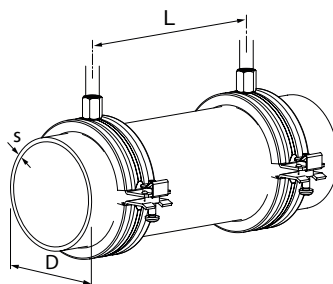


DIMENSIONS AND WEIGHTS FOR TUBES

To support selections and calculations of the right pipe supporting materials we have selected an overview of a number of common tube types. The data have been distributed by third parties (such as standardisation institutes and suppliers) and are subject to occasional changes. The data mentioned in the tables are indicative and dependent on the used material and local standards. The data for maximum recommended span are mentioned according to DIN 1988-2 (TWRI) and are valid for straight lengths inbetween two brackets. In the case of a bend or a loose extremity the span between two brackets is 0.65 x the span as mentioned in the table.



Seamless steel pipes according to EN 10220 (replaces DIN 2448)

Ø Pipe D		s [mm]	Weight of pipe [kg/m]	Water content [l/m]	Water filled weight [kg/m]	L max. [m]
[DN]	O.D. [mm]					
6	10.2	1.6	0.34	0.04	0.38	1
8	13.5	1.8	0.52	0.08	0.6	1
-	16	1.8	0.63	0.121	0.751	1.1
10	17.2	1.8	0.68	0.145	0.825	1.2
-	20	2	0.89	0.201	1.091	1.2
15	21.3	2	0.95	0.235	1.185	1.3
-	25	2	1.13	0.346	1.476	1.4
20	26.9	2.3	1.4	0.39	1.79	1.5
-	30	2.6	1.76	0.483	2.243	1.8
-	31.8	2.6	1.87	0.555	2.425	1.8
25	33.7	2.6	1.99	0.638	2.628	2
-	38	2.6	2.27	0.845	3.115	2.2
32	42.4	2.6	2.55	1.086	3.636	2.3
-	44.5	2.6	2.69	1.212	3.902	2.4
40	48.3	2.6	2.95	1.458	4.408	2.5
-	51	2.6	3.1	1.647	4.747	2.8
-	57	2.9	3.87	2.058	5.928	3
50	60.3	2.9	4.11	2.332	6.442	3.1
-	63.5	2.9	4.33	2.614	6.944	3.1
-	70	2.9	4.8	3.235	8.035	3.2
65	76.1	2.9	5.24	3.88	9.12	3.3
-	82.5	3.2	6.26	4.546	10.806	3.7
80	88.9	3.2	6.76	5.343	12.103	4.2
-	101.6	3.6	8.7	6.995	15.695	4.3
-	108	3.6	9.27	7.976	17.246	4.4
100	114.3	3.6	9.83	9.004	18.834	4.5
-	127	4	12.13	11.116	23.246	4.7
-	133	4	12.73	12.266	24.996	4.9
125	139.7	4	13.39	13.616	27.006	5.1
-	152.4	4.5	16.41	16.144	32.554	5.3
-	159	4.5	17.15	17.663	34.813	5.5
150	168.3	4.5	18.18	19.921	38.101	5.8
-	177.8	5	21.31	22.103	43.413	6
-	193.7	5.4	25.08	26.26	51.34	6
200	219.1	5.9	31.02	33.734	64.754	6
-	244.5	6.3	37.01	42.215	79.225	6
250	273	6.3	41.44	53.26	94.7	6
300	323.9	7.1	55.47	75.33	130.8	6
350	355.6	8	68.58	90.58	159.16	6
400	406.4	8.8	86.29	118.73	205.02	6
450	457	10	110.24	149.99	260.23	6
500	508	11	134.82	185.51	320.33	6
600	610	12.5	184.19	268.78	452.97	6

Steel fire tube
EN 10220 (replaces DIN 2458)

Ø Pipe D		s	Weight of pipe	Water content	Water filled weight	L max.
DN	O.D.[mm]	[mm]	[kg/m]	[l/m]	[kg/m]	[m]
(DN)						
6	10.2	1.6	0.34	0.04	0.38	1
8	13.5	1.8	0.52	0.08	0.6	1
-	16	1.8	0.63	0.121	0.751	1.1
10	17.2	1.8	0.68	0.145	0.825	1.2
-	20	2	0.89	0.201	1.091	1.2
15	21.3	2	0.95	0.235	1.185	1.3
-	25	2	1.13	0.346	1.476	1.4
20	26.9	2	1.23	0.41	1.64	1.5
-	30.0	2	1.38	0.53	1.91	1.8
-	31.8	2	1.47	0.61	2.08	1.8
25	33.7	2	1.56	0.69	2.25	2
-	38	2.3	2.02	0.88	2.9	2.2
32	42.4	2.3	2.27	1.12	3.39	2.3
-	44.5	2.3	2.39	1.25	3.64	2.4
40	48.3	2.3	2.61	1.5	4.11	2.5
-	51	2.3	2.76	1.69	4.45	2.8
-	57	2.3	3.1	2.16	5.26	3
50	60.3	2.3	3.29	2.44	5.73	3.1
-	63.5	2.6	3.9	2.67	6.57	3.1
-	70.0	2.6	4.32	3.3	7.62	3.2
65	76.1	2.6	4.71	3.95	8.66	3.3
-	82.5	2.6	5.12	4.69	9.81	3.7
80	88.9	2.9	6.15	5.42	11.57	4.2
-	101.6	2.9	7.06	7.21	14.27	4.3
-	108	2.9	7.52	8.2	15.72	4.4
100	114.3	3.2	8.77	9.14	17.91	4.5
-	127	3.2	9.77	11.42	21.19	4.7
-	133	3.6	11.49	12.43	23.92	4.9
125	139.7	3.6	12.08	13.79	25.87	5.1
-	152.4	4	14.64	16.38	31.02	5.3
-	159	4	15.29	17.91	33.2	5.5
150	168.3	4	16.21	20.18	36.39	5.8
-	177.8	4.5	19.23	22.38	41.61	6
-	193.7	4.5	21	26.79	47.79	6
200	219.1	4.5	23.82	34.67	58.49	6
-	244.5	5	29.53	43.19	72.72	6
250	273	5	33.05	54.33	87.38	6
300	323.9	5.6	43.96	76.8	120.76	6
350	355.6	5.6	48.34	93.16	141.5	6
400	406.4	6.3	62.16	121.8	183.96	6
450	457	6.3	70.02	155.11	225.13	6
500	508	6.3	77.95	192.75	270.7	6
600	610	6.3	93.8	280.3	374.1	6

Stainless steel dairy pipe
DIN 11850

Ø Pipe D		s	Weight of pipe	Water content	Water filled weight
DN	O.D.[mm]	[mm]	[kg/m]	[l/m]	[kg/m]
(DN)					
10	12	1	0.28	0.079	0.359
-	12	1.5	0.39	0.064	0.454
15	18	1	0.43	0.201	0.631
-	18	1.5	0.62	0.177	0.797
20	22	1	0.53	0.314	0.844
-	22	1.5	0.77	0.284	1.054
25	28	1	0.68	0.531	1.211
-	28	1.5	1	0.491	1.491
32	34	1	0.83	0.804	1.634
-	34	1.5	1.22	0.755	1.975
40	40	1	0.98	1.134	2.114
-	40	1.5	1.45	1.075	2.525
50	52	1	1.28	1.963	3.243
-	52	1.5	1.9	1.886	3.786
65	70	2	3.41	3.421	6.831
80	85	2	4.16	5.153	9.313
100	104	2	5.11	7.854	12.964
125	129	2	6.36	12.272	18.632
150	154	2	7.61	17.671	25.281
200	204	2	10.12	31.416	41.536
250	254	2	12.7	49.087	61.787



AKB (Multilayer pipe)

Ø Pipe D O.D.al	s [mm]	Weight of pipe (kg/m)	Water content (L/m)	Water filled weight (kg/m)	L max. (m)
14	2	0.111	0.079	0.19	1
16	2	0.129	0.113	0.242	1
16	2.5	0.135	0.104	0.239	1
20	2	0.175	0.201	0.376	1
20	2.5	0.185	0.177	0.362	1
25	2.5	0.274	0.314	0.588	1.5
26	3	0.3	0.314	0.614	1.5
32	3	0.415	0.531	0.946	2
40	3.5	0.595	0.855	1.45	2
50	4	0.84	1.385	2.225	2
63	4.5	1.1	2.29	3.39	2.5

Stainless steel pharma tube DIN 11866

Ø Pipe D DN (DN)	O.D.[mm]	s [mm]	Weight of pipe [kg/m]	Water content [l/m]	Water filled weight [kg/m]
10	13	1.5	0.432	0.079	0.511
15	19	1.5	0.658	0.201	0.859
20	23	1.5	0.808	0.314	1.122
25	29	1.5	1.034	0.531	1.565
32	35	1.5	1.26	0.804	2.064
40	41	1.5	1.485	1.134	2.619
50	53	1.5	1.937	1.963	3.9
65	70	2	3.409	3.421	6.83
80	85	2	4.161	5.153	9.314
100	104	2	5.114	7.854	12.968

HDPE DIN 8074, column 5

Ø Pipe D O.D.al	s [mm]	Weight of pipe (kg/m)	Water content (L/m)	Water filled weight (kg/m)	L max. (m) *
10	2	0.05	0.028	0.078	0.5
12	2	0.06	0.05	0.11	0.5
16	2	0.08	0.113	0.193	0.5
20	2	0.11	0.201	0.311	0.75
25	2.3	0.16	0.327	0.487	0.9
32	3	0.26	0.531	0.791	1
40	3.7	0.4	0.835	1.235	1
50	4.6	0.62	1.307	1.927	1.15
63	5.8	0.99	2.075	3.065	1.25
75	6.9	1.4	2.942	4.342	1.33
90	8.2	2	4.254	6.254	1.45
110	10	2.98	6.362	9.342	1.6
125	11.4	3.87	8.203	12.073	1.7
140	12.8	4.86	10.279	15.139	1.75
160	14.6	6.34	13.437	19.777	1.9
180	16.4	8.01	17.018	25.028	1.95
200	18.2	9.88	21.021	30.901	2
225	20.5	12.51	26.59	39.1	2.1
250	22.8	15.46	32.813	48.273	2.25
280	25.5	19.37	41.187	60.557	2.4
315	28.7	24.52	52.117	76.637	2.5

* At 40 °C (314 K).

Round airduct (Spiral tube)
EN 12237 (replaces DIN EN 24147)

Ø Pipe D O.D.al	s [mm]	Weight of pipe (kg/m)	L max. (m)
80	0.5	1.1	3
100	0.5	1.4	3
125	0.5	1.8	3
160	0.5	2.3	3
200	0.5	2.8	3
250	0.5	3.5	3
315	0.6	5.3	3
355	0.6	6	3
400	0.6	6.8	3
450	0.6	7.6	3
500	0.6	8.4	3
560	0.6	9.5	3
630	0.8	14.2	3
710	0.8	16	3
800	0.8	18	3
900	0.8	20.3	3
1000	1	28.1	3
1120	1	31.5	3
1250	1	35.2	3

Seamless copper pipes according to
EN 1057 (replaces DIN 1786)

Ø Pipe D O.D.al	s [mm]	Weight of pipe (kg/m)	Water content (L/m)	Water filled weight (kg/m)	L max. (m) *
10	1	0.252	0.05	0.302	1.25
12	1	0.308	0.079	0.387	1.25
15	1	0.391	0.133	0.524	1.25
18	1	0.475	0.201	0.676	1.5
22	1	0.587	0.314	0.901	2
28	1.5	1.11	0.491	1.601	2.25
35	1.5	1.41	0.804	2.214	2.75
42	1.5	1.7	1.194	2.894	3
54	2	2.91	1.963	4.873	3.5
64	2	3.47	2.828	6.298	4
76,1	2	4.17	4.08	8.25	4.25
88,9	2	4.89	5.66	10.55	4.75
108	2.5	7.42	8.33	15.75	5
133	3	10.98	12.67	23.65	5
159	3	13.17	18.39	31.56	5
219	3	18.24	35.63	53.87	5
267	3	22.29	53.5	75.79	5

* According to DIN 1988-2.

Seamless threaded steel pipes according to
EN 10255 (replaces DIN 2440)

Ø Pipe D	s [mm]	Weight of pipe [kg/m]	Water content [l/m]	Water filled weight [kg/m]	L max. [m] *
Nom. ["]	O.D. [mm]				
1/4"	13.5	2.35	0.061	0.711	1.5
3/8"	17.2	2.35	0.123	0.983	2.25
1/2"	21.3	2.65	0.201	1.421	2.75
3/4"	26.9	2.65	0.366	1.946	3
1"	33.7	3.25	0.581	3.021	3.5
1 1/4"	42.4	3.25	1.012	4.152	3.75
1 1/2"	48.3	3.25	1.372	4.982	4.25
2"	60.3	3.65	2.205	7.305	4.75
2 1/2"	76.1	3.65	3.716	10.236	5.5
3"	88.9	4.05	5.125	13.595	6
4"	114.3	4.5	8.704	20.894	6
5"	139.7	4.85	13.267	29.397	6
6"	165.1	4.85	18.957	38.127	6

* According to DIN 1988-2.



GA cast iron drainage pipes according to DIN 19500

Ø Pipe D		s [mm]	Weight of pipe [kg/m]	Water content [l/m]	Water filled weight [kg/m]	L max. [m] **
DN [mm]	O.D. [mm]					
50	60	3.5	5.2	2.205	7.405	1.5
70	80	3.5	7	4.183	11.183	1.5
100	112	4	11.3	8.491	19.791	1.5
125	137	4	14	13.063	27.063	1.5
150	162	5	20.6	18.137	38.737	1.5
200	212	6	32.4	31.4	63.8	1.5

** A minimum of 2 clips per trade length.

PVC drainage pipes DIN 8062, column 3

Ø Pipe D		s [mm]	Weight of pipe [kg/m]	Water content [l/m]	Water filled weight [kg/m]	L max. [m] *
DN [mm]	O.D. [mm]					
40	50	1.8	0.4	1.69	2.09	1.10 *
50	63	1.9	0.53	2.75	3.29	1.20 *
70	75	2.2	0.73	3.91	4.65	1.35 *
80	90	2.7	1.08	5.62	6.7	1.50 *
100	110	3.2	1.57	8.43	10	1.70 *
125	125	3.7	2.06	10.86	12.92	1.95 *
150	160	4.7	3.35	17.81	21.16	2.10 *
-	180	5.3	4.25	22.54	26.78	2.2
-	200	5.9	5.25	27.82	33.07	2.2
-	225	6.6	6.61	35.23	41.84	2.3
-	250	7.3	8.13	43.52	51.65	2.5
-	280	8.2	10.22	54.57	64.8	2.8
-	315	9.2	12.91	69.09	82	3

* According to DIN 1988-2, at 40 °C (314 K).

PVC-hart PN16 DIN 8062, column 5

Ø Pipe D		s [mm]	Weight of pipe [kg/m]	Water content [l/m]	Water filled weight [kg/m]	L max. [m] *
DN [mm]	O.D. [mm]					
10	16	1.2	0.08	0.15	0.23	0.50 *
15	20	1.5	0.13	0.23	0.35	0.60 *
20	25	1.9	0.2	0.35	0.55	0.65 *
25	32	2.4	0.33	0.58	0.91	0.70 *
32	40	3	0.51	0.91	1.42	0.90 *
40	50	3.7	0.79	1.43	2.21	1.10 *
50	63	4.7	1.26	2.26	3.51	1.20 *
70	75	5.6	1.78	3.2	4.98	1.35 *
80	90	6.7	2.56	4.61	7.17	1.50 *
100	110	8.2	3.83	6.88	10.71	1.70 *
125	125	10.4	6.18	11.16	17.34	1.95 *
150	160	11.9	8.08	14.57	22.65	2.10 *
-	180	13.4	10.24	18.43	28.67	2.2
-	200	14.9	12.65	22.75	35.4	2.2
-	225	16.7	15.96	28.83	44.79	2.3
-	250	18.6	19.74	35.57	55.31	2.5
-	280	20.8	24.73	44.64	69.37	2.8
-	315	23.4	31.3	56.49	87.79	3

* According to DIN 1988-2, at 40 °C (314 K).

SML waste pipe (cast iron)
DIN 19522-2010-12 + DIN EN 877 (replaces DIN 19522-2000-1)

Ø Pipe D		s	Weight of pipe	Water content	Water filled weight	L max.
DN [mm]	O.D. [mm]	[mm]	[kg/m]	[l/m]	[kg/m]	[m] *
40	48	3	3.07	1.39	4.46	1.5
70	78	3.5	5.94	3.96	9.9	1.5
80	83	3.5	6.34	4.54	10.88	1.5
100	110	3.5	8.49	8.33	16.82	1.5
125	135	4	11.93	12.67	24.6	1.5
150	160	4	14.21	18.15	32.36	1.5
50	58	3.5	4.34	2.04	6.38	1.5
200	210	5	23.35	31.42	54.77	1.5
250	274	5.5	33.64	54.33	87.97	1.5
300	326	6	43.73	77.44	121.17	1.5
400	429	8.1	77.65	133.83	211.48	1.5
500	532	9	107.21	207.5	314.71	1.5
600	635	9.9	140.95	297.25	438.2	1.5

* A minimum of 2 clips per trade length.

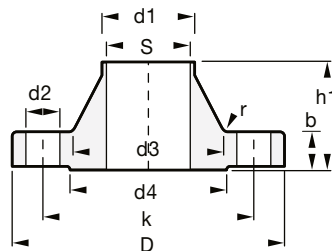
PE drainage pipes
DIN 19535

Ø Pipe D		s	Weight of pipe	Water content	Water filled weight	L max.
DN [mm]	O.D. [mm]	[mm]	[kg/m]	[l/m]	[kg/m]	[m]
26	32	3	0.273	0.531	0.804	0.95
34	40	3	0.348	0.907	1.255	0.95
40 (44)	50	3	0.443	1.52	1.963	1.05
50	56	3	0.5	1.963	2.463	1.2
57	63	3	0.566	2.55	3.116	1.2
70	75	3	0.679	3.737	4.416	1.3
80	90	3.5	0.952	5.408	6.36	1.45
100	110	4.3	1.432	8.071	9.503	1.6
115 (125)	125	4.8	1.817	10.454	12.271	1.7
125	140	5.4	2.296	13.104	15.394	1.8
150	160	6.2	3.004	17.102	20.106	1.9
200	200	6.2	3.83	27.627	31.457	2
250	250	7.8	6.019	43.131	49.15	2.2
300	315	9.8	9.4	68.51	77.91	2.4

DIMENSIONS AND WEIGHTS FOR FLANGES
Flanges

According to EN 1092-1 PN 16.

Material: C 22.3 according to DIN 17243. without corrosion protection.



DN	d1	D	d3	s	b	r	k	h1	Holes	D2	d4	Weight [kg]
50	60.3	165	75	2.9	18	6	125	45	4	18	102	2.53
65	76.1	185	90	2.9	18	6	145	45	8	18	122	3.06
80	88.9	200	105	3.2	20	8	160	50	8	18	138	3.7
100	114.3	220	125	3.6	20	8	180	52	8	18	158	4.62
125	139.7	250	156	4	22	8	210	55	8	18	188	6.3
150	168.3	285	184	4.5	22	10	240	55	8	22	212	7.75
200	219.1	340	235	5.9	24	10	295	62	12	22	268	11.0
250	273	405	292	6.3	26	12	355	70	12	26	320	15.6
300	323.9	460	344	7.1	28	12	410	78	12	26	378	22.0
350	355.6	520	390	8	30	12	470	82	16	26	438	28.7
400	406.4	580	445	8	32	12	525	85	16	30	490	36.3
450	457	640	490	8	32	12	585	85	18	30	550	44.1
500	508	715	548	8	34	12	650	90	20	33	610	61.0
600	610	840	652	8.8	36	12	770	95	20	36	725	75.4