

**LYNDEX-NIKKEN**

**OTHER**

Ground surface allows perpendicular contact of retention stud, ensuring better alignment

Turned rough surface causes the retention stud centerline to deviate

AT3 or better taper contact: .0028 degree tolerance variation 80 millionths to 126 millionths. Traverse ground taper ensures 80% or better taper contact

AT4 or better taper contact: .0028 degree tolerance variation 80 millionths to 126 millionths. Plunge ground taper creates inconsistency, ensuring only 60% or better taper contact

Drive keys milled to same depth for symmetrical body design, resulting in better high speed balance

Drive keys milled to different depths, per standard of 70 years ago

Body of Collet Chuck equal in diameter to the nut diameter. Thicker diameter and wall thickness results in stronger rigidity

Reduced gap size to prevent birds nests and other stringy chips from packing in or wrapping about

Recessed collet chuck body diameter weakens rigidity of holder

**ER Nut**  
Smooth nut prevents coolant flare and provides better balance

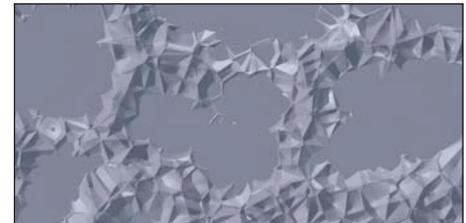
Large hex nut body design flares coolant away from toolholder

**Nickel Chrome Molybdenum Alloy**



Lyndex-Nikken toolholders are heat treated "in house" to a hardness between 55 to 58 Rc under the highest quality standard, ensuring a homogeneous martensite (needle-shaped) crystalline structure. The additional heat treatment process allows for a better ground surface finish and stress stability of the toolholder.

**High Carbon Steel**



Other toolholders are commonly not heat treated thoroughly to reduce costs, resulting in austenite deposits. Surface finish and material integrity are compromised commonly masked by chrome plating or polishing.

# ER Collet Features

We offer the widest ER Collets product range in the industry.

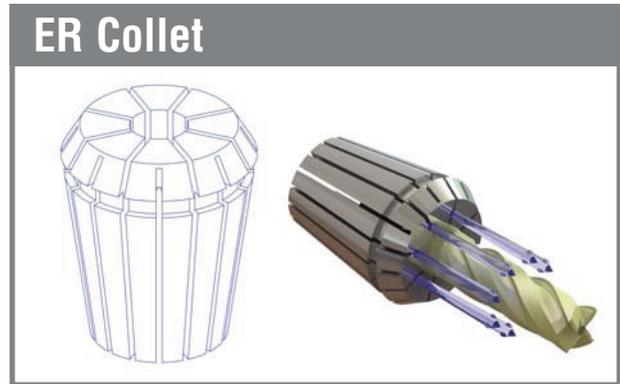
**Quality Standard-** Made to DIN 6499 Specification

**Material-** High Tensile Chromium Molybdenum Alloy provides greater hardness and less material deformation compared to traditional spring steel collets

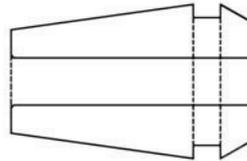
**Tolerance-** Guaranteed to be within .0001" or better run out at the collet nose

**Accuracy-** Less than .0004" at 4 X Dia.

**Inspection-** 100% collet inspection, checked 3 times for concentricity



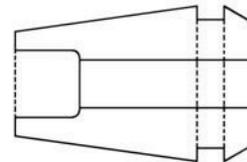
## ER Standard Type Collet



**Flexibility and Durability:**

We offers the ultimate trifecta: Wide clamping range, ultra precision, and super high pressure. Our 1300 PSI capable collets have a wide .031" collapse range and the ability to maintain less than .0001 run out at the collet nose.

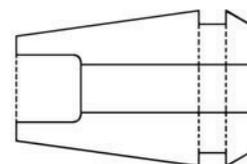
## ER Counter-Bored Type Collet



**Ultra Precision for MicroCutters:**

Our High Precision "On Size" Collets have 25% longer collet bore lengths than competitors, resulting in stronger gripping power at higher RPM's. The High Pressure Coolant Collet's special design reduces cutter vibration due to high pressure.

## High Precision ER Tap Collet

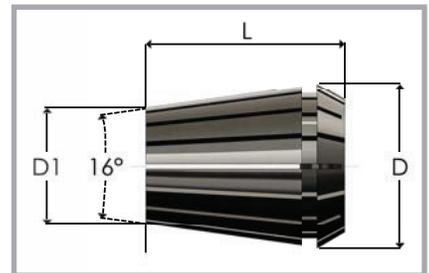


**Extreme rigidity, high pressure performance:**

Our Tap Collets are designed for all ANSI, DIN, ISO, JIS Specification Taps. 1300 PSI capable Coolant Tap Collets increase tool life by dissipating heat and preventing chip build-up.

## Dimensional Data

Style	D	D1	L	Collet Range	Coolant Collet Size Range
ER16	17.2mm	11.3mm	27.0mm	0.5 - 10.0mm	4.0 - 10.0mm (3/16" - 17/64")
ER20	21.2mm	14.5mm	31.0mm	1.0 - 13.0mm	5.0 - 13.0mm (5/32" - 1/2")
ER25	26.2mm	18.5mm	35.0mm	1.0 - 16.0mm	6.0 - 16.0mm (7/32" - 5/8")
ER32	33.2mm	24.4mm	40.0mm	2.0 - 20.0mm	10.0 - 20.0mm (1/4" - 25/32")
ER40	41.2mm	31.2mm	46.0mm	3.0mm - 26.0mm	10.0 - 26.0mm



**LYNDEX-NIKKEN NUT**

**OTHER NUT**



**Bearing Nut**



Bearing nuts come as standard on all of our ER Collet Chucks:

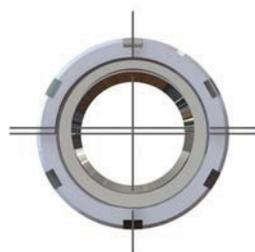
- Reduce twisting of the collet and increase the TIR accuracy
- Improve chucking consistency to 6 times compare to non bearing style nut!

**Standard Nut - No Bearing**



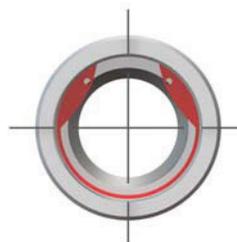
Non bearing style nuts only provide the ability to retain the collet, and do not carry a functional advantage to improve the TIR or chucking consistency.

**Maximum Accuracy**



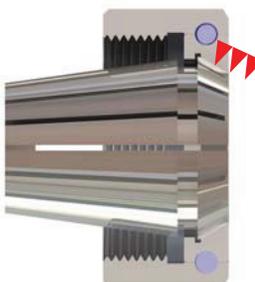
Because we manufacture all of our products and control all of our processes, Lyndex-Nikken maintains the accuracy assembly tolerance between the nut, collet and holder.

Our ground eccentric bearing race makes set up extremely easy, and ensures the accurate concentric placement of the collet.



Other manufacturers use a commercial snap ring as a retainer for the collet. This can contribute to minor misalignment between the nut, collet and holder.

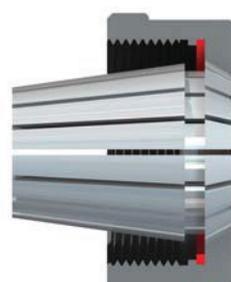
**Ground Eccentric Nut**



Our ground eccentric bearing race increases clamping power by 40% compared to standard nuts!

It also prevents galling and twisting between the collet angle contact surface and the nut to minimize runout, and greatly assist in alignment of the collet to the holder.

**No Ground Surface**



ER Collet without ground contact locations cannot ensure ultra precision due to surface abnormality.