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DIMENSIONAL STANDARD · ASME B16.9

ASME B16.9 Butt Weld Elbow Weight Chart (kg)

ASME B16.9 butt weld elbow weight chart: 90° long and short radius elbow weight in kg for SCH 10S, 20, STD, 40, XS and 80, NPS ½ to 48.

This chart gives approximate **ASME B16.9 butt weld elbow weights** in kilograms for 90° long radius (LR) and short radius (SR) elbows, by wall schedule from SCH 10S to SCH 80.

Teshi Group manufactures these fittings in India in carbon, low-temperature, alloy, stainless, duplex and nickel-alloy grades, with EN 10204 3.1 certificates.

kg Approximate weight per piece by wall schedule or class

90° long radius elbow — weight by schedule (kg)

NPS	DN	SCH10S kg	SCH20 kg	STD kg	SCH40 kg	XS kg	SCH80 kg
1/2"	15	0.06	—	0.08	0.08	0.1	0.1
3/4"	20	0.08	—	0.11	0.11	0.13	0.13
1"	25	0.13	—	0.15	0.15	0.21	0.21
1 1/4"	32	0.21	—	0.25	0.25	0.36	0.36
1 1/2"	40	0.28	—	0.39	0.39	0.52	0.52
2"	50	0.47	—	0.66	0.66	0.96	0.96
2 1/2"	65	0.79	—	1.37	1.37	1.8	1.8
3"	80	1.16	—	2.19	2.19	2.87	2.87
3 1/2"	90	1.55	—	2.96	2.96	4.06	4.06
4"	100	2.02	—	4.13	4.13	5.6	5.6
5"	125	3.46	—	6.89	6.89	9.62	9.62
6"	150	4.98	—	10.7	10.7	16.5	16.5
8"	200	9.57	16.5	21.6	21.6	31.6	31.6
10"	250	16.7	25.8	37	37	49.9	60.7
12"	300	25.9	36.1	56	61	71.6	97.4
14"	350	34.7	60.2	71.4	85.1	92	139
16"	400	45.4	78	93.6	121	121	200
18"	450	56.2	87.7	119	176	153	287
20"	500	82.2	147	147	232	190	396
22"	550	99.6	178	178	—	230	515
24"	600	136	212	212	377	275	635
26"	650	—	323	249	—	323	—
28"	700	—	375	290	—	375	—
30"	750	265	431	333	—	431	—
32"	800	—	491	379	675	491	—
34"	850	—	555	428	762	555	—

NPS	DN	SCH10S kg	SCH20 kg	STD kg	SCH40 kg	XS kg	SCH80 kg
36"	900	—	622	480	950	622	—
38"	950	—	—	535	—	694	—
40"	1000	—	—	594	—	769	—
42"	1050	—	—	655	—	849	—
44"	1100	—	—	718	—	932	—
46"	1150	—	—	786	—	1019	—
48"	1200	—	—	865	—	1110	—
52"	1300	—	—	1006	—	—	—
56"	1400	—	—	1183	—	—	—
60"	1500	—	—	1341	—	—	—
64"	1600	—	—	1526	—	—	—
68"	1700	—	—	1723	—	—	—
72"	1800	—	—	1933	—	—	—
76"	1900	—	—	2154	—	—	—
80"	2000	—	—	2388	—	—	—

90° short radius elbow — weight by schedule (kg)

NPS	DN	SCH10S kg	SCH20 kg	STD kg	SCH40 kg	XS kg	SCH80 kg
1"	25	0.08	—	0.11	0.11	0.13	0.13
1 1/4"	32	0.14	—	0.17	0.17	0.24	0.24
1 1/2"	40	0.19	—	0.24	0.24	0.34	0.34
2"	50	0.32	—	0.44	0.44	0.68	0.68
2 1/2"	65	0.53	—	0.91	0.91	1.18	1.18
3"	80	0.78	—	1.36	1.36	1.91	1.91
3 1/2"	90	1.04	—	1.96	1.96	2.58	2.58
4"	100	1.35	—	2.77	2.77	3.54	3.54
5"	125	2.32	—	4.4	4.4	6.46	6.46
6"	150	3.31	—	7.12	7.12	10.6	10.6
8"	200	6.38	11	14.1	14.1	21.1	21.1
10"	250	11.2	16.8	24.6	24.6	33.2	40.4
12"	300	17.3	24.1	37	40.6	47.7	65
14"	350	23.2	40.2	42.6	54.5	61.3	92.4
16"	400	30.2	51.9	62.2	80.4	80.4	133
18"	450	38.3	65.7	79.1	117	102	184
20"	500	54.9	97.9	97.9	155	126	255

NPS	DN	SCH10S kg	SCH20 kg	STD kg	SCH40 kg	XS kg	SCH80 kg
22"	550	66.5	119	119	—	154	333
24"	600	90.6	142	142	251	183	424
26"	650	—	—	167	—	—	—
28"	700	—	—	194	—	—	—
30"	750	—	—	222	—	—	—
32"	800	—	—	253	438	—	—
34"	850	—	—	286	495	—	—
36"	900	—	—	320	607	—	—
38"	950	—	—	357	—	—	—
40"	1000	—	—	396	—	—	—
42"	1050	—	—	437	—	—	—
44"	1100	—	—	480	—	—	—
46"	1150	—	—	524	—	—	—
48"	1200	—	—	571	—	—	—
52"	1300	—	—	671	—	—	—
56"	1400	—	—	776	—	—	—
60"	1500	—	—	894	—	—	—
64"	1600	—	—	1010	—	—	—
68"	1700	—	—	1149	—	—	—
72"	1800	—	—	1289	—	—	—
76"	1900	—	—	1436	—	—	—
80"	2000	—	—	1592	—	—	—

Notes

- Weight formula for 90° elbows: $W = 9.685 \times 10^{-6} \times R \times (D^2 - d^2)$ kg, with R, D and d in mm; 45° and 180° elbows are half and twice the 90° weight.
- Weights are approximate net weights per piece in kg for carbon steel, for estimation, freight and packing only. For austenitic stainless steel multiply by about 1.01–1.02.
- Reference values for estimation and checking. Verify against the current edition of the standard and the purchase specification before design, purchase or fabrication.

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