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M1.6–M10 · English · screw-size-chart-en

Screw Size Chart (Machine Screws M1.6–M10)

Head diameter dk, head height k and the drive size for metric machine screws M1.6–M10 across five head types (slotted pan GB/T 67, cross pan GB/T 818, countersunk GB/T 819.1, cheese GB/T 822, socket head GB/T 70.1), with a metric to inch comparison and a page for each size.

M1.6–M10 · **d nominal thread · P coarse pitch · dk head diameter · k head height · drive size** ·
Slotted pan GB/T 67 · Cross pan GB/T 818 · Countersunk GB/T 819.1 · Cheese head GB/T 822 · Socket head GB/T 70.1 ·
Row-level standards · **Nominal (= max) values**

Slotted pan head (GB/T 67)

GB/T 67-2016

Size d (mm)	Coarse pitch P (mm)	Head dia. dk (mm)	Head height k (mm)	Slot width n (mm)
M1.6	0.35	3.2	1	0.4
M2	0.4	4	1.3	0.5
M2.5	0.45	5	1.5	0.6
M3	0.5	5.6	1.8	0.8
M4	0.7	8	2.4	1.2
M5	0.8	9.5	3	1.2
M6	1	12	3.6	1.6
M8	1.25	16	4.8	2
M10	1.5	20	6	2.5

Slotted head: there is no recess number in this series. The drive is described by the slot width n (nominal, with its own max/min band), which is also the blade width to use.

Cross recessed pan head (GB/T 818)

GB/T 818-2016

Size d (mm)	Coarse pitch P (mm)	Head dia. dk (mm)	Head height k (mm)	Recess No.
M1.6	0.35	3.2	1.3	0
M2	0.4	4	1.6	0
M2.5	0.45	5	2.1	1
M3	0.5	5.6	2.4	1
M4	0.7	8	3.1	2
M5	0.8	9.5	3.7	2
M6	1	12	4.6	3
M8	1.25	16	6	4
M10	1.5	20	7.5	4

The recess No. is the bit: No.0 to No.4 is a PH0 to PH4 bit. Recess numbering is per head type, so the same thread size can take a different recess number in two head types.

Cross recessed countersunk head 90° (GB/T 819.1)

GB/T 819.1-2016

Size d (mm)	Coarse pitch P (mm)	Head dia. dk (mm)	Theoretical dk max (mm)	Head height kc (mm)	Recess No.
M1.6	0.35	3	3.6	1	0
M2	0.4	3.8	4.4	1.2	0
M2.5	0.45	4.7	5.5	1.5	1
M3	0.5	5.5	6.3	1.65	1
M4	0.7	8.4	9.4	2.7	2
M5	0.8	9.3	10.4	2.7	2
M6	1	11.3	12.6	3.3	3
M8	1.25	15.8	17.3	4.65	4

Size d (mm)	Coarse pitch P (mm)	Head dia. dk (mm)	Theoretical dk max (mm)	Head height kc (mm)	Recess No.
M10	1.5	18.3	20	5	4

Countersunk head: dk is the nominal (= max) head diameter for general quoting, and the theoretical dk max is the upper limit that includes the full 90° cone - use that one when the seat is machined. The height column is kc, the head height that sets the counterbore depth.

Cross recessed cheese head (GB/T 822)

GB/T 822-2016

Size d (mm)	Coarse pitch P (mm)	Head dia. dk (mm)	Head height k (mm)	Recess No.
M1.6	—	—	—	—
M2	—	—	—	—
M2.5	0.45	4.5	1.8	1
M3	0.5	5.5	2	2
M4	0.7	7	2.6	2
M5	0.8	8.5	3.3	2
M6	1	10	3.9	3
M8	1.25	13	5	3
M10	—	—	—	—

The recess No. is the bit: No.0 to No.4 is a PH0 to PH4 bit. Recess numbering is per head type, so the same thread size can take a different recess number in two head types.

GB/T 822 covers M2.5 to M8, so the cheese head row is blank at M1.6, M2 and M10. Use the pan head or socket head column for those sizes.

Socket head cap (GB/T 70.1)

GB/T 70.1-2008

Size d (mm)	Coarse pitch P (mm)	Head dia. dk (mm)	Head height k (mm)	Hex socket s (mm)
M1.6	0.35	3	1.6	1.5
M2	0.4	3.8	2	1.5
M2.5	0.45	4.5	2.5	2
M3	0.5	5.5	3	2.5
M4	0.7	7	4	3
M5	0.8	8.5	5	4
M6	1	10	6	5
M8	1.25	13	8	6
M10	1.5	16	10	8

Socket head cap screw: s is the width across flats of the hexagon socket, not an outside head dimension. It is the hex key size, and on the same thread it is smaller than the head diameter - dk = 8.5 mm against s = 4 mm at M5.

Which dimension do you need? d, dk, k and the drive size

A machine screw carries four different numbers that all get called "the size". Buyers order by the first one and measure the others, which is where most wrong orders start.

- **d - nominal thread diameter** — The number after M: M5 is d = 5 mm, a 5 mm thread. It is what the order is placed on, and it is not the head size.
- **P - pitch** — Distance between two thread crests. M5 in the coarse series is 0.8 mm. Coarse pitch covers almost all machine screws; fine pitch is agreed on order against the drawing.
- **dk - head diameter** — Outside diameter of the head, measured across it with a caliper. It sets the clearance hole and the counterbore: 9.5 mm for an M5 cross recessed pan head, 8.5 mm for an M5 cheese head, 9.3 mm for an M5 countersunk head.
- **k - head height** — Height of the head above the bearing surface (on a countersunk head this is kc, the depth that has to be sunk). It sets counterbore depth and how far the head stands proud: 3.7 mm for an M5 pan head, 5 mm for an M5 socket head, 2.7 mm for an M5 countersunk head.
- **Drive size - recess No., slot width n or hexagon socket s** — The recess that takes the tool: No.2 (PH2) at M5 in the cross recessed pan head series, slot width n = 1.2 mm at M5 in the slotted series, hexagon socket s = 4 mm at M5 for a socket head cap screw. Take the drive size from the head type, not from the thread size.

References

- GB/T 67-2016 Slotted pan head screws - table 1 (head diameter dk, head height k, slot width n) — https://openstd.samr.gov.cn/bzgk/gb/std?std_no=GB%2FT%2067-2016
- GB/T 818-2016 Cross recessed pan head screws - table 1 (dk, k, recess No.) — https://openstd.samr.gov.cn/bzgk/gb/std?std_no=GB%2FT%20818-2016
- GB/T 819.1-2016 Cross recessed countersunk head screws, part 1: class 4.8 - table 1 (dk, theoretical dk max, kc, recess No., 90° head) — https://openstd.samr.gov.cn/bzgk/gb/std?std_no=GB%2FT%20819.1-2016
- GB/T 822-2016 Cross recessed cheese head screws - table 1 (dk, k, recess No.; sizes M2.5 to M8) — https://openstd.samr.gov.cn/bzgk/gb/std?std_no=GB%2FT%20822-2016

- GB/T 70.1-2008 Socket head cap screws - table 1 (head diameter dk for the plain head, head height k, hexagon socket s) — https://openstd.samr.gov.cn/bzgk/gb/std?std_no=GB%2FT%2070.1-2008
- Table values are the nominal (= max) figures of the standard editions above, checked row by row against the official text. No table values are reproduced from third-party dimension tables, and each row is labelled with the standard it comes from.

Disclaimer: this table is a selection and quotation reference built from the standard editions named on this page, not a design basis or an acceptance standard.

Screw Size Chart (Machine Screws M1.6–M10) — Yaxiio full-range reference PDF, pack v1 · generated 2026-09-17 · data source: yaxiio-customer/utils/screwSizeDims.ts (single source of truth) · methodology matches the online tool pages · https://www.yaxiio.com/en/tools/screw-size-chart