ACE Hardware Zimbabwe

Collet Chart

ER collet sizes, clamping ranges and nut threads, plus a quick guide to 5C, R8 and Morse collets.

Workshop Reference Charts
acehardware.co.zw

ER collets

ER collets (DIN 6499 / ISO 15488)

Series	Collet OD mm	Length mm	Standard nut thread	Clamping range mm	Each collet grips (mm)
ER8	8.5	13.5	-	0.5 - 5	0.5
ER11	11.5	18	M14 × 0.75	0.5 - 7	0.5
ER16	17	27.5	M22 × 1.5	0.5 - 10	1
ER20	21	31.5	M25 × 1.5	1 - 13	1
ER25	26	34	M32 × 1.5	1 - 16	1
ER32	33	40	M40 × 1.5	2 - 20	1
ER40	41	46	M50 × 1.5	3 - 26	1
ER50	52	60	varies by maker	5 - 34	2

Each ER collet closes down from its marked size by its grip range: an ER32 collet marked 12 holds 11 – 12 mm. To hold a size exactly on the boundary, use the collet marked at or just above it (for 12 mm use the 12 collet, not the 13). Always click the collet into the nut *before* screwing the nut onto the holder, and never tighten an empty collet.

Which ER series fits my shank?

Shank	ER series that will hold it
1 mm	ER8, ER11, ER16, ER20, ER25
2 mm	ER8, ER11, ER16, ER20, ER25, ER32
3 mm	ER8, ER11, ER16, ER20, ER25, ER32, ER40
3.175 mm (1/8")	ER8, ER11, ER16, ER20, ER25, ER32, ER40
4 mm	ER8, ER11, ER16, ER20, ER25, ER32, ER40
5 mm	ER8, ER11, ER16, ER20, ER25, ER32, ER40, ER50
6 mm	ER11, ER16, ER20, ER25, ER32, ER40, ER50
6.35 mm (1/4")	ER11, ER16, ER20, ER25, ER32, ER40, ER50
8 mm	ER16, ER20, ER25, ER32, ER40, ER50
9.525 mm (3/8")	ER16, ER20, ER25, ER32, ER40, ER50
10 mm	ER16, ER20, ER25, ER32, ER40, ER50
12 mm	ER20, ER25, ER32, ER40, ER50
12.7 mm (1/2")	ER20, ER25, ER32, ER40, ER50
16 mm	ER25, ER32, ER40, ER50
19.05 mm (3/4")	ER32, ER40, ER50
20 mm	ER32, ER40, ER50
25 mm	ER40, ER50
25.4 mm (1")	ER40, ER50
32 mm	ER50

Tips

- The series number is roughly the collet's outside diameter in mm.
- Collet capacity is the **largest** size; full sets step in 1 mm (0.5 mm for ER8/ER11, 2 mm for ER50).
- Clean the taper, collet and nut before fitting. Grit causes run-out and marks the bore.
- Hold the cutter shank for at least two-thirds of the collet length.
- Tighten with the correct spanner. Over-tightening does not improve grip and damages the nut.
- Imperial shanks (1/4", 1/2") fit the metric collet whose range covers them, e.g. 6.35 mm in a 7 mm collet.

Other collet systems

Other common collet systems

Type	Used on	Capacity	How it is held
5C	Lathe spindles, indexers, collet blocks	Up to 1-1/16" round	Pulled in by a draw tube (external thread on collet)
R8	Bridgeport-type milling machines	Commonly to 3/4"	7/16"-20 UNF drawbar; keyed body
MT2 / MT3 collets	Small mills and lathes with Morse spindles	To about 1/2" (MT2) / 5/8" (MT3)	Drawbar thread depends on the machine - check before buying
Screwed-shank (Clarkson/Autolock type)	Milling chucks for threaded-shank cutters	Cutter shank sizes	Collet bore is threaded to suit the cutter's screwed shank; plain shanks need an ER or side-lock holder

Guide values for general workshop use. Always follow the equipment or fastener maker's figure where one is given, and check critical work against the relevant standard.

© Ace Hardware Zimbabwe · acehardware.co.zw