

# Hex Cap Screws

10.9 Grade

Extended Rolled Threads

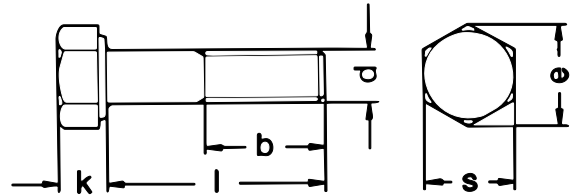
## Partially Threaded

H023-S — 931-10.9 (4140 Material)

**DIN 931**

ISO 4014

ANSI B18.2.3.1M



Where a length modification is required, the threads do not have to be re-machined and the mechanical integrity of the fastener will be retained

Diameter	M16			M18				M20				M22				M24				M27	
k	10			11.5				12.5				14				15				17	
s max	24			27				30				32				36				41	
e min	26.75			30.14				33.53				35.72				39.98				45.2	
b for l > 200mm	57			61				65				69				73				79	
Thread Length	200	200	300	150	200	200	300	200	200	200	300	150	200	200	300	200	200	200	300	300	400
Bolt Length	400	500	700	300	400	500	700	400	500	600	800	300	400	500	700	400	500	600	800	500	800
220				1								1									
240				1								1									
260	1			1								1									
280	1			1	1			1				1	1			1					1
300	1			1	1			1				1	1			1					1
320	1			1	1			1				1	1			1					1
340	1			1	1			1				1	1			1					1
360	1	1		1	1			1	1			1	1			1	1				1
380	1	1		1	1	1		1	1			1	1			1	1				1
400	1	1		1	1			1	1			1	1			1	1				1
420		1			1				1				1	1			1	1			1
440		1			1				1				1	1			1	1			1
460		1	1			1			1				1	1			1	1			1
480		1	1			1	1		1	1			1	1			1	1			1
500		1	1			1	1		1	1			1	1			1	1			1
520			1				1			1						1			1		1
540			1				1			1						1			1		1
560			1				1			1						1			1		1
580			1				1			1	1					1			1	1	1
600			1				1			1	1					1			1	1	1
620			1				1			1	1					1			1	1	1
640			1				1			1	1					1			1	1	1
660			1				1			1	1					1			1	1	1
680			1				1			1	1					1			1	1	1
700			1				1			1	1					1			1	1	1
720										1	1								1	1	1
740										1	1								1	1	1
760										1	1								1	1	1
780										1	1								1	1	1
800										1	1								1	1	1

The chart above shows the sizes we stock and the lengths that can be produced from the stocked part. For example, using a M16x400 bolt you can produce any length from 260mm to 400mm (260, 280, 300, 320, 340, 360 and 380). Since the original bolt has extended threads, even after cut-off you will still have an appropriate amount of thread (minimum “b” dimension according to DIN) without needing to re-thread the bolt

Diameter	<b>M16</b>			Diameter of bolt
b for l > 200mm	57			Recommended amount of thread for a bolt longer than 200 mm according to the DIN 931 standard
Thread Length	200	200	300	Length of threaded portion of the bolt
Bolt Length	400	500	700	Overall length of bolt in stock
260				} Possible lengths that can be produced from a M16x400 mm bolt
280				
300				
320				



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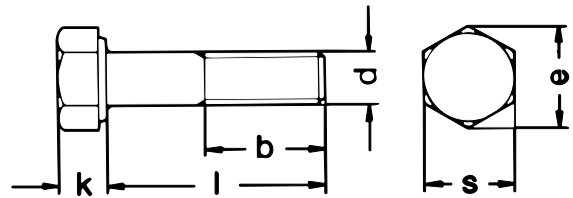
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Diameter	M30			M33		M36				M39			M42		M45		M48		M56		M64			
k	18.7			21		22.5				25			26		28		30		35		40			
s max	46			50		55				60			65		70		75		85		95			
e min	50.85			45.37		60.79				66.44			71.3		76.95		82.6		93.56		104.86			
b for l > 200mm	85			91		97				103			109		115		121		137		153			
Thread Length	200	200	200	300	300	400	200	200	200	300	150	200	350	250	400	250	400	250	400	400	400	400	400	
Bolt Length	400	500	600	800	500	800	400	500	600	800	300	400	700	500	800	500	800	500	800	600	800	600	800	
260											1													
280											1													
300	1				1		1				1													
320	1				1		1					1									1			
340	1				1		1					1									1			
360	1				1		1					1		1							1			1
380	1				1		1					1		1		1		1			1			1
400	1	1			1		1	1				1		1		1		1			1			1
420		1			1			1						1		1		1			1			1
440		1			1			1						1		1		1			1			1
460		1			1			1					1	1		1		1			1			1
480		1			1			1					1	1		1		1			1			1
500		1	1		1	1		1	1				1	1		1		1			1			1
520			1			1			1					1		1			1		1			1
540			1			1			1					1		1			1		1	1		1
560			1			1			1					1		1			1		1	1		1
580			1			1			1					1		1			1		1	1		1
600			1	1		1			1	1				1		1			1		1	1		1
620				1		1				1				1		1			1		1			1
640				1		1				1				1		1			1		1			1
660				1		1				1				1		1			1		1			1
680				1		1				1				1		1			1		1			1
700				1		1				1				1		1			1		1			1
720				1		1				1				1		1			1		1			1
740				1		1				1					1		1			1				1
760				1		1				1					1		1			1				1
780				1		1				1					1		1			1				1
800				1		1				1					1		1			1				1

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