

Mid Diameter Volume Tables

Forestry Commission
Field Book 11

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Mid Diameter Volume Tables

General

1. The mid diameter method is the traditional method for estimating the volume of logs. Although it is a very accurate method, it becomes less accurate as the length increases.
2. The volume is derived from the product of the length of the log and its mean cross-sectional area. In practice it is the diameter at the mid point which is actually measured.
3. The volume is derived from the following formula which is known as Huber's formula:

$$V = \frac{\pi \times d^2 \times L}{40\,000}$$

where V = volume in cubic metres

L = length in metres

d = mid diameter in centimetres

π = 3.1415927

Practice

4. *Lengths*, measured from the butt end, should be rounded down to the nearest 0.1 m for lengths up to 10 m, and to the nearest whole metre for lengths greater than 10 m. Where the rounded down length exceeds 20 m the tree should be measured in two sections. Where the stem is curved, lengths should be measured along the curvature and not in a direct line from end to end.
5. *Diameters* will be measured at the mid point of the rounded down length. They will usually be measured with a girthing tape, calibrated in centimetres diameter, and should be rounded down to the nearest whole centimetre. This is achieved automatically with the classifying tapes of the type used by the Forestry Commission. (The zero point of these tapes is the extreme outside edge of the D ring or the point of the hook, according to the fitment). The minimum top diameter for volume measurement is 7 cm over-bark. (Using a rounded down centimetre class tape 7 cm diameter is the dividing line between the 6 and 7 cm classes.)
6. *Volumes* include bark if the mid diameter is measured over-bark, and exclude bark if the mid diameter is measured under-bark. The lengths in the table are tabulated from 1.0 m to 10.0 m. For lengths greater than 10 m the decimal point in the lengths and volumes is moved one place to the right. For example, for a mid diameter of 20 cm and a length of 11.0 m, in place of 1.1 m length and a volume of 0.035 cubic metres, read 11 m and 0.35 cubic metres, and so on.

Examples

- (i) Actual length: = 7.36 m
Rounded down length = 7.3 m
Rounded down diameter at $\left(\frac{7.3}{2}\right)$ m
= 3.65 m from butt end = 18 cm
Volume from Table = 0.186 m³
- (ii) Actual length: = 12.85 m
Rounded down length = 12 m
Rounded down diameter at 6 m from butt end = 25 cm
Volume from Table (enter 1.2 m length, move decimal point) = 0.59 m³
- (iii) Actual length: = 25.7 m
Rounded down length = 25 m
1st (butt) section length = $\frac{25}{2}$
1st (butt) section length (rounded down) = 12 m
2nd section length (25-12) = 13 m
1st section mid diameter (at 6 m from butt) = 29 cm
1st section volume from Table (enter 1.2 m, move decimal point) = 0.79 m³
2nd section mid diameter (at 6.5 m from large end of section or 18.5 m from extreme butt end) = 16 cm
2nd section volume from Table (enter 1.3 m, move decimal point) = 0.26 m³
Total volume of timber length = 0.79 + 0.26 m³
= 1.05 m³

Mid Diameter Volume Tables

Volume ready reckoner

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
7	8		9	10
0.004	0.005	1.0	0.006	0.008
0.004	0.006	1.1	0.007	0.009
0.005	0.006	1.2	0.008	0.009
0.005	0.007	1.3	0.008	0.010
0.005	0.007	1.4	0.009	0.011
0.006	0.008	1.5	0.010	0.012
0.006	0.008	1.6	0.010	0.013
0.007	0.009	1.7	0.011	0.013
0.007	0.009	1.8	0.011	0.014
0.007	0.010	1.9	0.012	0.015
0.008	0.010	2.0	0.013	0.016
0.008	0.011	2.1	0.013	0.016
0.008	0.011	2.2	0.014	0.017
0.009	0.012	2.3	0.015	0.018
0.009	0.012	2.4	0.015	0.019
0.010	0.013	2.5	0.016	0.020
0.010	0.013	2.6	0.017	0.020
0.010	0.014	2.7	0.017	0.021
0.011	0.014	2.8	0.018	0.022
0.011	0.015	2.9	0.018	0.023
0.012	0.015	3.0	0.019	0.024
0.012	0.016	3.1	0.020	0.024
0.012	0.016	3.2	0.020	0.025
0.013	0.017	3.3	0.021	0.026
0.013	0.017	3.4	0.022	0.027
0.013	0.018	3.5	0.022	0.027
0.014	0.018	3.6	0.023	0.028
0.014	0.019	3.7	0.024	0.029
0.015	0.019	3.8	0.024	0.030
0.015	0.020	3.9	0.025	0.031
0.015	0.020	4.0	0.025	0.031
0.016	0.021	4.1	0.026	0.032
0.016	0.021	4.2	0.027	0.033
0.017	0.022	4.3	0.027	0.034
0.017	0.022	4.4	0.028	0.035
0.017	0.023	4.5	0.029	0.035
0.018	0.023	4.6	0.029	0.036
0.018	0.024	4.7	0.030	0.037
0.018	0.024	4.8	0.031	0.038
0.019	0.025	4.9	0.031	0.038
0.019	0.025	5.0	0.032	0.039
0.020	0.026	5.1	0.032	0.040
0.020	0.026	5.2	0.033	0.041
0.020	0.027	5.3	0.034	0.042
0.021	0.027	5.4	0.034	0.042

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
7	8		9	10
0.021	0.028	5.5	0.035	0.043
0.022	0.028	5.6	0.036	0.044
0.022	0.029	5.7	0.036	0.045
0.022	0.029	5.8	0.037	0.046
0.023	0.030	5.9	0.038	0.046
0.023	0.030	6.0	0.038	0.047
0.023	0.031	6.1	0.039	0.048
0.024	0.031	6.2	0.039	0.049
0.024	0.032	6.3	0.040	0.049
0.025	0.032	6.4	0.041	0.050
0.025	0.033	6.5	0.041	0.051
0.025	0.033	6.6	0.042	0.052
0.026	0.034	6.7	0.043	0.053
0.026	0.034	6.8	0.043	0.053
0.027	0.035	6.9	0.044	0.054
0.027	0.035	7.0	0.045	0.055
0.027	0.036	7.1	0.045	0.056
0.028	0.038	7.2	0.046	0.057
0.028	0.037	7.3	0.046	0.057
0.028	0.037	7.4	0.047	0.058
0.029	0.038	7.5	0.048	0.059
0.029	0.038	7.6	0.048	0.060
0.030	0.039	7.7	0.049	0.060
0.030	0.039	7.8	0.050	0.061
0.030	0.040	7.9	0.050	0.062
0.031	0.040	8.0	0.051	0.063
0.031	0.041	8.1	0.052	0.064
0.032	0.041	8.2	0.052	0.064
0.032	0.042	8.3	0.053	0.065
0.032	0.042	8.4	0.053	0.066
0.033	0.043	8.5	0.054	0.067
0.033	0.043	8.6	0.055	0.068
0.033	0.044	8.7	0.055	0.068
0.034	0.044	8.8	0.056	0.069
0.034	0.045	8.9	0.057	0.070
0.035	0.045	9.0	0.057	0.071
0.035	0.046	9.1	0.058	0.071
0.035	0.046	9.2	0.059	0.072
0.036	0.047	9.3	0.059	0.073
0.036	0.047	9.4	0.060	0.074
0.037	0.048	9.5	0.060	0.075
0.037	0.048	9.6	0.061	0.075
0.037	0.049	9.7	0.062	0.076
0.038	0.049	9.8	0.062	0.077
0.038	0.050	9.9	0.063	0.078
0.038	0.050	10.0	0.064	0.079

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
11	12		13	14
0.010	0.011	1.0	0.013	0.015
0.010	0.012	1.1	0.015	0.017
0.011	0.014	1.2	0.016	0.018
0.012	0.015	1.3	0.017	0.020
0.013	0.016	1.4	0.019	0.022
0.014	0.017	1.5	0.020	0.023
0.015	0.018	1.6	0.021	0.025
0.016	0.019	1.7	0.023	0.026
0.017	0.020	1.8	0.024	0.028
0.018	0.021	1.9	0.025	0.029
0.019	0.023	2.0	0.027	0.031
0.020	0.024	2.1	0.028	0.032
0.021	0.025	2.2	0.029	0.034
0.022	0.026	2.3	0.031	0.035
0.023	0.027	2.4	0.032	0.037
0.024	0.028	2.5	0.033	0.038
0.025	0.029	2.6	0.035	0.040
0.026	0.031	2.7	0.036	0.042
0.027	0.032	2.8	0.037	0.043
0.028	0.033	2.9	0.038	0.045
0.029	0.034	3.0	0.040	0.046
0.029	0.035	3.1	0.041	0.048
0.030	0.036	3.2	0.042	0.049
0.031	0.037	3.3	0.044	0.051
0.032	0.038	3.4	0.045	0.052
0.033	0.040	3.5	0.046	0.054
0.034	0.041	3.6	0.048	0.055
0.035	0.042	3.7	0.049	0.057
0.036	0.043	3.8	0.050	0.058
0.037	0.044	3.9	0.052	0.060
0.038	0.045	4.0	0.053	0.062
0.039	0.046	4.1	0.054	0.063
0.040	0.048	4.2	0.056	0.065
0.041	0.049	4.3	0.057	0.066
0.042	0.050	4.4	0.058	0.068
0.043	0.051	4.5	0.060	0.069
0.044	0.052	4.6	0.061	0.071
0.045	0.053	4.7	0.062	0.072
0.046	0.054	4.8	0.064	0.074
0.047	0.055	4.9	0.065	0.075
0.048	0.057	5.0	0.066	0.077
0.048	0.058	5.1	0.068	0.079
0.049	0.059	5.2	0.069	0.080
0.050	0.060	5.3	0.070	0.082
0.051	0.061	5.4	0.072	0.083

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
11	12		13	14
0.052	0.062	5.5	0.073	0.085
0.053	0.063	5.6	0.074	0.086
0.054	0.064	5.7	0.076	0.088
0.055	0.066	5.8	0.077	0.089
0.056	0.067	5.9	0.078	0.091
0.057	0.068	6.0	0.080	0.092
0.058	0.069	6.1	0.081	0.094
0.059	0.070	6.2	0.082	0.095
0.060	0.071	6.3	0.084	0.097
0.061	0.072	6.4	0.085	0.099
0.062	0.074	6.5	0.086	0.100
0.063	0.075	6.6	0.088	0.102
0.064	0.076	6.7	0.089	0.103
0.065	0.077	6.8	0.090	0.105
0.066	0.078	6.9	0.092	0.106
0.067	0.079	7.0	0.093	0.108
0.067	0.080	7.1	0.094	0.109
0.068	0.081	7.2	0.096	0.111
0.069	0.083	7.3	0.097	0.112
0.070	0.084	7.4	0.098	0.114
0.071	0.085	7.5	0.100	0.115
0.072	0.086	7.6	0.101	0.117
0.073	0.087	7.7	0.102	0.119
0.074	0.088	7.8	0.104	0.120
0.075	0.089	7.9	0.105	0.122
0.076	0.090	8.0	0.106	0.123
0.077	0.092	8.1	0.108	0.125
0.078	0.093	8.2	0.109	0.126
0.079	0.094	8.3	0.110	0.128
0.080	0.095	8.4	0.111	0.129
0.081	0.096	8.5	0.113	0.131
0.082	0.097	8.6	0.114	0.132
0.083	0.098	8.7	0.115	0.134
0.084	0.100	8.8	0.117	0.135
0.085	0.101	8.9	0.118	0.137
0.086	0.102	9.0	0.119	0.139
0.086	0.103	9.1	0.121	0.140
0.087	0.104	9.2	0.122	0.142
0.088	0.105	9.3	0.123	0.143
0.089	0.106	9.4	0.125	0.145
0.090	0.107	9.5	0.126	0.146
0.091	0.109	9.6	0.127	0.148
0.092	0.110	9.7	0.129	0.149
0.093	0.111	9.8	0.130	0.151
0.094	0.112	9.9	0.131	0.152
0.095	0.113	10.0	0.133	0.154

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
15	16		17	18
0.018	0.020	1.0	0.023	0.025
0.019	0.022	1.1	0.025	0.028
0.021	0.024	1.2	0.027	0.031
0.023	0.026	1.3	0.030	0.033
0.025	0.028	1.4	0.032	0.036
0.027	0.030	1.5	0.034	0.038
0.028	0.032	1.6	0.036	0.041
0.030	0.034	1.7	0.039	0.043
0.032	0.036	1.8	0.041	0.046
0.034	0.038	1.9	0.043	0.048
0.035	0.040	2.0	0.045	0.051
0.037	0.042	2.1	0.048	0.053
0.039	0.044	2.2	0.050	0.056
0.041	0.046	2.3	0.052	0.059
0.042	0.048	2.4	0.054	0.061
0.044	0.050	2.5	0.057	0.064
0.046	0.052	2.6	0.059	0.066
0.048	0.054	2.7	0.061	0.069
0.049	0.056	2.8	0.064	0.071
0.051	0.058	2.9	0.066	0.074
0.053	0.060	3.0	0.068	0.076
0.055	0.062	3.1	0.070	0.079
0.057	0.064	3.2	0.073	0.081
0.058	0.066	3.3	0.075	0.084
0.060	0.068	3.4	0.077	0.087
0.062	0.070	3.5	0.079	0.089
0.064	0.072	3.6	0.082	0.092
0.065	0.074	3.7	0.084	0.094
0.067	0.076	3.8	0.086	0.097
0.069	0.078	3.9	0.089	0.099
0.071	0.080	4.0	0.091	0.102
0.072	0.082	4.1	0.093	0.104
0.074	0.084	4.2	0.095	0.107
0.076	0.086	4.3	0.098	0.109
0.078	0.088	4.4	0.100	0.112
0.080	0.090	4.5	0.102	0.115
0.081	0.092	4.6	0.104	0.117
0.083	0.094	4.7	0.107	0.120
0.085	0.097	4.8	0.109	0.122
0.087	0.099	4.9	0.111	0.125
0.088	0.101	5.0	0.113	0.127
0.090	0.103	5.1	0.116	0.130
0.092	0.105	5.2	0.118	0.132
0.094	0.107	5.3	0.120	0.135
0.095	0.109	5.4	0.123	0.137

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
15	16		17	18
0.097	0.111	5.5	0.125	0.140
0.099	0.113	5.6	0.127	0.143
0.101	0.115	5.7	0.129	0.145
0.102	0.117	5.8	0.132	0.148
0.104	0.119	5.9	0.134	0.150
0.106	0.121	6.0	0.136	0.153
0.108	0.123	6.1	0.138	0.155
0.110	0.125	6.2	0.141	0.158
0.111	0.127	6.3	0.143	0.160
0.113	0.129	6.4	0.145	0.163
0.115	0.131	6.5	0.148	0.165
0.117	0.133	6.6	0.150	0.168
0.118	0.135	6.7	0.152	0.170
0.120	0.137	6.8	0.154	0.173
0.122	0.139	6.9	0.157	0.176
0.124	0.141	7.0	0.159	0.178
0.125	0.143	7.1	0.161	0.181
0.127	0.145	7.2	0.163	0.183
0.129	0.147	7.3	0.166	0.186
0.131	0.149	7.4	0.168	0.188
0.133	0.151	7.5	0.170	0.191
0.134	0.153	7.6	0.173	0.193
0.136	0.155	7.7	0.175	0.196
0.138	0.157	7.8	0.177	0.198
0.140	0.159	7.9	0.179	0.201
0.141	0.161	8.0	0.182	0.204
0.143	0.163	8.1	0.184	0.206
0.145	0.165	8.2	0.186	0.209
0.147	0.167	8.3	0.188	0.211
0.148	0.169	8.4	0.191	0.214
0.150	0.171	8.5	0.193	0.216
0.152	0.173	8.6	0.195	0.219
0.154	0.175	8.7	0.197	0.221
0.156	0.177	8.8	0.200	0.224
0.157	0.179	8.9	0.202	0.226
0.159	0.181	9.0	0.204	0.229
0.161	0.183	9.1	0.207	0.232
0.163	0.185	9.2	0.209	0.234
0.164	0.187	9.3	0.211	0.237
0.166	0.189	9.4	0.213	0.239
0.168	0.191	9.5	0.216	0.242
0.170	0.193	9.6	0.218	0.244
0.171	0.195	9.7	0.220	0.247
0.173	0.197	9.8	0.222	0.249
0.175	0.199	9.9	0.225	0.252
0.177	0.201	10.0	0.227	0.254

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
19	20		21	22
0.028	0.031	1.0	0.035	0.038
0.031	0.035	1.1	0.038	0.042
0.034	0.038	1.2	0.042	0.046
0.037	0.041	1.3	0.045	0.049
0.040	0.044	1.4	0.048	0.053
0.043	0.047	1.5	0.052	0.057
0.045	0.050	1.6	0.055	0.061
0.048	0.053	1.7	0.059	0.065
0.051	0.057	1.8	0.062	0.068
0.054	0.060	1.9	0.066	0.072
0.057	0.063	2.0	0.069	0.076
0.060	0.066	2.1	0.073	0.080
0.062	0.069	2.2	0.076	0.084
0.065	0.072	2.3	0.080	0.087
0.068	0.075	2.4	0.083	0.091
0.071	0.079	2.5	0.087	0.095
0.074	0.082	2.6	0.090	0.099
0.077	0.085	2.7	0.094	0.103
0.079	0.088	2.8	0.097	0.106
0.082	0.091	2.9	0.100	0.110
0.085	0.094	3.0	0.104	0.114
0.088	0.097	3.1	0.107	0.118
0.091	0.101	3.2	0.111	0.122
0.094	0.104	3.3	0.114	0.125
0.096	0.107	3.4	0.118	0.129
0.099	0.110	3.5	0.121	0.133
0.102	0.113	3.6	0.125	0.137
0.105	0.116	3.7	0.128	0.141
0.108	0.119	3.8	0.132	0.144
0.111	0.123	3.9	0.135	0.148
0.113	0.126	4.0	0.139	0.152
0.116	0.129	4.1	0.142	0.156
0.119	0.132	4.2	0.145	0.160
0.122	0.135	4.3	0.149	0.163
0.125	0.138	4.4	0.152	0.167
0.128	0.141	4.5	0.156	0.171
0.130	0.145	4.6	0.159	0.175
0.133	0.148	4.7	0.163	0.179
0.136	0.151	4.8	0.166	0.182
0.139	0.154	4.9	0.170	0.186
0.142	0.157	5.0	0.173	0.190
0.145	0.160	5.1	0.177	0.194
0.147	0.163	5.2	0.180	0.198
0.150	0.167	5.3	0.184	0.201
0.153	0.170	5.4	0.187	0.205

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
19	20		21	22
0.156	0.173	5.5	0.190	0.209
0.159	0.176	5.6	0.194	0.213
0.162	0.179	5.7	0.197	0.217
0.164	0.182	5.8	0.201	0.220
0.167	0.185	5.9	0.204	0.224
0.170	0.188	6.0	0.208	0.228
0.173	0.192	6.1	0.211	0.232
0.176	0.195	6.2	0.215	0.236
0.179	0.198	6.3	0.218	0.239
0.181	0.201	6.4	0.222	0.243
0.184	0.204	6.5	0.225	0.247
0.187	0.207	6.6	0.229	0.251
0.190	0.210	6.7	0.232	0.255
0.193	0.214	6.8	0.236	0.258
0.196	0.217	6.9	0.239	0.262
0.198	0.220	7.0	0.242	0.266
0.201	0.223	7.1	0.246	0.270
0.204	0.226	7.2	0.249	0.274
0.207	0.229	7.3	0.253	0.277
0.210	0.232	7.4	0.256	0.281
0.213	0.236	7.5	0.260	0.285
0.215	0.239	7.6	0.263	0.289
0.218	0.242	7.7	0.267	0.293
0.221	0.245	7.8	0.270	0.297
0.224	0.248	7.9	0.274	0.300
0.227	0.251	8.0	0.277	0.304
0.230	0.254	8.1	0.281	0.308
0.232	0.258	8.2	0.284	0.312
0.235	0.261	8.3	0.287	0.316
0.238	0.264	8.4	0.291	0.319
0.241	0.267	8.5	0.294	0.323
0.244	0.270	8.6	0.298	0.327
0.247	0.273	8.7	0.301	0.331
0.250	0.276	8.8	0.305	0.335
0.252	0.280	8.9	0.308	0.338
0.255	0.283	9.0	0.312	0.342
0.258	0.286	9.1	0.315	0.346
0.261	0.289	9.2	0.319	0.350
0.264	0.292	9.3	0.322	0.354
0.267	0.295	9.4	0.326	0.357
0.269	0.298	9.5	0.329	0.361
0.272	0.302	9.6	0.333	0.365
0.275	0.305	9.7	0.336	0.369
0.278	0.308	9.8	0.339	0.373
0.281	0.311	9.9	0.343	0.376
0.284	0.314	10.0	0.346	0.380

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
23	24		25	26
0.042	0.045	1.0	0.049	0.053
0.046	0.050	1.1	0.054	0.058
0.050	0.054	1.2	0.059	0.064
0.054	0.059	1.3	0.064	0.069
0.058	0.063	1.4	0.069	0.074
0.062	0.068	1.5	0.074	0.080
0.066	0.072	1.6	0.079	0.085
0.071	0.077	1.7	0.083	0.090
0.075	0.081	1.8	0.088	0.096
0.079	0.086	1.9	0.093	0.101
0.083	0.090	2.0	0.098	0.106
0.087	0.095	2.1	0.103	0.111
0.091	0.100	2.2	0.108	0.117
0.096	0.104	2.3	0.113	0.122
0.100	0.109	2.4	0.118	0.127
0.104	0.113	2.5	0.123	0.133
0.108	0.118	2.6	0.128	0.138
0.112	0.122	2.7	0.133	0.143
0.116	0.127	2.8	0.137	0.149
0.120	0.131	2.9	0.142	0.154
0.125	0.136	3.0	0.147	0.159
0.129	0.140	3.1	0.152	0.165
0.133	0.145	3.2	0.157	0.170
0.137	0.149	3.3	0.162	0.175
0.141	0.154	3.4	0.167	0.181
0.145	0.158	3.5	0.172	0.186
0.150	0.163	3.6	0.177	0.191
0.154	0.167	3.7	0.182	0.196
0.158	0.172	3.8	0.187	0.202
0.162	0.176	3.9	0.191	0.207
0.166	0.181	4.0	0.196	0.212
0.170	0.185	4.1	0.201	0.218
0.174	0.190	4.2	0.206	0.223
0.179	0.195	4.3	0.211	0.228
0.183	0.199	4.4	0.216	0.234
0.187	0.204	4.5	0.221	0.239
0.191	0.208	4.6	0.226	0.244
0.195	0.213	4.7	0.231	0.250
0.199	0.217	4.8	0.236	0.255
0.204	0.222	4.9	0.241	0.260
0.208	0.226	5.0	0.245	0.265
0.212	0.231	5.1	0.250	0.271
0.216	0.235	5.2	0.255	0.276
0.220	0.240	5.3	0.260	0.281
0.224	0.244	5.4	0.265	0.287

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
23	24		25	26
0.229	0.249	5.5	0.270	0.292
0.233	0.253	5.6	0.275	0.297
0.237	0.258	5.7	0.280	0.303
0.241	0.262	5.8	0.285	0.308
0.245	0.267	5.9	0.290	0.313
0.249	0.271	6.0	0.295	0.319
0.253	0.276	6.1	0.299	0.324
0.258	0.280	6.2	0.304	0.329
0.262	0.285	6.3	0.309	0.334
0.266	0.290	6.4	0.314	0.340
0.270	0.294	6.5	0.319	0.345
0.274	0.299	6.6	0.324	0.350
0.278	0.303	6.7	0.329	0.356
0.283	0.308	6.8	0.334	0.361
0.287	0.312	6.9	0.339	0.366
0.291	0.317	7.0	0.344	0.372
0.295	0.321	7.1	0.349	0.377
0.299	0.326	7.2	0.353	0.382
0.303	0.330	7.3	0.358	0.388
0.307	0.335	7.4	0.363	0.393
0.312	0.339	7.5	0.368	0.398
0.316	0.344	7.6	0.373	0.404
0.320	0.348	7.7	0.378	0.409
0.324	0.353	7.8	0.383	0.414
0.328	0.357	7.9	0.388	0.419
0.332	0.362	8.0	0.393	0.425
0.337	0.366	8.1	0.398	0.430
0.341	0.371	8.2	0.403	0.435
0.345	0.375	8.3	0.407	0.441
0.349	0.380	8.4	0.412	0.446
0.353	0.385	8.5	0.417	0.451
0.357	0.389	8.6	0.422	0.457
0.361	0.394	8.7	0.427	0.462
0.366	0.398	8.8	0.432	0.467
0.370	0.403	8.9	0.437	0.473
0.374	0.407	9.0	0.442	0.478
0.378	0.412	9.1	0.447	0.483
0.382	0.416	9.2	0.452	0.488
0.386	0.421	9.3	0.457	0.494
0.391	0.425	9.4	0.461	0.499
0.395	0.430	9.5	0.466	0.504
0.399	0.434	9.6	0.471	0.510
0.403	0.439	9.7	0.476	0.515
0.407	0.443	9.8	0.481	0.520
0.411	0.448	9.9	0.486	0.526
0.415	0.452	10.0	0.491	0.531

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
27	28		29	30
0.057	0.062	1.0	0.066	0.071
0.063	0.068	1.1	0.073	0.078
0.069	0.074	1.2	0.079	0.085
0.074	0.080	1.3	0.086	0.092
0.080	0.086	1.4	0.092	0.099
0.086	0.092	1.5	0.099	0.106
0.092	0.099	1.6	0.106	0.113
0.097	0.105	1.7	0.112	0.120
0.103	0.111	1.8	0.119	0.127
0.109	0.117	1.9	0.125	0.134
0.115	0.123	2.0	0.132	0.141
0.120	0.129	2.1	0.139	0.148
0.126	0.135	2.2	0.145	0.156
0.132	0.142	2.3	0.152	0.163
0.137	0.148	2.4	0.159	0.170
0.143	0.154	2.5	0.165	0.177
0.149	0.160	2.6	0.172	0.184
0.155	0.166	2.7	0.178	0.191
0.160	0.172	2.8	0.185	0.198
0.166	0.179	2.9	0.192	0.205
0.172	0.185	3.0	0.198	0.212
0.177	0.191	3.1	0.205	0.219
0.183	0.197	3.2	0.211	0.226
0.189	0.203	3.3	0.218	0.233
0.195	0.209	3.4	0.225	0.240
0.200	0.216	3.5	0.231	0.247
0.206	0.222	3.6	0.238	0.254
0.212	0.228	3.7	0.244	0.262
0.218	0.234	3.8	0.251	0.269
0.223	0.240	3.9	0.258	0.276
0.229	0.246	4.0	0.264	0.283
0.235	0.252	4.1	0.271	0.290
0.240	0.259	4.2	0.277	0.297
0.246	0.265	4.3	0.284	0.304
0.252	0.271	4.4	0.291	0.311
0.258	0.277	4.5	0.297	0.318
0.263	0.283	4.6	0.304	0.325
0.269	0.289	4.7	0.310	0.332
0.275	0.296	4.8	0.317	0.339
0.281	0.302	4.9	0.324	0.346
0.286	0.308	5.0	0.330	0.353
0.292	0.314	5.1	0.337	0.360
0.298	0.320	5.2	0.343	0.368
0.303	0.326	5.3	0.350	0.375
0.309	0.333	5.4	0.357	0.382

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
27	28		29	30
0.315	0.339	5.5	0.363	0.389
0.321	0.345	5.6	0.370	0.396
0.326	0.351	5.7	0.376	0.403
0.332	0.357	5.8	0.383	0.410
0.338	0.363	5.9	0.390	0.417
0.344	0.369	6.0	0.396	0.424
0.349	0.376	6.1	0.403	0.431
0.355	0.382	6.2	0.410	0.438
0.361	0.388	6.3	0.416	0.445
0.366	0.394	6.4	0.423	0.452
0.372	0.400	6.5	0.429	0.459
0.378	0.406	6.6	0.436	0.467
0.384	0.413	6.7	0.443	0.474
0.389	0.419	6.8	0.449	0.481
0.395	0.425	6.9	0.456	0.488
0.401	0.431	7.0	0.462	0.495
0.407	0.437	7.1	0.469	0.502
0.412	0.443	7.2	0.476	0.509
0.418	0.449	7.3	0.482	0.516
0.424	0.456	7.4	0.489	0.523
0.429	0.462	7.5	0.495	0.530
0.435	0.468	7.6	0.502	0.537
0.441	0.474	7.7	0.509	0.544
0.447	0.480	7.8	0.515	0.551
0.452	0.486	7.9	0.522	0.558
0.458	0.493	8.0	0.528	0.565
0.464	0.499	8.1	0.535	0.573
0.469	0.505	8.2	0.542	0.580
0.475	0.511	8.3	0.548	0.587
0.481	0.517	8.4	0.555	0.594
0.487	0.523	8.5	0.561	0.601
0.492	0.530	8.6	0.568	0.608
0.498	0.536	8.7	0.575	0.615
0.504	0.542	8.8	0.581	0.622
0.510	0.548	8.9	0.588	0.629
0.515	0.554	9.0	0.594	0.636
0.521	0.560	9.1	0.601	0.643
0.527	0.566	9.2	0.608	0.650
0.532	0.573	9.3	0.614	0.657
0.538	0.579	9.4	0.621	0.664
0.544	0.585	9.5	0.627	0.672
0.550	0.591	9.6	0.634	0.679
0.555	0.597	9.7	0.641	0.686
0.561	0.603	9.8	0.647	0.693
0.567	0.610	9.9	0.654	0.700
0.573	0.616	10.0	0.661	0.707

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
31	32		33	34
0.075	0.080	1.0	0.086	0.091
0.083	0.088	1.1	0.094	0.100
0.091	0.097	1.2	0.103	0.109
0.098	0.105	1.3	0.111	0.118
0.106	0.113	1.4	0.120	0.127
0.113	0.121	1.5	0.128	0.136
0.121	0.129	1.6	0.137	0.145
0.128	0.137	1.7	0.145	0.154
0.136	0.145	1.8	0.154	0.163
0.143	0.153	1.9	0.163	0.173
0.151	0.161	2.0	0.171	0.182
0.159	0.169	2.1	0.180	0.191
0.166	0.177	2.2	0.188	0.200
0.174	0.185	2.3	0.197	0.209
0.181	0.193	2.4	0.205	0.218
0.189	0.201	2.5	0.214	0.227
0.196	0.209	2.6	0.222	0.236
0.204	0.217	2.7	0.231	0.245
0.211	0.225	2.8	0.239	0.254
0.219	0.233	2.9	0.248	0.263
0.226	0.241	3.0	0.257	0.272
0.234	0.249	3.1	0.265	0.281
0.242	0.257	3.2	0.274	0.291
0.249	0.265	3.3	0.282	0.300
0.257	0.273	3.4	0.291	0.309
0.264	0.281	3.5	0.299	0.318
0.272	0.290	3.6	0.308	0.327
0.279	0.298	3.7	0.316	0.336
0.287	0.306	3.8	0.325	0.345
0.294	0.314	3.9	0.334	0.354
0.302	0.322	4.0	0.342	0.363
0.309	0.330	4.1	0.351	0.372
0.317	0.338	4.2	0.359	0.381
0.325	0.346	4.3	0.368	0.390
0.332	0.354	4.4	0.376	0.399
0.340	0.362	4.5	0.385	0.409
0.347	0.370	4.6	0.393	0.418
0.355	0.378	4.7	0.402	0.427
0.362	0.386	4.8	0.411	0.436
0.370	0.394	4.9	0.419	0.445
0.377	0.402	5.0	0.428	0.454
0.385	0.410	5.1	0.436	0.463
0.392	0.418	5.2	0.445	0.472
0.400	0.426	5.3	0.453	0.481
0.408	0.434	5.4	0.462	0.490

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
31	32		33	34
0.415	0.442	5.5	0.470	0.499
0.423	0.450	5.6	0.479	0.508
0.430	0.458	5.7	0.488	0.518
0.438	0.466	5.8	0.496	0.527
0.445	0.475	5.9	0.505	0.536
0.453	0.483	6.0	0.513	0.545
0.460	0.491	6.1	0.522	0.554
0.468	0.499	6.2	0.530	0.563
0.476	0.507	6.3	0.539	0.572
0.483	0.515	6.4	0.547	0.581
0.491	0.523	6.5	0.556	0.590
0.498	0.531	6.6	0.564	0.599
0.506	0.539	6.7	0.573	0.608
0.513	0.547	6.8	0.582	0.617
0.521	0.555	6.9	0.590	0.626
0.528	0.563	7.0	0.599	0.636
0.536	0.571	7.1	0.607	0.645
0.543	0.579	7.2	0.616	0.654
0.551	0.587	7.3	0.624	0.663
0.559	0.595	7.4	0.633	0.672
0.566	0.603	7.5	0.641	0.681
0.574	0.611	7.6	0.650	0.690
0.581	0.619	7.7	0.659	0.699
0.589	0.627	7.8	0.667	0.708
0.596	0.635	7.9	0.676	0.717
0.604	0.643	8.0	0.684	0.726
0.611	0.651	8.1	0.693	0.735
0.619	0.659	8.2	0.701	0.744
0.626	0.668	8.3	0.710	0.754
0.634	0.676	8.4	0.718	0.763
0.642	0.684	8.5	0.727	0.772
0.649	0.692	8.6	0.736	0.781
0.657	0.700	8.7	0.744	0.790
0.664	0.708	8.8	0.753	0.799
0.672	0.716	8.9	0.761	0.808
0.679	0.724	9.0	0.770	0.817
0.687	0.732	9.1	0.778	0.826
0.694	0.740	9.2	0.787	0.835
0.702	0.748	9.3	0.795	0.844
0.709	0.756	9.4	0.804	0.853
0.717	0.764	9.5	0.813	0.863
0.725	0.772	9.6	0.821	0.872
0.732	0.780	9.7	0.830	0.881
0.740	0.788	9.8	0.838	0.890
0.747	0.796	9.9	0.847	0.899
0.755	0.804	10.0	0.855	0.908

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
35	36		37	38
0.096	0.102	1.0	0.108	0.113
0.106	0.112	1.1	0.118	0.125
0.115	0.122	1.2	0.129	0.136
0.125	0.132	1.3	0.140	0.147
0.135	0.143	1.4	0.151	0.159
0.144	0.153	1.5	0.161	0.170
0.154	0.163	1.6	0.172	0.181
0.164	0.173	1.7	0.183	0.193
0.173	0.183	1.8	0.194	0.204
0.183	0.193	1.9	0.204	0.215
0.192	0.204	2.0	0.215	0.227
0.202	0.214	2.1	0.226	0.238
0.212	0.224	2.2	0.237	0.250
0.221	0.234	2.3	0.247	0.261
0.231	0.244	2.4	0.258	0.272
0.241	0.254	2.5	0.269	0.284
0.250	0.265	2.6	0.280	0.295
0.260	0.275	2.7	0.290	0.306
0.269	0.285	2.8	0.301	0.318
0.279	0.295	2.9	0.312	0.329
0.289	0.305	3.0	0.323	0.340
0.298	0.316	3.1	0.333	0.352
0.308	0.326	3.2	0.344	0.363
0.317	0.336	3.3	0.355	0.374
0.327	0.346	3.4	0.366	0.386
0.337	0.356	3.5	0.376	0.397
0.346	0.366	3.6	0.387	0.408
0.356	0.377	3.7	0.398	0.420
0.366	0.387	3.8	0.409	0.431
0.375	0.397	3.9	0.419	0.442
0.385	0.407	4.0	0.430	0.454
0.394	0.417	4.1	0.441	0.465
0.404	0.428	4.2	0.452	0.476
0.414	0.438	4.3	0.462	0.488
0.423	0.448	4.4	0.473	0.499
0.433	0.458	4.5	0.484	0.510
0.443	0.468	4.6	0.495	0.522
0.452	0.478	4.7	0.505	0.533
0.462	0.489	4.8	0.516	0.544
0.471	0.499	4.9	0.527	0.556
0.481	0.509	5.0	0.538	0.567
0.491	0.519	5.1	0.548	0.578
0.500	0.529	5.2	0.559	0.590
0.510	0.539	5.3	0.570	0.601
0.520	0.550	5.4	0.581	0.612

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
35	36		37	38
0.529	0.560	5.5	0.591	0.624
0.539	0.570	5.6	0.602	0.635
0.548	0.580	5.7	0.613	0.646
0.558	0.590	5.8	0.624	0.658
0.568	0.601	5.9	0.634	0.669
0.577	0.611	6.0	0.645	0.680
0.587	0.621	6.1	0.656	0.692
0.597	0.631	6.2	0.667	0.703
0.606	0.641	6.3	0.677	0.714
0.616	0.651	6.4	0.688	0.726
0.625	0.662	6.5	0.699	0.737
0.635	0.672	6.6	0.710	0.749
0.645	0.682	6.7	0.720	0.760
0.654	0.692	6.8	0.731	0.771
0.664	0.702	6.9	0.742	0.783
0.673	0.713	7.0	0.753	0.794
0.683	0.723	7.1	0.763	0.805
0.693	0.733	7.2	0.774	0.817
0.702	0.743	7.3	0.785	0.828
0.712	0.753	7.4	0.796	0.839
0.722	0.763	7.5	0.806	0.851
0.731	0.774	7.6	0.817	0.862
0.741	0.784	7.7	0.828	0.873
0.750	0.794	7.8	0.839	0.885
0.760	0.804	7.9	0.849	0.896
0.770	0.814	8.0	0.860	0.907
0.779	0.824	8.1	0.871	0.919
0.789	0.835	8.2	0.882	0.930
0.799	0.845	8.3	0.892	0.941
0.808	0.855	8.4	0.903	0.953
0.818	0.865	8.5	0.914	0.964
0.827	0.875	8.6	0.925	0.975
0.837	0.886	8.7	0.935	0.987
0.847	0.896	8.8	0.946	0.998
0.856	0.906	8.9	0.957	1.009
0.866	0.916	9.0	0.968	1.021
0.876	0.926	9.1	0.978	1.032
0.885	0.936	9.2	0.989	1.043
0.895	0.947	9.3	1.000	1.055
0.904	0.957	9.4	1.011	1.066
0.914	0.967	9.5	1.021	1.077
0.924	0.977	9.6	1.032	1.089
0.933	0.987	9.7	1.043	1.100
0.943	0.998	9.8	1.054	1.111
0.952	1.008	9.9	1.064	1.123
0.962	1.018	10.0	1.075	1.134

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
39	40		41	42
0.119	0.126	1.0	0.132	0.139
0.131	0.138	1.1	0.145	0.152
0.143	0.151	1.2	0.158	0.166
0.155	0.163	1.3	0.172	0.180
0.167	0.176	1.4	0.185	0.194
0.179	0.188	1.5	0.198	0.208
0.191	0.201	1.6	0.211	0.222
0.203	0.214	1.7	0.224	0.236
0.215	0.226	1.8	0.238	0.249
0.227	0.239	1.9	0.251	0.263
0.239	0.251	2.0	0.264	0.277
0.251	0.264	2.1	0.277	0.291
0.263	0.276	2.2	0.290	0.305
0.275	0.289	2.3	0.304	0.319
0.287	0.302	2.4	0.317	0.333
0.299	0.314	2.5	0.330	0.346
0.311	0.327	2.6	0.343	0.360
0.323	0.339	2.7	0.356	0.374
0.334	0.352	2.8	0.370	0.388
0.346	0.364	2.9	0.383	0.402
0.358	0.377	3.0	0.396	0.416
0.370	0.390	3.1	0.409	0.429
0.382	0.402	3.2	0.422	0.443
0.394	0.415	3.3	0.436	0.457
0.406	0.427	3.4	0.449	0.471
0.418	0.440	3.5	0.462	0.485
0.430	0.452	3.6	0.475	0.499
0.442	0.465	3.7	0.488	0.513
0.454	0.478	3.8	0.502	0.526
0.466	0.490	3.9	0.515	0.540
0.478	0.503	4.0	0.528	0.554
0.490	0.515	4.1	0.541	0.568
0.502	0.528	4.2	0.555	0.582
0.514	0.540	4.3	0.568	0.596
0.526	0.553	4.4	0.581	0.610
0.538	0.565	4.5	0.594	0.623
0.550	0.578	4.6	0.607	0.637
0.561	0.591	4.7	0.621	0.651
0.573	0.603	4.8	0.634	0.665
0.585	0.616	4.9	0.647	0.679
0.597	0.628	5.0	0.660	0.693
0.609	0.641	5.1	0.673	0.707
0.621	0.653	5.2	0.687	0.720
0.633	0.666	5.3	0.700	0.734
0.645	0.679	5.4	0.713	0.748

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
39	40		41	42
0.657	0.691	5.5	0.726	0.762
0.669	0.704	5.6	0.739	0.776
0.681	0.716	5.7	0.753	0.790
0.693	0.729	5.8	0.766	0.804
0.705	0.741	5.9	0.779	0.817
0.717	0.754	6.0	0.792	0.831
0.729	0.767	6.1	0.805	0.845
0.741	0.779	6.2	0.819	0.859
0.753	0.792	6.3	0.832	0.873
0.765	0.804	6.4	0.845	0.887
0.776	0.817	6.5	0.858	0.901
0.788	0.829	6.6	0.871	0.914
0.800	0.842	6.7	0.885	0.928
0.812	0.855	6.8	0.898	0.942
0.824	0.867	6.9	0.911	0.956
0.836	0.880	7.0	0.924	0.970
0.848	0.892	7.1	0.937	0.984
0.860	0.905	7.2	0.951	0.998
0.872	0.917	7.3	0.964	1.011
0.884	0.930	7.4	0.977	1.025
0.896	0.942	7.5	0.990	1.039
0.908	0.955	7.6	1.003	1.053
0.920	0.968	7.7	1.017	1.067
0.932	0.980	7.8	1.030	1.081
0.944	0.993	7.9	1.043	1.094
0.956	1.005	8.0	1.056	1.108
0.968	1.018	8.1	1.069	1.122
0.980	1.030	8.2	1.083	1.136
0.992	1.043	8.3	1.096	1.150
1.003	1.056	8.4	1.109	1.164
1.015	1.068	8.5	1.122	1.178
1.027	1.081	8.6	1.135	1.191
1.039	1.093	8.7	1.149	1.205
1.051	1.106	8.8	1.162	1.219
1.063	1.118	8.9	1.175	1.233
1.075	1.131	9.0	1.188	1.247
1.087	1.144	9.1	1.201	1.261
1.099	1.156	9.2	1.215	1.275
1.111	1.169	9.3	1.228	1.288
1.123	1.181	9.4	1.241	1.302
1.135	1.194	9.5	1.254	1.316
1.147	1.206	9.6	1.267	1.330
1.159	1.219	9.7	1.281	1.344
1.171	1.232	9.8	1.294	1.358
1.183	1.244	9.9	1.307	1.372
1.195	1.257	10.0	1.320	1.385

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
43	44		45	46
0.145	0.152	1.0	0.159	0.166
0.160	0.167	1.1	0.175	0.183
0.174	0.182	1.2	0.191	0.199
0.189	0.198	1.3	0.207	0.216
0.203	0.213	1.4	0.223	0.233
0.218	0.228	1.5	0.239	0.249
0.232	0.243	1.6	0.254	0.266
0.247	0.258	1.7	0.270	0.283
0.261	0.274	1.8	0.286	0.299
0.276	0.289	1.9	0.302	0.316
0.290	0.304	2.0	0.318	0.332
0.305	0.319	2.1	0.334	0.349
0.319	0.335	2.2	0.350	0.366
0.334	0.350	2.3	0.366	0.382
0.349	0.365	2.4	0.382	0.399
0.363	0.380	2.5	0.398	0.415
0.378	0.395	2.6	0.414	0.432
0.392	0.411	2.7	0.429	0.449
0.407	0.426	2.8	0.445	0.465
0.421	0.441	2.9	0.461	0.482
0.436	0.456	3.0	0.477	0.499
0.450	0.471	3.1	0.493	0.515
0.465	0.487	3.2	0.509	0.532
0.479	0.502	3.3	0.525	0.548
0.494	0.517	3.4	0.541	0.565
0.508	0.532	3.5	0.557	0.582
0.523	0.547	3.6	0.573	0.598
0.537	0.563	3.7	0.588	0.615
0.552	0.578	3.8	0.604	0.632
0.566	0.593	3.9	0.620	0.648
0.581	0.608	4.0	0.636	0.665
0.595	0.623	4.1	0.652	0.681
0.610	0.639	4.2	0.668	0.698
0.624	0.654	4.3	0.684	0.715
0.639	0.669	4.4	0.700	0.731
0.653	0.684	4.5	0.716	0.748
0.668	0.699	4.6	0.732	0.764
0.683	0.715	4.7	0.748	0.781
0.697	0.730	4.8	0.763	0.798
0.712	0.745	4.9	0.779	0.814
0.726	0.760	5.0	0.795	0.831
0.741	0.775	5.1	0.811	0.848
0.755	0.791	5.2	0.827	0.864
0.770	0.806	5.3	0.843	0.881
0.784	0.821	5.4	0.859	0.897

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
43	44		45	46
0.799	0.836	5.5	0.875	0.914
0.813	0.851	5.6	0.891	0.931
0.828	0.867	5.7	0.907	0.947
0.842	0.882	5.8	0.922	0.964
0.857	0.897	5.9	0.938	0.981
0.871	0.912	6.0	0.954	0.997
0.886	0.928	6.1	0.970	1.014
0.900	0.943	6.2	0.986	1.030
0.915	0.958	6.3	1.002	1.047
0.929	0.973	6.4	1.018	1.064
0.944	0.988	6.5	1.034	1.080
0.958	1.004	6.6	1.050	1.097
0.973	1.019	6.7	1.066	1.113
0.987	1.034	6.8	1.081	1.130
1.002	1.049	6.9	1.097	1.147
1.017	1.064	7.0	1.113	1.163
1.031	1.080	7.1	1.129	1.180
1.046	1.095	7.2	1.145	1.197
1.060	1.110	7.3	1.161	1.213
1.075	1.125	7.4	1.177	1.230
1.089	1.140	7.5	1.193	1.246
1.104	1.156	7.6	1.209	1.263
1.118	1.171	7.7	1.225	1.280
1.133	1.186	7.8	1.241	1.296
1.147	1.201	7.9	1.256	1.313
1.162	1.216	8.0	1.272	1.330
1.176	1.232	8.1	1.288	1.346
1.191	1.247	8.2	1.304	1.363
1.205	1.262	8.3	1.320	1.379
1.220	1.277	8.4	1.336	1.396
1.234	1.292	8.5	1.352	1.413
1.249	1.308	8.6	1.368	1.429
1.263	1.323	8.7	1.384	1.446
1.278	1.338	8.8	1.400	1.462
1.292	1.353	8.9	1.415	1.479
1.307	1.368	9.0	1.431	1.496
1.322	1.384	9.1	1.447	1.512
1.336	1.399	9.2	1.463	1.529
1.351	1.414	9.3	1.479	1.546
1.365	1.429	9.4	1.495	1.562
1.380	1.445	9.5	1.511	1.579
1.394	1.460	9.6	1.527	1.595
1.409	1.475	9.7	1.543	1.612
1.423	1.490	9.8	1.559	1.629
1.438	1.505	9.9	1.575	1.645
1.452	1.521	10.0	1.590	1.662

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
47	48		49	50
0.173	0.181	1.0	0.189	0.196
0.191	0.199	1.1	0.207	0.216
0.208	0.217	1.2	0.226	0.236
0.226	0.235	1.3	0.245	0.255
0.243	0.253	1.4	0.264	0.275
0.260	0.271	1.5	0.283	0.295
0.278	0.290	1.6	0.302	0.314
0.295	0.308	1.7	0.321	0.334
0.312	0.326	1.8	0.339	0.353
0.330	0.344	1.9	0.358	0.373
0.347	0.362	2.0	0.377	0.393
0.364	0.380	2.1	0.396	0.412
0.382	0.398	2.2	0.415	0.432
0.399	0.416	2.3	0.434	0.452
0.416	0.434	2.4	0.453	0.471
0.434	0.452	2.5	0.471	0.491
0.451	0.470	2.6	0.490	0.511
0.468	0.489	2.7	0.509	0.530
0.486	0.507	2.8	0.528	0.550
0.503	0.525	2.9	0.547	0.569
0.520	0.543	3.0	0.566	0.589
0.538	0.561	3.1	0.585	0.609
0.555	0.579	3.2	0.603	0.628
0.573	0.597	3.3	0.622	0.648
0.590	0.615	3.4	0.641	0.668
0.607	0.633	3.5	0.660	0.687
0.625	0.651	3.6	0.679	0.707
0.642	0.670	3.7	0.698	0.726
0.659	0.688	3.8	0.717	0.746
0.677	0.706	3.9	0.735	0.766
0.694	0.724	4.0	0.754	0.785
0.711	0.742	4.1	0.773	0.805
0.729	0.760	4.2	0.792	0.825
0.746	0.778	4.3	0.811	0.844
0.763	0.796	4.4	0.830	0.864
0.781	0.814	4.5	0.849	0.884
0.798	0.832	4.6	0.867	0.903
0.815	0.850	4.7	0.886	0.923
0.833	0.869	4.8	0.905	0.942
0.850	0.887	4.9	0.924	0.962
0.867	0.905	5.0	0.943	0.982
0.885	0.923	5.1	0.962	1.001
0.902	0.941	5.2	0.981	1.021
0.920	0.959	5.3	0.999	1.041
0.937	0.977	5.4	1.018	1.060

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
47	48		49	50
0.954	0.995	5.5	1.037	1.080
0.972	1.013	5.6	1.056	1.100
0.989	1.031	5.7	1.075	1.119
1.006	1.050	5.8	1.094	1.139
1.024	1.068	5.9	1.113	1.158
1.041	1.086	6.0	1.131	1.178
1.058	1.104	6.1	1.150	1.198
1.076	1.122	6.2	1.169	1.217
1.093	1.140	6.3	1.188	1.237
1.110	1.158	6.4	1.207	1.257
1.128	1.176	6.5	1.226	1.276
1.145	1.194	6.6	1.245	1.296
1.162	1.212	6.7	1.263	1.316
1.180	1.230	6.8	1.282	1.335
1.197	1.249	6.9	1.301	1.355
1.214	1.267	7.0	1.320	1.374
1.232	1.285	7.1	1.339	1.394
1.249	1.303	7.2	1.358	1.414
1.267	1.321	7.3	1.377	1.433
1.284	1.339	7.4	1.395	1.453
1.301	1.357	7.5	1.414	1.473
1.319	1.375	7.6	1.433	1.492
1.336	1.393	7.7	1.452	1.512
1.353	1.411	7.8	1.471	1.532
1.371	1.430	7.9	1.490	1.551
1.388	1.448	8.0	1.509	1.571
1.405	1.466	8.1	1.527	1.590
1.423	1.484	8.2	1.546	1.610
1.440	1.502	8.3	1.565	1.630
1.457	1.520	8.4	1.584	1.649
1.475	1.538	8.5	1.603	1.669
1.492	1.556	8.6	1.622	1.689
1.509	1.574	8.7	1.641	1.708
1.527	1.592	8.8	1.659	1.728
1.544	1.611	8.9	1.678	1.748
1.561	1.629	9.0	1.697	1.767
1.579	1.647	9.1	1.716	1.787
1.596	1.665	9.2	1.735	1.806
1.613	1.683	9.3	1.754	1.826
1.631	1.701	9.4	1.773	1.846
1.648	1.719	9.5	1.791	1.865
1.666	1.737	9.6	1.810	1.885
1.683	1.755	9.7	1.829	1.905
1.700	1.773	9.8	1.848	1.924
1.718	1.791	9.9	1.867	1.944
1.735	1.810	10.0	1.886	1.963

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
51	52		53	54
0.204	0.212	1.0	0.221	0.229
0.225	0.234	1.1	0.243	0.252
0.245	0.255	1.2	0.265	0.275
0.266	0.276	1.3	0.287	0.298
0.286	0.297	1.4	0.309	0.321
0.306	0.319	1.5	0.331	0.344
0.327	0.340	1.6	0.353	0.366
0.347	0.361	1.7	0.375	0.389
0.368	0.382	1.8	0.397	0.412
0.388	0.404	1.9	0.419	0.435
0.409	0.425	2.0	0.441	0.458
0.429	0.446	2.1	0.463	0.481
0.449	0.467	2.2	0.485	0.504
0.470	0.488	2.3	0.507	0.527
0.490	0.510	2.4	0.529	0.550
0.511	0.531	2.5	0.552	0.573
0.531	0.552	2.6	0.574	0.595
0.552	0.573	2.7	0.596	0.618
0.572	0.595	2.8	0.618	0.641
0.592	0.616	2.9	0.640	0.664
0.613	0.637	3.0	0.662	0.687
0.633	0.658	3.1	0.684	0.710
0.654	0.680	3.2	0.706	0.733
0.674	0.701	3.3	0.728	0.756
0.695	0.722	3.4	0.750	0.779
0.715	0.743	3.5	0.772	0.802
0.735	0.765	3.6	0.794	0.824
0.756	0.786	3.7	0.816	0.847
0.776	0.807	3.8	0.838	0.870
0.797	0.828	3.9	0.860	0.893
0.817	0.849	4.0	0.882	0.916
0.838	0.871	4.1	0.905	0.939
0.858	0.892	4.2	0.927	0.962
0.878	0.913	4.3	0.949	0.985
0.899	0.934	4.4	0.971	1.008
0.919	0.956	4.5	0.993	1.031
0.940	0.977	4.6	1.015	1.054
0.960	0.998	4.7	1.037	1.076
0.981	1.019	4.8	1.059	1.099
1.001	1.041	4.9	1.081	1.122
1.021	1.062	5.0	1.103	1.145
1.042	1.083	5.1	1.125	1.168
1.062	1.104	5.2	1.147	1.191
1.083	1.126	5.3	1.169	1.214
1.103	1.147	5.4	1.191	1.237

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
51	52		53	54
1.124	1.168	5.5	1.213	1.260
1.144	1.189	5.6	1.235	1.283
1.164	1.211	5.7	1.258	1.305
1.185	1.232	5.8	1.280	1.328
1.205	1.253	5.9	1.302	1.351
1.226	1.274	6.0	1.324	1.374
1.246	1.295	6.1	1.346	1.397
1.267	1.317	6.2	1.368	1.420
1.287	1.338	6.3	1.390	1.443
1.307	1.359	6.4	1.412	1.466
1.328	1.380	6.5	1.434	1.489
1.348	1.402	6.6	1.456	1.512
1.369	1.423	6.7	1.478	1.534
1.389	1.444	6.8	1.500	1.557
1.410	1.465	6.9	1.522	1.580
1.430	1.487	7.0	1.544	1.603
1.450	1.508	7.1	1.566	1.626
1.471	1.529	7.2	1.588	1.649
1.491	1.550	7.3	1.611	1.672
1.512	1.572	7.4	1.633	1.695
1.532	1.593	7.5	1.655	1.718
1.553	1.614	7.6	1.677	1.741
1.573	1.635	7.7	1.699	1.763
1.593	1.656	7.8	1.721	1.786
1.614	1.678	7.9	1.743	1.809
1.634	1.699	8.0	1.765	1.832
1.655	1.720	8.1	1.787	1.855
1.675	1.741	8.2	1.809	1.878
1.696	1.763	8.3	1.831	1.901
1.716	1.784	8.4	1.853	1.924
1.736	1.805	8.5	1.875	1.947
1.757	1.826	8.6	1.897	1.970
1.777	1.848	8.7	1.919	1.992
1.798	1.869	8.8	1.941	2.015
1.818	1.890	8.9	1.964	2.038
1.839	1.911	9.0	1.986	2.061
1.859	1.933	9.1	2.008	2.084
1.879	1.954	9.2	2.030	2.107
1.900	1.975	9.3	2.052	2.130
1.920	1.996	9.4	2.074	2.153
1.941	2.018	9.5	2.096	2.176
1.961	2.039	9.6	2.118	2.199
1.982	2.060	9.7	2.140	2.222
2.002	2.081	9.8	2.162	2.244
2.022	2.102	9.9	2.184	2.267
2.043	2.124	10.0	2.206	2.290

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
55	56		57	58
0.238	0.246	1.0	0.255	0.264
0.261	0.271	1.1	0.281	0.291
0.285	0.296	1.2	0.306	0.317
0.309	0.320	1.3	0.332	0.343
0.333	0.345	1.4	0.357	0.370
0.356	0.369	1.5	0.383	0.396
0.380	0.394	1.6	0.408	0.423
0.404	0.419	1.7	0.434	0.449
0.428	0.443	1.8	0.459	0.476
0.451	0.468	1.9	0.485	0.502
0.475	0.493	2.0	0.510	0.528
0.499	0.517	2.1	0.536	0.555
0.523	0.542	2.2	0.561	0.581
0.546	0.566	2.3	0.587	0.608
0.570	0.591	2.4	0.612	0.634
0.594	0.616	2.5	0.638	0.661
0.618	0.640	2.6	0.663	0.687
0.641	0.665	2.7	0.689	0.713
0.665	0.690	2.8	0.714	0.740
0.689	0.714	2.9	0.740	0.766
0.713	0.739	3.0	0.766	0.793
0.737	0.764	3.1	0.791	0.819
0.760	0.788	3.2	0.817	0.845
0.784	0.813	3.3	0.842	0.872
0.808	0.837	3.4	0.868	0.898
0.832	0.862	3.5	0.893	0.925
0.855	0.887	3.6	0.919	0.951
0.879	0.911	3.7	0.944	0.978
0.903	0.936	3.8	0.970	1.004
0.927	0.961	3.9	0.995	1.030
0.950	0.985	4.0	1.021	1.057
0.974	1.010	4.1	1.046	1.083
0.998	1.034	4.2	1.072	1.110
1.022	1.059	4.3	1.097	1.136
1.045	1.084	4.4	1.123	1.163
1.069	1.108	4.5	1.148	1.189
1.093	1.133	4.6	1.174	1.215
1.117	1.158	4.7	1.199	1.242
1.140	1.182	4.8	1.225	1.268
1.164	1.207	4.9	1.250	1.295
1.188	1.232	5.0	1.276	1.321
1.212	1.256	5.1	1.301	1.347
1.235	1.281	5.2	1.327	1.374
1.259	1.305	5.3	1.352	1.400
1.283	1.330	5.4	1.378	1.427

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
55	56		57	58
1.307	1.355	5.5	1.403	1.453
1.330	1.379	5.6	1.429	1.480
1.354	1.404	5.7	1.455	1.506
1.378	1.429	5.8	1.480	1.532
1.402	1.453	5.9	1.506	1.559
1.425	1.478	6.0	1.531	1.585
1.449	1.502	6.1	1.557	1.612
1.473	1.527	6.2	1.582	1.638
1.497	1.552	6.3	1.608	1.665
1.521	1.576	6.4	1.633	1.691
1.544	1.601	6.5	1.659	1.717
1.568	1.626	6.6	1.684	1.744
1.592	1.650	6.7	1.710	1.770
1.616	1.675	6.8	1.735	1.797
1.639	1.699	6.9	1.761	1.823
1.663	1.724	7.0	1.786	1.849
1.687	1.749	7.1	1.812	1.876
1.711	1.773	7.2	1.837	1.902
1.734	1.798	7.3	1.863	1.929
1.758	1.823	7.4	1.888	1.955
1.782	1.847	7.5	1.914	1.982
1.806	1.872	7.6	1.939	2.008
1.829	1.897	7.7	1.965	2.034
1.853	1.921	7.8	1.990	2.061
1.877	1.946	7.9	2.016	2.087
1.901	1.970	8.0	2.041	2.114
1.924	1.995	8.1	2.067	2.140
1.948	2.020	8.2	2.092	2.167
1.972	2.044	8.3	2.118	2.193
1.996	2.069	8.4	2.143	2.219
2.019	2.094	8.5	2.169	2.246
2.043	2.118	8.6	2.195	2.272
2.067	2.143	8.7	2.220	2.299
2.091	2.167	8.8	2.246	2.325
2.114	2.192	8.9	2.271	2.351
2.138	2.217	9.0	2.297	2.378
2.162	2.241	9.1	2.322	2.404
2.186	2.266	9.2	2.348	2.431
2.210	2.291	9.3	2.373	2.457
2.233	2.315	9.4	2.399	2.484
2.257	2.340	9.5	2.424	2.510
2.281	2.364	9.6	2.450	2.536
2.305	2.389	9.7	2.475	2.563
2.328	2.414	9.8	2.501	2.589
2.352	2.438	9.9	2.526	2.616
2.376	2.463	10.0	2.552	2.642

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
59	60		61	62
0.273	0.283	1.0	0.292	0.302
0.301	0.311	1.1	0.321	0.332
0.328	0.339	1.2	0.351	0.362
0.355	0.368	1.3	0.380	0.392
0.383	0.396	1.4	0.409	0.423
0.410	0.424	1.5	0.438	0.453
0.437	0.452	1.6	0.468	0.483
0.465	0.481	1.7	0.497	0.513
0.492	0.509	1.8	0.526	0.543
0.519	0.537	1.9	0.555	0.574
0.547	0.565	2.0	0.584	0.604
0.574	0.594	2.1	0.614	0.634
0.601	0.622	2.2	0.643	0.664
0.629	0.650	2.3	0.672	0.694
0.656	0.679	2.4	0.701	0.725
0.683	0.707	2.5	0.731	0.755
0.711	0.735	2.6	0.760	0.785
0.738	0.763	2.7	0.789	0.815
0.766	0.792	2.8	0.818	0.845
0.793	0.820	2.9	0.848	0.876
0.820	0.848	3.0	0.877	0.906
0.848	0.877	3.1	0.906	0.936
0.875	0.905	3.2	0.935	0.966
0.902	0.933	3.3	0.964	0.996
0.930	0.961	3.4	0.994	1.026
0.957	0.990	3.5	1.023	1.057
0.984	1.018	3.6	1.052	1.087
1.012	1.046	3.7	1.081	1.117
1.039	1.074	3.8	1.111	1.147
1.066	1.103	3.9	1.140	1.177
1.094	1.131	4.0	1.169	1.208
1.121	1.159	4.1	1.198	1.238
1.148	1.188	4.2	1.227	1.268
1.176	1.216	4.3	1.257	1.298
1.203	1.244	4.4	1.286	1.328
1.230	1.272	4.5	1.315	1.359
1.258	1.301	4.6	1.344	1.389
1.285	1.329	4.7	1.374	1.419
1.312	1.357	4.8	1.403	1.449
1.340	1.385	4.9	1.432	1.479
1.367	1.414	5.0	1.461	1.510
1.394	1.442	5.1	1.490	1.540
1.422	1.470	5.2	1.520	1.570
1.449	1.499	5.3	1.549	1.600
1.476	1.527	5.4	1.578	1.630

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
59	60		61	62
1.504	1.555	5.5	1.607	1.660
1.531	1.583	5.6	1.637	1.691
1.558	1.612	5.7	1.666	1.721
1.586	1.640	5.8	1.695	1.751
1.613	1.668	5.9	1.724	1.781
1.640	1.696	6.0	1.753	1.811
1.668	1.725	6.1	1.783	1.842
1.695	1.753	6.2	1.812	1.872
1.722	1.781	6.3	1.841	1.902
1.750	1.810	6.4	1.870	1.932
1.777	1.838	6.5	1.900	1.962
1.804	1.866	6.6	1.929	1.993
1.832	1.894	6.7	1.958	2.023
1.859	1.923	6.8	1.987	2.053
1.886	1.951	6.9	2.017	2.083
1.914	1.979	7.0	2.046	2.113
1.941	2.007	7.1	2.075	2.144
1.968	2.036	7.2	2.104	2.174
1.996	2.064	7.3	2.133	2.204
2.023	2.092	7.4	2.163	2.234
2.050	2.121	7.5	2.192	2.264
2.078	2.149	7.6	2.221	2.294
2.105	2.177	7.7	2.250	2.325
2.132	2.205	7.8	2.280	2.355
2.160	2.234	7.9	2.309	2.385
2.187	2.262	8.0	2.338	2.415
2.215	2.290	8.1	2.367	2.445
2.242	2.318	8.2	2.396	2.476
2.269	2.347	8.3	2.426	2.506
2.297	2.375	8.4	2.455	2.536
2.324	2.403	8.5	2.484	2.566
2.351	2.432	8.6	2.513	2.596
2.379	2.460	8.7	2.543	2.627
2.406	2.488	8.8	2.572	2.657
2.433	2.516	8.9	2.601	2.687
2.461	2.545	9.0	2.630	2.717
2.488	2.573	9.1	2.659	2.747
2.515	2.601	9.2	2.689	2.778
2.543	2.630	9.3	2.718	2.808
2.570	2.658	9.4	2.747	2.838
2.597	2.686	9.5	2.776	2.868
2.625	2.714	9.6	2.806	2.898
2.652	2.743	9.7	2.835	2.928
2.679	2.771	9.8	2.864	2.959
2.707	2.799	9.9	2.893	2.989
2.734	2.827	10.0	2.922	3.019

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
63	64		65	66
0.312	0.322	1.0	0.332	0.342
0.343	0.354	1.1	0.365	0.376
0.374	0.386	1.2	0.398	0.411
0.405	0.418	1.3	0.431	0.445
0.436	0.450	1.4	0.465	0.479
0.468	0.483	1.5	0.498	0.513
0.499	0.515	1.6	0.531	0.547
0.530	0.547	1.7	0.564	0.582
0.561	0.579	1.8	0.597	0.616
0.592	0.611	1.9	0.630	0.650
0.623	0.643	2.0	0.664	0.684
0.655	0.676	2.1	0.697	0.718
0.686	0.708	2.2	0.730	0.753
0.717	0.740	2.3	0.763	0.787
0.748	0.772	2.4	0.796	0.821
0.779	0.804	2.5	0.830	0.855
0.810	0.836	2.6	0.863	0.890
0.842	0.869	2.7	0.896	0.924
0.873	0.901	2.8	0.929	0.958
0.904	0.933	2.9	0.962	0.992
0.935	0.965	3.0	0.995	1.026
0.966	0.997	3.1	1.029	1.061
0.998	1.029	3.2	1.062	1.095
1.029	1.062	3.3	1.095	1.129
1.060	1.094	3.4	1.128	1.163
1.091	1.126	3.5	1.161	1.197
1.122	1.158	3.6	1.195	1.232
1.153	1.190	3.7	1.228	1.266
1.185	1.222	3.8	1.261	1.300
1.216	1.255	3.9	1.294	1.334
1.247	1.287	4.0	1.327	1.368
1.278	1.319	4.1	1.361	1.403
1.309	1.351	4.2	1.394	1.437
1.340	1.383	4.3	1.427	1.471
1.372	1.415	4.4	1.460	1.505
1.403	1.448	4.5	1.493	1.540
1.434	1.480	4.6	1.526	1.574
1.465	1.512	4.7	1.560	1.608
1.496	1.544	4.8	1.593	1.642
1.527	1.576	4.9	1.626	1.676
1.559	1.608	5.0	1.659	1.711
1.590	1.641	5.1	1.692	1.745
1.621	1.673	5.2	1.726	1.779
1.652	1.705	5.3	1.759	1.813
1.683	1.737	5.4	1.792	1.847

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
63	64		65	66
1.714	1.769	5.5	1.825	1.882
1.746	1.802	5.6	1.858	1.916
1.777	1.834	5.7	1.891	1.950
1.808	1.866	5.8	1.925	1.984
1.839	1.898	5.9	1.958	2.019
1.870	1.930	6.0	1.991	2.053
1.902	1.962	6.1	2.024	2.087
1.933	1.995	6.2	2.057	2.121
1.964	2.027	6.3	2.091	2.155
1.995	2.059	6.4	2.124	2.190
2.026	2.091	6.5	2.157	2.224
2.057	2.123	6.6	2.190	2.258
2.089	2.155	6.7	2.223	2.292
2.120	2.188	6.8	2.256	2.326
2.151	2.220	6.9	2.290	2.361
2.182	2.252	7.0	2.323	2.395
2.213	2.284	7.1	2.356	2.429
2.244	2.316	7.2	2.389	2.463
2.276	2.348	7.3	2.422	2.497
2.307	2.381	7.4	2.456	2.532
2.338	2.413	7.5	2.489	2.566
2.369	2.445	7.6	2.522	2.600
2.400	2.477	7.7	2.555	2.634
2.431	2.509	7.8	2.588	2.669
2.463	2.541	7.9	2.621	2.703
2.494	2.574	8.0	2.655	2.737
2.525	2.606	8.1	2.688	2.771
2.556	2.638	8.2	2.721	2.805
2.587	2.670	8.3	2.754	2.840
2.618	2.702	8.4	2.787	2.874
2.650	2.734	8.5	2.821	2.908
2.681	2.767	8.6	2.854	2.942
2.712	2.799	8.7	2.887	2.976
2.743	2.831	8.8	2.920	3.011
2.774	2.863	8.9	2.953	3.045
2.806	2.895	9.0	2.986	3.079
2.837	2.927	9.1	3.020	3.113
2.868	2.960	9.2	3.053	3.147
2.899	2.992	9.3	3.086	3.182
2.930	3.024	9.4	3.119	3.216
2.961	3.056	9.5	3.152	3.250
2.993	3.088	9.6	3.186	3.284
3.024	3.120	9.7	3.219	3.319
3.055	3.153	9.8	3.252	3.353
3.086	3.185	9.9	3.285	3.387
3.117	3.217	10.0	3.318	3.421

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
67	68		69	70
0.353	0.363	1.0	0.374	0.385
0.388	0.399	1.1	0.411	0.423
0.423	0.436	1.2	0.449	0.462
0.458	0.472	1.3	0.486	0.500
0.494	0.508	1.4	0.523	0.539
0.529	0.545	1.5	0.561	0.577
0.564	0.581	1.6	0.598	0.616
0.599	0.617	1.7	0.636	0.654
0.635	0.654	1.8	0.673	0.693
0.670	0.690	1.9	0.710	0.731
0.705	0.726	2.0	0.748	0.770
0.740	0.763	2.1	0.785	0.808
0.776	0.799	2.2	0.823	0.847
0.811	0.835	2.3	0.860	0.885
0.846	0.872	2.4	0.897	0.924
0.881	0.908	2.5	0.935	0.962
0.917	0.944	2.6	0.972	1.001
0.952	0.981	2.7	1.010	1.039
0.987	1.017	2.8	1.047	1.078
1.022	1.053	2.9	1.084	1.116
1.058	1.090	3.0	1.122	1.155
1.093	1.126	3.1	1.159	1.193
1.128	1.162	3.2	1.197	1.232
1.163	1.198	3.3	1.234	1.270
1.199	1.235	3.4	1.271	1.308
1.234	1.271	3.5	1.309	1.347
1.269	1.307	3.6	1.346	1.385
1.304	1.344	3.7	1.384	1.424
1.340	1.380	3.8	1.421	1.462
1.375	1.416	3.9	1.458	1.501
1.410	1.453	4.0	1.496	1.539
1.446	1.489	4.1	1.533	1.578
1.481	1.525	4.2	1.570	1.616
1.516	1.562	4.3	1.608	1.655
1.551	1.598	4.4	1.645	1.693
1.587	1.634	4.5	1.683	1.732
1.622	1.671	4.6	1.720	1.770
1.657	1.707	4.7	1.757	1.809
1.692	1.743	4.8	1.795	1.847
1.728	1.780	4.9	1.832	1.886
1.763	1.816	5.0	1.870	1.924
1.798	1.852	5.1	1.907	1.963
1.833	1.888	5.2	1.944	2.001
1.869	1.925	5.3	1.982	2.040
1.904	1.961	5.4	2.019	2.078

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
67	68		69	70
1.939	1.997	5.5	2.057	2.117
1.974	2.034	5.6	2.094	2.155
2.010	2.070	5.7	2.131	2.194
2.045	2.106	5.8	2.169	2.232
2.080	2.143	5.9	2.206	2.271
2.115	2.179	6.0	2.244	2.309
2.151	2.215	6.1	2.281	2.348
2.186	2.252	6.2	2.318	2.386
2.221	2.288	6.3	2.356	2.425
2.256	2.324	6.4	2.393	2.463
2.292	2.361	6.5	2.431	2.501
2.327	2.397	6.6	2.468	2.540
2.362	2.433	6.7	2.505	2.578
2.397	2.470	6.8	2.543	2.617
2.433	2.506	6.9	2.580	2.655
2.468	2.542	7.0	2.617	2.694
2.503	2.578	7.1	2.655	2.732
2.538	2.615	7.2	2.692	2.771
2.574	2.651	7.3	2.730	2.809
2.609	2.687	7.4	2.767	2.848
2.644	2.724	7.5	2.804	2.886
2.679	2.760	7.6	2.842	2.925
2.715	2.796	7.7	2.879	2.963
2.750	2.833	7.8	2.917	3.002
2.785	2.869	7.9	2.954	3.040
2.821	2.905	8.0	2.991	3.079
2.856	2.942	8.1	3.029	3.117
2.891	2.978	8.2	3.066	3.156
2.926	3.014	8.3	3.104	3.194
2.962	3.051	8.4	3.141	3.233
2.997	3.087	8.5	3.178	3.271
3.032	3.123	8.6	3.216	3.310
3.067	3.160	8.7	3.253	3.348
3.103	3.196	8.8	3.291	3.387
3.138	3.232	8.9	3.328	3.425
3.173	3.269	9.0	3.365	3.464
3.208	3.305	9.1	3.403	3.502
3.244	3.341	9.2	3.440	3.541
3.279	3.377	9.3	3.478	3.579
3.314	3.414	9.4	3.515	3.618
3.349	3.450	9.5	3.552	3.656
3.385	3.486	9.6	3.590	3.695
3.420	3.523	9.7	3.627	3.733
3.455	3.559	9.8	3.664	3.771
3.490	3.595	9.9	3.702	3.810
3.526	3.632	10.0	3.739	3.848

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
71	72		73	74
0.396	0.407	1.0	0.419	0.430
0.436	0.448	1.1	0.460	0.473
0.475	0.489	1.2	0.502	0.516
0.515	0.529	1.3	0.544	0.559
0.554	0.570	1.4	0.586	0.602
0.594	0.611	1.5	0.628	0.645
0.633	0.651	1.6	0.670	0.688
0.673	0.692	1.7	0.712	0.731
0.713	0.733	1.8	0.753	0.774
0.752	0.774	1.9	0.795	0.817
0.792	0.814	2.0	0.837	0.860
0.831	0.855	2.1	0.879	0.903
0.871	0.896	2.2	0.921	0.946
0.911	0.936	2.3	0.963	0.989
0.950	0.977	2.4	1.004	1.032
0.990	1.018	2.5	1.046	1.075
1.029	1.059	2.6	1.088	1.118
1.069	1.099	2.7	1.130	1.161
1.109	1.140	2.8	1.172	1.204
1.148	1.181	2.9	1.214	1.247
1.188	1.221	3.0	1.256	1.290
1.227	1.262	3.1	1.297	1.333
1.267	1.303	3.2	1.339	1.376
1.307	1.344	3.3	1.381	1.419
1.346	1.384	3.4	1.423	1.462
1.386	1.425	3.5	1.465	1.505
1.425	1.466	3.6	1.507	1.548
1.465	1.506	3.7	1.549	1.591
1.504	1.547	3.8	1.590	1.634
1.544	1.588	3.9	1.632	1.677
1.584	1.629	4.0	1.674	1.720
1.623	1.669	4.1	1.716	1.763
1.663	1.710	4.2	1.758	1.806
1.702	1.751	4.3	1.800	1.849
1.742	1.791	4.4	1.842	1.892
1.782	1.832	4.5	1.883	1.935
1.821	1.873	4.6	1.925	1.978
1.861	1.914	4.7	1.967	2.021
1.900	1.954	4.8	2.009	2.064
1.940	1.995	4.9	2.051	2.107
1.980	2.036	5.0	2.093	2.150
2.019	2.076	5.1	2.135	2.193
2.059	2.117	5.2	2.176	2.236
2.098	2.158	5.3	2.218	2.279
2.138	2.199	5.4	2.260	2.322

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
71	72		73	74
2.178	2.239	5.5	2.302	2.365
2.217	2.280	5.6	2.344	2.408
2.257	2.321	5.7	2.386	2.451
2.296	2.361	5.8	2.428	2.494
2.336	2.402	5.9	2.469	2.537
2.376	2.443	6.0	2.511	2.581
2.415	2.484	6.1	2.553	2.624
2.455	2.524	6.2	2.595	2.667
2.494	2.565	6.3	2.637	2.710
2.534	2.606	6.4	2.679	2.753
2.573	2.646	6.5	2.721	2.796
2.613	2.687	6.6	2.762	2.839
2.653	2.728	6.7	2.804	2.882
2.692	2.769	6.8	2.846	2.925
2.732	2.809	6.9	2.888	2.968
2.771	2.850	7.0	2.930	3.011
2.811	2.891	7.1	2.972	3.054
2.851	2.931	7.2	3.013	3.097
2.890	2.972	7.3	3.055	3.140
2.930	3.013	7.4	3.097	3.183
2.969	3.054	7.5	3.139	3.226
3.009	3.094	7.6	3.181	3.269
3.049	3.135	7.7	3.223	3.312
3.088	3.176	7.8	3.265	3.355
3.128	3.216	7.9	3.306	3.398
3.167	3.257	8.0	3.348	3.441
3.207	3.298	8.1	3.390	3.484
3.247	3.339	8.2	3.432	3.527
3.286	3.379	8.3	3.474	3.570
3.326	3.420	8.4	3.516	3.613
3.365	3.461	8.5	3.558	3.656
3.405	3.501	8.6	3.599	3.699
3.444	3.542	8.7	3.641	3.742
3.484	3.583	8.8	3.683	3.785
3.524	3.624	8.9	3.725	3.828
3.563	3.664	9.0	3.767	3.871
3.603	3.705	9.1	3.809	3.914
3.642	3.746	9.2	3.851	3.957
3.682	3.786	9.3	3.892	4.000
3.722	3.827	9.4	3.934	4.043
3.761	3.868	9.5	3.976	4.086
3.801	3.909	9.6	4.018	4.129
3.840	3.949	9.7	4.060	4.172
3.880	3.990	9.8	4.102	4.215
3.920	4.031	9.9	4.144	4.258
3.959	4.072	10.0	4.185	4.301

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
75	76		77	78
0.442	0.454	1.0	0.466	0.478
0.486	0.499	1.1	0.512	0.526
0.530	0.544	1.2	0.559	0.573
0.574	0.590	1.3	0.605	0.621
0.619	0.635	1.4	0.652	0.669
0.663	0.680	1.5	0.698	0.717
0.707	0.726	1.6	0.745	0.765
0.751	0.771	1.7	0.792	0.812
0.795	0.817	1.8	0.838	0.860
0.839	0.862	1.9	0.885	0.908
0.884	0.907	2.0	0.931	0.956
0.928	0.953	2.1	0.978	1.003
0.972	0.998	2.2	1.024	1.051
1.016	1.043	2.3	1.071	1.099
1.060	1.089	2.4	1.118	1.147
1.104	1.134	2.5	1.164	1.195
1.149	1.179	2.6	1.211	1.242
1.193	1.225	2.7	1.257	1.290
1.237	1.270	2.8	1.304	1.338
1.281	1.316	2.9	1.350	1.386
1.325	1.361	3.0	1.397	1.434
1.370	1.406	3.1	1.444	1.481
1.414	1.452	3.2	1.490	1.529
1.458	1.497	3.3	1.537	1.577
1.502	1.542	3.4	1.583	1.625
1.546	1.588	3.5	1.630	1.672
1.590	1.633	3.6	1.676	1.720
1.635	1.678	3.7	1.723	1.768
1.679	1.724	3.8	1.770	1.816
1.723	1.769	3.9	1.816	1.864
1.767	1.815	4.0	1.863	1.911
1.811	1.860	4.1	1.909	1.959
1.856	1.905	4.2	1.956	2.007
1.900	1.951	4.3	2.002	2.055
1.944	1.996	4.4	2.049	2.102
1.988	2.041	4.5	2.095	2.150
2.032	2.087	4.6	2.142	2.198
2.076	2.132	4.7	2.189	2.246
2.121	2.177	4.8	2.235	2.294
2.165	2.223	4.9	2.282	2.341
2.209	2.268	5.0	2.328	2.389
2.253	2.314	5.1	2.375	2.437
2.297	2.359	5.2	2.421	2.485
2.341	2.404	5.3	2.468	2.533
2.386	2.450	5.4	2.515	2.580

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
75	76		77	78
2.430	2.495	5.5	2.561	2.628
2.474	2.540	5.6	2.608	2.676
2.518	2.586	5.7	2.654	2.724
2.562	2.631	5.8	2.701	2.771
2.607	2.677	5.9	2.747	2.819
2.651	2.722	6.0	2.794	2.867
2.695	2.767	6.1	2.841	2.915
2.739	2.813	6.2	2.887	2.963
2.783	2.858	6.3	2.934	3.010
2.827	2.903	6.4	2.980	3.058
2.872	2.949	6.5	3.027	3.106
2.916	2.994	6.6	3.073	3.154
2.960	3.039	6.7	3.120	3.202
3.004	3.085	6.8	3.167	3.249
3.048	3.130	6.9	3.213	3.297
3.093	3.176	7.0	3.260	3.345
3.137	3.221	7.1	3.306	3.393
3.181	3.266	7.2	3.353	3.440
3.225	3.312	7.3	3.399	3.488
3.269	3.357	7.4	3.446	3.536
3.313	3.402	7.5	3.492	3.584
3.358	3.448	7.6	3.539	3.632
3.402	3.493	7.7	3.586	3.679
3.446	3.538	7.8	3.632	3.727
3.490	3.584	7.9	3.679	3.775
3.534	3.629	8.0	3.725	3.823
3.578	3.675	8.1	3.772	3.870
3.623	3.720	8.2	3.818	3.918
3.667	3.765	8.3	3.865	3.966
3.711	3.811	8.4	3.912	4.014
3.755	3.856	8.5	3.958	4.062
3.799	3.901	8.6	4.005	4.109
3.844	3.947	8.7	4.051	4.157
3.888	3.992	8.8	4.098	4.205
3.932	4.037	8.9	4.144	4.253
3.976	4.083	9.0	4.191	4.301
4.020	4.128	9.1	4.238	4.348
4.064	4.174	9.2	4.284	4.396
4.109	4.219	9.3	4.331	4.444
4.153	4.264	9.4	4.377	4.492
4.197	4.310	9.5	4.424	4.539
4.241	4.355	9.6	4.470	4.587
4.285	4.400	9.7	4.517	4.635
4.330	4.446	9.8	4.563	4.683
4.374	4.491	9.9	4.610	4.731
4.418	4.536	10.0	4.657	4.778

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
79	80		81	82
0.490	0.503	1.0	0.515	0.528
0.539	0.553	1.1	0.567	0.581
0.588	0.603	1.2	0.618	0.634
0.637	0.653	1.3	0.670	0.687
0.686	0.704	1.4	0.721	0.739
0.735	0.754	1.5	0.773	0.792
0.784	0.804	1.6	0.824	0.845
0.833	0.855	1.7	0.876	0.898
0.882	0.905	1.8	0.928	0.951
0.931	0.955	1.9	0.979	1.003
0.980	1.005	2.0	1.031	1.056
1.029	1.056	2.1	1.082	1.109
1.078	1.106	2.2	1.134	1.162
1.127	1.156	2.3	1.185	1.215
1.176	1.206	2.4	1.237	1.267
1.225	1.257	2.5	1.288	1.320
1.274	1.307	2.6	1.340	1.373
1.323	1.357	2.7	1.391	1.426
1.372	1.407	2.8	1.443	1.479
1.421	1.458	2.9	1.494	1.531
1.470	1.508	3.0	1.546	1.584
1.520	1.558	3.1	1.597	1.637
1.569	1.608	3.2	1.649	1.690
1.618	1.659	3.3	1.700	1.743
1.667	1.709	3.4	1.752	1.796
1.716	1.759	3.5	1.804	1.848
1.765	1.810	3.6	1.855	1.901
1.814	1.860	3.7	1.907	1.954
1.863	1.910	3.8	1.958	2.007
1.912	1.960	3.9	2.010	2.060
1.961	2.011	4.0	2.061	2.112
2.010	2.061	4.1	2.113	2.165
2.059	2.111	4.2	2.164	2.218
2.108	2.161	4.3	2.216	2.271
2.157	2.212	4.4	2.267	2.324
2.206	2.262	4.5	2.319	2.376
2.255	2.312	4.6	2.370	2.429
2.304	2.362	4.7	2.422	2.482
2.353	2.413	4.8	2.473	2.535
2.402	2.463	4.9	2.525	2.588
2.451	2.513	5.0	2.576	2.641
2.500	2.564	5.1	2.628	2.693
2.549	2.614	5.2	2.680	2.746
2.598	2.664	5.3	2.731	2.799
2.647	2.714	5.4	2.783	2.852

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
79	80		81	82
2.696	2.765	5.5	2.834	2.905
2.745	2.815	5.6	2.886	2.957
2.794	2.865	5.7	2.937	3.010
2.843	2.915	5.8	2.989	3.063
2.892	2.966	5.9	3.040	3.116
2.941	3.016	6.0	3.092	3.169
2.990	3.066	6.1	3.143	3.221
3.039	3.116	6.2	3.195	3.274
3.088	3.167	6.3	3.246	3.327
3.137	3.217	6.4	3.298	3.380
3.186	3.267	6.5	3.349	3.433
3.235	3.318	6.6	3.401	3.485
3.284	3.368	6.7	3.453	3.538
3.333	3.418	6.8	3.504	3.591
3.382	3.468	6.9	3.556	3.644
3.431	3.519	7.0	3.607	3.697
3.480	3.569	7.1	3.659	3.750
3.529	3.619	7.2	3.710	3.802
3.578	3.669	7.3	3.762	3.855
3.627	3.720	7.4	3.813	3.908
3.676	3.770	7.5	3.865	3.961
3.725	3.820	7.6	3.916	4.014
3.774	3.870	7.7	3.968	4.066
3.823	3.921	7.8	4.019	4.119
3.872	3.971	7.9	4.071	4.172
3.921	4.021	8.0	4.122	4.225
3.970	4.072	8.1	4.174	4.278
4.019	4.122	8.2	4.225	4.330
4.068	4.172	8.3	4.277	4.383
4.117	4.222	8.4	4.329	4.436
4.166	4.273	8.5	4.380	4.489
4.215	4.323	8.6	4.432	4.542
4.264	4.373	8.7	4.483	4.594
4.313	4.423	8.8	4.535	4.647
4.362	4.474	8.9	4.586	4.700
4.411	4.524	9.0	4.638	4.753
4.461	4.574	9.1	4.689	4.806
4.510	4.624	9.2	4.741	4.859
4.559	4.675	9.3	4.792	4.911
4.608	4.725	9.4	4.844	4.964
4.657	4.775	9.5	4.895	4.017
4.706	4.825	9.6	4.947	5.070
4.755	4.876	9.7	4.998	5.123
4.804	4.926	9.8	5.050	5.175
4.853	4.976	9.9	5.101	5.228
4.902	5.027	10.0	5.153	5.281

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
83	84		85	86
0.541	0.554	1.0	0.567	0.581
0.595	0.610	1.1	0.624	0.639
0.649	0.665	1.2	0.681	0.697
0.703	0.720	1.3	0.738	0.755
0.757	0.776	1.4	0.794	0.813
0.812	0.831	1.5	0.851	0.871
0.866	0.887	1.6	0.908	0.929
0.920	0.942	1.7	0.965	0.987
0.974	0.998	1.8	1.021	1.046
1.028	1.053	1.9	1.078	1.104
1.082	1.108	2.0	1.135	1.162
1.136	1.164	2.1	1.192	1.220
1.190	1.219	2.2	1.248	1.278
1.244	1.275	2.3	1.305	1.336
1.299	1.330	2.4	1.362	1.394
1.353	1.385	2.5	1.419	1.452
1.407	1.441	2.6	1.475	1.510
1.461	1.496	2.7	1.532	1.568
1.515	1.552	2.8	1.589	1.626
1.569	1.607	2.9	1.646	1.685
1.623	1.663	3.0	1.702	1.743
1.677	1.718	3.1	1.759	1.801
1.731	1.773	3.2	1.816	1.859
1.785	1.829	3.3	1.873	1.917
1.840	1.884	3.4	1.929	1.975
1.894	1.940	3.5	1.986	2.033
1.948	1.995	3.6	2.043	2.091
2.002	2.050	3.7	2.100	2.149
2.056	2.106	3.8	2.156	2.207
2.110	2.161	3.9	2.213	2.265
2.164	2.217	4.0	2.270	2.324
2.218	2.272	4.1	2.327	2.382
2.272	2.328	4.2	2.383	2.440
2.327	2.383	4.3	2.440	2.498
2.381	2.438	4.4	2.497	2.556
2.435	2.494	4.5	2.554	2.614
2.489	2.549	4.6	2.610	2.672
2.543	2.605	4.7	2.667	2.730
2.597	2.660	4.8	2.724	2.788
2.651	2.715	4.9	2.781	2.846
2.705	2.771	5.0	2.837	2.904
2.759	2.826	5.1	2.894	2.962
2.814	2.882	5.2	2.951	3.021
2.868	2.937	5.3	3.007	3.079
2.922	2.993	5.4	3.064	3.137

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
83	84		85	86
2.976	3.048	5.5	3.121	3.195
3.030	3.103	5.6	3.178	3.253
3.084	3.159	5.7	3.234	3.311
3.138	3.214	5.8	3.291	3.369
3.192	3.270	5.9	3.348	3.427
3.246	3.325	6.0	3.405	3.485
3.300	3.380	6.1	3.461	3.543
3.355	3.436	6.2	3.518	3.601
3.409	3.491	6.3	3.575	3.660
3.463	3.547	6.4	3.632	3.718
3.517	3.602	6.5	3.688	3.776
3.571	3.658	6.6	3.745	3.834
3.625	3.713	6.7	3.802	3.892
3.679	3.768	6.8	3.859	3.950
3.733	3.824	6.9	3.915	4.008
3.787	3.879	7.0	3.972	4.066
3.842	3.935	7.1	4.029	4.124
3.896	3.990	7.2	4.086	4.182
3.950	4.045	7.3	4.142	4.240
4.004	4.101	7.4	4.199	4.299
4.058	4.156	7.5	4.256	4.357
4.112	4.212	7.6	4.313	4.415
4.166	4.267	7.7	4.369	4.473
4.220	4.323	7.8	4.426	4.531
4.274	4.378	7.9	4.483	4.589
4.328	4.433	8.0	4.540	4.647
4.383	4.489	8.1	4.596	4.705
4.437	4.544	8.2	4.653	4.763
4.491	4.600	8.3	4.710	4.821
4.545	4.655	8.4	4.767	4.879
4.599	4.711	8.5	4.823	4.937
4.653	4.766	8.6	4.880	4.996
4.707	4.821	8.7	4.937	5.054
4.761	4.877	8.8	4.994	5.112
4.815	4.932	8.9	5.050	5.170
4.870	4.988	9.0	5.107	5.228
4.924	5.043	9.1	5.164	5.286
4.978	5.098	9.2	5.221	5.344
5.032	5.154	9.3	5.277	5.402
5.086	5.209	9.4	5.334	5.460
5.140	5.265	9.5	5.391	5.518
5.194	5.320	9.6	5.448	5.576
5.248	5.376	9.7	5.504	5.635
5.302	5.431	9.8	5.561	5.693
5.356	5.486	9.9	5.618	5.751
5.411	5.542	10.0	5.675	5.809

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
87	88		89	90
0.594	0.608	1.0	0.622	0.636
0.654	0.669	1.1	0.684	0.700
0.713	0.730	1.2	0.747	0.763
0.773	0.791	1.3	0.809	0.827
0.832	0.851	1.4	0.871	0.891
0.892	0.912	1.5	0.933	0.954
0.951	0.973	1.6	0.995	1.018
1.011	1.034	1.7	1.058	1.081
1.070	1.095	1.8	1.120	1.145
1.129	1.156	1.9	1.182	1.209
1.189	1.216	2.0	1.244	1.272
1.248	1.277	2.1	1.306	1.336
1.308	1.338	2.2	1.369	1.400
1.367	1.399	2.3	1.431	1.463
1.427	1.460	2.4	1.493	1.527
1.486	1.521	2.5	1.555	1.590
1.546	1.581	2.6	1.617	1.654
1.605	1.642	2.7	1.680	1.718
1.665	1.703	2.8	1.742	1.781
1.724	1.764	2.9	1.804	1.845
1.783	1.825	3.0	1.866	1.909
1.843	1.885	3.1	1.929	1.972
1.902	1.946	3.2	1.991	2.036
1.962	2.007	3.3	2.053	2.099
2.021	2.068	3.4	2.115	2.163
2.081	2.129	3.5	2.177	2.227
2.140	2.190	3.6	2.240	2.290
2.200	2.250	3.7	2.302	2.354
2.259	2.311	3.8	2.364	2.417
2.318	2.372	3.9	2.426	2.481
2.378	2.433	4.0	2.488	2.545
2.437	2.494	4.1	2.551	2.608
2.497	2.554	4.2	2.613	2.672
2.556	2.615	4.3	2.675	2.736
2.616	2.676	4.4	2.737	2.799
2.675	2.737	4.5	2.800	2.863
2.735	2.798	4.6	2.862	2.926
2.794	2.859	4.7	2.924	2.990
2.853	2.919	4.8	2.986	3.054
2.913	2.980	4.9	3.048	3.117
2.972	3.041	5.0	3.111	3.181
3.032	3.102	5.1	3.173	3.244
3.091	3.163	5.2	3.235	3.308
3.151	3.224	5.3	3.297	3.372
3.210	3.284	5.4	3.359	3.435

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
87	88		89	90
3.270	3.345	5.5	3.422	3.499
3.329	3.406	5.6	3.484	3.563
3.388	3.467	5.7	3.546	3.626
3.448	3.528	5.8	3.608	3.690
3.507	3.588	5.9	3.670	3.753
3.567	3.649	6.0	3.733	3.817
3.626	3.710	6.1	3.795	3.881
3.686	3.771	6.2	3.857	3.944
3.745	3.832	6.3	3.919	4.008
3.805	3.893	6.4	3.982	4.072
3.864	3.953	6.5	4.044	4.135
3.923	4.014	6.6	4.106	4.199
3.983	4.075	6.7	4.168	4.262
4.042	4.136	6.8	4.230	4.326
4.102	4.197	6.9	4.293	4.390
4.161	4.257	7.0	4.355	4.453
4.221	4.318	7.1	4.417	4.517
4.280	4.379	7.2	4.479	4.580
4.340	4.440	7.3	4.541	4.644
4.399	4.501	7.4	4.604	4.708
4.459	4.562	7.5	4.666	4.771
4.518	4.622	7.6	4.728	4.835
4.577	4.683	7.7	4.790	4.899
4.637	4.744	7.8	4.852	4.962
4.696	4.805	7.9	4.915	5.026
4.756	4.866	8.0	4.977	5.089
4.815	4.927	8.1	5.039	5.153
4.875	4.987	8.2	5.101	5.217
4.934	5.048	8.3	5.164	5.280
4.994	5.109	8.4	5.226	5.344
5.053	5.170	8.5	5.288	5.407
5.112	5.231	8.6	5.350	5.471
5.172	5.291	8.7	5.412	5.535
5.231	5.352	8.8	5.475	5.598
5.291	5.413	8.9	5.537	5.662
5.350	5.474	9.0	5.599	5.726
5.410	5.535	9.1	5.661	5.789
5.469	5.596	9.2	5.723	5.853
5.529	5.656	9.3	5.786	5.916
5.588	5.717	9.4	5.848	5.980
5.647	5.778	9.5	5.910	6.044
5.707	5.839	9.6	5.972	6.107
5.766	5.900	9.7	6.035	6.171
5.826	5.960	9.8	6.097	6.234
5.885	6.021	9.9	6.159	6.298
5.945	6.082	10.0	6.221	6.362

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
91	92		93	94
0.650	0.665	1.0	0.679	0.694
0.715	0.731	1.1	0.747	0.763
0.780	0.798	1.2	0.815	0.833
0.846	0.864	1.3	0.883	0.902
0.911	0.931	1.4	0.951	0.972
0.976	0.997	1.5	1.019	1.041
1.041	1.064	1.6	1.087	1.110
1.106	1.130	1.7	1.155	1.180
1.171	1.197	1.8	1.223	1.249
1.236	1.263	1.9	1.291	1.319
1.301	1.330	2.0	1.359	1.388
1.366	1.396	2.1	1.427	1.457
1.431	1.462	2.2	1.494	1.527
1.496	1.529	2.3	1.562	1.596
1.561	1.595	2.4	1.630	1.666
1.626	1.662	2.5	1.698	1.735
1.691	1.728	2.6	1.766	1.804
1.756	1.795	2.7	1.834	1.874
1.821	1.861	2.8	1.902	1.943
1.886	1.928	2.9	1.970	2.013
1.951	1.994	3.0	2.038	2.082
2.016	2.061	3.1	2.106	2.151
2.081	2.127	3.2	2.174	2.221
2.146	2.194	3.3	2.242	2.290
2.211	2.260	3.4	2.310	2.360
2.276	2.327	3.5	2.378	2.429
2.341	2.393	3.6	2.445	2.498
2.406	2.460	3.7	2.513	2.568
2.471	2.526	3.8	2.581	2.637
2.537	2.593	3.9	2.649	2.707
2.602	2.659	4.0	2.717	2.776
2.667	2.726	4.1	2.785	2.845
2.732	2.792	4.2	2.853	2.915
2.797	2.858	4.3	2.921	2.984
2.862	2.925	4.4	2.989	3.054
2.927	2.991	4.5	3.057	3.123
2.992	3.058	4.6	3.125	3.192
3.057	3.124	4.7	3.193	3.262
3.122	3.191	4.8	3.261	3.331
3.187	3.257	4.9	3.329	3.400
3.252	3.324	5.0	3.396	3.470
3.317	3.390	5.1	3.464	3.539
3.382	3.457	5.2	3.532	3.609
3.447	3.523	5.3	3.600	3.678
3.512	3.590	5.4	3.668	3.747

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
91	92		93	94
3.577	3.656	5.5	3.736	3.817
3.642	3.723	5.6	3.804	3.886
3.707	3.789	5.7	3.872	3.956
3.772	3.856	5.8	3.940	4.025
3.837	3.922	5.9	4.008	4.094
3.902	3.989	6.0	4.076	4.164
3.967	4.055	6.1	4.144	4.233
4.032	4.122	6.2	4.212	4.303
4.097	4.188	6.3	4.280	4.372
4.162	4.254	6.4	4.347	4.441
4.228	4.321	6.5	4.415	4.511
4.293	4.387	6.6	4.483	4.580
4.358	4.454	6.7	4.551	4.650
4.423	4.520	6.8	4.619	4.719
4.488	4.587	6.9	4.687	4.788
4.553	4.653	7.0	4.755	4.858
4.618	4.720	7.1	4.823	4.927
4.683	4.786	7.2	4.891	4.997
4.748	4.853	7.3	4.959	5.066
4.813	4.919	7.4	5.027	5.135
4.878	4.986	7.5	5.095	5.205
4.943	5.052	7.6	5.163	5.274
5.008	5.119	7.7	5.231	5.344
5.073	5.185	7.8	5.298	5.413
5.138	5.252	7.9	5.366	5.482
5.203	5.318	8.0	5.434	5.552
5.268	5.385	8.1	5.502	5.621
5.333	5.451	8.2	5.570	5.691
5.398	5.518	8.3	5.638	5.760
5.463	5.584	8.4	5.706	5.829
5.528	5.650	8.5	5.774	5.899
5.593	5.717	8.6	5.842	5.968
5.658	5.783	8.7	5.910	6.038
5.723	5.850	8.8	5.978	6.107
5.788	5.916	8.9	6.046	6.176
5.853	5.983	9.0	6.114	6.246
5.919	6.049	9.1	6.182	6.315
5.984	6.116	9.2	6.249	6.385
6.049	6.182	9.3	6.317	6.454
6.114	6.249	9.4	6.385	6.523
6.179	6.315	9.5	6.453	6.593
6.244	6.382	9.6	6.521	6.662
6.309	6.448	9.7	6.589	6.732
6.374	6.515	9.8	6.657	6.801
6.439	6.581	9.9	6.725	6.870
6.504	6.648	10.0	6.793	6.940

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
95	96		97	98
0.709	0.724	1.0	0.739	0.754
0.780	0.796	1.1	0.813	0.830
0.851	0.869	1.2	0.887	0.905
0.921	0.941	1.3	0.961	0.981
0.992	1.013	1.4	1.035	1.056
1.063	1.086	1.5	1.108	1.131
1.134	1.158	1.6	1.182	1.207
1.205	1.230	1.7	1.256	1.282
1.276	1.303	1.8	1.330	1.358
1.347	1.375	1.9	1.404	1.433
1.418	1.448	2.0	1.478	1.509
1.489	1.520	2.1	1.552	1.584
1.559	1.592	2.2	1.626	1.659
1.630	1.665	2.3	1.700	1.735
1.701	1.737	2.4	1.774	1.810
1.772	1.810	2.5	1.847	1.886
1.843	1.882	2.6	1.921	1.961
1.914	1.954	2.7	1.995	2.037
1.985	2.027	2.8	2.069	2.112
2.056	2.099	2.9	2.143	2.187
2.126	2.171	3.0	2.217	2.263
2.197	2.244	3.1	2.291	2.338
2.268	2.316	3.2	2.365	2.414
2.339	2.389	3.3	2.439	2.489
2.410	2.461	3.4	2.513	2.565
2.481	2.533	3.5	2.586	2.640
2.552	2.606	3.6	2.660	2.715
2.623	2.678	3.7	2.734	2.791
2.694	2.751	3.8	2.808	2.866
2.764	2.823	3.9	2.882	2.942
2.835	2.895	4.0	2.956	3.017
2.906	2.968	4.1	3.030	3.093
2.977	3.040	4.2	3.104	3.168
3.048	3.112	4.3	3.178	3.243
3.119	3.185	4.4	3.252	3.319
3.190	3.257	4.5	3.325	3.394
3.261	3.330	4.6	3.399	3.470
3.331	3.402	4.7	3.473	3.545
3.402	3.474	4.8	3.547	3.621
3.473	3.547	4.9	3.621	3.696
3.544	3.619	5.0	3.695	3.771
3.615	3.691	5.1	3.769	3.847
3.686	3.764	5.2	3.843	3.922
3.757	3.836	5.3	3.917	3.998
3.828	3.909	5.4	3.990	4.073

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
95	96		97	98
3.899	3.981	5.5	4.064	4.149
3.969	4.053	5.6	4.138	4.224
4.040	4.126	5.7	4.212	4.299
4.111	4.198	5.8	4.286	4.375
4.182	4.271	5.9	4.360	4.450
4.253	4.343	6.0	4.434	4.526
4.324	4.415	6.1	4.508	4.601
4.395	4.488	6.2	4.582	4.677
4.466	4.560	6.3	4.656	4.752
4.536	4.632	6.4	4.729	4.827
4.607	4.705	6.5	4.803	4.903
4.678	4.777	6.6	4.877	4.978
4.749	4.850	6.7	4.951	5.054
4.820	4.922	6.8	5.025	5.129
4.891	4.994	6.9	5.099	5.205
4.962	5.067	7.0	5.173	5.280
5.033	5.139	7.1	5.247	5.356
5.104	5.212	7.2	5.321	5.431
5.174	5.284	7.3	5.395	5.506
5.245	5.356	7.4	5.468	5.582
5.316	5.429	7.5	5.542	5.657
5.387	5.501	7.6	5.616	5.733
5.458	5.573	7.7	5.690	5.808
5.529	5.646	7.8	5.764	5.884
5.600	5.718	7.9	5.838	5.959
5.671	5.791	8.0	5.912	6.034
5.741	5.863	8.1	5.986	6.110
5.812	5.935	8.2	6.060	6.185
5.883	6.008	8.3	6.134	6.261
5.954	6.080	8.4	6.207	6.336
6.025	6.152	8.5	6.281	6.412
6.096	6.225	8.6	6.355	6.487
6.167	6.297	8.7	6.429	6.562
6.238	6.370	8.8	6.503	6.638
6.309	6.442	8.9	6.577	6.713
6.379	6.514	9.0	6.651	6.789
6.450	6.587	9.1	6.725	6.864
6.521	6.659	9.2	6.799	6.940
6.592	6.732	9.3	6.873	7.015
6.663	6.804	9.4	6.946	7.090
6.734	6.876	9.5	7.020	7.166
6.805	6.949	9.6	7.094	7.241
6.876	7.021	9.7	7.168	7.317
6.946	7.093	9.8	7.242	7.392
7.017	7.166	9.9	7.316	7.468
7.088	7.238	10.0	7.390	7.543

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
99	100		101	102
0.770	0.785	1.0	0.801	0.817
0.847	0.864	1.1	0.881	0.899
0.924	0.942	1.2	0.961	0.981
1.001	1.021	1.3	1.042	1.062
1.078	1.100	1.4	1.122	1.144
1.155	1.178	1.5	1.202	1.226
1.232	1.257	1.6	1.282	1.307
1.309	1.335	1.7	1.362	1.389
1.386	1.414	1.8	1.442	1.471
1.463	1.492	1.9	1.522	1.553
1.540	1.571	2.0	1.602	1.634
1.617	1.649	2.1	1.682	1.716
1.693	1.728	2.2	1.763	1.798
1.770	1.806	2.3	1.843	1.879
1.847	1.885	2.4	1.923	1.961
1.924	1.963	2.5	2.003	2.043
2.001	2.042	2.6	2.083	2.125
2.078	2.121	2.7	2.163	2.206
2.155	2.199	2.8	2.243	2.288
2.232	2.278	2.9	2.323	2.370
2.309	2.356	3.0	2.404	2.451
2.386	2.435	3.1	2.484	2.533
2.463	2.513	3.2	2.564	2.615
2.540	2.592	3.3	2.644	2.697
2.617	2.670	3.4	2.724	2.778
2.694	2.749	3.5	2.804	2.860
2.771	2.827	3.6	2.884	2.942
2.848	2.906	3.7	2.964	3.023
2.925	2.985	3.8	3.045	3.105
3.002	3.063	3.9	3.125	3.187
3.079	3.142	4.0	3.205	3.269
3.156	3.220	4.1	3.285	3.350
3.233	3.299	4.2	3.365	3.432
3.310	3.377	4.3	3.445	3.514
3.387	3.456	4.4	3.525	3.595
3.464	3.534	4.5	3.605	3.677
3.541	3.613	4.6	3.685	3.759
3.618	3.691	4.7	3.766	3.841
3.695	3.770	4.8	3.846	3.922
3.772	3.848	4.9	3.926	4.004
3.849	3.927	5.0	4.006	4.086
3.926	4.006	5.1	4.086	4.167
4.003	4.084	5.2	4.166	4.249
4.080	4.163	5.3	4.246	4.331
4.157	4.241	5.4	4.326	4.412

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
99	100		101	102
4.234	4.320	5.5	4.407	4.494
4.311	4.398	5.6	4.487	4.576
4.388	4.477	5.7	4.567	4.658
4.465	4.555	5.8	4.647	4.739
4.542	4.634	5.9	4.727	4.821
4.619	4.712	6.0	4.807	4.903
4.696	4.791	6.1	4.887	4.984
4.773	4.869	6.2	4.967	5.066
4.850	4.948	6.3	5.047	5.148
4.927	5.027	6.4	5.128	5.230
5.003	5.105	6.5	5.208	5.311
5.080	5.184	6.6	5.288	5.393
5.157	5.262	6.7	5.368	5.475
5.234	5.341	6.8	5.448	5.556
5.311	5.419	6.9	5.528	5.638
5.388	5.498	7.0	5.608	5.720
5.465	5.576	7.1	5.688	5.802
5.542	5.655	7.2	5.769	5.883
5.619	5.733	7.3	5.849	5.965
5.696	5.812	7.4	5.929	6.047
5.773	5.890	7.5	6.009	6.128
5.850	5.969	7.6	6.089	6.210
5.927	6.048	7.7	6.169	6.292
6.004	6.126	7.8	6.249	6.374
6.081	6.205	7.9	6.329	6.455
6.158	6.283	8.0	6.409	6.537
6.235	6.362	8.1	6.490	6.619
6.312	6.440	8.2	6.570	6.700
6.389	6.519	8.3	6.650	6.782
6.466	6.597	8.4	6.730	6.864
6.543	6.676	8.5	6.810	6.946
6.620	6.754	8.6	6.890	7.027
6.697	6.833	8.7	6.970	7.109
6.774	6.911	8.8	7.050	7.191
6.851	6.990	8.9	7.131	7.272
6.928	7.069	9.0	7.211	7.354
7.005	7.147	9.1	7.291	7.436
7.082	7.226	9.2	7.371	7.518
7.159	7.304	9.3	7.451	7.599
7.236	7.383	9.4	7.531	7.681
7.313	7.461	9.5	7.611	7.763
7.390	7.540	9.6	7.691	7.844
7.467	7.618	9.7	7.771	7.926
7.544	7.697	9.8	7.852	8.008
7.621	7.775	9.9	7.932	8.090
7.698	7.854	10.0	8.012	8.171

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
103	104		105	106
0.833	0.849	1.0	0.866	0.882
0.917	0.934	1.1	0.952	0.971
1.000	1.019	1.2	1.039	1.059
1.083	1.104	1.3	1.126	1.147
1.167	1.189	1.4	1.212	1.235
1.250	1.274	1.5	1.299	1.324
1.333	1.359	1.6	1.385	1.412
1.416	1.444	1.7	1.472	1.500
1.500	1.529	1.8	1.559	1.588
1.583	1.614	1.9	1.645	1.677
1.666	1.699	2.0	1.732	1.765
1.750	1.784	2.1	1.818	1.853
1.833	1.869	2.2	1.905	1.941
1.916	1.954	2.3	1.992	2.030
2.000	2.039	2.4	2.078	2.118
2.083	2.124	2.5	2.165	2.206
2.166	2.209	2.6	2.251	2.294
2.250	2.294	2.7	2.338	2.383
2.333	2.379	2.8	2.425	2.471
2.416	2.464	2.9	2.511	2.559
2.500	2.548	3.0	2.598	2.647
2.583	2.633	3.1	2.684	2.736
2.666	2.718	3.2	2.771	2.824
2.750	2.803	3.3	2.857	2.912
2.833	2.888	3.4	2.944	3.000
2.916	2.973	3.5	3.031	3.089
3.000	3.058	3.6	3.117	3.177
3.083	3.143	3.7	3.204	3.265
3.166	3.228	3.8	3.290	3.353
3.250	3.313	3.9	3.377	3.442
3.333	3.398	4.0	3.464	3.530
3.416	3.483	4.1	3.550	3.618
3.500	3.568	4.2	3.637	3.706
3.583	3.653	4.3	3.723	3.795
3.666	3.738	4.4	3.810	3.883
3.750	3.823	4.5	3.897	3.971
3.833	3.908	4.6	3.983	4.059
3.916	3.993	4.7	4.070	4.148
3.999	4.078	4.8	4.156	4.236
4.083	4.162	4.9	4.243	4.324
4.166	4.247	5.0	4.330	4.412
4.249	4.332	5.1	4.416	4.501
4.333	4.417	5.2	4.503	4.589
4.416	4.502	5.3	4.589	4.677
4.499	4.587	5.4	4.676	4.765

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
103	104		105	106
4.583	4.672	5.5	4.762	4.854
4.666	4.757	5.6	4.849	4.942
4.749	4.842	5.7	4.936	5.030
4.833	4.927	5.8	5.022	5.118
4.916	5.012	5.9	5.109	5.207
4.999	5.097	6.0	5.195	5.295
5.083	5.182	6.1	5.282	5.383
5.166	5.267	6.2	5.369	5.471
5.249	5.352	6.3	5.455	5.560
5.333	5.437	6.4	5.542	5.648
5.416	5.522	6.5	5.628	5.736
5.499	5.607	6.6	5.715	5.824
5.583	5.692	6.7	5.802	5.913
5.666	5.777	6.8	5.888	6.001
5.749	5.861	6.9	5.975	6.089
5.833	5.946	7.0	6.061	6.177
5.916	6.031	7.1	6.148	6.266
5.999	6.116	7.2	6.234	6.354
6.083	6.201	7.3	6.321	6.442
6.166	6.286	7.4	6.408	6.530
6.249	6.371	7.5	6.494	6.619
6.333	6.456	7.6	6.581	6.707
6.416	6.541	7.7	6.667	6.795
6.499	6.626	7.8	6.754	6.883
6.583	6.711	7.9	6.841	6.972
6.666	6.796	8.0	6.927	7.060
6.749	6.881	8.1	7.014	7.148
6.832	6.966	8.2	7.100	7.236
6.916	7.051	8.3	7.187	7.325
6.999	7.136	8.4	7.274	7.413
7.082	7.221	8.5	7.360	7.501
7.166	7.306	8.6	7.447	7.589
7.249	7.391	8.7	7.533	7.678
7.332	7.475	8.8	7.620	7.766
7.416	7.560	8.9	7.707	7.854
7.499	7.645	9.0	7.793	7.942
7.582	7.730	9.1	7.880	8.031
7.666	7.815	9.2	7.966	8.119
7.749	7.900	9.3	8.053	8.207
7.832	7.985	9.4	8.139	8.295
7.916	8.070	9.5	8.226	8.383
7.999	8.155	9.6	8.313	8.472
8.082	8.240	9.7	8.399	8.560
8.166	8.325	9.8	8.486	8.648
8.249	8.410	9.9	8.572	8.736
8.332	8.495	10.0	8.659	8.825

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
107	108		109	110
0.899	0.916	1.0	0.933	0.950
0.989	1.008	1.1	1.026	1.045
1.079	1.099	1.2	1.120	1.140
1.169	1.191	1.3	1.213	1.235
1.259	1.283	1.4	1.306	1.330
1.349	1.374	1.5	1.400	1.425
1.439	1.466	1.6	1.493	1.521
1.529	1.557	1.7	1.586	1.616
1.619	1.649	1.8	1.680	1.711
1.708	1.741	1.9	1.773	1.806
1.798	1.832	2.0	1.866	1.901
1.888	1.924	2.1	1.960	1.996
1.978	2.015	2.2	2.053	2.091
2.068	2.107	2.3	2.146	2.186
2.158	2.199	2.4	2.240	2.281
2.248	2.290	2.5	2.333	2.376
2.338	2.382	2.6	2.426	2.471
2.428	2.473	2.7	2.519	2.566
2.518	2.565	2.8	2.613	2.661
2.608	2.657	2.9	2.706	2.756
2.698	2.748	3.0	2.799	2.851
2.788	2.840	3.1	2.893	2.946
2.877	2.931	3.2	2.986	3.041
2.967	3.023	3.3	3.079	3.136
3.057	3.115	3.4	3.173	3.231
3.147	3.206	3.5	3.266	3.326
3.237	3.298	3.6	3.359	3.421
3.327	3.390	3.7	3.453	3.516
3.417	3.481	3.8	3.546	3.611
3.507	3.573	3.9	3.639	3.706
3.597	3.664	4.0	3.733	3.801
3.687	3.756	4.1	3.826	3.896
3.777	3.848	4.2	3.919	3.991
3.867	3.939	4.3	4.012	4.086
3.956	4.031	4.4	4.106	4.181
4.046	4.122	4.5	4.199	4.276
4.136	4.214	4.6	4.292	4.372
4.226	4.306	4.7	4.386	4.467
4.316	4.397	4.8	4.479	4.562
4.406	4.489	4.9	4.572	4.657
4.496	4.580	5.0	4.666	4.752
4.586	4.672	5.1	4.759	4.847
4.676	4.764	5.2	4.852	4.942
4.766	4.855	5.3	4.946	5.037
4.856	4.947	5.4	5.039	5.132

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
107	108		109	110
4.946	5.038	5.5	5.132	5.227
5.036	5.130	5.6	5.226	5.322
5.125	5.222	5.7	5.319	5.417
5.215	5.313	5.8	5.412	5.512
5.305	5.405	5.9	5.505	5.607
5.395	5.497	6.0	5.599	5.702
5.485	5.588	6.1	5.692	5.797
5.575	5.680	6.2	5.785	5.892
5.665	5.771	6.3	5.879	5.987
5.755	5.863	6.4	5.972	6.082
5.845	5.955	6.5	6.065	6.177
5.935	6.046	6.6	6.159	6.272
6.025	6.138	6.7	6.252	6.367
6.115	6.229	6.8	6.345	6.462
6.204	6.321	6.9	6.439	6.557
6.294	6.413	7.0	6.532	6.652
6.384	6.504	7.1	6.625	6.747
6.474	6.596	7.2	6.719	6.842
6.564	6.687	7.3	6.812	6.937
6.654	6.779	7.4	6.905	7.032
6.744	6.871	7.5	6.998	7.127
6.834	6.962	7.6	7.092	7.223
6.924	7.054	7.7	7.185	7.318
7.014	7.145	7.8	7.278	7.413
7.104	7.237	7.9	7.372	7.508
7.194	7.329	8.0	7.465	7.603
7.284	7.420	8.1	7.558	7.698
7.373	7.512	8.2	7.652	7.793
7.463	7.604	8.3	7.745	7.888
7.553	7.695	8.4	7.838	7.983
7.643	7.787	8.5	7.932	8.078
7.733	7.878	8.6	8.025	8.173
7.823	7.970	8.7	8.118	8.268
7.913	8.062	8.8	8.212	8.363
8.003	8.153	8.9	8.305	8.458
8.093	8.245	9.0	8.398	8.553
8.183	8.336	9.1	8.491	8.648
8.273	8.428	9.2	8.585	8.743
8.363	8.520	9.3	8.678	8.838
8.452	8.611	9.4	8.771	8.933
8.542	8.703	9.5	8.865	9.028
8.632	8.794	9.6	8.958	9.123
8.722	8.886	9.7	9.051	9.218
8.812	8.978	9.8	9.145	9.313
8.902	9.069	9.9	9.238	9.408
8.992	9.161	10.0	9.331	9.503

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
111	112		113	114
0.968	0.985	1.0	1.003	1.021
1.064	1.084	1.1	1.103	1.123
1.161	1.182	1.2	1.203	1.225
1.258	1.281	1.3	1.304	1.327
1.355	1.379	1.4	1.404	1.429
1.452	1.478	1.5	1.504	1.531
1.548	1.576	1.6	1.605	1.633
1.645	1.675	1.7	1.705	1.735
1.742	1.773	1.8	1.805	1.837
1.839	1.872	1.9	1.905	1.939
1.935	1.970	2.0	2.006	2.041
2.032	2.069	2.1	2.106	2.143
2.129	2.167	2.2	2.206	2.246
2.226	2.266	2.3	2.307	2.348
2.322	2.364	2.4	2.407	2.450
2.419	2.463	2.5	2.507	2.552
2.516	2.562	2.6	2.607	2.654
2.613	2.660	2.7	2.708	2.756
2.710	2.759	2.8	2.808	2.858
2.806	2.857	2.9	2.908	2.960
2.903	2.956	3.0	3.009	3.062
3.000	3.054	3.1	3.109	3.164
3.097	3.153	3.2	3.209	3.266
3.193	3.251	3.3	3.309	3.368
3.290	3.350	3.4	3.410	3.470
3.387	3.448	3.5	3.510	3.572
3.484	3.547	3.6	3.610	3.675
3.580	3.645	3.7	3.711	3.777
3.677	3.744	3.8	3.811	3.879
3.774	3.842	3.9	3.911	3.981
3.871	3.941	4.0	4.011	4.083
3.968	4.039	4.1	4.112	4.185
4.064	4.138	4.2	4.212	4.287
4.161	4.236	4.3	4.312	4.389
4.258	4.335	4.4	4.413	4.491
4.355	4.433	4.5	4.513	4.593
4.451	4.532	4.6	4.613	4.695
4.548	4.630	4.7	4.714	4.797
4.645	4.729	4.8	4.814	4.899
4.742	4.827	4.9	4.914	5.001
4.838	4.926	5.0	5.014	5.104
4.935	5.025	5.1	5.115	5.206
5.032	5.123	5.2	5.215	5.308
5.129	5.222	5.3	5.315	5.410
5.226	5.320	5.4	5.416	5.512

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
111	112		113	114
5.322	5.419	5.5	5.516	5.614
5.419	5.517	5.6	5.616	5.716
5.516	5.616	5.7	5.716	5.818
5.613	5.714	5.8	5.817	5.920
5.709	5.813	5.9	5.917	6.022
5.806	5.911	6.0	6.017	6.124
5.903	6.010	6.1	6.118	6.226
6.000	6.108	6.2	6.218	6.328
6.096	6.207	6.3	6.318	6.430
6.193	6.305	6.4	6.418	6.532
6.290	6.404	6.5	6.519	6.635
6.387	6.502	6.6	6.619	6.737
6.484	6.601	6.7	6.719	6.839
6.580	6.699	6.8	6.820	6.941
6.677	6.798	6.9	6.920	7.043
6.774	6.896	7.0	7.020	7.145
6.871	6.995	7.1	7.120	7.247
6.967	7.093	7.2	7.221	7.349
7.064	7.192	7.3	7.321	7.451
7.161	7.291	7.4	7.421	7.553
7.258	7.389	7.5	7.522	7.655
7.354	7.488	7.6	7.622	7.757
7.451	7.586	7.7	7.722	7.859
7.548	7.685	7.8	7.822	7.961
7.645	7.783	7.9	7.923	8.064
7.742	7.882	8.0	8.023	8.166
7.838	7.980	8.1	8.123	8.268
7.935	8.079	8.2	8.224	8.370
8.032	8.177	8.3	8.324	8.472
8.129	8.276	8.4	8.424	8.574
8.225	8.374	8.5	8.524	8.676
8.322	8.473	8.6	8.625	8.778
8.419	8.571	8.7	8.725	8.880
8.516	8.670	8.8	8.825	8.982
8.612	8.768	8.9	8.926	9.084
8.709	8.867	9.0	9.026	9.186
8.806	8.965	9.1	9.126	9.288
8.903	9.064	9.2	9.226	9.390
9.000	9.162	9.3	9.327	9.493
9.096	9.261	9.4	9.427	9.595
9.193	9.359	9.5	9.527	9.697
9.290	9.458	9.6	9.628	9.799
9.387	9.556	9.7	9.728	9.901
9.483	9.655	9.8	9.828	10.00
9.580	9.754	9.9	9.928	10.10
9.677	9.852	10.0	10.03	10.21

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
115	116		117	118
1.039	1.057	1.0	1.075	1.094
1.143	1.163	1.1	1.183	1.203
1.246	1.268	1.2	1.290	1.312
1.350	1.374	1.3	1.398	1.422
1.454	1.480	1.4	1.505	1.531
1.558	1.585	1.5	1.613	1.640
1.662	1.691	1.6	1.720	1.750
1.766	1.797	1.7	1.828	1.859
1.870	1.902	1.8	1.935	1.968
1.974	2.008	1.9	2.043	2.078
2.077	2.114	2.0	2.150	2.187
2.181	2.219	2.1	2.258	2.297
2.285	2.325	2.2	2.365	2.406
2.389	2.431	2.3	2.473	2.515
2.493	2.536	2.4	2.580	2.625
2.597	2.642	2.5	2.688	2.734
2.701	2.748	2.6	2.795	2.843
2.804	2.853	2.7	2.903	2.953
2.908	2.959	2.8	3.010	3.062
3.012	3.065	2.9	3.118	3.171
3.116	3.170	3.0	3.225	3.281
3.220	3.276	3.1	3.333	3.390
3.324	3.382	3.2	3.440	3.499
3.428	3.488	3.3	3.548	3.609
3.532	3.593	3.4	3.655	3.718
3.635	3.699	3.5	3.763	3.828
3.739	3.805	3.6	3.870	3.937
3.843	3.910	3.7	3.978	4.046
3.947	4.016	3.8	4.085	4.156
4.051	4.122	3.9	4.193	4.265
4.155	4.227	4.0	4.301	4.374
4.259	4.333	4.1	4.408	4.484
4.362	4.439	4.2	4.516	4.593
4.466	4.544	4.3	4.623	4.702
4.570	4.650	4.4	4.731	4.812
4.674	4.756	4.5	4.838	4.921
4.778	4.861	4.6	4.946	5.031
4.882	4.967	4.7	5.053	5.140
4.986	5.073	4.8	5.161	5.249
5.090	5.178	4.9	5.268	5.359
5.193	5.284	5.0	5.376	5.468
5.297	5.390	5.1	5.483	5.577
5.401	5.496	5.2	5.591	5.687
5.505	5.601	5.3	5.698	5.796
5.609	5.707	5.4	5.806	5.905

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
115	116		117	118
5.713	5.813	5.5	5.913	6.015
5.817	5.918	5.6	6.021	6.124
5.921	6.024	5.7	6.128	6.233
6.024	6.130	5.8	6.236	6.343
6.128	6.235	5.9	6.343	6.452
6.232	6.341	6.0	6.451	6.562
6.336	6.447	6.1	6.558	6.671
6.440	6.552	6.2	6.666	6.780
6.544	6.658	6.3	6.773	6.890
6.648	6.764	6.4	6.881	6.999
6.751	6.869	6.5	6.988	7.108
6.855	6.975	6.6	7.096	7.218
6.959	7.081	6.7	7.203	7.327
7.063	7.186	6.8	7.311	7.436
7.167	7.292	6.9	7.418	7.546
7.271	7.398	7.0	7.526	7.655
7.375	7.504	7.1	7.633	7.764
7.479	7.609	7.2	7.741	7.874
7.582	7.715	7.3	7.848	7.983
7.686	7.821	7.4	7.956	8.093
7.790	7.926	7.5	8.063	8.202
7.894	8.032	7.6	8.171	8.311
7.998	8.138	7.7	8.279	8.421
8.102	8.243	7.8	8.386	8.530
8.206	8.349	7.9	8.494	8.639
8.310	8.455	8.0	8.601	8.749
8.413	8.560	8.1	8.709	8.858
8.517	8.666	8.2	8.816	8.967
8.621	8.772	8.3	8.924	9.077
8.725	8.877	8.4	9.031	9.186
8.829	8.983	8.5	9.139	9.295
8.933	9.089	8.6	9.246	9.405
9.037	9.194	8.7	9.354	9.514
9.140	9.300	8.8	9.461	9.624
9.244	9.406	8.9	9.569	9.733
9.348	9.511	9.0	9.676	9.842
9.452	9.617	9.1	9.784	9.952
9.556	9.723	9.2	9.891	10.06
9.660	9.829	9.3	9.999	10.17
9.764	9.934	9.4	10.11	10.28
9.868	10.04	9.5	10.21	10.39
9.971	10.15	9.6	10.32	10.50
10.08	10.25	9.7	10.43	10.61
10.18	10.36	9.8	10.54	10.72
10.28	10.46	9.9	10.64	10.83
10.39	10.57	10.0	10.75	10.94

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
119	120		121	122
1.112	1.131	1.0	1.150	1.169
1.223	1.244	1.1	1.265	1.286
1.335	1.357	1.2	1.380	1.403
1.446	1.470	1.3	1.495	1.520
1.557	1.583	1.4	1.610	1.637
1.668	1.696	1.5	1.725	1.753
1.780	1.810	1.6	1.840	1.870
1.891	1.923	1.7	1.955	1.987
2.002	2.036	1.8	2.070	2.104
2.113	2.149	1.9	2.185	2.221
2.224	2.262	2.0	2.300	2.338
2.336	2.375	2.1	2.415	2.455
2.447	2.488	2.2	2.530	2.572
2.558	2.601	2.3	2.645	2.689
2.669	2.714	2.4	2.760	2.806
2.781	2.827	2.5	2.875	2.922
2.892	2.941	2.6	2.990	3.039
3.003	3.054	2.7	3.105	3.156
3.114	3.167	2.8	3.220	3.273
3.225	3.280	2.9	3.335	3.390
3.337	3.393	3.0	3.450	3.507
3.448	3.506	3.1	3.565	3.624
3.559	3.619	3.2	3.680	3.741
3.670	3.732	3.3	3.795	3.858
3.781	3.845	3.4	3.910	3.975
3.893	3.958	3.5	4.025	4.091
4.004	4.072	3.6	4.140	4.208
4.115	4.185	3.7	4.255	4.325
4.226	4.298	3.8	4.370	4.442
4.338	4.411	3.9	4.485	4.559
4.449	4.524	4.0	4.600	4.676
4.560	4.637	4.1	4.715	4.793
4.671	4.750	4.2	4.830	4.910
4.782	4.863	4.3	4.945	5.027
4.894	4.976	4.4	5.060	5.144
5.005	5.089	4.5	5.175	5.260
5.116	5.202	4.6	5.290	5.377
5.227	5.316	4.7	5.405	5.494
5.339	5.429	4.8	5.520	5.611
5.450	5.542	4.9	5.635	5.728
5.561	5.655	5.0	5.750	5.845
5.672	5.768	5.1	5.864	5.962
5.783	5.881	5.2	5.979	6.079
5.895	5.994	5.3	6.094	6.196
6.006	6.107	5.4	6.209	6.313

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
119	120		121	122
6.117	6.220	5.5	6.324	6.429
6.228	6.333	5.6	6.439	6.546
6.340	6.447	5.7	6.554	6.663
6.451	6.560	5.8	6.669	6.780
6.562	6.673	5.9	6.784	6.897
6.673	6.786	6.0	6.899	7.014
6.784	6.899	6.1	7.014	7.131
6.896	7.012	6.2	7.129	7.248
7.007	7.125	6.3	7.244	7.365
7.118	7.238	6.4	7.359	7.482
7.229	7.351	6.5	7.474	7.598
7.341	7.464	6.6	7.589	7.715
7.452	7.578	6.7	7.704	7.832
7.563	7.691	6.8	7.819	7.949
7.674	7.804	6.9	7.934	8.066
7.785	7.917	7.0	8.049	8.183
7.897	8.030	7.1	8.164	8.300
8.008	8.143	7.2	8.279	8.417
8.119	8.256	7.3	8.394	8.534
8.230	8.369	7.4	8.509	8.650
8.342	8.482	7.5	8.624	8.767
8.453	8.595	7.6	8.739	8.884
8.564	8.708	7.7	8.854	9.001
8.675	8.822	7.8	8.969	9.118
8.786	8.935	7.9	9.084	9.235
8.898	9.048	8.0	9.199	9.352
9.009	9.161	8.1	9.314	9.469
9.120	9.274	8.2	9.429	9.586
9.231	9.387	8.3	9.544	9.703
9.342	9.500	8.4	9.659	9.819
9.454	9.613	8.5	9.774	9.936
9.565	9.726	8.6	9.889	10.05
9.676	9.839	8.7	10.00	10.17
9.787	9.953	8.8	10.12	10.29
9.899	10.07	8.9	10.23	10.40
10.01	10.18	9.0	10.35	10.52
10.12	10.29	9.1	10.46	10.64
10.23	10.40	9.2	10.58	10.75
10.34	10.52	9.3	10.69	10.87
10.45	10.63	9.4	10.81	10.99
10.57	10.74	9.5	10.92	11.11
10.68	10.86	9.6	11.04	11.22
10.79	10.97	9.7	11.15	11.34
10.90	11.08	9.8	11.27	11.46
11.01	11.20	9.9	11.38	11.57
11.12	11.31	10.0	11.50	11.69

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
123	124		125	126
1.188	1.208	1.0	1.227	1.247
1.307	1.328	1.1	1.350	1.372
1.426	1.449	1.2	1.473	1.496
1.545	1.570	1.3	1.595	1.621
1.664	1.691	1.4	1.718	1.746
1.782	1.811	1.5	1.841	1.870
1.901	1.932	1.6	1.963	1.995
2.020	2.053	1.7	2.086	2.120
2.139	2.174	1.8	2.209	2.244
2.258	2.294	1.9	2.332	2.369
2.376	2.415	2.0	2.454	2.494
2.495	2.536	2.1	2.577	2.618
2.614	2.657	2.2	2.700	2.743
2.733	2.778	2.3	2.823	2.868
2.852	2.898	2.4	2.945	2.993
2.971	3.019	2.5	3.068	3.117
3.089	3.140	2.6	3.191	3.242
3.208	3.261	2.7	3.313	3.367
3.327	3.381	2.8	3.436	3.491
3.446	3.502	2.9	3.559	3.616
3.565	3.623	3.0	3.682	3.741
3.684	3.744	3.1	3.804	3.865
3.802	3.864	3.2	3.927	3.990
3.921	3.985	3.3	4.050	4.115
4.040	4.106	3.4	4.172	4.239
4.159	4.227	3.5	4.295	4.364
4.278	4.347	3.6	4.418	4.489
4.396	4.468	3.7	4.541	4.614
4.515	4.589	3.8	4.663	4.738
4.634	4.710	3.9	4.786	4.863
4.753	4.831	4.0	4.909	4.988
4.872	4.951	4.1	5.031	5.112
4.991	5.072	4.2	5.154	5.237
5.109	5.193	4.3	5.277	5.362
5.228	5.314	4.4	5.400	5.486
5.347	5.434	4.5	5.522	5.611
5.466	5.555	4.6	5.645	5.736
5.585	5.676	4.7	5.768	5.860
5.703	5.797	4.8	5.890	5.985
5.822	5.917	4.9	6.013	6.110
5.941	6.038	5.0	6.136	6.234
6.060	6.159	5.1	6.259	6.359
6.179	6.280	5.2	6.381	6.484
6.298	6.400	5.3	6.504	6.609
6.416	6.521	5.4	6.627	6.733

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
123	124		125	126
6.535	6.642	5.5	6.750	6.858
6.654	6.763	5.6	6.872	6.983
6.773	6.883	5.7	6.995	7.107
6.892	7.004	5.8	7.118	7.232
7.011	7.125	5.9	7.240	7.357
7.129	7.246	6.0	7.363	7.481
7.248	7.367	6.1	7.486	7.606
7.367	7.487	6.2	7.609	7.731
7.486	7.608	6.3	7.731	7.855
7.605	7.729	6.4	7.854	7.980
7.723	7.850	6.5	7.977	8.105
7.842	7.970	6.6	8.099	8.230
7.961	8.091	6.7	8.222	8.354
8.080	8.212	6.8	8.345	8.479
8.199	8.333	6.9	8.468	8.604
8.318	8.453	7.0	8.590	8.728
8.436	8.574	7.1	8.713	8.853
8.555	8.695	7.2	8.836	8.978
8.674	8.816	7.3	8.958	9.102
8.793	8.936	7.4	9.081	9.227
8.912	9.057	7.5	9.204	9.352
9.031	9.178	7.6	9.327	9.476
9.149	9.299	7.7	9.449	9.601
9.268	9.419	7.8	9.572	9.726
9.387	9.540	7.9	9.695	9.850
9.506	9.661	8.0	9.817	9.975
9.625	9.782	8.1	9.940	10.10
9.743	9.903	8.2	10.06	10.22
9.862	10.02	8.3	10.19	10.35
9.981	10.14	8.4	10.31	10.47
10.10	10.26	8.5	10.43	10.60
10.22	10.39	8.6	10.55	10.72
10.34	10.51	8.7	10.68	10.85
10.46	10.63	8.8	10.80	10.97
10.58	10.75	8.9	10.92	11.10
10.69	10.87	9.0	11.04	11.22
10.81	10.99	9.1	11.17	11.35
10.93	11.11	9.2	11.29	11.47
11.05	11.23	9.3	11.41	11.60
11.17	11.35	9.4	11.54	11.72
11.29	11.47	9.5	11.66	11.85
11.41	11.59	9.6	11.78	11.97
11.53	11.71	9.7	11.90	12.09
11.64	11.83	9.8	12.03	12.22
11.76	11.96	9.9	12.15	12.34
11.88	12.08	10.0	12.27	12.47

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
127	128		129	130
1.267	1.287	1.0	1.307	1.327
1.393	1.415	1.1	1.438	1.460
1.520	1.544	1.2	1.568	1.593
1.647	1.673	1.3	1.699	1.726
1.773	1.802	1.4	1.830	1.858
1.900	1.930	1.5	1.960	1.991
2.027	2.059	1.6	2.091	2.124
2.154	2.188	1.7	2.222	2.256
2.280	2.316	1.8	2.353	2.389
2.407	2.445	1.9	2.483	2.522
2.534	2.574	2.0	2.614	2.655
2.660	2.702	2.1	2.745	2.787
2.787	2.831	2.2	2.875	2.920
2.914	2.960	2.3	3.006	3.053
3.040	3.088	2.4	3.137	3.186
3.167	3.217	2.5	3.267	3.318
3.294	3.346	2.6	3.398	3.451
3.420	3.474	2.7	3.529	3.584
3.547	3.603	2.8	3.660	3.717
3.674	3.732	2.9	3.790	3.849
3.800	3.860	3.0	3.921	3.982
3.927	3.989	3.1	4.052	4.115
4.054	4.118	3.2	4.182	4.247
4.180	4.246	3.3	4.313	4.380
4.307	4.375	3.4	4.444	4.513
4.434	4.504	3.5	4.574	4.646
4.560	4.632	3.6	4.705	4.778
4.687	4.761	3.7	4.836	4.911
4.814	4.890	3.8	4.967	5.044
4.940	5.019	3.9	5.097	5.177
5.067	5.147	4.0	5.228	5.309
5.194	5.276	4.1	5.359	5.442
5.320	5.405	4.2	5.489	5.575
5.447	5.533	4.3	5.620	5.707
5.574	5.662	4.4	5.751	5.840
5.700	5.791	4.5	5.881	5.973
5.827	5.919	4.6	6.012	6.106
5.954	6.048	4.7	6.143	6.238
6.080	6.177	4.8	6.274	6.371
6.207	6.305	4.9	6.404	6.504
6.334	6.434	5.0	6.535	6.637
6.461	6.563	5.1	6.666	6.769
6.587	6.691	5.2	6.796	6.902
6.714	6.820	5.3	6.927	7.035
6.841	6.949	5.4	7.058	7.168

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
127	128		129	130
6.967	7.077	5.5	7.188	7.300
7.094	7.206	5.6	7.319	7.433
7.221	7.335	5.7	7.450	7.566
7.347	7.463	5.8	7.580	7.698
7.474	7.592	5.9	7.711	7.831
7.601	7.721	6.0	7.842	7.964
7.727	7.849	6.1	7.973	8.097
7.854	7.978	6.2	8.103	8.229
7.981	8.107	6.3	8.234	8.362
8.107	8.235	6.4	8.365	8.495
8.234	8.364	6.5	8.495	8.628
8.361	8.493	6.6	8.626	8.760
8.487	8.622	6.7	8.757	8.893
8.614	8.750	6.8	8.887	9.026
8.741	8.879	6.9	9.018	9.159
8.867	9.008	7.0	9.149	9.291
8.994	9.136	7.1	9.280	9.424
9.121	9.265	7.2	9.410	9.557
9.247	9.394	7.3	9.541	9.689
9.374	9.522	7.4	9.672	9.822
9.501	9.651	7.5	9.802	9.955
9.627	9.780	7.6	9.933	10.09
9.754	9.908	7.7	10.06	10.22
9.881	10.04	7.8	10.19	10.35
10.01	10.17	7.9	10.33	10.49
10.13	10.29	8.0	10.46	10.62
10.26	10.42	8.1	10.59	10.75
10.39	10.55	8.2	10.72	10.88
10.51	10.68	8.3	10.85	11.02
10.64	10.81	8.4	10.98	11.15
10.77	10.94	8.5	11.11	11.28
10.89	11.07	8.6	11.24	11.41
11.02	11.20	8.7	11.37	11.55
11.15	11.32	8.8	11.50	11.68
11.27	11.45	8.9	11.63	11.81
11.40	11.58	9.0	11.76	11.95
11.53	11.71	9.1	11.89	12.08
11.65	11.84	9.2	12.02	12.21
11.78	11.97	9.3	12.15	12.34
11.91	12.10	9.4	12.29	12.48
12.03	12.22	9.5	12.42	12.61
12.16	12.35	9.6	12.55	12.74
12.29	12.48	9.7	12.68	12.88
12.41	12.61	9.8	12.81	13.01
12.54	12.74	9.9	12.94	13.14
12.67	12.87	10.0	13.07	13.27

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
131	132		133	134
1.348	1.368	1.0	1.389	1.410
1.483	1.505	1.1	1.528	1.551
1.617	1.642	1.2	1.667	1.692
1.752	1.779	1.3	1.806	1.833
1.887	1.916	1.4	1.945	1.974
2.022	2.053	1.5	2.084	2.115
2.157	2.190	1.6	2.223	2.256
2.291	2.326	1.7	2.362	2.397
2.426	2.463	1.8	2.501	2.538
2.561	2.600	1.9	2.640	2.679
2.696	2.737	2.0	2.779	2.821
2.830	2.874	2.1	2.918	2.962
2.965	3.011	2.2	3.056	3.103
3.100	3.147	2.3	3.195	3.244
3.235	3.284	2.4	3.334	3.385
3.370	3.421	2.5	3.473	3.526
3.504	3.558	2.6	3.612	3.667
3.639	3.695	2.7	3.751	3.808
3.774	3.832	2.8	3.890	3.949
3.909	3.969	2.9	4.029	4.090
4.043	4.105	3.0	4.168	4.231
4.178	4.242	3.1	4.307	4.372
4.313	4.379	3.2	4.446	4.513
4.448	4.516	3.3	4.585	4.654
4.583	4.653	3.4	4.724	4.795
4.717	4.790	3.5	4.863	4.936
4.852	4.927	3.6	5.001	5.077
4.987	5.063	3.7	5.140	5.218
5.122	5.200	3.8	5.279	5.359
5.257	5.337	3.9	5.418	5.500
5.391	5.474	4.0	5.557	5.641
5.526	5.611	4.1	5.696	5.782
5.661	5.748	4.2	5.835	5.923
5.796	5.884	4.3	5.974	6.064
5.930	6.021	4.4	6.113	6.205
6.065	6.158	4.5	6.252	6.346
6.200	6.295	4.6	6.391	6.487
6.335	6.432	4.7	6.530	6.628
6.470	6.569	4.8	6.669	6.769
6.604	6.706	4.9	6.808	6.910
6.739	6.842	5.0	6.946	7.051
6.874	6.979	5.1	7.085	7.192
7.009	7.116	5.2	7.224	7.333
7.143	7.253	5.3	7.363	7.474
7.278	7.390	5.4	7.502	7.615

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
131	132		133	134
7.413	7.527	5.5	7.641	7.756
7.548	7.663	5.6	7.780	7.897
7.683	7.800	5.7	7.919	8.038
7.817	7.937	5.8	8.058	8.180
7.952	8.074	5.9	8.197	8.321
8.087	8.211	6.0	8.336	8.462
8.222	8.348	6.1	8.475	8.603
8.356	8.485	6.2	8.614	8.744
8.491	8.621	6.3	8.753	8.885
8.626	8.758	6.4	8.891	9.026
8.761	8.895	6.5	9.030	9.167
8.896	9.032	6.6	9.169	9.308
9.030	9.169	6.7	9.308	9.449
9.165	9.306	6.8	9.447	9.590
9.300	9.442	6.9	9.586	9.731
9.435	9.579	7.0	9.725	9.872
9.570	9.716	7.1	9.864	10.01
9.704	9.853	7.2	10.00	10.15
9.839	9.990	7.3	10.14	10.29
9.974	10.13	7.4	10.28	10.44
10.11	10.26	7.5	10.42	10.58
10.24	10.40	7.6	10.56	10.72
10.38	10.54	7.7	10.70	10.86
10.51	10.67	7.8	10.84	11.00
10.65	10.81	7.9	10.98	11.14
10.78	10.95	8.0	11.11	11.28
10.92	11.08	8.1	11.25	11.42
11.05	11.22	8.2	11.39	11.56
11.19	11.36	8.3	11.53	11.71
11.32	11.50	8.4	11.67	11.85
11.46	11.63	8.5	11.81	11.99
11.59	11.77	8.6	11.95	12.13
11.73	11.91	8.7	12.09	12.27
11.86	12.04	8.8	12.23	12.41
12.00	12.18	8.9	12.36	12.55
12.13	12.32	9.0	12.50	12.69
12.27	12.45	9.1	12.64	12.83
12.40	12.59	9.2	12.78	12.97
12.53	12.73	9.3	12.92	13.12
12.67	12.86	9.4	13.06	13.26
12.80	13.00	9.5	13.20	13.40
12.94	13.14	9.6	13.34	13.54
13.07	13.27	9.7	13.48	13.68
13.21	13.41	9.8	13.62	13.82
13.34	13.55	9.9	13.75	13.96
13.48	13.68	10.0	13.89	14.10

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
135	136		137	138
1.431	1.453	1.0	1.474	1.496
1.575	1.598	1.1	1.622	1.645
1.718	1.743	1.2	1.769	1.795
1.861	1.888	1.3	1.916	1.944
2.004	2.034	1.4	2.064	2.094
2.147	2.179	1.5	2.211	2.244
2.290	2.324	1.6	2.359	2.393
2.433	2.470	1.7	2.506	2.543
2.576	2.615	1.8	2.653	2.692
2.720	2.760	1.9	2.801	2.842
2.863	2.905	2.0	2.948	2.991
3.006	3.051	2.1	3.096	3.141
3.149	3.196	2.2	3.243	3.291
3.292	3.341	2.3	3.390	3.440
3.435	3.486	2.4	3.538	3.590
3.578	3.632	2.5	3.685	3.739
3.722	3.777	2.6	3.833	3.889
3.865	3.922	2.7	3.980	4.038
4.008	4.067	2.8	4.128	4.188
4.151	4.213	2.9	4.275	4.338
4.294	4.358	3.0	4.422	4.487
4.437	4.503	3.1	4.570	4.637
4.580	4.649	3.2	4.717	4.786
4.724	4.794	3.3	4.865	4.936
4.867	4.939	3.4	5.012	5.085
5.010	5.084	3.5	5.159	5.235
5.153	5.230	3.6	5.307	5.385
5.296	5.375	3.7	5.454	5.534
5.439	5.520	3.8	5.602	5.684
5.582	5.665	3.9	5.749	5.833
5.726	5.811	4.0	5.896	5.983
5.869	5.956	4.1	6.044	6.132
6.012	6.101	4.2	6.191	6.282
6.155	6.246	4.3	6.339	6.432
6.298	6.392	4.4	6.486	6.581
6.441	6.537	4.5	6.634	6.731
6.584	6.682	4.6	6.781	6.880
6.728	6.828	4.7	6.928	7.030
6.871	6.973	4.8	7.076	7.179
7.014	7.118	4.9	7.223	7.329
7.157	7.263	5.0	7.371	7.479
7.300	7.409	5.1	7.518	7.628
7.443	7.554	5.2	7.665	7.778
7.586	7.699	5.3	7.813	7.927
7.729	8.844	5.4	7.960	8.077

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
135	136		137	138
7.873	7.990	5.5	8.108	8.226
8.016	8.135	5.6	8.255	8.376
8.159	8.280	5.7	8.402	8.526
8.302	8.425	5.8	8.550	8.675
8.445	8.571	5.9	8.697	8.825
8.588	8.716	6.0	8.845	8.974
8.731	8.861	6.1	8.992	9.124
8.875	9.007	6.2	9.140	9.273
9.018	9.152	6.3	9.287	9.423
9.161	9.297	6.4	9.434	9.573
9.304	9.442	6.5	9.582	9.722
9.447	9.588	6.6	9.729	9.872
9.590	9.733	6.7	9.877	10.02
9.733	9.878	6.8	10.02	10.17
9.877	10.02	6.9	10.17	10.32
10.02	10.17	7.0	10.32	10.47
10.16	10.31	7.1	10.47	10.62
10.31	10.46	7.2	10.61	10.77
10.45	10.60	7.3	10.76	10.92
10.59	10.75	7.4	10.91	11.07
10.74	10.90	7.5	11.06	11.22
10.88	11.04	7.6	11.20	11.37
11.02	11.19	7.7	11.35	11.52
11.16	11.33	7.8	11.50	11.67
11.31	11.48	7.9	11.65	11.82
11.45	11.62	8.0	11.79	11.97
11.59	11.77	8.1	11.94	12.12
11.74	11.91	8.2	12.09	12.26
11.88	12.06	8.3	12.24	12.41
12.02	12.20	8.4	12.38	12.56
12.17	12.35	8.5	12.53	12.71
12.31	12.49	8.6	12.68	12.84
12.45	12.64	8.7	12.82	13.01
12.60	12.78	8.8	12.97	13.16
12.74	12.93	8.9	13.12	1331
12.88	13.07	9.0	13.27	13.46
13.03	13.22	9.1	13.41	13.61
13.17	13.36	9.2	13.56	13.76
13.31	13.51	9.3	13.71	13.91
13.46	13.66	9.4	13.86	14.06
13.60	13.80	9.5	14.00	14.21
13.74	13.95	9.6	14.15	14.36
13.88	14.09	9.7	14.30	14.51
14.03	14.24	9.8	14.45	14.66
14.17	14.38	9.9	14.59	14.81
14.31	14.53	10.0	14.74	14.96

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
139	140		141	142
1.517	1.539	1.0	1.561	1.584
1.669	1.693	1.1	1.718	1.742
1.821	1.847	1.2	1.874	1.900
1.973	2.001	1.3	2.030	2.059
2.124	2.155	1.4	2.186	2.217
2.276	2.309	1.5	2.342	2.376
2.428	2.463	1.6	2.498	2.534
2.580	2.617	1.7	2.654	2.692
2.731	2.771	1.8	2.811	2.851
2.883	2.925	1.9	2.967	3.009
3.035	3.079	2.0	3.123	3.167
3.187	3.233	2.1	3.279	3.326
3.338	3.387	2.2	3.435	3.484
3.490	3.541	2.3	3.591	3.642
3.642	3.695	2.4	3.747	3.801
3.794	3.848	2.5	3.904	3.959
3.945	4.002	2.6	4.060	4.118
4.097	4.156	2.7	4.216	4.276
4.249	4.310	2.8	4.372	4.434
4.401	4.464	2.9	4.528	4.593
4.552	4.618	3.0	4.684	4.751
4.704	4.772	3.1	4.840	4.909
4.856	4.926	3.2	4.997	5.068
5.008	5.080	3.3	5.153	5.226
5.159	5.234	3.4	5.309	5.384
5.311	5.388	3.5	5.465	5.543
5.463	5.542	3.6	5.621	5.701
5.615	5.696	3.7	5.777	5.860
5.766	5.850	3.8	5.934	6.018
5.918	6.004	3.9	6.090	6.176
6.070	6.158	4.0	6.246	6.335
6.222	6.311	4.1	6.402	6.493
6.373	6.465	4.2	6.558	6.651
6.525	6.619	4.3	6.714	6.810
6.677	6.773	4.4	6.870	6.968
6.829	6.927	4.5	7.027	7.127
6.980	7.081	4.6	7.183	7.285
7.132	7.235	4.7	7.339	7.443
7.284	7.389	4.8	7.495	7.602
7.436	7.543	4.9	7.651	7.760
7.587	7.697	5.0	7.807	7.918
7.739	7.851	5.1	7.963	8.077
7.891	8.005	5.2	8.120	8.235
8.043	8.159	5.3	8.276	8.393
8.194	8.313	5.4	8.432	8.552

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
139	140		141	142
8.346	8.467	5.5	8.588	8.710
8.498	8.621	5.6	8.744	8.869
8.650	8.774	5.7	8.900	9.027
8.801	8.928	5.8	9.056	9.185
8.953	9.082	5.9	9.213	9.344
9.105	9.236	6.0	9.369	9.502
9.257	9.390	6.1	9.525	9.660
9.408	9.544	6.2	9.681	9.819
9.560	9.698	6.3	9.837	9.977
9.712	9.852	6.4	9.993	10.14
9.864	10.01	6.5	10.15	10.29
10.02	10.16	6.6	10.31	10.45
10.17	10.31	6.7	10.46	10.61
10.32	10.47	6.8	10.62	10.77
10.47	10.62	6.9	10.77	10.93
10.62	10.78	7.0	10.93	11.09
10.77	10.93	7.1	11.09	11.24
10.93	11.08	7.2	11.24	11.40
11.08	11.24	7.3	11.40	11.56
11.23	11.39	7.4	11.55	11.72
11.38	11.55	7.5	11.71	11.88
11.53	11.70	7.6	11.87	12.04
11.68	11.85	7.7	12.02	12.19
11.84	12.01	7.8	12.18	12.35
11.99	12.16	7.9	12.34	12.51
12.14	12.32	8.0	12.49	12.67
12.29	12.47	8.1	12.65	12.83
12.44	12.62	8.2	12.80	12.99
12.59	12.78	8.3	12.96	13.14
12.75	12.93	8.4	13.12	13.30
12.90	13.08	8.5	13.27	13.46
13.05	13.24	8.6	13.43	13.62
13.20	13.39	8.7	13.58	13.78
13.35	13.55	8.8	13.74	13.94
13.51	13.70	8.9	13.90	14.09
13.66	13.85	9.0	14.05	14.25
13.81	14.01	9.1	14.21	14.41
13.96	14.16	9.2	14.37	14.57
14.11	14.32	9.3	14.52	14.73
14.26	14.47	9.4	14.68	14.89
14.42	14.62	9.5	14.83	15.04
14.57	14.78	9.6	14.99	15.20
14.72	14.93	9.7	15.15	15.36
14.87	15.09	9.8	15.30	15.52
15.02	15.24	9.9	15.46	15.68
15.17	15.39	10.0	15.61	15.84

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
143	144		145	146
1.606	1.629	1.0	1.651	1.674
1.767	1.791	1.1	1.816	1.842
1.927	1.954	1.2	1.982	2.009
2.088	2.117	1.3	2.147	2.176
2.248	2.280	1.4	2.312	2.344
2.409	2.443	1.5	2.477	2.511
2.570	2.606	1.6	2.642	2.679
2.730	2.769	1.7	2.807	2.846
2.891	2.931	1.8	2.972	3.013
3.052	3.094	1.9	3.137	3.181
3.212	3.257	2.0	3.303	3.348
3.373	3.420	2.1	3.468	3.516
3.533	3.583	2.2	3.633	3.683
3.694	3.746	2.3	3.798	3.851
3.855	3.909	2.4	3.963	4.018
4.015	4.072	2.5	4.128	4.185
4.176	4.234	2.6	4.293	4.353
4.336	4.397	2.7	4.459	4.520
4.497	4.560	2.8	4.624	4.688
4.658	4.723	2.9	4.789	4.855
4.818	4.886	3.0	4.954	5.022
4.979	5.049	3.1	5.119	5.190
5.139	5.212	3.2	5.284	5.357
5.300	5.374	3.3	5.449	5.525
5.461	5.537	3.4	5.614	5.692
5.621	5.700	3.5	5.780	5.860
5.782	5.863	3.6	5.945	6.027
5.942	6.026	3.7	6.110	6.194
6.103	6.189	3.8	6.275	6.362
6.264	6.352	3.9	6.440	6.529
6.424	6.514	4.0	6.605	6.697
6.585	6.677	4.1	6.770	6.864
6.745	6.840	4.2	6.935	7.031
6.906	7.003	4.3	7.101	7.199
7.067	7.166	4.4	7.266	7.366
7.227	7.329	4.5	7.431	7.534
7.388	7.492	4.6	7.596	7.701
7.548	7.654	4.7	7.761	7.869
7.709	7.817	4.8	7.926	8.036
7.870	7.980	4.9	8.091	8.203
8.030	8.143	5.0	8.256	8.371
8.191	8.306	5.1	8.422	8.538
8.352	8.469	5.2	8.587	8.706
8.512	8.632	5.3	8.752	8.873
8.673	8.794	5.4	8.917	9.040

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
143	144		145	146
8.833	8.957	5.5	9.082	9.208
8.994	9.120	5.6	9.247	9.375
9.155	9.283	5.7	9.412	9.543
9.315	9.446	5.8	9.578	9.710
9.476	9.609	5.9	9.743	9.878
9.636	9.772	6.0	9.908	10.04
9.797	9.934	6.1	10.07	10.21
9.958	10.10	6.2	10.24	10.38
10.12	10.26	6.3	10.40	10.55
10.28	10.42	6.4	10.57	10.71
10.44	10.59	6.5	10.73	10.88
10.60	10.75	6.6	10.90	11.05
10.76	10.91	6.7	11.06	11.22
10.92	11.07	6.8	11.23	11.38
11.08	11.24	6.9	11.39	11.55
11.24	11.40	7.0	11.56	11.72
11.40	11.56	7.1	11.72	11.89
11.56	11.73	7.2	11.89	12.05
11.72	11.89	7.3	12.05	12.22
11.88	12.05	7.4	12.22	12.39
12.05	12.21	7.5	12.38	12.56
12.21	12.38	7.6	12.55	12.72
12.37	12.54	7.7	12.72	12.89
12.53	12.70	7.8	12.88	13.06
12.69	12.87	7.9	13.05	13.23
12.85	13.03	8.0	13.21	13.39
13.01	13.19	8.1	13.38	13.56
13.17	13.35	8.2	13.54	13.73
13.33	13.52	8.3	13.71	13.90
13.49	13.68	8.4	13.87	14.06
13.65	13.84	8.5	14.04	14.23
13.81	14.01	8.6	14.20	14.40
13.97	14.17	8.7	14.37	14.57
14.13	14.33	8.8	14.53	14.73
14.29	14.49	8.9	14.70	14.90
14.45	14.66	9.0	14.86	15.07
14.62	14.82	9.1	15.03	15.23
14.78	14.98	9.2	15.19	15.40
14.94	15.15	9.3	15.36	15.57
15.10	15.31	9.4	15.52	15.74
15.26	15.47	9.5	15.69	15.90
15.42	15.63	9.6	15.85	16.07
15.58	15.80	9.7	16.02	16.24
15.74	15.96	9.8	16.18	16.41
15.90	16.12	9.9	16.35	16.57
16.06	16.29	10.0	16.51	16.74

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
147	148		149	150
1.697	1.720	1.0	1.744	1.767
1.867	1.892	1.1	1.918	1.944
2.037	2.064	1.2	2.092	2.121
2.206	2.236	1.3	2.267	2.297
2.376	2.408	1.4	2.441	2.474
2.546	2.581	1.5	2.615	2.651
2.715	2.753	1.6	2.790	2.827
2.885	2.925	1.7	2.964	3.004
3.055	3.097	1.8	3.139	3.181
3.225	3.269	1.9	3.313	3.358
3.394	3.441	2.0	3.487	3.534
3.564	3.613	2.1	3.662	3.711
3.734	3.785	2.2	3.836	3.888
3.903	3.957	2.3	4.010	4.064
4.073	4.129	2.4	4.185	4.241
4.243	4.301	2.5	4.359	4.418
4.413	4.473	2.6	4.534	4.595
4.582	4.645	2.7	4.708	4.771
4.752	4.817	2.8	4.882	4.948
4.922	4.989	2.9	5.057	5.125
5.091	5.161	3.0	5.231	5.301
5.261	5.333	3.1	5.405	5.478
5.431	5.505	3.2	5.580	5.655
5.601	5.677	3.3	5.754	5.832
5.770	5.849	3.4	5.928	6.008
5.940	6.021	3.5	6.103	6.185
6.110	6.193	3.6	6.277	6.362
6.280	6.365	3.7	6.452	6.538
6.449	6.537	3.8	6.626	6.715
6.619	6.709	3.9	6.800	6.892
6.789	6.881	4.0	6.975	7.069
6.958	7.053	4.1	7.149	7.245
7.128	7.225	4.2	7.323	7.422
7.298	7.397	4.3	7.498	7.599
7.468	7.569	4.4	7.672	7.775
7.637	7.742	4.5	7.846	7.952
7.807	7.914	4.6	8.021	8.129
7.977	8.086	4.7	8.195	8.306
8.146	8.258	4.8	8.370	8.482
8.316	8.430	4.9	8.544	8.659
8.486	8.602	5.0	8.718	8.836
8.656	8.774	5.1	8.893	9.012
8.825	8.946	5.2	9.067	9.189
8.995	9.118	5.3	9.241	9.366
9.165	9.290	5.4	9.416	9.543

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
147	148		149	150
9.334	9.462	5.5	9.590	9.719
9.504	9.634	5.6	9.765	9.896
9.674	9.806	5.7	9.939	10.07
9.844	9.978	5.8	10.11	10.25
10.01	10.15	5.9	10.29	10.43
10.18	10.32	6.0	10.46	10.60
10.35	10.49	6.1	10.64	10.78
10.52	10.67	6.2	10.81	10.96
10.69	10.84	6.3	10.99	11.13
10.86	11.01	6.4	11.16	11.31
11.03	11.18	6.5	11.33	11.49
11.20	11.35	6.6	11.51	11.66
11.37	11.53	6.7	11.68	11.84
11.54	11.70	6.8	11.86	12.02
11.71	11.87	6.9	12.03	12.19
11.88	12.04	7.0	12.21	12.37
12.05	12.21	7.1	12.38	12.55
12.22	12.39	7.2	12.55	12.72
12.39	12.56	7.3	12.73	12.90
12.56	12.73	7.4	12.90	13.08
12.73	12.90	7.5	13.08	13.25
12.90	13.07	7.6	13.25	13.43
13.07	13.25	7.7	13.43	13.61
13.24	13.42	7.8	13.60	13.78
13.41	13.59	7.9	13.77	13.96
13.58	13.76	8.0	13.95	14.14
13.75	13.93	8.1	14.12	14.31
13.92	14.11	8.2	14.30	14.49
14.09	14.28	8.3	14.47	14.67
14.26	14.45	8.4	14.65	14.84
14.43	14.62	8.5	14.82	15.02
14.60	14.79	8.6	15.00	15.20
14.77	14.97	8.7	15.17	15.37
14.94	15.14	8.8	15.34	15.55
15.10	15.31	8.9	15.52	15.73
15.27	15.48	9.0	15.69	15.90
15.44	15.66	9.1	15.87	16.08
15.61	15.83	9.2	16.04	16.26
15.78	16.00	9.3	16.22	16.43
15.95	16.17	9.4	16.39	16.61
16.12	16.34	9.5	16.56	16.79
16.29	16.52	9.6	16.74	16.96
16.46	16.69	9.7	16.91	17.14
16.63	16.86	9.8	17.09	17.32
16.80	17.03	9.9	17.26	17.49
16.97	17.20	10.0	17.44	17.67

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
151	152		153	154
1.791	1.815	1.0	1.839	1.863
1.970	1.996	1.1	2.022	2.049
2.149	2.177	1.2	2.206	2.235
2.328	2.359	1.3	2.390	2.421
2.507	2.540	1.4	2.574	2.608
2.686	2.722	1.5	2.758	2.794
2.865	2.903	1.6	2.942	2.980
3.044	3.085	1.7	3.126	3.167
3.223	3.266	1.8	3.309	3.353
3.402	3.448	1.9	3.493	3.539
3.582	3.629	2.0	3.677	3.725
3.761	3.811	2.1	3.861	3.912
3.940	3.992	2.2	4.045	4.098
4.119	4.174	2.3	4.229	4.284
4.298	4.355	2.4	4.412	4.470
4.477	4.536	2.5	4.596	4.657
4.656	4.718	2.6	4.780	4.843
4.835	4.899	2.7	4.964	5.029
5.014	5.081	2.8	5.148	5.215
5.193	5.262	2.9	5.332	5.402
5.372	5.444	3.0	5.516	5.588
5.551	5.625	3.1	5.699	5.774
5.731	5.807	3.2	5.883	5.960
5.910	5.988	3.3	6.067	6.147
6.089	6.170	3.4	6.251	6.333
6.268	6.351	3.5	6.435	6.519
6.447	6.532	3.6	6.619	6.706
6.626	6.714	3.7	6.803	6.892
6.805	6.895	3.8	6.986	7.078
6.984	7.077	3.9	7.170	7.264
7.163	7.258	4.0	7.354	7.451
7.342	7.440	4.1	7.538	7.637
7.521	7.621	4.2	7.722	7.823
7.700	7.803	4.3	7.906	8.009
7.879	7.984	4.4	8.090	8.196
8.059	8.166	4.5	8.273	8.382
8.238	8.347	4.6	8.457	8.568
8.417	8.529	4.8	8.641	8.754
8.596	8.710	4.8	8.825	8.941
8.775	8.891	4.9	9.009	9.127
8.954	9.073	5.0	9.193	9.313
9.133	9.254	5.1	9.377	9.500
9.312	9.436	5.2	9.560	9.686
9.491	9.617	5.3	9.744	9.872
9.670	9.799	5.4	9.928	10.06

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
151	152		153	154
9.849	9.980	5.5	10.11	10.24
10.03	10.16	5.6	10.30	10.43
10.21	10.34	5.7	10.48	10.62
10.39	10.52	5.8	10.66	10.80
10.57	10.71	5.9	10.85	10.99
10.74	10.89	6.0	11.03	11.18
10.92	11.07	6.1	11.22	11.36
11.10	11.25	6.2	11.40	11.55
11.28	11.43	6.3	11.58	11.73
11.46	11.61	6.4	11.77	11.92
11.64	11.79	6.5	11.95	12.11
11.82	11.98	6.6	12.13	12.29
12.00	12.16	6.7	12.32	12.48
12.18	12.34	6.8	12.50	12.67
12.36	12.52	6.9	12.69	12.85
12.54	12.70	7.0	12.87	13.04
12.71	12.88	7.1	13.05	13.22
12.89	13.06	7.2	13.24	13.41
13.07	13.25	7.3	13.42	13.60
13.25	13.43	7.4	13.61	13.78
13.43	13.61	7.5	13.79	13.97
13.61	13.79	7.6	13.97	14.16
13.79	13.97	7.7	14.16	14.34
13.97	14.15	7.8	14.34	14.53
14.15	14.34	7.9	14.52	14.71
14.33	14.52	8.0	14.71	14.90
14.51	14.70	8.1	14.89	15.09
14.68	14.88	8.2	15.08	15.27
14.86	15.06	8.3	15.26	15.46
15.04	15.24	8.4	15.44	15.65
15.22	15.42	8.5	15.63	15.83
15.40	15.61	8.6	15.81	16.02
15.58	15.79	8.7	16.00	16.21
15.76	15.97	8.8	16.18	16.39
15.94	16.15	8.9	16.36	16.58
16.12	16.33	9.0	16.55	16.76
16.30	16.51	9.1	16.73	16.95
16.48	16.69	9.2	16.91	17.14
16.65	16.88	9.3	17.10	17.32
16.83	17.06	9.4	17.28	17.51
17.01	17.24	9.5	17.47	17.70
17.19	17.42	9.6	17.65	17.88
17.37	17.60	9.7	17.83	18.07
17.55	17.78	9.8	18.02	18.25
17.73	17.96	9.9	18.20	18.44
17.91	18.15	10.0	18.39	18.63

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
155	156		157	158
1.887	1.911	1.0	1.936	1.961
2.076	2.102	1.1	2.130	2.157
2.264	2.294	1.2	2.323	2.353
2.453	2.485	1.3	2.517	2.549
2.642	2.676	1.4	2.710	2.745
2.830	2.867	1.5	2.904	2.941
3.019	3.058	1.6	3.097	3.137
3.208	3.249	1.7	3.291	3.333
3.396	3.440	1.8	3.485	3.529
3.585	3.632	1.9	3.678	3.725
3.774	3.823	2.0	3.872	3.921
3.963	4.014	2.1	4.065	4.117
4.151	4.205	2.2	4.259	4.313
4.340	4.396	2.3	4.453	4.510
4.529	4.587	2.4	4.646	4.706
4.717	4.778	2.5	4.840	4.902
4.906	4.969	2.6	5.033	5.098
5.095	5.161	2.7	5.227	5.294
5.283	5.352	2.8	5.421	5.490
5.472	5.543	2.9	5.614	5.686
5.661	5.734	3.0	5.808	5.882
5.849	5.925	3.1	6.001	6.078
6.038	6.116	3.2	6.195	6.274
6.227	6.307	3.3	6.389	6.470
6.416	6.499	3.4	6.582	6.666
6.604	6.690	3.5	6.776	6.862
6.793	6.881	3.6	6.969	7.058
6.982	7.072	3.7	7.163	7.254
7.170	7.263	3.8	7.357	7.451
7.359	7.454	3.9	7.550	7.647
7.548	7.645	4.0	7.744	7.843
7.736	7.837	4.1	7.937	8.039
7.925	8.028	4.2	8.131	8.235
8.114	8.219	4.3	8.324	8.431
8.302	8.410	4.4	8.518	8.627
8.491	8.601	4.5	8.712	8.823
8.680	8.792	4.6	8.905	9.019
8.869	8.983	4.7	9.099	9.215
9.057	9.174	4.8	9.292	9.411
9.246	9.366	4.9	9.486	9.607
9.435	9.557	5.0	9.680	9.803
9.623	9.748	5.1	9.873	10.00
9.812	9.939	5.2	10.07	10.20
10.00	10.13	5.3	10.26	10.39
10.19	10.32	5.4	10.45	10.59

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
155	156		157	158
10.38	10.51	5.5	10.65	10.78
10.57	10.70	5.6	10.84	10.98
10.76	10.89	5.7	11.03	11.18
10.94	11.09	5.8	11.23	11.37
11.13	11.28	5.9	11.42	11.57
11.32	11.47	6.0	11.62	11.76
11.51	11.66	6.1	11.81	11.96
11.70	11.85	6.2	12.00	12.16
11.89	12.04	6.3	12.20	12.35
12.08	12.23	6.4	12.39	12.55
12.26	12.42	6.5	12.58	12.74
12.45	12.61	6.6	12.78	12.94
12.64	12.81	6.7	12.97	13.14
12.83	13.00	6.8	13.16	13.33
13.02	13.19	6.9	13.36	13.53
13.21	13.38	7.0	13.55	13.72
13.40	13.57	7.1	13.75	13.92
13.59	13.76	7.2	13.94	14.12
13.77	13.95	7.3	14.13	14.31
13.96	14.14	7.4	14.33	14.51
14.15	14.34	7.5	14.52	14.70
14.34	14.53	7.6	14.71	14.90
14.53	14.72	7.7	14.91	15.10
14.72	14.91	7.8	15.10	15.29
14.91	15.10	7.9	15.29	15.49
15.10	15.29	8.0	15.49	15.69
15.28	15.48	8.1	15.68	15.88
15.47	15.67	8.2	15.87	16.08
15.66	15.86	8.3	16.07	16.27
15.85	16.06	8.4	16.26	16.47
16.04	16.25	8.5	16.46	16.67
16.23	16.44	8.6	16.65	16.86
16.42	16.63	8.7	16.84	17.06
16.60	16.82	8.8	17.04	17.25
16.79	17.01	8.9	17.23	17.45
16.98	17.20	9.0	17.42	17.65
17.17	17.39	9.1	17.62	17.84
17.36	17.58	9.2	17.81	18.04
17.55	17.78	9.3	18.00	18.23
17.74	17.97	9.4	18.20	18.43
17.93	18.16	9.5	18.39	18.63
18.11	18.35	9.6	18.58	18.82
18.30	18.54	9.7	18.78	19.02
18.49	18.73	9.8	18.97	19.21
18.68	18.92	9.9	19.17	19.41
18.87	19.11	10.0	19.36	19.61

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
159	160		161	162
1.986	2.011	1.0	2.036	2.061
2.184	2.212	1.1	2.239	2.267
2.383	2.413	1.2	2.443	2.473
2.581	2.614	1.3	2.647	2.680
2.780	2.815	1.4	2.850	2.886
2.978	3.016	1.5	3.054	3.092
3.177	3.217	1.6	3.257	3.298
3.375	3.418	1.7	3.461	3.504
3.574	3.619	1.8	3.664	3.710
3.773	3.820	1.9	3.868	3.916
3.971	4.021	2.0	4.072	4.122
4.170	4.222	2.1	4.275	4.329
4.368	4.423	2.2	4.479	4.535
4.567	4.624	2.3	4.682	4.741
4.765	4.825	2.4	4.886	4.947
4.964	5.027	2.5	5.090	5.153
5.162	5.228	2.6	5.293	5.359
5.361	5.429	2.7	5.497	5.565
5.560	5.630	2.8	5.700	5.771
5.758	5.831	2.9	5.904	5.977
5.957	6.032	3.0	6.107	6.184
6.155	6.233	3.1	6.311	6.390
6.354	6.434	3.2	6.515	6.596
6.552	6.635	3.3	6.718	6.802
6.751	6.836	3.4	6.922	7.008
6.949	7.037	3.5	7.125	7.214
7.148	7.238	3.6	7.329	7.420
7.347	7.439	3.7	7.533	7.626
7.545	7.640	3.8	7.736	7.833
7.744	7.841	3.9	7.940	8.039
7.942	8.042	4.0	8.143	8.245
8.141	8.244	4.1	8.347	8.451
8.339	8.445	4.2	8.550	8.657
8.538	8.646	4.3	8.754	8.863
8.736	8.847	4.4	8.958	9.069
8.935	9.048	4.5	9.161	9.275
9.134	9.249	4.6	9.365	9.482
9.332	9.450	4.7	9.568	9.688
9.531	9.651	4.8	9.772	9.894
9.729	9.852	4.9	9.976	10.10
9.928	10.05	5.0	10.18	10.31
10.13	10.25	5.1	10.38	10.51
10.32	10.46	5.2	10.59	10.72
10.52	10.66	5.3	10.79	10.92
10.72	10.86	5.4	10.99	11.13

Volume in cubic metres

Mid-diameter in centimetres		Length in metres	Mid-diameter in centimetres	
159	160		161	162
10.92	11.06	5.5	11.20	11.34
11.12	11.26	5.6	11.40	11.54
11.32	11.46	5.7	11.60	11.75
11.52	11.66	5.8	11.81	11.95
11.71	11.86	5.9	12.01	12.16
11.91	12.06	6.0	12.21	12.37
12.11	12.26	6.1	12.42	12.57
12.31	12.47	6.2	12.62	12.78
12.51	12.67	6.3	12.83	12.99
12.71	12.87	6.4	13.03	13.19
12.91	13.07	6.5	13.23	13.40
13.10	13.27	6.6	13.44	13.60
13.30	13.47	6.7	13.64	13.81
13.50	13.67	6.8	13.84	14.02
13.70	13.87	6.9	14.05	14.22
13.90	14.07	7.0	14.25	14.43
14.10	14.28	7.1	14.45	14.63
14.30	14.48	7.2	14.66	14.84
14.49	14.68	7.3	14.86	15.05
14.69	14.88	7.4	15.07	15.25
14.89	15.08	7.5	15.27	15.46
15.09	15.28	7.6	15.47	15.67
15.29	15.48	7.7	15.68	15.87
15.49	15.68	7.8	15.88	16.08
15.69	15.88	7.9	16.08	16.28
15.88	16.08	8.0	16.29	16.49
16.08	16.29	8.1	16.49	16.70
16.28	16.49	8.2	16.69	16.90
16.48	16.69	8.3	16.90	17.11
16.68	16.89	8.4	17.10	17.31
16.88	17.09	8.5	17.30	17.52
17.08	17.29	8.6	17.51	17.73
17.27	17.49	8.7	17.71	17.93
17.47	17.69	8.8	17.92	18.14
17.67	17.89	8.9	18.12	18.34
17.87	18.10	9.0	18.32	18.55
18.07	18.30	9.1	18.53	18.76
18.27	18.50	9.2	18.73	18.96
18.47	18.70	9.3	18.93	19.17
18.66	18.90	9.4	19.14	19.38
18.86	19.10	9.5	19.34	19.58
19.06	19.30	9.6	19.54	19.79
19.26	19.50	9.7	19.75	19.99
19.46	19.70	9.8	19.95	20.20
19.66	19.91	9.9	20.15	20.41
19.86	20.11	10.0	20.36	20.61

Further information

1. Forestry Commission publications:
 - Booklet 37 — Volume Tables for Smallwood and Round Pitwood (1973).
 - Booklet 39 — Forest Mensuration Handbook (1985).
 - Booklet 48 — Yield Models for Forest Management (1981).
 - Booklet 49 — Timber Measurement – A Field Guide (1983).
 - Field Book 1 — Top Diameter Sawlog Tables (1987).
 - Field Book 2 — Thinning Control (1988).

2. Advice on any matter relating to timber measurement is available from:

Mensuration Officer,
Forestry Commission Research Station,
Alice Holt Lodge,
Wrecclesham,
FARNHAM,
Surrey,
GU10 4LH

Tel: Bentley (0420) 22255





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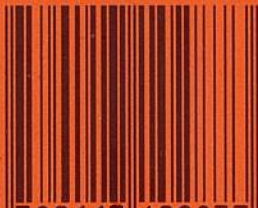
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