

# Datasheet

RS Stock No: 4838146

## Steel Bright Zinc Plated, Hexagon Cap Socket Screws: Metric Thread



Socket Caps have a small cylindrical head with tall, vertical sides giving them space saving advantages as well as greater tensile strength. They also require less side room for wrenches. These socket screws are used in many applications including the manufacture and repair of vehicles, machine tooling, tools and dies, machine production and repair and general engineering applications. Most importantly, socket cap head screws provide safety, reliability and cost efficiency.

- Threaded in accordance with DIN 912 Standard
- 12.9 grade heat-treated high tensile alloy steel
- 1200 MPa maximum tensile strength\* compared to just 800 MPa for structural grade 8.8 so can be used in high tensile applications
- 1100 yield strength\*\* compared to 640-660 MPa depending on the size of the screw for structural grade 8.8
- 970 MPa proof load\*\*\* compared to just 580-600 depending on the size of the screw for structural grade 8.8
- Used for applications with limited space in high-tensile applications
- Suitable for use in many industrial applications and similarly medical, construction, electronic and domestic applications
- Requires a Hex Key / Allen Key

**\*Tensile Strength:** The maximum load in tension (pulling apart) which a material can withstand before breaking or fracturing.

**\*\*Yield Strength:** The maximum load at which a material exhibits a specific permanent deformation.

**\*\*\*Proof Load:** An axial tensile load which the product must withstand without evidence of any permanent set.



**ENGLISH**

Please view our full range listing below for all Bright Zinc Plated Steel Hexagon Socket Cap Head Screws:

Head Shape	Material	Thread Size	Length	RS Part No.
Hex Socket Cap	Zinc Plated Steel	M2.5	6 mm	4838124
Hex Socket Cap	Zinc Plated Steel	M2.5	12 mm	4838130
Hex Socket Cap	Zinc Plated Steel	M3	6 mm	4838146
Hex Socket Cap	Zinc Plated Steel	M3	8 mm	4838168
Hex Socket Cap	Zinc Plated Steel	M3	10 mm	4838174
Hex Socket Cap	Zinc Plated Steel	M3	12 mm	4915209
Hex Socket Cap	Zinc Plated Steel	M3	16 mm	4838180
Hex Socket Cap	Zinc Plated Steel	M3	20 mm	4838196
Hex Socket Cap	Zinc Plated Steel	M4	8 mm	4915215
Hex Socket Cap	Zinc Plated Steel	M4	10 mm	4838203
Hex Socket Cap	Zinc Plated Steel	M4	12 mm	4915221
Hex Socket Cap	Zinc Plated Steel	M4	16 mm	4838225
Hex Socket Cap	Zinc Plated Steel	M4	20 mm	4838231
Hex Socket Cap	Zinc Plated Steel	M4	25 mm	4915237
Hex Socket Cap	Zinc Plated Steel	M4	30 mm	4838247
Hex Socket Cap	Zinc Plated Steel	M4	40 mm	4838253
Hex Socket Cap	Zinc Plated Steel	M5	10 mm	4838269
Hex Socket Cap	Zinc Plated Steel	M5	12 mm	4915243
Hex Socket Cap	Zinc Plated Steel	M5	16 mm	4839981
Hex Socket Cap	Zinc Plated Steel	M5	20 mm	4838275
Hex Socket Cap	Zinc Plated Steel	M5	25 mm	4915259
Hex Socket Cap	Zinc Plated Steel	M5	30 mm	4839997
Hex Socket Cap	Zinc Plated Steel	M5	40 mm	4838281
Hex Socket Cap	Zinc Plated Steel	M5	50 mm	4838297

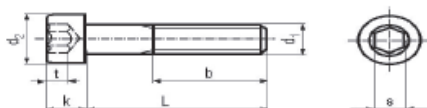


**ENGLISH**

Please view our full range listing below for all Bright Zinc Plated Steel Hexagon Socket Cap Head Screws:

Head Shape	Material	Thread Size	Length	RS Part No.
Hex Socket Cap	Zinc Plated Steel	M6	10 mm	4838304
Hex Socket Cap	Zinc Plated Steel	M6	12 mm	4838310
Hex Socket Cap	Zinc Plated Steel	M6	16 mm	4838326
Hex Socket Cap	Zinc Plated Steel	M6	20 mm	4840004
Hex Socket Cap	Zinc Plated Steel	M6	25 mm	4838332
Hex Socket Cap	Zinc Plated Steel	M6	30 mm	4838348
Hex Socket Cap	Zinc Plated Steel	M6	35 mm	4915265
Hex Socket Cap	Zinc Plated Steel	M6	40 mm	4840010
Hex Socket Cap	Zinc Plated Steel	M6	50 mm	4838354
Hex Socket Cap	Zinc Plated Steel	M6	60 mm	4838360
Hex Socket Cap	Zinc Plated Steel	M8	16 mm	4838382
Hex Socket Cap	Zinc Plated Steel	M8	20 mm	4838398
Hex Socket Cap	Zinc Plated Steel	M8	25 mm	4915271
Hex Socket Cap	Zinc Plated Steel	M8	30 mm	4838405
Hex Socket Cap	Zinc Plated Steel	M8	35 mm	4915287
Hex Socket Cap	Zinc Plated Steel	M8	40 mm	4838411
Hex Socket Cap	Zinc Plated Steel	M8	50 mm	4838427
Hex Socket Cap	Zinc Plated Steel	M8	60 mm	4839515
Hex Socket Cap	Zinc Plated Steel	M8	70 mm	4839521
Hex Socket Cap	Zinc Plated Steel	M8	80 mm	4839537
Hex Socket Cap	Zinc Plated Steel	M10	20 mm	4840026
Hex Socket Cap	Zinc Plated Steel	M10	25 mm	4840032
Hex Socket Cap	Zinc Plated Steel	M10	30 mm	4840054
Hex Socket Cap	Zinc Plated Steel	M10	40 mm	4840060
Hex Socket Cap	Zinc Plated Steel	M10	50 mm	4840076

## SOCKET HEAD CAP SCREWS DIN 912/ ISO 4762 / ANSI B 18.3.1 M



Head Diameter d2 max. allows for Knurled Head

<b>Thread Size d1</b>	<b>(M1.4)</b>		<b>M1.6</b>		<b>M2</b>		<b>M2.5</b>		<b>M2.6</b>		<b>M3</b>		<b>M4</b>	
<b>Thread Pitch</b>	0.3		0.35		0.4		0.45		0.45		0.5		0.7	
<b>Thread Length b</b>	14		15		16		17		NA		18		20	
<b>Head Dia. d2</b>	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
DIN 912 (1983)	2.46	2.74	2.86	3.14	3.62	3.98	4.32	4.68	4.82	5.18	5.32	5.68	6.78	7.22
ISO 4762 (1997)			2.86	3.14	3.62	3.98	4.32	4.68			5.32	5.68	6.78	7.22
ANSI B 18.3.1 M (1988)			2.87	3.14	3.65	3.98	4.33	4.68			5.32	5.68	6.80	7.22
<b>Head Height k</b>	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
DIN 912 (1983)	1.28	1.40	1.46	1.60	1.86	2.00	2.36	2.50	2.46	2.60	2.86	3.00	3.82	4.00
ISO 4762 (1997)			1.46	1.60	1.86	2.00	2.36	2.50			2.86	3.00	3.82	4.00
ANSI B 18.3.1 M (1988)			1.52	1.60	1.91	2.00	2.40	2.50			2.89	3.00	3.88	4.00
<b>Key Size nominal s</b>	1.3		1.5		1.5		2		2		2.5		3	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
DIN 912 (1983)	1.32	1.38	1.52	1.56	1.52	1.56	2.02	2.06	2.02	2.06	2.52	2.58	3.02	3.08
ISO 4762 (1997)			1.52	1.56	1.52	1.56	2.02	2.06			2.52	2.58	3.02	3.08
ANSI B 18.3.1 M (1988)			1.520	1.545	1.520	1.545	2.020	2.045			2.52	2.58	3.020	3.071
<b>Key Engagement t</b>	min.		min.		min.		min.		min.		min.		min.	
DIN 912 (1983)	0.6		0.7		1		1.10		1.2		1.3		2	
ISO 4762 (1997)			0.7		1		1.10				1.3		2	
ANSI B 18.3.1 M (1988)			0.8		1		1.25				1.5		2	
<b>Thread Size d1</b>	<b>M5</b>		<b>M6</b>		<b>M8</b>		<b>M10</b>		<b>M12</b>		<b>(M14)</b>		<b>M16</b>	
<b>Thread Pitch</b>	0.8		1		1.25		1.5		1.75		2		2	
<b>Thread Length b</b>	22		24		28		32		36		40		44	
<b>Head Dia. d2</b>	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
DIN 912 (1983)	8.28	8.72	9.78	10.22	12.73	13.27	15.73	16.27	17.73	18.27	20.67	21.33	23.67	24.33
ISO 4762 (1997)	8.28	8.72	9.78	10.22	12.73	13.27	15.73	16.27	17.73	18.27	20.67	21.33	23.67	24.33
ANSI B 18.3.1 M (1988)	8.27	8.72	9.74	10.22	12.70	13.27	15.67	16.27	17.63	18.27	20.6	21.33	23.58	24.33
<b>Head Height k</b>	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
DIN 912 (1983)	4.82	5.00	5.7	6.0	7.64	8.00	9.64	10.00	11.57	12.00	13.57	14.00	15.57	16.00
ISO 4762 (1997)	4.82	5.00	5.7	6.0	7.64	8.00	9.64	10.00	11.57	12.00	13.57	14.00	15.57	16.00
ANSI B 18.3.1 M (1988)	4.86	5.00	5.85	6.00	7.83	8.00	9.81	10.00	11.79	12.00	13.77	14.00	15.76	16.00
<b>Key Size nominal s</b>	4		5		6		8		10		12		14	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
DIN 912 (1983)	4.020	4.095	5.02	5.14	6.02	6.14	8.025	8.175	10.025	10.175	12.032	12.212	14.032	14.212
ISO 4762 (1997)	4.020	4.095	5.02	5.14	6.02	6.14	8.025	8.175	10.025	10.175	12.032	12.212	14.032	14.212
ANSI B 18.3.1 M (1988)	4.020	4.084	5.020	5.084	6.020	6.095	8.025	8.115	10.025	10.127	12.032	12.146	14.032	14.159
<b>Key Engagement t</b>	min.		min.		min.		min.		min.		min.		min.	
DIN 912 (1983)	2.5		3		4		5		6		7		8	
ISO 4762 (1997)	2.5		3		4		5		6		7		8	
ANSI B 18.3.1 M (1988)	2.5		3		4		5		6		7		8	
<b>Thread Size d1</b>	<b>(M18)</b>		<b>M20</b>		<b>(M22)</b>		<b>M24</b>		<b>(M27)</b>		<b>M30</b>		<b>M33</b>	
<b>Thread Pitch</b>	2.5		2.5		2.5		3		3		3.5		3.5	
<b>Thread Length b</b>	48		52		56		60		66		72		78	
<b>Head Dia. d2</b>	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
DIN 912 (1983)	26.67	27.33	29.67	30.33	32.61	33.39	35.61	36.39	39.61	40.39	44.61	45.39	49.61	50.39
ISO 4762 (1997)			29.67	30.33			35.61	36.39			44.61	45.39		
ANSI B 18.3.1 M (1988)			29.53	30.33			35.48	36.39			44.42	45.39		
<b>Head Height k</b>	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
DIN 912 (1983)	17.57	18.00	19.48	20.00	21.48	22.00	23.48	24.00	26.48	27.00	29.48	30.00	32.38	33.00
ISO 4762 (1997)			19.48	20.00			23.48	24.00			29.48	30.00		
ANSI B 18.3.1 M (1988)			19.73	20.00			23.70	24.00			29.67	30.00		
<b>Key Size nominal s</b>	14		17		17		19		19		22		24	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
DIN 912 (1983)	14.032	14.212	17.05	17.23	17.05	17.23	19.065	19.275	19.065	19.275	22.065	22.275	24.065	24.275
ISO 4762 (1997)			17.05	17.23			19.065	19.275			22.065	22.275		
ANSI B 18.3.1 M (1988)			17.050	17.216			19.065	19.243			22.065	22.319		
<b>Key Engagement t</b>	min.		min.		min.		min.		min.		min.		min.	
DIN 912 (1983)	9		10		11		12		13.5		15.5		18	
ISO 4762 (1997)			10				12				15.5			
ANSI B 18.3.1 M (1988)			10				12				15.0			