Clamping Factors

(Compression Clamps only)

This section provides clamping correction factors for compression clamps that can be used to solve the equations found in the online help.

Clamping Factors for 1 mm Ring Sample

Table 1: Clamping Factors (Fe) for 1 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
1	5	4	0.7669
1.5	5	4	0.8026
2	5	4	0.8207
2.5	5	4	0.8314
3	5	4	0.8383
3.5	5	4	0.8430
4	5	4	0.8464
4.5	5	4	0.8488
5	5	4	0.8507
1	10	9	0.7669
1.5	10	9	0.8026
2	10	9	0.8207
2.5	10	9	0.8314
3	10	9	0.8383
3.5	10	9	0.8430

Table 1: Clamping Factors (Fe) for 1 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
4	10	9	0.8464
4.5	10	9	0.8488
5	10	9	0.8507
1	15	14	0.7669
1.5	15	14	0.8026
2	15	14	0.8207
2.5	15	14	0.8314
3	15	14	0.8383
3.5	15	14	0.8430
4	15	14	0.8464
4.5	15	14	0.8488
5	15	14	0.8507
1	20	19	0.7669
1.5	20	19	0.8026
2	20	19	0.8207
2.5	20	19	0.8314
3	20	19	0.8383
3.5	20	19	0.8430
4	20	19	0.8464
4.5	20	19	0.8488
5	20	19	0.8507
1	25	24	0.7669
1.5	25	24	0.8026
2	25	24	0.8207
2.5	25	24	0.8314
3	25	24	0.8383
3.5	25	24	0.8430

Table 1: Clamping Factors (Fe) for 1 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
4	25	24	0.8464
4.5	25	24	0.8488
5	25	24	0.8507
1	30	29	0.7669
1.5	30	29	0.8026
2	30	29	0.8207
2.5	30	29	0.8314
3	30	29	0.8383
3.5	30	29	0.8430
4	30	29	0.8464
4.5	30	29	0.8488
5	30	29	0.8507
1	35	34	0.7669
1.5	35	34	0.8026
2	35	34	0.8207
2.5	35	34	0.8314
3	35	34	0.8383
3.5	35	34	0.8430
4	35	34	0.8464
4.5	35	34	0.8488
5	35	34	0.8507
1	40	39	0.7669
1.5	40	39	0.8026
2	40	39	0.8207
2.5	40	39	0.8314
3	40	39	0.8383
3.5	40	39	0.8430

Table 1: Clamping Factors (Fe) for 1 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
4	40	39	0.8464
4.5	40	39	0.8488
5	40	39	0.8507

Clamping Factors for 2 mm Ring Sample

Table 2: Clamping Factors (Fe) for 2 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
1	5	3	0.67337
1.5	5	3	0.73322
2	5	3	0.76688
2.5	5	3	0.78811
3	5	3	0.80256
3.5	5	3	0.81293
4	5	3	0.82069
4.5	5	3	0.82666
5	5	3	0.83137
1	10	8	0.67337
1.5	10	8	0.73322
2	10	8	0.76688
2.5	10	8	0.78811
3	10	8	0.80256
3.5	10	8	0.81293
4	10	8	0.82069
4.5	10	8	0.82666
5	10	8	0.83137
1	15	13	0.67337
1.5	15	13	0.73322
2	15	13	0.76688
2.5	15	13	0.78811
3	15	13	0.80256
3.5	15	13	0.81293
4	15	13	0.82069
4.5	15	13	0.82666

Table 2: Clamping Factors (Fe) for 2 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
5	15	13	0.83137
1	20	18	0.67337
1.5	20	18	0.73322
2	20	18	0.76688
2.5	20	18	0.78811
3	20	18	0.80256
3.5	20	18	0.81293
4	20	18	0.82069
4.5	20	18	0.82666
5	20	18	0.83137
1	25	23	0.67337
1.5	25	23	0.73322
2	25	23	0.76688
2.5	25	23	0.78811
3	25	23	0.80256
3.5	25	23	0.81293
4	25	23	0.82069
4.5	25	23	0.82666
5	25	23	0.83137
1	30	28	0.67337
1.5	30	28	0.73322
2	30	28	0.76688
2.5	30	28	0.78811
3	30	28	0.80256
3.5	30	28	0.81293
4	30	28	0.82069
4.5	30	28	0.82666

Table 2: Clamping Factors (Fe) for 2 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
5	30	28	0.83137
1	35	33	0.67337
1.5	35	33	0.73322
2	35	33	0.76688
2.5	35	33	0.78811
3	35	33	0.80256
3.5	35	33	0.81293
4	35	33	0.82069
4.5	35	33	0.82666
5	35	33	0.83137
1	40	38	0.67337
1.5	40	38	0.73322
2	40	38	0.76688
2.5	40	38	0.78811
3	40	38	0.80256
3.5	40	38	0.81293
4	40	38	0.82069
4.5	40	38	0.82666
5	40	38	0.83137

Clamping Factors for 3 mm Ring Sample

Table 3: Clamping Factors (Fe) for 3 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
1	5	2	0.6013
1.5	5	2	0.6734
2	5	2	0.7173
2.5	5	2	0.7464
3	5	2	0.7669
3.5	5	2	0.7820
4	5	2	0.7935
4.5	5	2	0.8026
5	5	2	0.8098
1	10	7	0.6013
1.5	10	7	0.6734
2	10	7	0.7173
2.5	10	7	0.7464
3	10	7	0.7669
3.5	10	7	0.7820
4	10	7	0.7935
4.5	10	7	0.8026
5	10	7	0.8098
1	15	12	0.6013
1.5	15	12	0.6734
2	15	12	0.7173
2.5	15	12	0.7464
3	15	12	0.7669
3.5	15	12	0.7820
4	15	12	0.7935
4.5	15	12	0.8026

Table 3: Clamping Factors (Fe) for 3 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
5	15	12	0.8098
1	20	17	0.6013
1.5	20	17	0.6734
2	20	17	0.7173
2.5	20	17	0.7464
3	20	17	0.7669
3.5	20	17	0.7820
4	20	17	0.7935
4.5	20	17	0.8026
5	20	17	0.8098
1	25	22	0.6013
1.5	25	22	0.6734
2	25	22	0.7173
2.5	25	22	0.7464
3	25	22	0.7669
3.5	25	22	0.7820
4	25	22	0.7935
4.5	25	22	0.8026
5	25	22	0.8098
1	30	27	0.6013
1.5	30	27	0.6734
2	30	27	0.7173
2.5	30	27	0.7464
3	30	27	0.7669
3.5	30	27	0.7820
4	30	27	0.7935
4.5	30	27	0.8026

Table 3: Clamping Factors (Fe) for 3 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
5	30	27	0.8098
1	35	32	0.6013
1.5	35	32	0.6734
2	35	32	0.7173
2.5	35	32	0.7464
3	35	32	0.7669
3.5	35	32	0.7820
4	35	32	0.7935
4.5	35	32	0.8026
5	35	32	0.8098
1	40	37	0.6013
1.5	40	37	0.6734
2	40	37	0.7173
2.5	40	37	0.7464
3	40	37	0.7669
3.5	40	37	0.7820
4	40	37	0.7935
4.5	40	37	0.8026
5	40	37	0.8098

Clamping Factors for 4 mm Ring Sample

Table 4: Clamping Factors (Fe) for 4 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
1	5	1	0.7752
1.5	5	1	0.8539
2	5	1	0.8572
2.5	5	1	0.8390
3	5	1	0.8150
3.5	5	1	0.7903
4	5	1	0.7669
4.5	5	1	0.7452
5	5	1	0.7254
1	10	6	0.7752
1.5	10	6	0.8539
2	10	6	0.8572
2.5	10	6	0.8390
3	10	6	0.8150
3.5	10	6	0.7903
4	10	6	0.7669
4.5	10	6	0.7452
5	10	6	0.7254
1	15	11	0.7752
1.5	15	11	0.8539
2	15	11	0.8572
2.5	15	11	0.8390
3	15	11	0.8150
3.5	15	11	0.7903
4	15	11	0.7669
4.5	15	11	0.7452

Table 4: Clamping Factors (Fe) for 4 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
5	15	11	0.7254
1	20	16	0.7752
1.5	20	16	0.8539
2	20	16	0.8572
2.5	20	16	0.8390
3	20	16	0.8150
3.5	20	16	0.7903
4	20	16	0.7669
4.5	20	16	0.7452
5	20	16	0.7254
1	25	21	0.7752
1.5	25	21	0.8539
2	25	21	0.8572
2.5	25	21	0.8390
3	25	21	0.8150
3.5	25	21	0.7903
4	25	21	0.7669
4.5	25	21	0.7452
5	25	21	0.7254
1	30	26	0.7752
1.5	30	26	0.8539
2	30	26	0.8572
2.5	30	26	0.8390
3	30	26	0.8150
3.5	30	26	0.7903
4	30	26	0.7669
4.5	30	26	0.7452

Table 4: Clamping Factors (Fe) for 4 mm Ring Sample

Thickness (mm)	OD (mm)	ID (mm)	Fe
5	30	26	0.7254
1	35	31	0.7752
1.5	35	31	0.8539
2	35	31	0.8572
2.5	35	31	0.8390
3	35	31	0.8150
3.5	35	31	0.7903
4	35	31	0.7669
4.5	35	31	0.7452
5	35	31	0.7254
1	40	36	0.7752
1.5	40	36	0.8539
2	40	36	0.8572
2.5	40	36	0.8390
3	40	36	0.8150
3.5	40	36	0.7903
4	40	36	0.7669
4.5	40	36	0.7452
5	40	36	0.7254

Clamping Factors for Square Sample

Table 5: Clamping Factor (Fe) for Square Sample

Thickness (mm)	Length (mm)	Fe
1	5	0.4647
1.5	5	0.5550
2	5	0.6326
2.5	5	0.6937
3	5	0.7404
3.5	5	0.7759
4	5	0.8032
4.5	5	0.8246
5	5	0.8417
1	10	0.3784
1.5	10	0.4193
2	10	0.4647
2.5	10	0.5108
3	10	0.5550
3.5	10	0.5958
4	10	0.6326
4.5	10	0.6651
5	10	0.6937
1	15	0.3558
1.5	15	0.3784
2	15	0.4050
2.5	15	0.4342
3	15	0.4647
3.5	15	0.4956
4	15	0.5259
4.5	15	0.5550

Table 5: Clamping Factor (Fe) for Square Sample

Thickness (mm)	Length (mm)	Fe
5	15	0.5827
1	20	0.3465
1.5	20	0.3610
2	20	0.3784
2.5	20	0.3980
3	20	0.4193
3.5	20	0.4417
4	20	0.4647
4.5	20	0.4879
5	20	0.5108
1	25	0.3415
1.5	25	0.3519
2	25	0.3643
2.5	25	0.3784
3	25	0.3940
3.5	25	0.4107
4	25	0.4282
4.5	25	0.4463
5	25	0.4647
1	30	0.3386
1.5	30	0.3465
2	30	0.3558
2.5	30	0.3665
3	30	0.3784
3.5	30	0.3913
4	30	0.4050
4.5	30	0.4193

Table 5: Clamping Factor (Fe) for Square Sample

Thickness (mm)	Length (mm)	Fe
5	30	0.4342
1	35	0.3366
1.5	35	0.3429
2	35	0.3503
2.5	35	0.3588
3	35	0.3682
3.5	35	0.3784
4	35	0.3894
4.5	35	0.4010
5	35	0.4131
1	40	0.3352
1.5	40	0.3404
2	40	0.3465
2.5	40	0.3534
3	40	0.3610
3.5	40	0.3694
4	40	0.3784
4.5	40	0.3880
5	40	0.3980

Clamping Factors for Solid Circular Sample

Table 6: Clamping Factor (Fe) for Solid Circular Sample

Thickness (mm)	Length (mm)	Fe
1	5	0.4871
1.5	5	0.5890
2	5	0.6708
2.5	5	0.7319
3	5	0.7771
3.5	5	0.8114
4	5	0.8385
4.5	5	0.8612
5	5	0.8814
1	10	0.3842
1.5	10	0.4334
2	10	0.4871
2.5	10	0.5400
3	10	0.5890
3.5	10	0.6327
4	10	0.6708
4.5	10	0.7037
5	10	0.7319
1	15	0.3570
1.5	15	0.3842
2	15	0.4162
2.5	15	0.4511
3	15	0.4871
3.5	15	0.5226
4	15	0.5568
4.5	15	0.5890

Table 6: Clamping Factor (Fe) for Solid Circular Sample

Thickness (mm)	Length (mm)	Fe
5	15	0.6187
1	20	0.3459
1.5	20	0.3632
2	20	0.3842
2.5	20	0.4079
3	20	0.4334
3.5	20	0.4601
4	20	0.4871
4.5	20	0.5139
5	20	0.5400
1	25	0.3401
1.5	25	0.3523
2	25	0.3672
2.5	25	0.3842
3	25	0.4030
3.5	25	0.4230
4	25	0.4440
4.5	25	0.4655
5	25	0.4871
1	30	0.3367
1.5	30	0.3459
2	30	0.3570
2.5	30	0.3699
3	30	0.3842
3.5	30	0.3997
4	30	0.4162
4.5	30	0.4334

Table 6: Clamping Factor (Fe) for Solid Circular Sample

Thickness (mm)	Length (mm)	Fe
5	30	0.4511
1	35	0.3345
1.5	35	0.3417
2	35	0.3504
2.5	35	0.3605
3	35	0.3718
3.5	35	0.3842
4	35	0.3974
4.5	35	0.4114
5	35	0.4260
1	40	0.3329
1.5	40	0.3388
2	40	0.3459
2.5	40	0.3541
3	40	0.3632
3.5	40	0.3733
4	40	0.3842
4.5	40	0.3957
5	40	0.4079