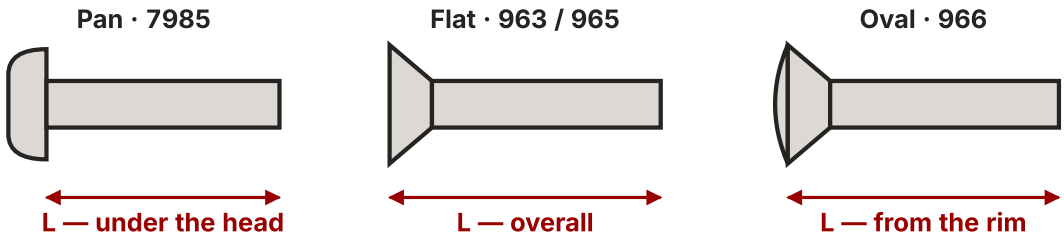
Metric Machine Screw Head Dimensions

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Head diameter, head height and Phillips driver size for metric machine screws — pan head (DIN 7985), flat head (DIN 963 slotted, DIN 965 Phillips) and oval head (DIN 966).

A metric machine screw is sized by its thread — M4 is 4 mm across — and measured in millimetres. A **pan** head sits on top, so it is measured **under the head**; a **flat** head sits flush in a 90° countersink, so it is measured **overall**; an **oval** head is measured from the rim, not counting its dome.



How each head is measured. Letters in the tables: **dk** head diameter, **k** head height, **f** oval dome, **n** slot width.

Metric pan head machine screws, Phillips — DIN 7985 (mm)

SIZE	PITCH	HEAD DIA DK MAX	HEAD HEIGHT K MAX	PHILLIPS
M1.6	0.35	3.2	1.42	PH0
M2	0.40	4	1.72	PH1
M2.5	0.45	5	2.12	PH1
M3	0.50	6	2.52	PH1
M3.5	0.60	7	2.82	PH2
M4	0.70	8	3.25	PH2
M5	0.80	10	3.95	PH2
M6	1.00	12	4.75	PH3
M8	1.25	16	6.15	PH4
M10	1.50	20	7.68	PH4

A raised cheese (pan) head; length is under the head. A dash: our two sources differ — give us a call.

Metric flat head machine screws, Phillips — DIN 965 (mm)

SIZE	PITCH	HEAD DIA DK MAX	HEAD HEIGHT K MAX	PHILLIPS
M1.6	0.35	3	0.96	PH0
M2	0.40	3.8	1.2	PH1
M2.5	0.45	4.7	1.5	PH1
M3	0.50	5.6	1.65	PH1
M3.5	0.60	6.5	1.93	PH2
M4	0.70	7.5	2.2	PH2
M5	0.80	9.2	2.5	PH2
M6	1.00	11	3	PH3
M8	1.25	14.5	4	PH4
M10	1.50	18	5	PH4

90° countersunk head; length is overall, head included. A dash: our two sources differ — give us a call.

Metric flat head machine screws, slotted — DIN 963 (mm)

SIZE	PITCH	HEAD DIA DK MAX	HEAD HEIGHT K MAX	SLOT WIDTH N
M1	0.25	1.9	0.6	0.25
M1.2	0.25	2.3	0.72	0.3
M1.4	0.30	2.6	0.86	0.3
M1.6	0.35	3	0.96	0.4

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SIZE	PITCH	HEAD DIA DK MAX	HEAD HEIGHT K MAX	SLOT WIDTH N
M2	0.40	3.8	1.2	0.5
M2.5	0.45	4.7	1.5	0.6
M3	0.50	5.6	1.65	0.8
M4	0.70	7.5	2.2	1
M5	0.80	9.2	2.5	1.2
M6	1.00	11	3	1.6
M8	1.25	14.5	4	2
M10	1.50	18	5	2.5
M12	1.75	22	6	3
M16	2.00	29	8	4
M20	2.50	36	10	5

90° countersunk head; length is overall, head included. A dash: our two sources differ — give us a call.

Metric oval head machine screws, Phillips — DIN 966 (mm)

SIZE	PITCH	HEAD DIA DK MAX	COUNTERSINK HEIGHT K MAX	PHILLIPS	DOME F APPROX
M1.6	0.35	3	0.96	PH0	0.4
M2	0.40	3.8	1.2	PH1	0.5
M2.5	0.45	4.7	1.5	PH1	0.6
M3	0.50	5.6	1.65	PH1	0.75
M3.5	0.60	6.5	1.93	PH2	0.9
M4	0.70	7.5	2.2	PH2	1
M5	0.80	9.2	2.5	PH2	1.25
M6	1.00	11	3	PH3	1.5
M8	1.25	14.5	4	PH4	2
M10	1.50	18	5	PH4	2.5

A 90° countersunk head with a raised dome (dome height f, approx., in the last column); length is from the rim — the dome is not counted. A dash: our two sources differ — give us a call.

Good to know

Phillips sizes run PH0 to PH4 — use the size in the table, a smaller bit cams out. Inch machine screws are on the machine screw chart; metric thread pitches on the metric thread pitch chart.

Quick answers

What size Phillips bit fits an M4 pan head machine screw?

A **PH2** (DIN 7985).

What Phillips bit goes with each metric pan head screw?

M1.6 – PH0, M2 – PH1, M2.5 – PH1, M3 – PH1, M3.5 – PH2, M4 – PH2, M5 – PH2, M6 – PH3, M8 – PH4, M10 – PH4.

How big is the head on an M5 flat head machine screw?

9.2 mm across, maximum, 2.5 mm tall (DIN 965 / 963).

How is a metric flat head machine screw measured?

Overall, head included — it sits flush in a 90° countersink. A pan head is measured under the head.

Reference values drawn from the governing standards. For critical applications, confirm against the standard and the manufacturer's published data. Technical information disclaimer →