

Anchor Bolt Weight Chart

Unit weight for straight / J-hook / L-bend / with-end-plate configurations across full length range, method fully disclosed.

M6–M36 · 13 lengths · 4 configurations · kg per piece · carbon steel 7.85 g/cm³

M6

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +36 mm (6d)	L-Bend leg +24 mm (4d)	With Plate plate 24×3 mm
100	0.022	0.03	0.028	0.036
150	0.033	0.041	0.039	0.047
200	0.044	0.052	0.05	0.058
250	0.055	0.063	0.061	0.069
300	0.067	0.075	0.072	0.08
400	0.089	0.097	0.094	0.1
500	0.11	0.12	0.12	0.12
600	0.13	0.14	0.14	0.15
800	0.18	0.19	0.18	0.19
1000	0.22	0.23	0.23	0.24
1200	0.27	0.27	0.27	0.28
1500	0.33	0.34	0.34	0.35
2000	0.44	0.45	0.45	0.46

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate $a \times a \times t$ ($a=4d$, $t=0.5d$, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M8

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +48 mm (6d)	L-Bend leg +32 mm (4d)	With Plate plate 32×4 mm
100	0.039	0.058	0.052	0.072
150	0.059	0.078	0.072	0.091
200	0.079	0.098	0.092	0.11
250	0.099	0.12	0.11	0.13
300	0.12	0.14	0.13	0.15
400	0.16	0.18	0.17	0.19
500	0.2	0.22	0.21	0.23
600	0.24	0.26	0.25	0.27
800	0.32	0.33	0.33	0.35
1000	0.39	0.41	0.41	0.43
1200	0.47	0.49	0.49	0.51
1500	0.59	0.61	0.6	0.62
2000	0.79	0.81	0.8	0.82

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate $a \times a \times t$ ($a=4d$, $t=0.5d$, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M10

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +60 mm (6d)	L-Bend leg +40 mm (4d)	With Plate plate 40×5 mm
100	0.062	0.099	0.086	0.12
150	0.092	0.13	0.12	0.16
200	0.12	0.16	0.15	0.19
250	0.15	0.19	0.18	0.22
300	0.18	0.22	0.21	0.25
400	0.25	0.28	0.27	0.31
500	0.31	0.35	0.33	0.37
600	0.37	0.41	0.39	0.43
800	0.49	0.53	0.52	0.56
1000	0.62	0.65	0.64	0.68
1200	0.74	0.78	0.76	0.8
1500	0.92	0.96	0.95	0.99
2000	1.2	1.3	1.3	1.3

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate $a \times a \times t$ ($a=4d$, $t=0.5d$, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M12

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +72 mm (6d)	L-Bend leg +48 mm (4d)	With Plate plate 48×6 mm
100	0.089	0.15	0.13	0.2
150	0.13	0.2	0.18	0.24
200	0.18	0.24	0.22	0.29
250	0.22	0.29	0.26	0.33
300	0.27	0.33	0.31	0.37
400	0.36	0.42	0.4	0.46
500	0.44	0.51	0.49	0.55
600	0.53	0.6	0.58	0.64
800	0.71	0.77	0.75	0.82
1000	0.89	0.95	0.93	1
1200	1.1	1.1	1.1	1.2
1500	1.3	1.4	1.4	1.4
2000	1.8	1.8	1.8	1.9

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate $a \times a \times t$ ($a=4d$, $t=0.5d$, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M14

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +84 mm (6d)	L-Bend leg +56 mm (4d)	With Plate plate 56×7 mm
100	0.12	0.22	0.19	0.29
150	0.18	0.28	0.25	0.35
200	0.24	0.34	0.31	0.41

Shank length L (mm)	Straight no add-on	J-Hook hook +84 mm (6d)	L-Bend leg +56 mm (4d)	With Plate plate 56×7 mm
250	0.3	0.4	0.37	0.47
300	0.36	0.46	0.43	0.53
400	0.48	0.58	0.55	0.66
500	0.6	0.71	0.67	0.78
600	0.73	0.83	0.79	0.9
800	0.97	1.1	1	1.1
1000	1.2	1.3	1.3	1.4
1200	1.5	1.6	1.5	1.6
1500	1.8	1.9	1.9	2
2000	2.4	2.5	2.5	2.6

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate $a \times a \times t$ ($a=4d$, $t=0.5d$, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M16

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +96 mm (6d)	L-Bend leg +64 mm (4d)	With Plate plate 64×8 mm
100	0.16	0.31	0.26	0.42
150	0.24	0.39	0.34	0.49
200	0.32	0.47	0.42	0.57
250	0.39	0.55	0.5	0.65
300	0.47	0.63	0.57	0.73
400	0.63	0.78	0.73	0.89
500	0.79	0.94	0.89	1
600	0.95	1.1	1	1.2
800	1.3	1.4	1.4	1.5
1000	1.6	1.7	1.7	1.8
1200	1.9	2	2	2.2
1500	2.4	2.5	2.5	2.6
2000	3.2	3.3	3.3	3.4

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate $a \times a \times t$ ($a=4d$, $t=0.5d$, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M18

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +108 mm (6d)	L-Bend leg +72 mm (4d)	With Plate plate 72×9 mm
100	0.2	0.42	0.34	0.57
150	0.3	0.52	0.44	0.67
200	0.4	0.62	0.54	0.77
250	0.5	0.72	0.64	0.87
300	0.6	0.82	0.74	0.97
400	0.8	1	0.94	1.2
500	1	1.2	1.1	1.4

Shank length L (mm)	Straight no add-on	J-Hook hook +108 mm (6d)	L-Bend leg +72 mm (4d)	With Plate plate 72×9 mm
600	1.2	1.4	1.3	1.6
800	1.6	1.8	1.7	2
1000	2	2.2	2.1	2.4
1200	2.4	2.6	2.5	2.8
1500	3	3.2	3.1	3.4
2000	4	4.2	4.1	4.4

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate $a \times a \times t$ ($a=4d$, $t=0.5d$, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M20

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +120 mm (6d)	L-Bend leg +80 mm (4d)	With Plate plate 80×10 mm
100	0.25	0.54	0.44	0.75
150	0.37	0.67	0.57	0.87
200	0.49	0.79	0.69	1
250	0.62	0.91	0.81	1.1
300	0.74	1	0.94	1.2
400	0.99	1.3	1.2	1.5
500	1.2	1.5	1.4	1.7
600	1.5	1.8	1.7	2
800	2	2.3	2.2	2.5
1000	2.5	2.8	2.7	3
1200	3	3.3	3.2	3.5
1500	3.7	4	3.9	4.2
2000	4.9	5.2	5.1	5.4

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate $a \times a \times t$ ($a=4d$, $t=0.5d$, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M22

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +132 mm (6d)	L-Bend leg +88 mm (4d)	With Plate plate 88×11 mm
100	0.3	0.69	0.56	0.97
150	0.45	0.84	0.71	1.1
200	0.6	0.99	0.86	1.3
250	0.75	1.1	1	1.4
300	0.9	1.3	1.2	1.6
400	1.2	1.6	1.5	1.9
500	1.5	1.9	1.8	2.2
600	1.8	2.2	2.1	2.5
800	2.4	2.8	2.6	3.1
1000	3	3.4	3.2	3.7
1200	3.6	4	3.8	4.2

Shank length L (mm)	Straight no add-on	J-Hook hook +132 mm (6d)	L-Bend leg +88 mm (4d)	With Plate plate 88×11 mm
1500	4.5	4.9	4.7	5.1
2000	6	6.4	6.2	6.6

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate $a \times a \times t$ ($a=4d$, $t=0.5d$, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M24

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +144 mm (6d)	L-Bend leg +96 mm (4d)	With Plate plate 96×12 mm
100	0.36	0.87	0.7	1.2
150	0.53	1	0.87	1.4
200	0.71	1.2	1.1	1.6
250	0.89	1.4	1.2	1.8
300	1.1	1.6	1.4	1.9
400	1.4	1.9	1.8	2.3
500	1.8	2.3	2.1	2.6
600	2.1	2.6	2.5	3
800	2.8	3.4	3.2	3.7
1000	3.6	4.1	3.9	4.4
1200	4.3	4.8	4.6	5.1
1500	5.3	5.8	5.7	6.2
2000	7.1	7.6	7.4	8

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate $a \times a \times t$ ($a=4d$, $t=0.5d$, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

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M27

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +162 mm (6d)	L-Bend leg +108 mm (4d)	With Plate plate 108×13.5 mm
100	0.45	1.2	0.93	1.7
150	0.67	1.4	1.2	1.9
200	0.9	1.6	1.4	2.1
250	1.1	1.9	1.6	2.4
300	1.3	2.1	1.8	2.6
400	1.8	2.5	2.3	3
500	2.2	3	2.7	3.5
600	2.7	3.4	3.2	3.9
800	3.6	4.3	4.1	4.8
1000	4.5	5.2	5	5.7
1200	5.4	6.1	5.9	6.6
1500	6.7	7.5	7.2	8
2000	9	9.7	9.5	10.2

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption —

GB/T 799 has no L-type leg table); with-plate = shank + square plate a×a×t (a=4d, t=0.5d, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M30

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +180 mm (6d)	L-Bend leg +120 mm (4d)	With Plate plate 120×15 mm
100	0.55	1.6	1.2	2.3
150	0.83	1.8	1.5	2.5
200	1.1	2.1	1.8	2.8
250	1.4	2.4	2.1	3.1
300	1.7	2.7	2.3	3.4
400	2.2	3.2	2.9	3.9
500	2.8	3.8	3.4	4.5
600	3.3	4.3	4	5
800	4.4	5.4	5.1	6.1
1000	5.5	6.5	6.2	7.2
1200	6.7	7.7	7.3	8.4
1500	8.3	9.3	9	10
2000	11.1	12.1	11.8	12.8

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate a×a×t (a=4d, t=0.5d, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M33

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +198 mm (6d)	L-Bend leg +132 mm (4d)	With Plate plate 132×16.5 mm
100	0.67	2	1.6	2.9
150	1	2.3	1.9	3.3
200	1.3	2.7	2.2	3.6
250	1.7	3	2.6	3.9
300	2	3.3	2.9	4.3
400	2.7	4	3.6	4.9
500	3.4	4.7	4.2	5.6
600	4	5.4	4.9	6.3
800	5.4	6.7	6.3	7.6
1000	6.7	8	7.6	9
1200	8.1	9.4	8.9	10.3
1500	10.1	11.4	11	12.3
2000	13.4	14.8	14.3	15.7

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate a×a×t (a=4d, t=0.5d, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

M36

kg per piece

Shank length L (mm)	Straight no add-on	J-Hook hook +216 mm (6d)	L-Bend leg +144 mm (4d)	With Plate plate 144×18 mm
100	0.8	2.5	1.9	3.7
150	1.2	2.9	2.3	4.1
200	1.6	3.3	2.7	4.5
250	2	3.7	3.1	4.9
300	2.4	4.1	3.5	5.3
400	3.2	4.9	4.3	6.1
500	4	5.7	5.1	6.9
600	4.8	6.5	5.9	7.7
800	6.4	8.1	7.5	9.3
1000	8	9.7	9.1	10.9
1200	9.6	11.3	10.7	12.5
1500	12	13.7	13.1	14.9
2000	16	17.7	17.1	18.9

All values are computed as geometric volume × density (carbon steel 7.85 g/cm³, base metal, coating excluded) — no copyrighted standard tables are reproduced. Straight = cylinder $\pi/4 \cdot d^2 \cdot L$; J-hook = shank + hook developed length 6d (GB/T 799 hooked-bolt basis, identical to the online calculator); L-bend = shank + leg 4d (explicit assumption — GB/T 799 has no L-type leg table); with-plate = shank + square plate $a \times a \times t$ ($a=4d$, $t=0.5d$, explicit assumption, unwelded-hole-free plate, weld and accessories excluded). The full nominal diameter is used along the shank with no thread reduction.

Cell shows weight per piece (kg/pc, carbon steel 7.85 g/cm³). L = straight shank length (hook/leg/plate excluded); full nominal diameter along the whole shank (no thread reduction).

Basis of Calculation & Disclosed Assumptions

Boundary: theoretical geometric estimates for quotation, freight and lifting budgets. Actual piece weight varies with the as-built configuration (hook/leg/plate per drawing) and coating (hot-dip galvanizing ≈ +4.5%). Use measured values for trade settlement; send drawings for non-standard configurations.

References

- GB/T 799-2020 — Anchor bolts (CN, official full text; common series — anchor bolts are often custom-designed per project drawing) — https://openstd.samr.gov.cn/bzgk/gb/std?std_no=GB%2FT%20799-2020
 - GB/T 192-2003 — General purpose metric screw threads: basic profile (CN, official full text; ISO 68-1 equivalent) — https://openstd.samr.gov.cn/bzgk/gb/std?std_no=GB%2FT%20192-2003
 - Metric thread basic profile (ISO 68-1)
 - Dimensions cross-checked against industry fastener data libraries; densities are common industry values
- Disclaimer: This chart is an engineering estimation for selection, quotation and freight estimation only. It does not constitute design or acceptance criteria.

Material Density Conversion

Values above are carbon steel (7.85 g/cm³); for other materials multiply by the density factor.

Material	Density (g/cm³) g/cm³	Factor
Carbon / Alloy Steel	7.85	×1.000
Stainless 304	7.93	×1.010
Stainless 316	7.98	×1.017
Brass	8.5	×1.083