1678	5/32"	3-1/2"	6-13/32"
876-1679	3/16"	3-13/16"	7-5/16"
876-1680	7/32"	4-3/16"	7-11/16"
876-1681	1/4"	4-11/16"	8-13/16"
876-1682	5/16"	5-19/32"	9-13/32"
876-1683	3/8"	6-1/2"	10-13/32"
876-1684	7/16"	7-19/32"	11-1/2"
876-1685	1/2"	8-1/2"	12-1/2"

All Hex Drivers - PKG QTY. 1

### HEX KEYS with Ball End

SPAENAUR No.	KEY SIZE Width A/F	Blade Length Inch
876-1686	.050"	2-13/16"
876-1687	1/16"	3
876-1688	5/64"	3-3/16"
876-1689	3/32"	3-13/32"
876-1690	7/64"	3-19/32"
876-1691	1/8"	3-13/16"
876-1692	9/64"	3-29/32"
876-1693	5/32"	4-3/32"
876-1694	3/16"	4-1/2"
876-1695	7/32"	4-29/32"
876-1696	1/4"	5-3/16"
876-1697	5/16"	6
876-1698	3/8"	6-13/16"
876-1699	7/16"	7-1/2"
876-1700	1/2"	8-5/16"
876-1701	9/16"	9
876-1702	5/8"	9-13/16"
876-1703	3/4"	11-5/16"



CATALOG 14

SPAENAUR



Inch

Pouce



Socket Head Cap Screws

Vis à tête à six pans creux



Flat Head Cap Screws

UNRF FINE THREAD

Sold in full packages only.

DIA., Threads per Inch and Key Size	Over-all LGTH.	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	Over-all LGTH.	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	Over-all LGTH.	SPAENAUR No.	PKG QTY.
#10 - 32 1/8" Key	3/8"	HK358-432	100	5/16" - 24 3/16" Key	1/2"	HK358-446	100	1/2" - 20 5/16" Key	3/4"	HK358-456	50
	1/2"	HK358-433	100		5/8"	HK358-447	100		1"	HK358-457	50
	5/8"	HK358-434	100		3/4"	HK358-448	100		1-1/4"	HK358-458	50
	3/4"	HK358-435	100		1"	HK358-449	100		1-1/2"	HK358-459	50
	1"	HK358-436	100		1-1/4"	HK358-450	100		1-3/4"	HK358-460	50
	1-1/4"	HK358-437	100						2"	HK358-461	50
1/4" - 28 5/32" Key	3/8"	HK358-439	100	3/8" - 24 7/32" Key	5/8"	HK358-451	100	See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers			
	1/2"	HK358-440	100		3/4"	HK358-452	100				
	5/8"	HK358-441	100		1"	HK358-453	100				
	3/4"	HK358-442	100		1-1/2"	HK358-455	100				
	1"	HK358-443	100								
	1-1/4"	HK358-444	100								



Button Head Cap Screws

COARSE THREAD and FINE THREAD SERIES

HEAT TREATED ALLOY STEEL UNIFIED 3A THREAD FIT MEETS ASME B18.3 and ASTM F835

For Thread Lengths see chart on page B183.

UNRC COARSE THREADS

Sold in full packages only.

DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	
1/2" - 13 5/16" Key	1"	HK358-499	25	5/8" - 11 3/8" Key	1"	HK358-503	25	UNRF FINE THREADS				
	1-1/4"	HK358-500	25		1-1/4"	HK358-504	25					
	1-1/2"	HK358-501	25		1-1/2"	HK358-505	25					
#4 - 40 1/16" Key	1/4"	HK358-462	100	1/4" - 20 5/32" Key	3/8"	HK358-481	100	#10 - 32 1/8" Key	1/4"	HK358-507	100	
	3/8"	HK358-463	100		1/2"	HK358-482	100		3/8"	HK358-508	100	
	1/2"	HK358-464	100		5/8"	HK358-483	100		5/8"	HK358-510	100	
	#6 - 32 5/64" Key	1/4"	HK358-465		100	3/4"	HK358-484		100	3/4"	HK358-511	100
		3/8"	HK358-466		100	7/8"	HK358-485		50	7/8"	HK358-512	50
		1/2"	HK358-467		100	1"	HK358-486		50	1"	HK358-513	50
5/8"		HK358-468	100									
#8 - 32 3/32" Key	1/4"	HK358-469	100	5/16" - 18 3/16" Key	1/2"	HK358-488	100	1/4" - 28 5/32" Key	3/8"	HK358-514	100	
	3/8"	HK358-470	100		5/8"	HK358-489	100		1/2"	HK358-515	100	
	5/8"	HK358-472	100		3/4"	HK358-490	100		5/8"	HK358-516	100	
	3/4"	HK358-473	100		7/8"	HK358-491	50		3/4"	HK358-517	100	
	1"	HK358-1635	100		1"	HK358-492	50		1"	HK358-518	50	
#10 - 24 1/8" Key	1/4"	HK358-474	100	3/8" - 16 7/32" Key	1/2"	HK358-493	50	5/16" - 24 3/16" Key	3/8"	HK358-519	100	
	3/8"	HK358-475	100		5/8"	HK358-494	50		1/2"	HK358-520	100	
	1/2"	HK358-476	100		3/4"	HK358-495	50		5/8"	HK358-521	100	
	5/8"	HK358-477	100		7/8"	HK358-496	50		1"	HK358-523	50	
	3/4"	HK358-478	100		1"	HK358-497	50		3/8" - 24 7/32" Key	1/2"	HK358-524	50
	7/8"	HK358-479	50		1-1/4"	HK358-498	50			3/4"	HK358-1626	50
	1"	HK358-480	50							1"	HK358-525	50

CATALOG 14 SPAENAUR

# Socket Head Cap Screws

Vis à tête à six pans creux



Inch  
Pouce

B



## Low Head Cap Screws

### UNRC COARSE AND UNRF FINE THREADS

HEAT TREATED ALLOY STEEL • UNIFIED 3A THREAD FIT

For Thread Lengths see chart on page B183.

Sold in full packages only.

#### UNRC COARSE THREADS

#### UNRF FINE THREAD

DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.
#8 - 32	3/8"	HK358-316	100	5/16" - 18 5/32" Key	3/4"	HK358-332	100	#10 - 32	3/8"	HK358-344	100
	1/2"	HK358-317	100		1"	HK358-333	100		1/2"	HK358-345	100
	3/4"	HK358-319	100						5/8"	HK358-346	100
	5/64" Key	1"	HK358-320		100				3/32" Key	3/4"	HK358-347
#10 - 24 3/32" Key	1/2"	HK358-322	100	3/8" - 16 3/16" Key	1/2"	HK358-336	100	See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers			
	3/4"	HK358-324	100		3/4"	HK358-337	100				
					1"	HK358-338	100				
					1-1/2"	HK358-340	100				
1/4" - 20 1/8" Key	1/2"	HK358-327	100	1/2" - 13 1/4" Key	1"	HK358-341	50				
	5/8"	HK358-328	100		1-1/4"	HK358-342	50				
	3/4"	HK358-329	100		1-1/2"	HK358-343	50				
	1"	HK358-330	100								

### Technical Information chart for Hex Socket Shoulder Screw

Nom. Size or Basic Shoulder Dia.	D Shoulder Diameter		A Head Diameter		H Head Height		D1 Nom. Thread Size or Basic Thread Dia.		Threads Per Inch	E Thread Length Basic	K Thread Neck Wdth. Max.	J Hexagon Socket Size Nom.		
	Max	Min	Max	Min	Max	Min								
1/4"	0.250	0.2480	0.2460	0.375	0.357	0.188	0.177	10	0.1900	24	0.375	0.062	1/8	0.125
5/16"	0.312	0.3105	0.3085	0.438	0.419	0.219	0.209	1/4	0.2500	20	0.438	0.075	5/32	0.156
3/8"	0.375	0.3730	0.3710	0.562	0.543	0.250	0.240	5/16	0.3125	18	0.500	0.083	3/16	0.188
1/2"	0.500	0.4980	0.4960	0.750	0.729	0.312	0.302	3/8	0.3750	16	0.625	0.093	1/4	0.250
5/8"	0.625	0.6230	0.6210	0.875	0.853	0.375	0.365	1/2	0.5000	13	0.750	0.115	5/16	0.312
3/4"	0.750	0.7480	0.7460	1.000	0.977	0.500	0.490	5/8	0.6250	11	0.875	0.136	3/8	0.375
1"	1.000	0.9980	0.9960	1.312	1.287	0.625	0.610	3/4	0.7500	10	1.000	0.150	1/2	0.500
1-1/4"	1.250	1.2480	1.2460	1.750	1.723	0.750	0.735	7/8	0.8750	9	1.125	0.222	5/8	0.625

For more Hex Socket Cap Screws, Flat Head Hex Socket Cap Screws and Button Head Hex Socket Cap Screws see Pages B196-232

Inch  
Pouce



Socket Head Cap Screws

Vis à tête à six pans creux



Socket Head Cap Screws

UNRC COARSE THREAD SERIES STAINLESS STEEL  
NON-HEAT TREATED • UNIFIED 3A THREAD FIT  
MEETS ASME B18.3

For Thread Lengths see chart on page B183.

Sold in full packages only.

DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	
#2 - 56 5/64" Key	1/4"	HK358-965	100	#10 - 24 5/32" Key	3/8"	HK358-980	100	Cont'd... 5/16"-18	1-1/4"	HK358-999	100	
	3/8"	HK358-966	100		1/2"	HK358-981	100		1-1/2"	HK358-1600	100	
#4 - 40 3/32" Key	1/4"	HK358-967	100	1/4"- 20 3/16" Key	5/8"	HK358-982	100	3/8"- 16	2"	HK358-1601	100	
	3/8"	HK358-968	100		3/4"	HK358-983	100		5/16" Key	1/2"	HK358-1602	100
	1/2"	HK358-969	100		7/8"	HK358-984	100			5/8"	HK358-1603	100
#6 - 32 7/64" Key	1/4"	HK358-970	100	5/16"- 18 1/4" Key	3/8"	HK358-985	100	1/2"- 13	3/4"	HK358-1604	100	
	3/8"	HK358-971	100		1/2"	HK358-986	100		1"	HK358-1605	100	
	1/2"	HK358-972	100		5/8"	HK358-987	100		1-1/4"	HK358-1606	100	
	5/8"	HK358-973	100		3/4"	HK358-988	100		1-1/2"	HK358-1607	100	
	3/4"	HK358-974	100		7/8"	HK358-989	100		1-3/4"	HK358-1608	50	
#8 - 32 9/64" Key	3/8"	HK358-975	100	5/16"- 18 1/4" Key	1"	HK358-990	100	3/8" Key	2"	HK358-1609	50	
	1/2"	HK358-976	100		1-1/4"	HK358-991	100		2-1/2"	HK358-1610	50	
	5/8"	HK358-977	100		1-1/2"	HK358-992	100		1"	HK358-1611	50	
	3/4"	HK358-978	100		1-3/4"	HK358-993	100		1-1/4"	HK358-1612	50	
	1"	HK358-979	100		2"	HK358-994	100		1-1/2"	HK358-1613	50	
				5/16"- 18	1/2"	HK358-995	100		1-3/4"	HK358-1614	50	
					3/4"	HK358-996	100		2"	HK358-1615	50	
					7/8"	HK358-997	100					
					1"	HK358-998	100					

See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers

Socket Head Cap Screws

UNRF FINE THREAD SERIES STAINLESS STEEL

NON-HEAT TREATED • UNIFIED 3A THREAD FIT • MEETS ASME B18.3

Sold in full packages only.



DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.
#10 - 32 5/32" Key	3/8"	HK358-1616	100	1/4"- 28 3/16" Key	5/8"	HK358-1623	100
	1/2"	HK358-1617	100		3/4"	HK358-1624	100
	5/8"	HK358-1618	100		1"	HK358-1625	100
	3/4"	HK358-1619	100				
	1"	HK358-1620	100				
	1-1/4"	HK358-1621	100				
1-1/2"	HK358-1622	100					

CATALOG 14 SPAENAUR

For Hex Keys see pages P2-P12

Socket Head Shoulder Screws

Vis à épaulement à tête creuse



Inch

Pouce

Hex Socket Shoulder Screws

See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers

UNRC COARSE THREADS

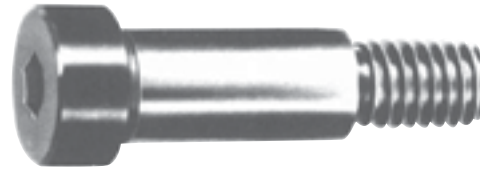
HEAT TREATED ALLOY STEEL

UNIFIED 3A THREAD FIT

MEETS ASME B18.3

Sold in full packages only.

For Technical Information chart see page B186.



B

Shoulder Dia.	Shoulder Length	UNRC Thread	SPAENAUR No.	PKG QTY.	Shoulder Dia.	Shoulder Length	UNRC Thread	SPAENAUR No.	PKG QTY.	
1/4" 1/8" Key	1/2"	10-24	HK358-526	25	...Cont'd. 1/2" 1/4" Key	3-1/4"	3/8"-16	HK358-595	25	
	5/8"		HK358-552	25		3-1/2"		HK358-596	25	
	3/4"		HK358-553	25		3-3/4"		HK358-597	25	
	1"		HK358-554	25		4"		HK358-598	25	
	1-1/4"		HK358-555	25		4-1/4"		HK358-1627	25	
	1-1/2"		HK358-556	25		4-1/2"		HK358-599	10	
5/16" 5/32" Key	3/8"	1/4"-20	HK358-557	25	5/8" 5/16" Key	4-3/4"	1/2"-13	HK358-1628	10	
	1/2"		HK358-558	25		5"		HK358-600	10	
	5/8"		HK358-559	25		3/8" Key		1-1/4"	HK358-601	25
	3/4"		HK358-560	25				1-1/2"	HK358-602	25
	1"		HK358-561	25				1-3/4"	HK358-603	25
	1-1/4"		HK358-562	25				2"	HK358-604	25
1-1/2"	HK358-563	25	2-1/4"	HK358-605	25					
2"	HK358-565	25	2-1/2"	HK358-606	25					
3/8" 3/16" Key	3/8"	5/16"-18	HK358-566	25	3/4" 3/8" Key	2-3/4"	5/8"-11	HK358-607	25	
	1/2"		HK358-567	25		3"		HK358-608	25	
	5/8"		HK358-568	25		3-1/4"		HK358-609	25	
	1"		HK358-570	25		3-1/2"		HK358-610	25	
	1-1/4"		HK358-571	25		3-3/4"		HK358-611	25	
	1-1/2"		HK358-572	25		4"		HK358-612	10	
	1-3/4"		HK358-573	25		4-1/2"		HK358-613	10	
	2"		HK358-574	25		4-3/4"		HK358-1630	10	
	2-1/4"		HK358-575	25		5"		HK358-614	10	
	2-1/2"		HK358-576	25		5-1/2"		HK358-615	10	
3"	HK358-578	25	6"	HK358-616	10					
1/2" 1/4" Key	5/8"	3/8"-16	HK358-584	25	5/8" 5/8" Key	1-1/2"	5/8"-11	HK358-617	10	
	3/4"		HK358-585	25		1-3/4"		HK358-618	10	
	1"		HK358-586	25		2"		HK358-619	10	
	1-1/4"		HK358-587	25		2-1/4"		HK358-620	10	
	1-1/2"		HK358-588	25		2-1/2"		HK358-621	10	
	1-3/4"		HK358-589	25		2-3/4"		HK358-622	10	
	2"		HK358-590	25		3"		HK358-623	10	
	2-1/4"		HK358-591	25		3-1/4"		HK358-624	10	
	2-1/2"		HK358-592	25		3-1/2"		HK358-625	10	
	2-3/4"		HK358-593	25		3-3/4"		HK358-626	10	
	3"		HK358-594	25		4-1/4"		HK358-1631	10	
								4-1/2"	HK358-628	10
								4-3/4"	HK358-1632	10
				5"	HK358-629	10				
				5-1/2"	HK358-630	10				
				6"	HK358-631	10				

SPAENAUR CATALOG 14

Metric  
Métrique



Socket Head Cap Screws  
Vis à tête à six pans creux



# Metric Socket Head Cap Screws

## HEAT TREATED ALLOY STEEL TO Property Class 12.9

ISO METRIC THREADS TO ASME B1.13M

Sold in full packages only.

See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers

**B**

DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.
<b>M2</b> Pitch .4 1.5 mm Key	4	HK358-2000	100	<b>M5</b> Pitch 0.80 4 mm Key	6	HK358-2037	100	Cont'd... <b>M6</b>	70	HK358-2075	100
	5	HK358-2001	100		8	HK358-2038	100		75	HK358-2076	100
	6	HK358-2002	100		10	HK358-2039	100		80	HK358-2077	100
	8	HK358-2003	100		12	HK358-2040	100		90	HK358-2078	100
	10	HK358-2004	100		*14	HK358-2041	100		100	HK358-2079	100
	12	HK358-2005	100		*15	HK358-2042	100	110	HK358-2080	100	
<b>M2.5</b> Pitch .45 2.0 mm Key	5	HK358-2006	100		16	HK358-2043	100	<b>M8</b> Pitch 1.25 6 mm Key	10	HK358-2081	100
	6	HK358-2007	100		*18	HK358-2044	100		12	HK358-2082	100
	8	HK358-2008	100		20	HK358-2045	100		*14	HK358-2083	100
	10	HK358-2009	100		*22	HK358-2046	100		*15	HK358-2084	100
	12	HK358-2010	100		25	HK358-2047	100		16	HK358-2085	100
<b>M3</b> Pitch .50 2.5 mm Key	5	HK358-2011	100		30	HK358-2048	100		*18	HK358-2086	100
	8	HK358-2013	100		40	HK358-2050	100		20	HK358-2087	100
	10	HK358-2014	100		45	HK358-2051	100		*22	HK358-2088	100
	12	HK358-2015	100		50	HK358-2052	100		25	HK358-2089	100
	*15	HK358-2016	100	55	HK358-2053	100	30		HK358-2090	100	
	16	HK358-2017	100	60	HK358-2054	100	35		HK358-2091	100	
	20	HK358-2018	100	65	HK358-2055	100	40		HK358-2092	100	
	25	HK358-2019	100	70	HK358-2056	100	45		HK358-2093	100	
	30	HK358-2020	100	<b>M6</b> Pitch 1.00 5 mm Key	8	HK358-2057	100		50	HK358-2094	100
	35	HK358-2021	100		10	HK358-2058	100		55	HK358-2095	100
<b>M4</b> Pitch 0.70 3 mm Key	5	HK358-2022	100		12	HK358-2059	100	70	HK358-2098	100	
	6	HK358-2023	100		*14	HK358-2060	100	75	HK358-2099	100	
	8	HK358-2024	100		16	HK358-2062	100	80	HK358-2100	100	
	10	HK358-2025	100		*18	HK358-2063	100	90	HK358-2101	100	
	12	HK358-2026	100		20	HK358-2064	100	100	HK358-2102	100	
	*14	HK358-2027	100		*22	HK358-2065	100	110	HK358-2103	100	
	*15	HK358-2028	100		35	HK358-2068	100	120	HK358-2104	100	
	16	HK358-2029	100		40	HK358-2069	100	130	HK358-2105	100	
	20	HK358-2030	100	45	HK358-2070	100	140	HK358-2106	100		
	25	HK358-2031	100	50	HK358-2071	100	150	HK358-2107	100		
30	HK358-2032	100	55	HK358-2072	100	<b>M10</b> Pitch 1.50 8 mm Key	10	HK358-2108	100		
35	HK358-2033	100	60	HK358-2073	100		12	HK358-2109	100		
40	HK358-2034	100	65	HK358-2074	100		*15	HK358-2110	100		
45	HK358-2035	100					16	HK358-2111	100		
50	HK358-2036	100									

\*Denotes Non-ASME Standard

Continues on Next Page

Socket Head Cap Screws

Vis à tête à six pans creux



Metric

Métrique

B

Continued from Previous Page HOLO-KROME, HEAT TREATED ALLOY STEEL TO GRADE 12.9. METRIC ASME B1.13M													
DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.		
Cont'd... <b>M10</b>	*18	HK358-2112	100	Cont'd... <b>M16</b>	65	HK358-2162	25	Cont'd... <b>M24</b>	160	HK358-2210	5		
	20	HK358-2113	100		70	HK358-2163	25		180	HK358-2211	5		
	*22	HK358-2114	100		75	HK358-2164	25		200	HK358-2212	5		
	25	HK358-2115	100		80	HK358-2165	25		220	HK358-2213	5		
	30	HK358-2116	100		90	HK358-2166	25		240	HK358-2214	1		
	35	HK358-2117	100		100	HK358-2167	10		260	HK358-2215	1		
	40	HK358-2118	100		120	HK358-2169	10		<b>M30</b> Pitch 3.5 22 mm Key	80	HK358-2216	10	
	45	HK358-2119	100		130	HK358-2170	10			90	HK358-2217	10	
	55	HK358-2121	100		140	HK358-2171	10			100	HK358-2218	10	
	60	HK358-2122	50		150	HK358-2172	10			110	HK358-2219	5	
	65	HK358-2123	50		160	HK358-2173	10			120	HK358-2220	5	
	70	HK358-2124	50		180	HK358-2174	10			130	HK358-2221	5	
	75	HK358-2125	50		<b>M20</b> Pitch 2.50 17 mm Key	30	HK358-2175			50	140	HK358-2222	5
	80	HK358-2126	50			35	HK358-2176			10	150	HK358-2223	1
	90	HK358-2127	50			40	HK358-2177			10	160	HK358-2224	1
110	HK358-2129	50	45	HK358-2178		10	180	HK358-2225		1			
130	HK358-2130	50	50	HK358-2179		10	200	HK358-2226	1				
150	HK358-2131	50	55	HK358-2180		10	220	HK358-2227	1				
<b>M12</b> Pitch 1.75 10 mm Key	12	HK358-2132	100	60		HK358-2181	10	240	HK358-2228	1			
	*15	HK358-2133	100	65		HK358-2182	10	300	HK358-2229	1			
	16	HK358-2134	100	70		HK358-2183	10	<b>M36</b> Pitch 4 27 mm Key	80	HK358-2230	5		
	20	HK358-2135	100	75		HK358-2184	10		90	HK358-2231	1		
	25	HK358-2136	100	80	HK358-2185	10	100		HK358-2232	1			
	30	HK358-2137	100	90	HK358-2186	10	110		HK358-2233	1			
	35	HK358-2138	100	100	HK358-2187	10	120		HK358-2234	1			
	40	HK358-2139	50	110	HK358-2188	10	130		HK358-2235	1			
	45	HK358-2140	50	120	HK358-2189	10	140		HK358-2236	1			
	50	HK358-2141	50	130	HK358-2190	10	150		HK358-2237	1			
	55	HK358-2142	50	140	HK358-2191	10	160		HK358-2238	1			
	60	HK358-2143	50	150	HK358-2192	10	170		HK358-2239	1			
	65	HK358-2144	50	160	HK358-2193	10	180	HK358-2240	1				
	70	HK358-2145	50	180	HK358-2194	10	200	HK358-2241	1				
	75	HK358-2146	50	200	HK358-2195	10	240	HK358-2242	1				
80	HK358-2147	25	<b>M24</b> Pitch 3.00 19 mm Key	40	HK358-2196	25	260	HK358-2243	1				
90	HK358-2148	25		50	HK358-2197	10	See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers						
100	HK358-2149	25		55	HK358-2198	10							
110	HK358-2150	25		60	HK358-2199	10							
120	HK358-2151	25		65	HK358-2200	10							
130	HK358-2152	25		70	HK358-2201	10							
150	HK358-2153	10		80	HK358-2202	10							
<b>M16</b> Pitch 2.00 14 mm Key	25	HK358-2154		25	90	HK358-2203		10					
	30	HK358-2155		25	100	HK358-2204		10					
	35	HK358-2156		25	110	HK358-2205		10					
	45	HK358-2158	25	120	HK358-2206	10							
	50	HK358-2159	25	130	HK358-2207	10							
	55	HK358-2160	25	140	HK358-2208	10							
	60	HK358-2161	25	150	HK358-2209	5							

Cont'd...

\*Denotes Non-ASME Standard

Metric  
Métrique



Socket Head Cap Screws  
Vis à tête à six pans creux



## Metric Flat Head Cap Screws

See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers

HEAT TREATED ALLOY STEEL  
ISO METRIC THREADS TO ASME B1.13M

Sold in full packages only.

DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.			
<b>M3</b> Pitch .50 2.0 mm Key	6	HK358-2352	100	<b>M6</b> Pitch 1.00 4 mm Key	10	HK358-2378	100	<b>M12</b> Pitch 1.75 8 mm Key	20	HK358-2409	100			
	8	HK358-2353	100		12	HK358-2379	100		25	HK358-2410	100			
	16	HK358-2356	100		16	HK358-2380	100		30	HK358-2411	100			
	20	HK358-2357	100		25	HK358-2382	100		40	HK358-2413	100			
	25	HK358-2358	100		30	HK358-2383	100		45	HK358-2414	50			
<b>M4</b> Pitch 0.70 2.5 mm Key	8	HK358-2359	100	35	HK358-2384	100	50	HK358-2415	50	<b>M16</b> Pitch 2.00 10 mm Key	30	HK358-2418	50	
	10	HK358-2360	100	40	HK358-2385	100	55	HK358-2416	50		35	HK358-2419	50	
	12	HK358-2361	100	50	HK358-2387	100	60	HK358-2417	50		40	HK358-2420	25	
	16	HK358-2362	100	<b>M8</b> Pitch 1.25 5 mm Key	16	HK358-2389	100	45	HK358-2421		25	45	HK358-2422	25
	20	HK358-2363	100		20	HK358-2390	100	50	HK358-2423		25	60	HK358-2424	25
25	HK358-2364	100	25		HK358-2391	100	55	HK358-2392	100	70	HK358-2393	100		
30	HK358-2365	100	30		HK358-2392	100	60	HK358-2394	100	45	HK358-2395	100		
35	HK358-2366	100	35		HK358-2393	100	65	HK358-2395	100	50	HK358-2396	100		
<b>M5</b> Pitch 0.80 3 mm Key	8	HK358-2368	100	40	HK358-2394	100	70	HK358-2396	100	<b>M10</b> Pitch 1.50 6 mm Key	16	HK358-2399	100	
	10	HK358-2369	100	45	HK358-2395	100	16	HK358-2399	100		20	HK358-2400	100	
	12	HK358-2370	100	50	HK358-2396	100	20	HK358-2400	100		25	HK358-2401	100	
	16	HK358-2371	100	60	HK358-2397	100	25	HK358-2401	100		30	HK358-2402	100	
	20	HK358-2372	100	70	HK358-2398	100	30	HK358-2402	100		35	HK358-2403	100	
25	HK358-2373	100	40	HK358-2403	100	35	HK358-2403	100	40	HK358-2404	100			
30	HK358-2374	100	45	HK358-2404	100	40	HK358-2404	100	45	HK358-2405	100			
35	HK358-2375	100	50	HK358-2405	100	45	HK358-2405	100	50	HK358-2406	100			
40	HK358-2376	100	55	HK358-2406	100	50	HK358-2406	100	60	HK358-2407	100			
50	HK358-2377	100	60	HK358-2407	100	60	HK358-2407	100	70	HK358-2408	50			

For Drive Bits and Hex Keys See Pages P2-P12

### Fold-Up Hex Key Sets

Precision tolerances, heat treated alloy steel, black finish.

#### AW56347

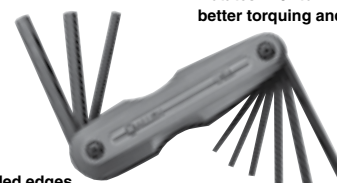
Contains 9 bits in inch sizes:  
5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 3/16, 7/32, 1/4.

#### AW56349

Contains 7 bits in metric sizes: 1.5, 2, 2.5, 3, 4, 5, 6 mm.

Wrenches open from the top and bottom, for easy access and use.

Rotates 270° to firm stop for better torquing and safety.



Rounded edges never cut hands or catch clothing.

Handle is specially contoured for better feel and control

CATALOG 14 SPAENAUR

Hex Socket Head Cap Screws / Hex Socket Shoulder Screws

Vis à 6 pans creux/Vis à épaulement à tête creuse hexagonale



Metric  
Métrique

B



**Metric Button Head Socket Cap Screws**

HEAT TREATED ALLOY STEEL  
ISO METRIC THREADS TO ASME B1.13M  
Sold in full packages only.

DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	DIA., Threads per Inch and Key Size	LGTH. Under Head	SPAENAUR No.	PKG QTY.	
<b>M3</b> Pitch .50 2 mm Key	8	HK358-2425	100	<b>M6</b> Pitch 1.00 4 mm Key	12	HK358-2440	100	<b>M10</b> Pitch 1.50 6 mm Key	16	HK358-2453	100	
	10	HK358-2426	100		16	HK358-2441	100		20	HK358-2454	100	
	12	HK358-2427	100		20	HK358-2442	100		25	HK358-2455	100	
	16	HK358-2428	100		25	HK358-2443	100		30	HK358-2456	100	
					30	HK358-2444	100		40	HK358-2457	100	
<b>M4</b> Pitch 0.70 2.5 mm Key	10	HK358-2430	100	<b>M8</b> Pitch 1.25 5 mm Key	10	HK358-2445	100	<b>M12</b> Pitch 1.75 8 mm Key	20	HK358-2458	100	
	12	HK358-2431	100		12	HK358-2446	100		25	HK358-2459	100	
	16	HK358-2432	100		16	HK358-2447	100					
<b>M5</b> Pitch 0.80 3 mm Key	10	HK358-2433	100		20	HK358-2448	100		See Tools Section P for Inch and Metric Hex Keys, Bits and Drivers			
	12	HK358-2434	100		25	HK358-2449	100					
	16	HK358-2435	100		30	HK358-2450	100					
	20	HK358-2436	100		35	HK358-2451	100					
25	HK358-2437	100	40	HK358-2452	100							
30	HK358-2438	100										



**Hex Socket Shoulder Screws**

HEAT TREATED ALLOY STEEL  
ISO METRIC THREADS TO ASME B1.13M  
Sold in full packages only.

Shoulder Dia., Thrd./Pitch and Key Size	Shldr. Lgth.	SPAENAUR No.	PKG QTY.	Shoulder Dia., Thrd./Pitch and Key Size	Shldr. Lgth. Under Head	SPAENAUR No.	PKG QTY.	Shoulder Dia., Thrd./Pitch and Key Size	Shldr. Lgth. Under Head	SPAENAUR No.	PKG QTY.
<b>6 mm</b> (5.987-5.951) M5 x 0.8 p 3 mm Key	10	HK358-2460	25	<b>10 mm</b> (9.987-9.951) M8 x 1.25 p 5 mm Key	20	HK358-2471	25	<b>12 mm</b> (11.984-11.941) M10 x 1.5 p 6 mm Key	16	HK358-2479	25
	12	HK358-2461	25		25	HK358-2472	25		20	HK358-2480	25
	16	HK358-2462	25		30	HK358-2473	25		30	HK358-2482	25
	20	HK358-2463	25		40	HK358-2474	25		40	HK358-2483	25
<b>8 mm</b> (7.987-7.951) M6 x 1.0 p 4 mm Key	20	HK358-2466	25		50	HK358-2475	25		50	HK358-2484	25
	25	HK358-2467	25		60	HK358-2476	25		60	HK358-2485	25
	30	HK358-2468	25		70	HK358-2477	25		70	HK358-2486	25
	40	HK358-2469	25		80	HK358-2478	25	<b>16 mm</b> (15.984-15.941) M12 x 1.75 p 8 mm Key	30	HK358-2487	25
						50	HK358-2488		25		
						70	HK358-2489		25		
							90	HK358-2490	10		

NEW



Threadlocker prevents threaded fasteners from coming loose due to shock and vibration.

See Page B4