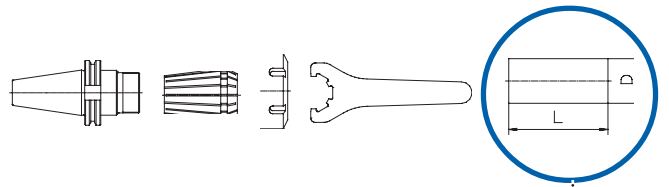


Technical Information

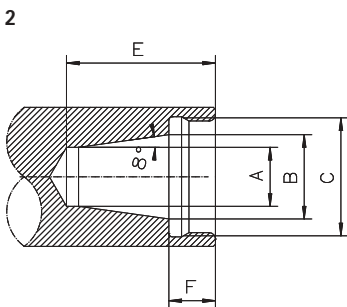
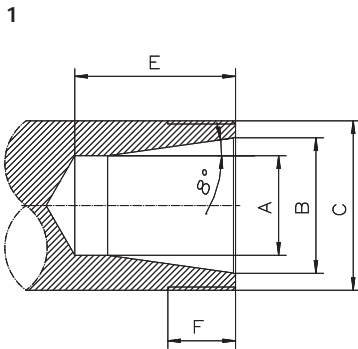
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ER COLLET CAVITY DIMENSIONS

■ DIMENSIONS FOR COLLET CAVITIES IN MACHINE SPINDLES AND MATCHING CLAMPING NUTS



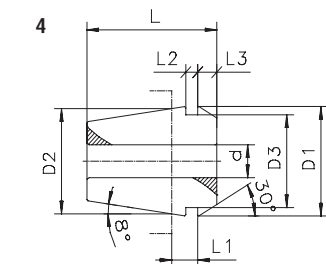
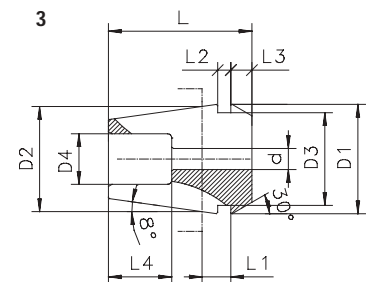
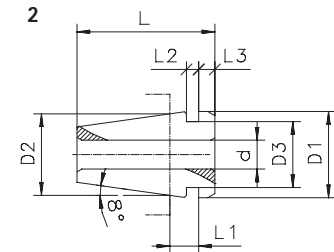
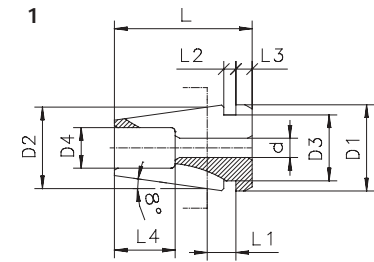
Size	Clamping Range	Hi-Q/ER	Hi-Q/ERC	Hi-Q/ERB	Hi-Q/ERBC	Hi-Q/ERM	Hi-Q/ERMC	ER MS	ER A	ER AC	A [mm]	B [mm]	C [mm]	E [mm]	F [mm]	Drawing
ER 11	0.5 ... 7.0	✓	✓								7.5	11	M14x.75	17	10	1
ER 16	0.5 ... 10.0	✓	✓	✓							10.5	16	M22x1.50	22	13	1
ER 20	0.5 ... 13.0	✓	✓	✓							13.5	20	M25x1.50	26.5	13.5	1
ER 25	0.5 ... 16.0	✓	✓	✓							18.0	25	M32x1.50	29	14	1
ER 32	1.0 ... 20.0	✓	✓	✓							23.5	32	M40x1.50	34	16	1
ER 40	2.0 ... 30.0	✓	✓	✓							30.5	40	M50x1.50	38	17	1
ER 50	4.0 ... 34.0	✓	✓								38.0	50	M64x2.00	48	24	1
ER 8	0.5 ... 5.0					✓	✓	✓			5.2	8	M10x0.75	13	7.5	1
ER 11	0.5 ... 7.0					✓	✓	✓			7.5	11	M13x0.75	17	10	1
ER 16	0.5 ... 10.0					✓	✓	✓			10.5	16	M19x1.00	22	13	1
ER 20	0.5 ... 13.0					✓	✓	✓			13.5	20	M24x1.00	26.5	13.5	1
ER 25	0.5 ... 16.0					✓	✓	✓			18.0	25	M30x1.00	29	14	1
ER 11	0.5 ... 7.0								✓		7.5	11	M18x1.00	23	7	2
ER 16	0.5 ... 10.0								✓	✓	10.5	16	M24x1.00	32	10	2
ER 20	0.5 ... 13.0								✓	✓	13.5	20	M28x1.50	37.5	11	2
ER 25	0.5 ... 16.0								✓	✓	18.0	25	M32x1.50	41	12	2
ER 32	1.0 ... 20.0								✓	✓	23.5	32	M40x1.50	48.0	14	2

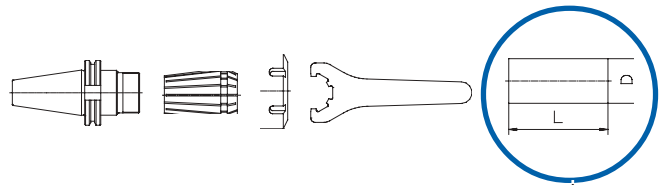
ER COLLETS

■ COLLETS TYPE ER PER DIN STD 6499-B

Size	d [mm]	D1 [mm]	D2 [mm]	D3 [mm]	D4 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	Drawing
ER 8	0.7 ... 2.5	8.5	8.0	6.5	4.0	13.5	2.98	1.2	1.5	6.0	1
ER 8	3.0 ... 5.0	8.5	8.0	6.5	--	13.5	2.98	1.2	1.5	--	2
ER 11	0.5 ... 2.5	11.5	11.0	9.5	5.0	18.0	3.80	2.0	2.5	9.0	3
ER 11	3.0 ... 7.0	11.5	11.0	9.5	--	18.0	3.80	2.0	2.5	--	4
ER 16	0.5 ... 4.5	17.0	16.0	13.8	7.5	27.5	6.26	2.7	4.0	10.0	3
ER 16	5.0 ... 10.0	17.0	16.0	13.8	--	27.5	6.26	2.7	4.0	--	4
ER 20	1.0 ... 6.5	21.0	20.0	17.4	9.0	31.5	6.36	2.8	4.8	13.0	3
ER 20	7.0 ... 13.0	21.0	20.0	17.4	--	31.5	6.36	2.8	4.8	--	4
ER 25	1.0 ... 7.5	26.0	25.0	22.0	12.0	34.0	6.66	3.1	5.0	15.0	3
ER 25	8.0 ... 16.0	26.0	25.0	22.0	--	34.0	6.66	3.1	5.0	--	4
ER 32	2.0 ... 3.5	33.0	32.0	29.2	15.0	40.0	7.16	3.6	5.5	20.0	3
ER 32	4.0 ... 7.5	33.0	32.0	29.2	15.0	40.0	7.16	3.6	5.5	15.0	3
ER 32	8.0 ... 20.0	33.0	32.0	29.2	--	40.0	7.16	3.6	5.5	--	4
ER 40	3.0 ... 3.5	41.0	40	36.2	20.0	46.0	7.66	4.1	7.0	21.0	3
ER 40	4.0 ... 8.5	41.0	40	36.2	20.0	46.0	7.66	4.1	7.0	18.0	3
ER 40	9.0 ... 30.0	41.0	40	36.2	--	46.0	7.66	4.1	7.0	--	4
ER 50	4.0 ... 10.0	52.0	50	46.0	20.0	60.0	12.60	5.5	8.5	26.0	3
ER 50	12.0 ... 34.0	52.0	50	46.0	--	60.0	12.60	5.5	8.5	--	4

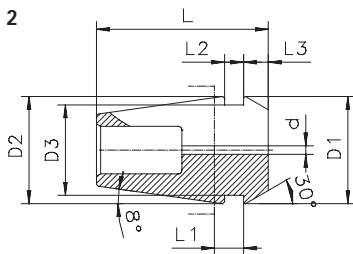
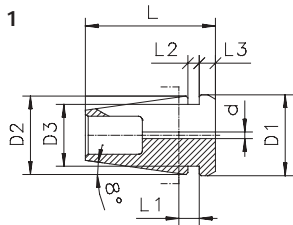
All ER collets per DIN STD 6499-B have a clamping range





ER-MB

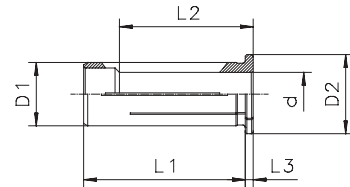
ER-MB MICROBORE COLLETS



Size	d [mm]	D1 [mm]	D2 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Drawing
ER 8-MB	0.2 ... 0.9	8.5	8.0	6.5	13.5	1.2	1.2	1.5	1
ER 11-MB	0.2 ... 0.9	11.5	11.0	9.5	18.0	2.0	2.0	2.5	2

The collet type ER-MB per DIN 6499 are only available in the above mentioned types. They have no clamping capacity. Only the nominal diameter with a maximum tolerance of h7 can be clamped!

Caution: Higher clamping force of the clamping nut means higher stress on the toolholder. REGO-FIX will not be responsible for damage to toolholders or spindles of other manufacturers. We also recommend the use of a REGO-FIX torque wrench on page 12-2 and tightening torque specifications on page 13-10.

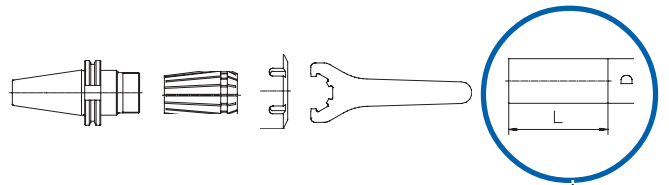


HS REDUCTION SLEEVES

Type	d	D1 [mm]	D2 [mm]	L1 [mm]	L2 [mm]	L3 [mm]
<i>HS 12</i>						
HS 12 / 3.000	3mm	12	16	40	29	4.0
HS 12 / 3.175	1/8"	12	16	40	29	4.0
HS 12 / 4.000	4mm	12	16	40	29	4.0
HS 12 / 4.763	3/16"	12	16	40	29	4.0
HS 12 / 5.000	5mm	12	16	40	29	4.0
HS 12 / 6.000	6mm	12	16	40	36	4.0
HS 12 / 6.350	1/4"	12	16	40	36	4.0
HS 12 / 7.000	7mm	12	16	40	37	4.0
HS 12 / 7.938	5/16"	12	16	40	37	4.0
HS 12 / 8.000	8mm	12	16	40	37	4.0
HS 12 / 9.000	9mm	12	16	40	37	4.0
HS 12 / 9.525	3/8"	12	16	40	40	4.0
HS 12 / 10.000	10mm	12	16	40	40	4.0
<i>HS 20</i>						
HS 20 / 3.000	3mm	20	25	50	28	4.0
HS 20 / 3.175	1/8"	20	25	50	28	4.0
HS 20 / 4.000	4mm	20	25	50	28	4.0
HS 20 / 4.763	3/16"	20	25	50	28	4.0
HS 20 / 5.000	5mm	20	25	50	28	4.0
HS 20 / 6.000	6mm	20	25	50	36	4.0
HS 20 / 6.350	1/4"	20	25	50	36	4.0
HS 20 / 7.000	7mm	20	25	50	38	4.0
HS 20 / 7.938	5/16"	20	25	50	37	4.0
HS 20 / 8.000	8mm	20	25	50	37	4.0
HS 20 / 9.000	9mm	20	25	50	38	4.0
HS 20 / 9.525	3/8"	20	25	50	38	4.0
HS 20 / 10.000	10mm	20	25	50	40	4.0
HS 20 / 12.000	12mm	20	25	50	45	4.0
HS 20 / 12.700	1/2"	20	25	50	45	4.0
HS 20 / 14.000	14mm	20	25	50	45	4.0
HS 20 / 15.875	5/8"	20	25	50	48	4.0
HS 20 / 16.000	16mm	20	25	50	48	4.0

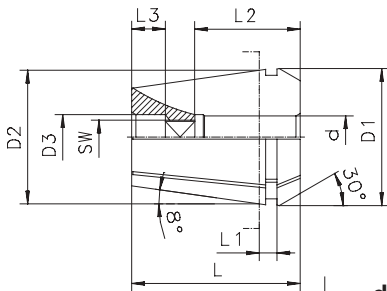
The above mentioned dimension reflect the newest DIN 69882-7 recommendation. There may be differences in the actual dimensions of HS reduction sleeves of previous production runs. Please call before placing order if you have any questions.

Type	d	D1 [mm]	D2 [mm]	L1 [mm]	L2 [mm]	L3 [mm]
<i>HS 32</i>						
HS 32 / 6.000	6mm	32	36	60	36	4.0
HS 32 / 6.350	1/4"	32	36	60	36	4.0
HS 32 / 7.000	7mm	32	36	60	37	4.0
HS 32 / 7.938	5/16"	32	36	60	36	4.0
HS 32 / 8.000	8mm	32	36	60	36	4.0
HS 32 / 9.000	9mm	32	36	60	37	4.0
HS 32 / 9.525	3/8"	32	36	60	37	4.0
HS 32 / 10.000	10mm	32	36	60	40	4.0
HS 32 / 12.000	12mm	32	36	60	45	4.0
HS 32 / 12.700	1/2"	32	36	60	45	4.0
HS 32 / 14.000	14mm	32	36	60	46	4.0
HS 32 / 15.875	5/8"	32	36	40	46	4.0
HS 32 / 16.000	16mm	32	36	60	48	4.0
HS 32 / 18.000	18mm	32	36	60	49	4.0
HS 32 / 19.050	3/4"	32	36	60	50	4.0
HS 32 / 20.000	20mm	32	36	60	50	4.0
HS 32 / 25.000	25mm	32	36	60	56	4.0
HS 32 / 25.400	1"	32	36	60	56	4.0
<i>HS 25</i>						
HS 25 / 3.000	3mm	25	30	56	29	4.0
HS 25 / 3.175	1/8"	25	30	56	29	4.0
HS 25 / 4.000	4mm	25	30	56	29	4.0
HS 25 / 4.763	3/16"	25	30	56	29	4.0
HS 25 / 5.000	5mm	25	30	56	29	4.0
HS 25 / 6.000	6mm	25	30	56	37	4.0
HS 25 / 6.350	1/4"	25	30	56	37	4.0
HS 25 / 7.000	7mm	25	30	56	37	4.0
HS 25 / 7.938	5/16"	25	30	56	37	4.0
HS 25 / 8.000	8mm	25	30	56	37	4.0
HS 25 / 9.000	9mm	25	30	56	38	4.0
HS 25 / 9.525	3/8"	25	30	56	38	4.0
HS 25 /10.000	10mm	25	30	56	40	4.0
HS 25 /12.000	12mm	25	30	56	46	4.0
HS 25 /12.700	1/2"	25	30	56	46	4.0
HS 25 /14.000	14mm	25	30	56	47	4.0
HS 25 /15.875	5/8"	25	30	56	48	4.0
HS 25 /16.000	16mm	25	30	56	48	4.0
HS 25 /18.000	18mm	25	30	56	48	4.0
HS 25 /19.050	3/4"	25	30	56	48	4.0
HS 25 /20.000	20mm	25	30	56	50	4.0



ER-GB (Metric Sizes)

ER-GB TAPPING COLLETS PER DIN STD 6499 - METRIC SIZES



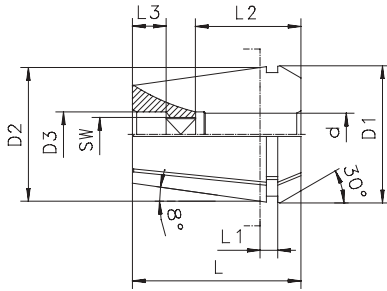
ER 16-GB	ER 20-GB	ER 25-GB	ER 32-GB	ER 40-GB
L = 27.5	L = 31.5	L = 34.0	L = 40.0	L = 46.0
L1 = 2.7	L1 = 2.8	L1 = 3.1	L1 = 3.6	L1 = 4.1
D1 = 16.8	D1 = 20.8	D1 = 25.8	D1 = 32.8	D1 = 40.8
D2 = 16.0	D2 = 20.0	D2 = 25.0	D2 = 32.0	D2 = 40.0

d [mm]	SW [mm]	L2 [mm]	D3 [mm]	L3 [mm]	L3 [mm]	L3 [mm]	L3 [mm]	L3 [mm]
4.0	3.15/3.2	18	4.5	5.5	9.5	12	18	---
4.5	3.4	18	5.0	5.5	9.5	12	18	---
5.0	4.0	18	5.5	5.5	9.5	12	18	---
5.5	4.3	18	6.0	5.5	9.5	12	18	---
5.5	4.5	18	6.0	5.5	9.5	12	18	---
6.0	4.5	18	6.5	4.5	8.5	11	18	23
6.0	4.9	18	6.5	4.5	8.5	11	17	23
6.2	5.0	18	6.7	4.5	8.5	11	17	23
6.3	5.0	18	6.8	4.5	8.5	11	17	23
7.0	5.5	18	7.5	3.5	7.5	10	16	22
7.1	5.6	18	7.6	3.5	7.5	10	16	22
8.0	6.2/6.3	22	8.6	---	2.5	5	11	17
8.5	6.5	22	9.0	---	2.5	5	11	17
9.0	7.0/7.1	22	9.6	---	2.5	4	10	16
10.0	8.0	25	10.5	---	---	---	7	13
10.5	8.0	25	11.0	---	---	---	7	13
11.0	9.0	25	11.5	---	---	---	6	12
11.2	9.0	25	11.7	---	---	---	6	12
12.0	9.0	25	12.5	---	---	---	6	12
12.5	10.0	25	13.0	---	---	---	5	11
14.0	11.0/11.2	25	14.7	---	---	---	4	10
15.0	12.0	25	15.5	---	---	---	4	10
16.0	12.0	25	16.5	---	---	---	3	9
17.0	13.0	25	17.5	---	---	---	3	9
18.0	14.0/14.5	25	18.5	---	---	---	3	8
20.0	16.0	28	20.5	---	---	---	3	4
22.0	18.0	28	22.5	---	---	---	---	4

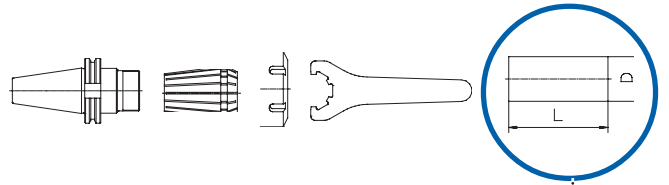
All dimensions in mm.

ER-GB (Inch Sizes)

■ ER-GB TAPPING COLLETS PER DIN STD 6499 - INCH SIZES

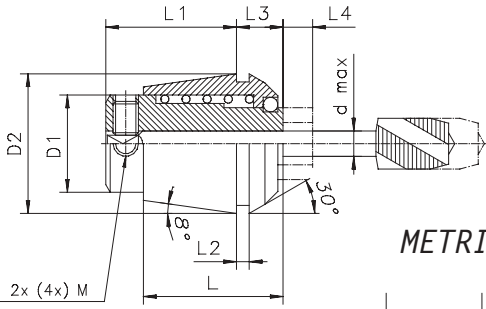


d [inch]	SW [inch]	L2 [mm]	D3 [mm]	<table border="1"> <thead> <tr> <th>ER 16-GB</th> <th>ER 20-GB</th> <th>ER 25-GB</th> <th>ER 32-GB</th> <th>ER 40-GB</th> </tr> </thead> <tbody> <tr> <td>L = 27.5</td> <td>L = 31.5</td> <td>L = 34.0</td> <td>L = 40.0</td> <td>L = 46.0</td> </tr> <tr> <td>L1 = 2.7</td> <td>L1 = 2.8</td> <td>L1 = 3.1</td> <td>L1 = 3.6</td> <td>L1 = 4.1</td> </tr> <tr> <td>D1 = 16.8</td> <td>D1 = 20.8</td> <td>D1 = 25.8</td> <td>D1 = 32.8</td> <td>D1 = 40.8</td> </tr> <tr> <td>D2 = 16.0</td> <td>D2 = 20.0</td> <td>D2 = 25.0</td> <td>D2 = 32.0</td> <td>D2 = 40.0</td> </tr> </tbody> </table>					ER 16-GB	ER 20-GB	ER 25-GB	ER 32-GB	ER 40-GB	L = 27.5	L = 31.5	L = 34.0	L = 40.0	L = 46.0	L1 = 2.7	L1 = 2.8	L1 = 3.1	L1 = 3.6	L1 = 4.1	D1 = 16.8	D1 = 20.8	D1 = 25.8	D1 = 32.8	D1 = 40.8	D2 = 16.0	D2 = 20.0	D2 = 25.0	D2 = 32.0	D2 = 40.0
				ER 16-GB	ER 20-GB	ER 25-GB	ER 32-GB	ER 40-GB																									
L = 27.5	L = 31.5	L = 34.0	L = 40.0	L = 46.0																													
L1 = 2.7	L1 = 2.8	L1 = 3.1	L1 = 3.6	L1 = 4.1																													
D1 = 16.8	D1 = 20.8	D1 = 25.8	D1 = 32.8	D1 = 40.8																													
D2 = 16.0	D2 = 20.0	D2 = 25.0	D2 = 32.0	D2 = 40.0																													
L3 [mm]	L3 [mm]	L3 [mm]	L3 [mm]	L3 [mm]																													
0.141	0.110	18	4.5	5.5	--	--	--	--																									
0.168	0.131	18	4.5	5.5	9.5	12	18	--																									
0.194	0.152	18	5.0	5.5	9.5	12	18	--																									
0.220	0.165	18	5.5	5.5	9.5	12	18	--																									
0.255	0.191	18	6.0	4.5	8.5	10	17	23																									
0.318	0.238	22	6.0	--	2.5	5	11	17																									
0.323	0.242	22	6.5	--	2.5	5	11	17																									
0.367	0.275	22	6.5	--	2.5	4	10	16																									
0.381	0.286	22	6.7	--	2.5	4	10	16																									
0.429	0.322	25	6.8	--	--	--	7	13																									
0.437	0.328	25	7.5	--	--	--	6	13																									
0.480	0.360	25	7.6	--	--	--	6	12																									
0.542	0.406	25	8.6	--	--	--	4	12																									
0.562	0.421	25	9.0	--	--	--	4	10																									
0.590	0.442	25	9.6	--	--	--	4	10																									
0.652	0.489	25	10.5	--	--	--	3	9																									
0.687	0.515	25	11.0	--	--	--	--	9																									
0.697	0.523	25	11.5	--	--	--	--	9																									
0.700	0.531	25	11.7	--	--	--	--	8																									
0.760	0.570	28	12.5	--	--	--	--	8																									
0.800	0.600	28	13.0	--	--	--	--	4																									



ET1

■ PCM ET1 TAPPING COLLETS PER DIN STD 6499



METRIC SIZES

Type	Range	d [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	M [mm]
ET1-12	M 0.5 ... M 4	3.55	7	11.5	18	16.5	2.5	5	5.5	2 x M 2.5
ET1-16	M 0.7 ... M 6	6.30	11	17.0	22	20.0	2.8	7	7.0	2 x M 4 4 x M 4
ET1-20	M 1 ... M 8 (M 10)	7.10	14	21.0	24	23.0	2.8	8	7.0	2 x M 4 2 x M 5
ET1-25	M 1 ... M 10 (M12)	10.00	19	26.0	26	24.0	3.0	10	8.0	2 x M 5 2 x M 6
ET1-32	M 4 ... M 12 (M 16)	12.50	23	33.0	33	32.0	3.0	11	10.0	2 x M 5 4 x M 6 4 x M 8
ET1-40	M 6 ... M 16 (M 20)	17.00	28	41.0	42	42.0	3.0	12	13.0	2 x M 6 2 x M 6 2 x M 8

(M= set screw)

INCH SIZES

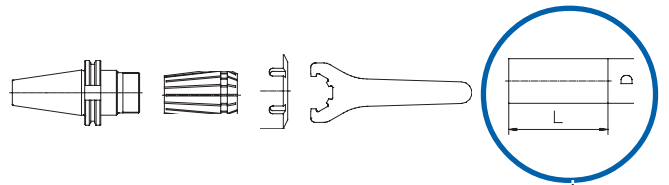
Type	Range	d [inch]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	M	M [UNF]
ET1-12	#0 ... #6 M 0.5 ... M 4	0.141	7	11.5	18	16.5	2.5	5	5.5	2	2 - 56
ET1-16	#0 ... #12 M 0.7 ... M 6	0.220	11	17.0	22	20.0	2.8	7	7.0	2 4	4 - 48 4 - 48
ET1-20	#0 ... 1/4" M 1 ... M 8	0.255	14	21.0	24	23.0	2.8	8	7	2 4	8 - 36 10 - 32
ET1-25	#0 ... 1/2" M 1 ... M 10	0.381	19	26.0	26	24.0	3.0	10	8.0	2 4	10 - 32 1/4 - 28
ET1-32	#8 ... 5/8" M 4 ... M 12	0.480	23	33.0	33	32.0	3.0	11	10.0	2 4	10 - 32 1/4 - 28
ET1-40	1/4" ... 7/8" M 6 ... M 16	0.697	28	41.0	42	42.0	3.0	12	13.0	2 4	1/4 - 28 5/16 - 24

(M= set screw)

DIMENSIONS OF TAPS

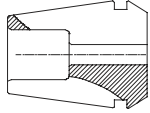
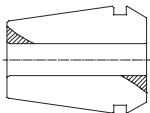
Thread		ISO 529		ISO 2283		DIN 371 (DIN 2181)		DIN 357 DIN 376		DIN 352		JAPAN JIS		US Standard	
[mm]	[inch]	[ø]	[o]	[ø]	[o]	[ø]	[o]	[ø]	[o]	[ø]	[o]	[ø]	[o]	[ø]"	[o]"
M 1.0	--	2.50	2.10	--	--	2.50	2.10	--	--	2.50	2.10	3.00	2.50	--	--
M 1.1	--	2.50	2.10	--	--	2.50	2.10	--	--	2.50	2.10	3.00	2.50	--	--
M 1.2	--	2.50	2.10	--	--	2.50	2.10	--	--	2.50	2.10	3.00	2.50	--	--
M 1.4	--	2.50	2.10	--	--	2.50	2.10	--	--	2.50	2.10	3.00	2.50	--	--
M 1.6	--	2.50	2.10	--	--	2.50	2.10	--	--	2.50	2.10	3.00	2.50	0.141	0.110
M 1.7	--	2.50	2.10	--	--	2.50	2.10	--	--	2.50	2.10	3.00	2.50	--	--
M 1.8	#0-6	2.50	2.10	--	--	2.50	2.10	--	--	2.50	2.10	3.00	2.50	0.141	0.110
M 2.0	--	2.80	2.10	2.50	2.00	2.50	2.10	--	--	2.80	2.10	3.00	2.50	0.141	0.110
M 2.2	1/16	2.80	2.10	2.80	2.24	2.50	2.10	--	--	2.80	2.10	3.00	2.50	0.141	0.110
M 2.3	--	2.80	2.10	2.80	2.24	2.50	2.10	--	--	2.80	2.10	3.00	2.50	--	--
M 2.5	3/32	2.80	2.10	2.80	2.24	2.50	2.10	--	--	2.80	2.10	3.00	2.50	0.141	0.110
M 2.6	--	2.80	2.10	2.80	2.24	2.50	2.10	--	--	2.80	2.10	3.00	2.50	--	--
M 3.0	1/8	3.15	2.50	3.15	2.50	3.50	2.70	3.00	--	3.50	2.70	4.00	3.00	0.141	0.110
M 3.5	--	3.55	2.80	3.55	2.80	4.00	3.00	2.50	2.10	4.00	3.00	4.00	3.00	0.141	0.110
--	#8	--	--	--	--	--	--	--	--	--	--	--	--	0.168	0.131
M 4.0	5/32	4.00	3.15	--	--	4.50	3.40	2.80	2.10	4.50	3.40	5.00	4.00	0.168	0.131
--	#10	--	--	--	--	--	--	--	--	--	--	--	--	0.194	0.152
M 4.5	3/16	4.50	3.55	--	--	6.00	4.90	3.50	2.70	6.00	4.90	5.00	4.00	0.194	0.152
M 5.0	--	5.00	4.00	--	--	6.00	4.90	3.50	2.70	6.00	4.90	5.50	4.50	0.194	0.152
--	#12	--	--	--	--	--	--	--	--	--	--	--	--	0.220	0.165
--	#14	--	--	--	--	--	--	--	--	--	--	--	--	0.255	0.191
M 6.0	1/4	6.30	5.00	--	--	6.00	4.90	4.50	3.40	6.00	4.90	6.00	4.50	0.255	0.191
M 7.0	5/16	7.10	5.60	--	--	7.00	5.50	5.50	4.30	6.00	4.90	6.20	5.00	0.318	0.238
M 8.0	--	8.00	6.30	--	--	8.00	6.20	6.00	4.90	6.00	4.90	6.20	5.00	0.318	0.238
--	7/16	--	--	--	--	--	--	--	--	--	--	--	--	0.323	0.242
M 9.0	--	9.00	7.10	--	--	9.00	7.00	7.00	5.50	7.00	5.50	7.00	5.50	--	--
M 10.0	3/8	10.00	8.00	--	--	10.00	8.00	7.00	5.50	7.00	5.50	7.00	5.50	0.381	0.286
M 11.0	--	8.00	6.30	--	--	--	--	8.00	6.20	8.00	6.20	8.00	6.20	--	--
M 12.0	1/2	9.00	7.10	9.00	--	--	--	9.00	7.00	9.00	7.00	8.50	6.50	0.367	0.275
M 14.0	9/16	11.20	9.00	11.20	--	--	--	11.00	9.00	11.00	9.00	10.50	8.00	0.429	0.322
--	1/8 PT	--	--	--	--	--	--	--	--	--	--	--	--	0.437	0.328
M 16.0	5/8	12.50	10.00	12.50	--	--	--	12.00	9.00	12.00	9.00	12.50	10.00	0.480	0.360
M 18.0	11/16	14.00	11.20	14.00	--	--	--	14.00	11.00	14.00	11.00	14.00	11.00	0.542	0.406
--	1/4 PT	--	--	--	--	--	--	--	--	--	--	--	--	0.562	0.421
--	3/4	--	--	--	--	--	--	--	--	--	--	--	--	0.590	0.442
M 20.0	13/16	14.00	11.20	14.00	--	--	--	16.00	12.00	16.00	12.00	15.00	12.00	0.652	0.489
--	1/2 PT	--	--	--	--	--	--	--	--	--	--	--	--	0.687	0.515
M 22.0	7/8	16.00	12.50	16.00	--	--	--	18.00	14.50	18.00	14.50	17.00	13.00	0.697	0.523
--	3/8 PT	--	--	--	--	--	--	--	--	--	--	--	--	0.700	0.531
M 24.0	15/16	18.00	14.00	18.00	--	--	--	18.00	14.50	18.00	14.50	19.00	15.00	0.760	0.570
--	1	--	--	--	--	--	--	--	--	--	--	--	--	0.800	0.600
M 27.0	1 1/16	20.00	16.00	20.00	--	--	--	20.00	16.00	20.00	16.00	20.00	15.00	0.896	0.672
M 30.0	1 3/16	20.00	16.00	20.00	--	--	--	22.00	18.00	22.00	18.00	23.00	23.17	1.021	0.766

All dimensions in mm (except US Standard in inch)
PT = Pipe Tap [ø] = Tap shank diameter [o] = Tap square size



COLLET CLASSIFICATION

CLASSIFICATION OF COLLETS

	Collets with Counter Bore [mm]	Collets with Counter Bore [inch]	Collets without Counter Bore [mm]	Collets without Counter Bore [inch]
Collet Types				
	Inside Diameter		Inside Diameter	
ER 8	1.0 ... 2.5	0.039 ... 0.098	3.0 ... 5.0	0.118 ... 0.197
ER 11	1.0 ... 2.5	0.039 ... 0.098	3.0 ... 7.0	0.118 ... 0.276
ER 16	1.0 ... 4.5	0.039 ... 0.177	5.0 ... 10.0	0.197 ... 0.394
ER 20	1.0 ... 6.5	0.039 ... 0.256	7.0 ... 13.0	0.276 ... 0.512
ER 25	1.0 ... 7.5	0.039 ... 0.295	8.0 ... 16.0	0.315 ... 0.630
ER 32	2.0 ... 7.5	0.079 ... 0.295	8.0 ... 20.0	0.315 ... 0.787
ER 40	3.0 ... 8.5	0.118 ... 0.335	9.0 ... 26.0	0.354 ... 1.024
ER 50	4.0 ... 10.0	0.157 ... 0.394	12.0 ... 34.0	0.394 ... 1.339
ER-GB 16-40	all diam.	all diam.	---	---
ER-MB 8-11	all diam.	all diam.	---	---

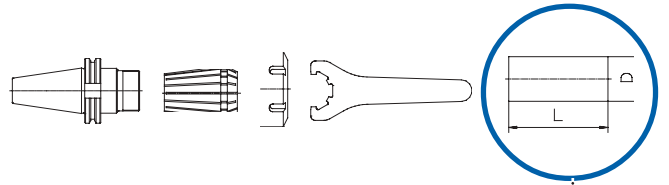
Please note that the smaller the bore (i.d.), the lower the tightening torque necessary to hold the tool securely!

The collets are divided into two categories, counter bore and non-counter bore. Please select the appropriate symbol based on collet type (e.g., ER 16) and clamping diameter from the table above. Then read the appropriate tightening torque from the table on page 13-10 under this symbol and the respective clamping nut type.

CLAMPING NUTS TIGHTENING TORQUE

■ MAXIMUM TIGHTENING TORQUE

Clamping Nut Types	Collets with Counter Bore [inch]			Collets without Counter Bore [inch]			ER GB
	dia [mm]	dia [inch]	Max Torque [ft-lbs]	dia [mm]	dia [inch]	Max Torque [ft-lbs]	Max Torque [ft-lbs]
Clamping Nut & Collet Size							
Hi-Q/ER & Hi-Q/ERC 11 MB	0.2-0.9	.0078-.035	7	---	---	---	---
Hi-Q/ER & Hi-Q/ERC 11	1.0-2.5	.039-.098	7	3.0-5.0	.118-.197	22	13
Hi-Q/ER & Hi-Q/ERC 16	1.0	.039	7	5.0-10.0	.197-.394	51	37
	1.5-3.5	.059-.138	18				
Hi-Q/ER & Hi-Q/ERC 20	1.0	.039	15	7.0-13.0	.276-.512	74	30
	1.5-6.5	.59-.256	30				
Hi-Q/ER & Hi-Q/ERC 25	1.0-3.5	.039-.138	22	8.0-16.0	.315-.630	96	96
	4.0-4.5	.157-.177	51				
	5.0-7.5	.196-.295	74				
Hi-Q/ER & Hi-Q/ERC 32	2.0-2.5	.078-.098	22	8.0-20.0	.315-.787	125	125
	3.0-7.5	.118-.291	125				
Hi-Q/ER & Hi-Q/ERC 40	3.0-8.5	.118-.335	162	9.0-26.0	.354-1.023	162	162
Hi-Q/ER & Hi-Q/ERC 50	6.0-10.0	.236-.394	220	12.0-34.0	.472-1.338	300	---
Hi-Q/ERB & Hi-Q/ERBC 16	1.0	.039	6	5.0-10.0	.197-.394	51	37
	1.5-3.5	.059-.138	15				
	4.0-4.5	.157-.177	30				
Hi-Q/ERB & Hi-Q/ERBC 20	1.0	.039	11	7.0-13.0	.276-.512	74	22
	1.5-6.5	.59-.256	22				
Hi-Q/ERB & Hi-Q/ERBC 25	1.0-3.5	.039-.138	18	8.0-16.0	.315-.630	96	66
	4.0-4.5	.157-.177	45				
	5.0-7.5	.196-.295	66				
Hi-Q/ERB & Hi-Q/ERBC 32	2.0-2.5	.078-.098	18	8.0-20.0	.315-.787	125	125
	3.0-7.5	.118-.291	118				
Hi-Q/ERB & Hi-Q/ERBC 40	3.0-8.5	.118-.335	162	9.0-26.0	.354-1.023	162	162
Hi-Q/ERB & Hi-Q/ERBC 50	6.0-10.0	.236-.394	220	12.0-34.0	.472-1.338	220	---



CLAMPING NUTS TIGHTENING TORQUE

■ MAXIMUM TIGHTENING TORQUE

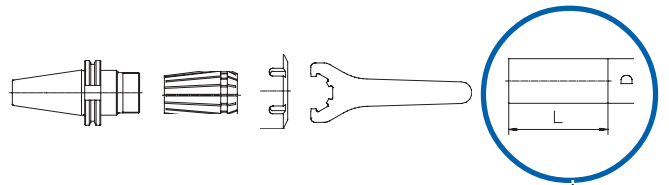
Clamping Nut Types	Collets with Counter Bore [inch]			Collets without Counter Bore [inch]			ER GB
	dia [mm]	dia [inch]	Max Torque [ft-lbs]	dia [mm]	dia [inch]	Max Torque [ft-lbs]	Max Torque [ft-lbs]
Clamping Nut & Collet Size							
Hi-Q/ERM & Hi-Q/ERMC 8MB	0.2-0.9	---	1.5	---	---	---	---
Hi-Q/ERM & Hi-Q/ERMC 8	1.0-1.25 2.0-2.5	.039-.049 .079-.098	1.5 3.7	3.0-5.0	.118-.197	5	---
Hi-Q/ERM & Hi-Q/ERMC 8	1.0-2.5	.039-.098	7	3.0-5.0	.118-.197	15	11
Hi-Q/ERM & Hi-Q/ERMC 8	1.0 1.5-3.5 4.0-4.5	.039 .059-.138 .157-.177	7 18.5 22	5.0-10.0	.197-.394	22	22
Hi-Q/ERM & Hi-Q/ERMC 8	1.0 1.5-6.5	.039 .59-.256	15 26	7.0-13.0	.276-.512	26	26
Hi-Q/ERM & Hi-Q/ERMC 8	1.0-3.5 4.0-7.5	.039-.138 .157-.295	22 30	8.0-16.0	.315-.360	30	30
Hi-Q/ERAX & Hi-Q/ERAXC 11	1.0-2.5	.039-.098	7.5	3.0-5.0	.118-.197	18	18
Hi-Q/ERAX & Hi-Q/ERAXC 16	1.0 1.5-3.5 4.0-4.5	.039 .059-.138 .157-.177	7.5 18 27	5.0-10.0	.197-.394	27	27
Hi-Q/ERAX & Hi-Q/ERAXC 20	1.0 1.5-6.5	.039 .059-.256	15 31	7.0-13.0	.276-.512	31	31
Hi-Q/ERAX & Hi-Q/ERAXC 25	1.0-3.5 4.0-4.5 5.0-7.5	.039-.138 .157-.177 .196-.295	22 35	8.0-16.0	.315-.630	35	35
Hi-Q/ERAX & Hi-Q/ERAXC 32	2.0-2.5 3.0-7.5	.078-.098 .118-.291	22 44	8.0-20.0	.315-.787	44	44
Hi-Q/ERAX & Hi-Q/ERAXC 40	3.0-8.5	.118-.335	59	9.0-26.0	.354-1.023	59	59

CLAMPING NUTS TIGHTENING TORQUE

■ MAXIMUM TIGHTENING TORQUE

Clamping Nut Types	Collets with Counter Bore [inch]			Collets without Counter Bore [inch]		
	dia [mm]	dia [inch]	Max Torque [ft-lbs]	dia [mm]	dia [inch]	Max Torque [ft-lbs]
ER MS 8MB	0.2-0.9	.0078-.035	1.5	---	---	---
ER MS 8	1.0-1.25 2.0-2.5	.039-.049 .79-.098	1.5 4.5	3.0-5.0	.18-.197	5
ER MS 11	1.0-2.5	.039-.098	9	3.0-5.0	.118-.197	9
ER MS 16	1.0 1.5-4.5	.039 .059-.177	9 13	5.0-10.0	.197-.394	13
ER MS 20	1.5-6.5	.59-.256	17	7.0-13.0	.276-.512	17

The tightening torques in these tables have been derived from test data collected in our labs on **REGO-FIX** ER tooling systems. **Caution: Higher tightening torques may permanently deform the collet cavity of the toolholder.** We recommend using a tightening torque of 80% of the maximum (80% listed in blue) tightening torque given in this table.

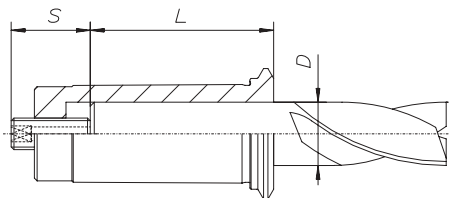


PG COLLETS

DEPTH CHARTS AND CLEANING

■ DEPTH CHARTS

D[inch]	D[mm]	PG 15		PG 25	
		L min.	L max.	L min.	L max.
1/8, 3/16	3, 4, 5	25	32	25	32
1/4, 5/16	6, 7, 8, 9	33	40	33	40
3/8	10	37	40.5	37	44
1/2, 9/16	12, 14	---	---	42	49
5/8	16, 18	---	---	45	50
3/4	20	---	---	47	50



■ PG Collet System Cleaning

NOTE: As with all high precision tool holding systems, the cleanliness of the system is very important. REGO-FIX recommends using a cleaning agent that will not only clean, but will also degrease, leaving no residue behind. Items to be cleaned include: The collet cavity, the collet O.D. and I.D. and the shank of the tool to be held. Not cleaning these items with a non-residue cleaning agent will result in lower clamping forces.