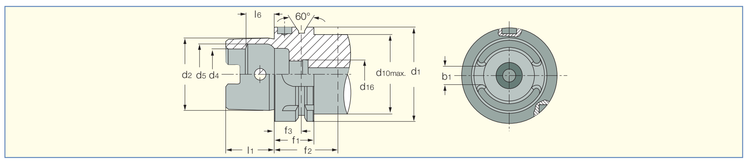
HSK DIN 69893 (ISO 12164-1 Standard)

DIN 69893 Form A



HSK-A	d_1 h_{10}	d_2	d_4 H_{10}	d_5 H_{11}	$d_{10\ max}$	d_{16}	l_1-0.2	l_6 Js_{10}	$b_1^{\pm 0.04(t)}$	f_1 -0.1	f_2 min	$f_3^{\pm 0.1}$
40	40	30	21	25.5	34	M12x1	20	11.42	8.05	20	35	16
50	50	38	26	32.0	42	M16x1	25	14.13	10.54	26	42	18
63	63	48	34	40.0	53	M18x1	32	18.13	12.54 (12.42)	26	42	18
80	80	60	42	50.0	67	M20x1.5	40	22.85	16.04	26	42	18
100	100	75	53	63.0	85	M24x1.5	50	28.56	20.02 (19.9)	29	45	20

ER - Top Clamping Nut for DIN 6499 Collets

Description

Friction bearing ER nut is a nut with a unique two-piece exclusive friction mechanism, combining radial and angular self-centering movements.

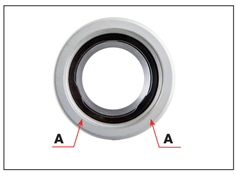
Features

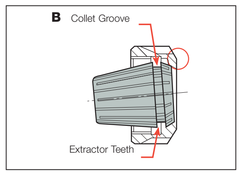
- Unique two-piece friction bearing
- Radial and angular float for better concentricity
- Powerful gripping force, 50-100% higher than the standard ER nut due to the friction bearing mechanism
- Balanced for higher spindle spin due to unique extractor teeth design
- Compact design - general dimensions and size range are the same as the standard nut
- Designed for use with sealed collets

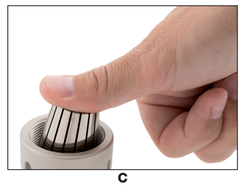
Always assemble the collet into the nut before mounting onto the collet chuck.

Insertion Procedure

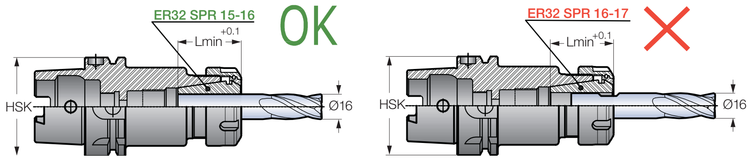
1 Insert the collet at an angle, fitting the two extractor teeth which protrude **(A)** into the collet's groove **(B)**.
2 Place the two parts on a clean and horizontal work surface.
3 Press down with your thumb on the back end of the collet until it clicks into place **(C)**.







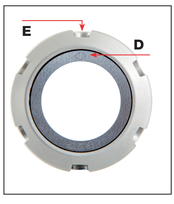
C



Important: Never insert the collet parallel to the extractor ring. Doing this will chip or break the extractor's teeth. When unclamping the nut, the collet will self-release from the chuck by means of extractor teeth.

Extraction Procedure

1 Align the engraved diamond shape which is on the silver ring (D), with any of the key slots (E) of the nut.
2 Place the nut with the collet facing down on a clean and horizontal work surface.
3 Insert a screwdriver vertically between the nut slots and the collet on the reverse side of the engraved diamond shape (D).
4 Tilt the screwdriver outwards, while helping the extraction by pushing the collet's back end in the opposite direction (F).



Nut type	Kgxm
ER-11	5
ER-11M	3
ER-16	7
ER-16M	4
ER-20	12
ER-20M	8
ER-25	20
ER-32	22
ER-40	25
ER-50	35

Note:
For maximum performance the clamping nut thread and collet taper must be cleaned and oiled before use.

Recommended Clamping Torque for Standard ER & ER-Top Clamping Nut

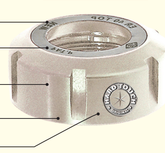
Important:
This torque is calculated with the maximum diameter capacity per collet which should be gradually reduced when used with a smaller shank size.

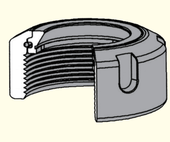
F

ER - Collet Chuck Features

ER-TOP™ NUT

Perfect balance and accuracy
Exclusive anti-friction mechanism
Powerful gripping force, 50-100% higher than conventional design
Compact design, standard size, **DIN** 6499
HARD TOUCH protective coating





ER-COOLIT™ JET

Ultra precision runout 0.01/ 0.005
Worldwide patented sealing system
Collapsibility 1 mm