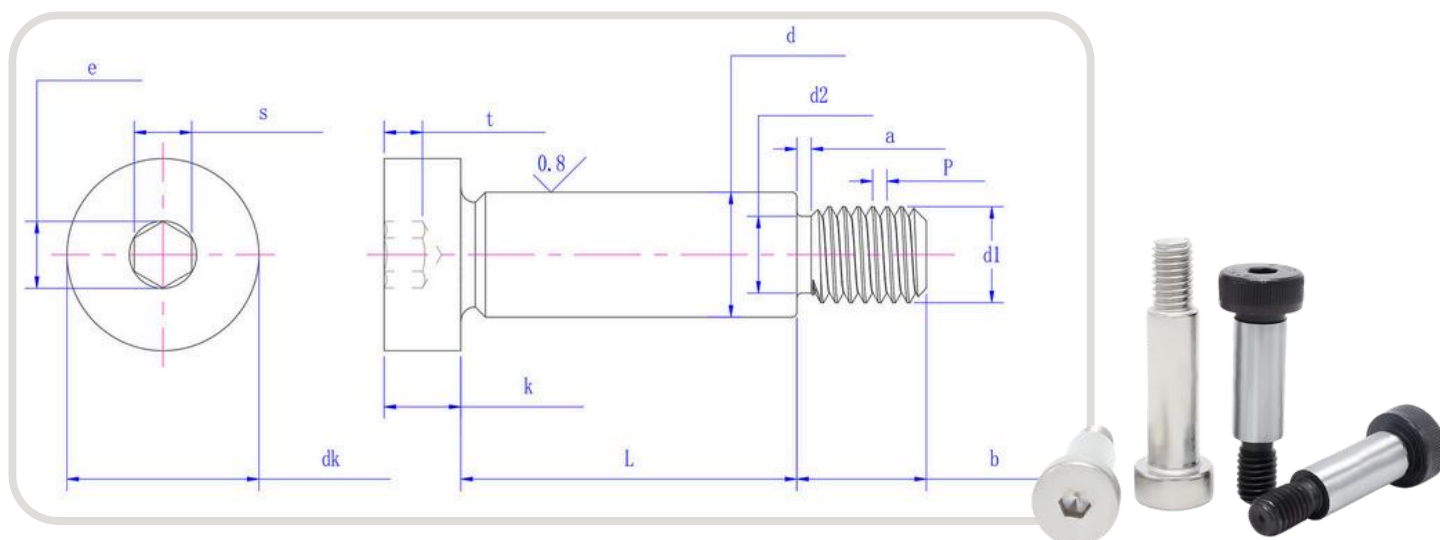




# Hexagon Socket Head Shoulder Screws



## Hexagon Socket Head Shoulder Screws product size table Based on ISO 7379

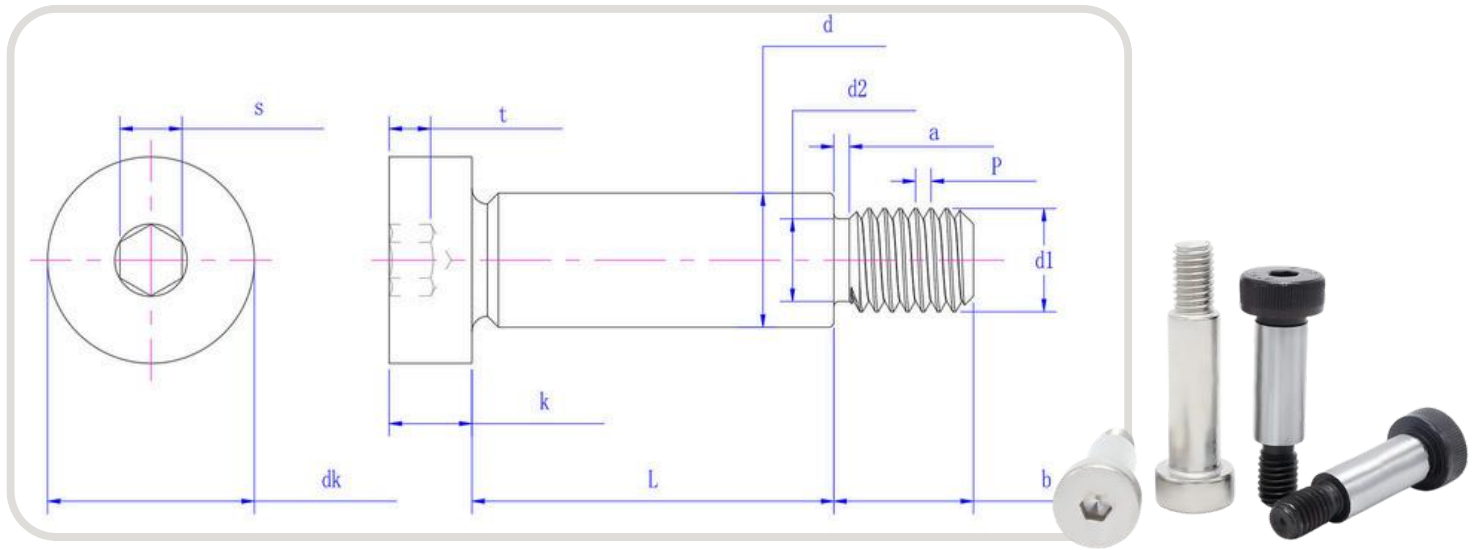
(mm)	M5	M6	M8	M10	M12	M16	M20
d	φ6.5	φ8	φ10	φ13	φ16	φ20	φ25
d max	6.487	7.987	9.987	12.984	15.984	19.98	24.98
d min	6.451	7.951	9.951	12.941	15.941	19.928	24.928
P	0.8	1	1.25	1.5	1.75	2	2.5
b max	9.75	11.25	13.25	16.4	18.4	22.4	27.4
b min	9.25	10.75	12.75	15.6	17.6	21.6	26.6
dk max	10	13	16	18	24	30	36
dk min	9.78	12.73	15.73	17.73	23.67	29.67	35.61
d2 max	3.86	4.58	6.25	7.91	9.57	13.33	16.57
d2 min	3.68	4.4	6.03	7.69	9.35	12.96	16.3
e min	3.44	4.58	5.72	6.86	9.15	11.43	13.72
k max	4.5	5.5	7	9	11	14	16
k min	4.32	5.32	6.78	8.78	10.73	13.73	15.73
a max	2	2.5	3.1	3.7	4.4	5	6.3
s max	3.08	4.095	5.095	6.095	8.115	10.115	12.142
s min	3.02	4.02	5.02	6.02	8.025	10.025	12.032
t min	2.4	3.3	4.2	4.9	6.6	8.8	10

## Hexagon Socket Head Shoulder Screws common length size table Metric Shoulder Length

(mm)	M5	M6	M8	M10	M12	M16	M20
4	X	X	X	X	X	X	X
5	○	○	X	X	X	X	X
6	○	○	X	X	X	X	X
8	○	○	X	X	X	X	X
10	○	○	○	X	X	X	X
12	○	○	○	○	X	X	X
14	○	○	○	○	X	X	X
15	○	○	○	○	X	X	X
16	○	○	○	○	○	X	X
18	○	○	○	○	○	X	X
20	○	○	○	○	○	○	X
22	○	○	○	○	○	○	X
25	○	○	○	○	○	○	○
30	○	○	○	○	○	○	○
35	○	○	○	○	○	○	○
40	○	○	○	○	○	○	○
45	○	○	○	○	○	○	○
50	○	○	○	○	○	○	○
55	○	○	○	○	○	○	○
60	○	○	○	○	○	○	○
65	○	○	○	○	○	○	○
70	○	○	○	○	○	○	○
75	○	○	○	○	○	○	○
80	○	○	○	○	○	○	○
85	○	○	○	○	○	○	○
90	○	○	○	○	○	○	○
95	X	○	○	○	○	○	○
100	X	○	○	○	○	○	○
110	X	X	○	○	○	○	○
120	X	X	○	○	○	○	○
130	X	X	○	○	○	○	○
140	X	X	○	○	○	○	○
150	X	X	○	○	○	○	○
160	X	X	X	○	○	○	○
170	X	X	X	○	○	○	○
180	X	X	X	○	○	○	○
190	X	X	X	○	○	○	○
200	X	X	X	○	○	○	○

• “○” represents the common length size, “X” represents the length size that needs to be customized.





## Hexagon Socket Head Shoulder Screws product size table Based on ASME/ANSI B18.3-Table 13-2017

(inch)	1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
d max	0.123	0.154	0.185	0.248	0.3105	0.373	0.498	0.623	0.748	0.998
d min	0.121	0.152	0.183	0.246	0.3085	0.371	0.496	0.621	0.746	0.996
dk max	0.25	0.281	0.312	0.375	0.438	0.562	0.75	0.875	1	1.312
dk min	0.235	0.266	0.296	0.357	0.419	0.543	0.729	0.853	0.977	1.287
k max	0.125	0.125	0.156	0.188	0.219	0.25	0.312	0.375	0.5	0.625
k min	0.115	0.115	0.146	0.177	0.209	0.24	0.302	0.365	0.49	0.61
S	0.078	0.094	0.094	0.125	0.156	0.188	0.25	0.312	0.375	0.5
t min	0.067	0.067	0.079	0.094	0.117	0.141	0.188	0.234	0.281	0.375
d1	#4	#6	#8	#10	1/4	5/16	3/8	1/2	5/8	3/4
P	40 UN	32 UN	32 UN	24 UN	20 UN	18 UN	16 UN	13 UN	11 UN	10 UN
d2 max	0.076	0.1	0.12	0.142	0.193	0.249	0.304	0.414	0.521	0.638
d2 min	0.069	0.093	0.112	0.133	0.182	0.237	0.291	0.397	0.502	0.616
a max	0.078	0.063	0.069	0.083	0.1	0.111	0.125	0.154	0.182	0.2



## Hexagon Socket Head Shoulder Screws common length size table Imperial Shoulder Length

(inch)	1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1
1/8	○	○	○	X	○	X	X	X	X	X
3/16	○	○	○	X	○	○	X	X	X	X
1/4	○	○	○	X	○	○	○	○	X	X
5/16	○	○	○	○	○	○	○	○	X	X
3/8	○	○	○	○	○	○	○	○	X	X
1/2	○	○	○	○	○	○	○	○	○	○
5/8	○	○	○	○	○	○	○	○	○	○
3/4	○	○	○	○	○	○	○	○	○	○
1	○	○	○	○	○	○	○	○	○	○
1-1/4	○	○	○	○	○	○	○	○	○	○
1-1/2	○	○	○	○	○	○	○	○	○	○
1-3/4	○	○	○	○	○	○	○	○	○	○
2	○	○	○	○	○	○	○	○	○	○
2-1/4	X	X	○	○	○	○	○	○	○	○
2-1/2	X	X	○	○	○	○	○	○	○	○
2-3/4	X	X	X	○	○	○	○	○	○	○
3	X	X	X	○	○	○	○	○	○	○
3-1/2	X	X	X	X	○	○	○	○	○	○
4	X	X	X	X	○	○	○	○	○	○
4-1/2	X	X	X	X	○	○	○	○	○	○
5	X	X	X	X	○	○	○	○	○	○
5-1/2	X	X	X	X	○	○	○	○	○	○
6	X	X	X	X	○	○	○	○	○	○
6-1/2	X	X	X	X	X	○	○	○	○	○
7	X	X	X	X	X	○	○	○	○	○
8	X	X	X	X	X	○	○	○	○	○

• “○” represents the common length size, “X” represents the length size that needs to be customized.



## Surface treatment of screws

Surface Treatment Type	Commonly used for this type of screw	Features	Corrosion Resistance	Applicable Environment	Coating Thickness	Salt Spray Test Time
Galvanized	○	Low cost, electroplated zinc, smooth surface, attractive appearance	Medium	General outdoor and indoor environments	5-15 $\mu\text{m}$	24-72 hours
Nickel Plated	○	Good oxidation resistance and corrosion resistance	High	Indoor, humid environment	5-15 $\mu\text{m}$	48-72 hours
Black Oxide	○	Low cost, enhances appearance and corrosion resistance	Medium	Indoor environment	0.5-1 $\mu\text{m}$	12-48 hours
Hot Dip Galvanizing	/	Excellent corrosion protection	High	Extreme environments	50-100 $\mu\text{m}$	100-500 hours
Dacromet	/	Strong corrosion resistance, environmentally friendly	High	Humid and corrosive environments	4-15 $\mu\text{m}$	100-1000 hours

- “○” represents the common use of this type of finish, “/” represents less use of this type of finish
  - Salt Spray Test Times: The times given in the table are some of the common test times and may vary according to standards and requirements.
- .....

## Screw Strength class

	strength class	Commonly used for this type of screw	Tensile Strength (MPa)	Yield Strength (MPa)	Features
Metric Strength Grades	4.8	○	400	320	Low cost, suitable for light duty applications
	8.8	○	800	640	High strength, good toughness, widely used
	10.9	○	1000	900	Ultra-high strength for heavy-duty and demanding applications
	12.9	○	1200	1080	Very high strength for extreme and critical connections
Imperial Strength Grades	2	○	510(74,000psi)	395(57,000psi)	Low cost, suitable for non-critical connections
	5	○	830(120,000psi)	635(92,000psi)	Medium to high strength, good toughness, wide range of applications
	8	○	1035(150,000psi)	895(130,000psi)	High strength, abrasion resistance and durability for heavy-duty applications

- “○” represents the strength grade of the type commonly used, “ / ” represents the strength grade of the type less commonly used

## Screw material

### Carbon Steel:

- WanHong Fastener offers a wide range of carbon steel screws in various strength grades, you can choose the right product according to the strength grade table. We use “○” and “/” in the strength grade table to indicate whether the strength grade is commonly used or not, to help you visualize and choose.

### stainless steel:

- WanHong Fastener is able to provide commonly used stainless steel screws in 201, 304, 316 and other commonly used stainless steel materials. Since stainless steel screws are not labeled with strength grade, you can choose the appropriate stainless steel material according to the usage environment, corrosion resistance and mechanical property requirements.



**WANHONG  
FASTENER**

WanHong Fastener specializes in providing high quality screws and fasteners solutions to our customers.

Please feel free to contact us to learn more about our product details.



**Order now!**

Website: <https://www.wanhong-fastener.com/>

WhatsApp: [+86 15724258255](https://wa.me/8615724258255)

Contact Email: [sales@wanhong-fastener.com](mailto:sales@wanhong-fastener.com)

