

Annex C
(informative)

Approximate masses of flanges and collars

Tables C.1 to C.8 give calculated masses of flanges and ancillary components, which may be used for guidance only.

These calculated masses are based on nominal dimensions given in tables 6 to 13, and on densities of 7,80 g/cm³ for steel materials.

The actual masses may vary from the calculated masses due to dimensional variations within the permitted tolerances given in table 14.

Table C.1 - Masses of flanges PN 2,5

Masses in kilograms

DN	Type 01	Type 05	Type 11
1200	101,5	505,0	77,5
1400	128,0	724,5	89,5
1600	171,0	996,0	117,5
1800	202,5	1305,5	135,0
2000	240,5	1699,5	153,0
2200	-	-	196,0
2400	-	-	213,0
2600	-	-	230,5
2800	-	-	283,5
3000	-	-	304,5
3200	-	-	324,5
3400	-	-	365,5
3600	-	-	410,5
3800	-	-	457,0
4000	-	-	480,5

Table C.2 - Masses of flanges PN 6

Masses in kilograms

DN	Type 01	Type 02	Type 05	Type 11	Type 12	Type 32
10	0,5	0,5	0,5	0,5	0,5	0,5
15	0,5	0,5	0,5	0,5	0,5	0,5
20	0,5	0,57	0,5	0,5	0,5	0,5
25	0,5	0,5	1,0	1,0	1,0	0,5
32	1,0	1,0	1,0	1,0	1,0	0,5
40	1,5	1,5	1,5	1,5	1,5	0,5
50	1,5	1,5	1,5	1,5	1,5	0,5
65	2,0	2,0	2,0	2,0	2,0	0,5
80	3,0	3,0	3,5	3,0	3,0	0,5
100	3,5	3,0	4,0	3,5	3,0	1,0
125	4,5	4,0	6,0	4,5	4,5	1,0
150	5,0	4,5	7,5	5,5	5,0	1,0
200	7,0	6,5	12,5	8,0	7,0	1,5
250	9,0	8,5	18,5	11,5	9,0	2,5
300	12,0	11,5	25,5	15,0	12,0	3,0
350	17,0	16,0	32,0	19,5	-	5,0
400	20,0	19,0	38,5	22,0	-	6,0
450	24,5	23,5	51,0	25,0	-	7,0
500	26,5	25,5	60,03	29,5	-	8,5
600	35,0	33,5	103,0	43,0	-	9,5
700	-	-	178,5	43,5	-	-
800	-	-	252,0	52,0	-	-
900	-	-	335,5	61,5	-	-
1000	-	-	434,5	67,0	-	-
1200	-	-	717,5	105,5	-	-
1400	-	-	1094,0	149,0	-	-
1600	-	-	1545,0	181,5	-	-
1800	-	-	2131,0	235,0	-	-
2000	-	-	2862,0	302,0	-	-
2200	-	-	-	380,5	-	-
2400	-	-	-	463,0	-	-
2600	-	-	-	558,0	-	-
2800	-	-	-	648,5	-	-
3000	-	-	-	736,0	-	-
3200	-	-	-	875,0	-	-
3400	-	-	-	1025,5	-	-
3600	-	-	-	1228,7	-	-

Table C.3 - Masses of flanges PN 10

Masses in kilograms

DN	Type 01	Type 02	Type 04	Type 05	Type 11	Type 12	Type 32	Type 34
200	9,5	9,0	8,0	16,5	11,5	10,5	3,0	5,0
250	12,0	11,5	10,0	24,0	15,5	13,0	3,5	6,5
300	13,5	13,0	11,5	31,0	18,0	15,0	4,0	8,0
350	20,5	19,5	15,0	39,5	24,5	23,5	7,5	12,0
400	27,5	26,5	21,0	49,5	29,5	29,0	9,0	15,0
450	33,5	32,5	26,0	63,0	34,0	33,5	10,5	16,5
500	40,0	39,0	31,0	75,5	39,5	40,5	12,5	20,0
600	54,5	52,5	43,5	124,0	56,0	56,0	14,5	24,0
700	-	-	-	182,5	65,0	-	-	-
800	-	-	-	260,0	87,0	-	-	-
900	-	-	-	344,0	106,0	-	-	-
1000	-	-	-	473,5	123,0	-	-	-
1200	-	-	-	765,0	184,0	-	-	-
1400	-	-	-	-	252,0	-	-	-
1600	-	-	-	-	363,0	-	-	-
1800	-	-	-	-	445,5	-	-	-
2000	-	-	-	-	558,0	-	-	-
2200	-	-	-	-	702,5	-	-	-
2400	-	-	-	-	860,5	-	-	-
2600	-	-	-	-	1010,5	-	-	-
2800	-	-	-	-	1208,0	-	-	-
3000	-	-	-	-	1461,0	-	-	-

Table C.4 - Masses of flanges PN 16

Masses in kilograms

DN	Type 01	Type 02	Type 04	Type 05	Type 11	Type 12	Type 32	Type 34
65	3,0	3,0	3,0	3,5	3,0	3,0	1,0	1,0
80	3,5	3,5	3,0	4,5	4,0	4,0	1,0	1,5
100	4,5	4,5	4,0	5,5	4,5	4,5	1,5	2,0
125	5,5	5,5	4,5	8,0	6,5	6,5	1,5	2,0
150	7,0	7,0	6,0	10,5	7,5	7,5	2,0	3,0
200	9,5	9,5	8,5	16,5	11,0	10,0	3,0	5,0
250	14,0	14,0	12,5	25,0	16,5	14,0	3,5	6,5
300	19,0	18,5	16,5	35,0	22,0	18,0	5,5	10,0
350	28,0	27,5	21,5	48,0	32,0	28,5	10,0	12,5
400	36,0	35,0	27,0	63,5	40,0	36,5	12,5	19,0
450	46,0	45,0	36,5	96,5	54,5	49,5	16,5	25,0
500	64,0	65,0	51,0	133,0	74,0	68,5	21,5	31,5
600	96,0	94,0	78,5	226,5	116,5	107,5	28,5	43,0
700	-	-	-	236,0	87,0	-	-	-
800	-	-	-	325,0	111,0	-	-	-
900	-	-	-	437,5	129,0	-	-	-
1000	-	-	-	602,0	169,0	-	-	-
1200	-	-	-	999,0	251,0	-	-	-
1400	-	-	-	-	329,0	-	-	-
1600	-	-	-	-	476,0	-	-	-
1800	-	-	-	-	582,0	-	-	-
2000	-	-	-	-	720,0	-	-	-

Table C.5 - Masses of flanges PN 25

Masses in kilograms

DN	Type 01	Type 02	Type 04	Type 05	Type 11	Type 12	Type 32	Type 34
200	14,5	14,0	11,5	22,5	17,0	15,0	4,5	7,5
250	20,0	19,5	17,0	33,5	24,0	21,0	5,5	10,0
300	26,5	26,0	22,0	46,5	31,5	28,0	8,5	14,5
350	42,0	41,0	32,0	68,0	48,0	46,5	14,5	22,0
400	55,0	54,0	42,5	89,5	63,0	59,5	18,0	28,5
450	64,5	63,0	50,0	120,0	75,5	71,5	21,0	32,5
500	84,0	82,0	63,5	150,0	96,5	89,5	27,0	43,5
600	127,5	124,5	98,5	244,5	138,6	129,5	34,0	56,5
700	-	-	-	-	143,5	-	-	-
800	-	-	-	-	193,5	-	-	-
900	-	-	-	-	237,0	-	-	-
1000	-	-	-	-	310,5	-	-	-

Table C.6 - Masses of flanges PN 40

Masses in kilograms

DN	Type 01	Type 02	Type 04	Type 05	Type 11	Type 12	Type 32	Type 34
10	0,6	0,5	0,5	1,0	0,5	0,5	0,5	0,5
15	0,5	0,5	0,5	1,0	1,0	0,5	0,5	0,5
20	1,0	1,0	1,0	1,0	1,0	1,0	0,5	0,5
25	1,0	1,0	1,0	1,5	1,0	1,5	0,5	0,5
32	2,0	2,0	1,5	2,0	2,0	2,0	0,5	0,5
40	2,0	2,0	2,0	2,5	2,0	2,0	0,5	0,5
50	2,5	2,5	2,5	3,0	3,0	3,0	0,5	1,0
65	3,5	3,5	3,0	4,5	4,0	4,0	1,0	1,0
80	4,5	4,0	3,5	5,5	5,0	4,5	1,0	1,5
100	6,0	6,0	5,0	7,5	6,5	6,5	1,5	2,5
125	8,0	8,0	7,0	11,0	9,0	8,5	2,0	3,0
150	10,5	10,0	8,5	14,5	11,5	11,0	2,5	4,0
200	18,0	17,5	15,0	29,0	21,0	18,5	5,5	8,5
250	29,5	28,5	24,0	44,5	34,0	28,5	8,0	13,0
300	41,5	40,5	33,5	64,0	47,5	41,5	12,75	20,54
350	62,0	60,74	47,0	89,5	69,0	60,0	19,31	29,50
400	89,5	88,0	69,5	127,0	98,0	83,5	30,38	46,11
450	91,5	90,0	72,5	154,0	105,08	87,5	28,40	48,55
500	120,5	118,0	92,0	188,0	130,5	107,5	35,31	61,70
600	189,5	186,0	149,5	331,0	211,5	176,0	53,32	91,74

Table C.7 - Masses of flanges PN 63

Masses in kilograms

DN	Type 01	Type 05	Type 11	Type 12
50	4,5	5,0	4,5	4,5
65	5,0	6,0	5,5	5,5
80	6,5	7,5	6,5	6,5
100	8,5	10,5	9,5	9,0
125	12,5	16,5	14,5	14,0
150	18,0	24,5	21,5	20,0
200	30,5	40,5	34,0	-
250	43,0	58,0	48,0	-
300	58,5	83,5	67,5	-
350	91,5	116,0	97,5	-
400	121,0	155,5	129,0	-

Table C.8 - Masses of flanges PN 100

Masses in kilograms

DN	Type 01	Type 05	Type 11	Type 12
10	1,0	1,0	1,0	1,0
15	1,0	1,5	1,0	1,0
20	2,0	2,0	2,0	2,0
25	2,5	2,5	2,5	2,5
32	3,0	3,5	3,0	3,0
40	4,0	4,5	4,0	4,0
50	5,5	6,0	6,0	5,5
65	7,0	8,0	7,5	7,0
80	8,0	9,5	9,0	8,0
100	11,0	14,0	13,0	12,0
125	18,5	22,5	21,0	18,5
150	25,0	30,5	28,0	24,5
200	44,5	54,5	50,0	-
250	71,0	87,5	81,0	-
300	107,0	131,5	117,97	-
350	154,0	179,0	167,25	-
400	199,5	-	-	-
500	339,5	-	-	-