

What Are E-Clips (External Snap Rings) Used For?

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[Fasteners](#), [Retaining Rings/E-Clips \(External Snap Rings\)/Applications](#)

[Retaining Rings](#) · [DIN 6799](#) · [Application guide](#)

Typical applications, the industries that specify e-clips (external snap rings), and how to choose the right size, material and finish for the joint.

E-Clips (External Snap Rings) are used for quick axial retention in a shaft groove where radial access is available. They are manufactured to DIN 6799, and selection is driven by the shaft / bore diameter, the fit and tolerance the assembly requires, and the service environment.

Primary duty

Quick axial retention in a shaft groove where radial access is available

Governing standard

DIN 6799

Shaft / bore diameter range

1.2 mm to 24 mm

Category

Retaining Rings

Application notes are general engineering guidance. Verify the property class and any approval requirement against your own design calculation.



E-Clips (External Snap Rings) (DIN 6799) are specified where the joint requires quick axial retention in a shaft groove where radial access is available. The sections below cover the typical end-uses by industry, the size and material decisions for each, assembly practice, and the applications this fastener type is not suited to. Stocked across roughly 1.2 mm to 24 mm, they cover general to heavy-duty work.

Typical Applications for E-Clips (External Snap Rings)

The most common settings where these are specified:

- **Shafts & gearboxes:** retaining bearings, gears and pulleys against axial movement.
- **Hydraulic & pneumatic:** holding pistons and seals in bores.
- **Automotive driveline:** axial location on rotating shafts.
- **Small shafts & spindles:** quick axial retention in light assemblies and mechanisms.
- **Linkages:** holding pins and rollers in place.

How to Specify E-Clips (External Snap Rings) for Your Application

- **Size:** Select on nominal diameter, then on the hole tolerance and fit class — the fit, not the diameter alone, determines whether the part locates or slips. This product spans 1.2 mm–24 mm; check the full table below for the exact dimensions of each size.

- **Groove fit:** Specify to the shaft or bore groove diameter; the ring must seat fully in the groove to carry the thrust load.
- **Environment:** For damp, coastal or chemical exposure prefer A4/316 stainless or a suitable coating; indoors, plated steel or A2 is usually sufficient.
- **Standard:** This product is supplied to DIN 6799. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

Installation & Assembly Practice

- Use the correct circlip pliers for the ring size; over-spreading a ring permanently reduces its retention.
- Check the ring is fully seated in the groove around its whole circumference before loading the assembly.

Common Selection Mistakes with E-Clips (External Snap Rings)

- Machining the groove to the shaft tolerance instead of the groove dimensions in the ring standard.
- Loading a standard ring axially beyond the groove rating instead of moving to a heavy-duty section ring.

Where E-Clips (External Snap Rings) Are Not the Right Choice

Not for heavy axial thrust beyond the groove rating, and not where the groove cannot be machined to spec.

Technical Drawing

Customize the parameters below — every spec field is editable, and the drawing redraws to match the values you choose. Changing the size will snap the other fields to that size's standard values; you can then override any individual value.

Sends the selected values to the quote form below.

Request a Quote

The form below follows the current technical drawing configuration. Change the drawing values above and the request details update automatically.

Dimensions & Specifications (DIN 6799)

Groove diameter (mm)	Shaft diameter range (mm)	Outside diameter (mm)	Thickness s (mm)	Reference standard	Notes
1.2	1.4~2.0	3.0	0.3	DIN 6799	E-clip, radial-fit external retaining
1.5	2.0~2.5	3.8	0.4	DIN 6799	E-clip, radial-fit external retaining
1.9	2.5~3.2	4.8	0.4	DIN 6799	E-clip, radial-fit external retaining
2.3	3.2~4.0	6.0	0.6	DIN 6799	E-clip, radial-fit external retaining
3.2	4.0~5.0	7.4	0.6	DIN 6799	E-clip, radial-fit external retaining
4.0	5.0~7.0	9.0	0.7	DIN 6799	E-clip, radial-fit external retaining
5.0	7.0~9.0	11.0	0.7	DIN 6799	E-clip, radial-fit external retaining
6.0	9.0~11.0	12.2	0.8	DIN 6799	E-clip, radial-fit external retaining
7.0	11.0~14.0	14.3	0.9	DIN 6799	E-clip, radial-fit external retaining
8.0	14.0~18.0	16.2	1.0	DIN 6799	E-clip, radial-fit external retaining
9.0	18.0~24.0	18.0	1.0	DIN 6799	E-clip, radial-fit external retaining
10.0	24.0~31.0	20.2	1.2	DIN 6799	E-clip, radial-fit external retaining
12.0	31.0~38.0	23.2	1.2	DIN 6799	E-clip, radial-fit external retaining
15.0	38.0~45.0	29.0	1.5	DIN 6799	E-clip, radial-fit external retaining

Groove diameter (mm)	Shaft diameter range (mm)	Outside diameter (mm)	Thickness s (mm)	Reference standard	Notes
19.0	45.0~55.0	37.0	1.75	DIN 6799	E-clip, radial-fit external retaining
24.0	55.0~70.0	44.0	2.0	DIN 6799	E-clip, radial-fit external retaining

Video: What Are E-Clips (External Snap Rings) Used For? in use



► Watch video: https://www.youtube.com/watch?v=_rL6ANsCasE

Third-party video, selected automatically for this topic. It is not produced by Engineering Hardware and is not a specification source — use the tables on this page for dimensional data.

Inside the plant

Manufactured in our own plant

This part is cold-formed, threaded, heat-treated and finished in-house. The stages below are where its class and finish are actually decided.

1.



01

Cold heading

Wire rod is drawn to size and cold-formed into blanks. Forming rather than cutting keeps the grain flow continuous around the head, which is where a bolt is most likely to fail.

Head dimensions and under-head radius checked at set-up and per shift.



2.

02

Thread rolling

Threads are rolled between hardened dies rather than cut. Rolled threads are stronger in fatigue than cut threads and hold pitch and flank angle far more consistently across a batch.

Go / no-go ring gauges to ISO 965 tolerance class 6g.

3.



03

Heat treatment

Quench-and-temper brings carbon and alloy steel to the property class ordered — 8.8, 10.9 or 12.9 — with the furnace charge tracked so a finished lot can be traced back to it.

Core hardness and tensile tested per lot to ISO 898-1.

4.



04

Surface treatment

Zinc, zinc-nickel, hot-dip galvanizing, black oxide, phosphate and Dacromet, selected against the service environment rather than against the price list.

Coating thickness and neutral salt spray hours to ISO 9227.

Frequently Asked Questions

Are E-Clips (External Snap Rings) made to a recognized standard?

Yes — they are manufactured to DIN 6799, so dimensions are interchangeable between suppliers when you quote the standard on your order.

What are E-Clips (External Snap Rings) used for?

Quick axial retention in a shaft groove where radial access is available. They are supplied to DIN 6799.

Which industries use E-Clips (External Snap Rings)?

They are commonly specified in automotive driveline, small shafts & spindles and linkages, among other sectors.

How do I choose the right size of E-Clips (External Snap Rings)?

Select on shaft / bore diameter and on the fit the assembly requires. This product is available from 1.2 mm to 24 mm; the full dimension table on this page lists each size.

Can I get a quote for E-Clips (External Snap Rings) in the size and material I need?

Yes. Use the technical drawing and quote form on this page to set the size and options, then send the exact configuration to our team for pricing and lead time.

Related Pages

Product page: [E-Clips \(External Snap Rings\) — specifications & sizes](#)

E-Clips (External Snap Rings) Specification Guides

- [A4 stainless E-Clips \(External Snap Rings\)](#)

Related Fastener Applications

- [Retaining Ring \(Circlip\) — ISO / DIN \(Series 147\) applications](#)
- [Retaining Ring \(Circlip\) — ISO / DIN \(Series 148\) applications](#)
- [Retaining Ring \(Circlip\) — ISO / DIN \(Series 149\) applications](#)
- [Retaining Ring \(Circlip\) — ISO / DIN \(Series 151\) applications](#)
- [Retaining Rings \(Circlips\) applications](#)