



NORIS HELIXPRO  $\mu$

Collet holder NORIS HELIXPRO  $\mu$

Operating instruction

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## Warnings, symbols

In this operating instruction the following symbols are used:



### Attention

Marks special instructions, rules and prohibitions, which are important in order to avoid any damage.

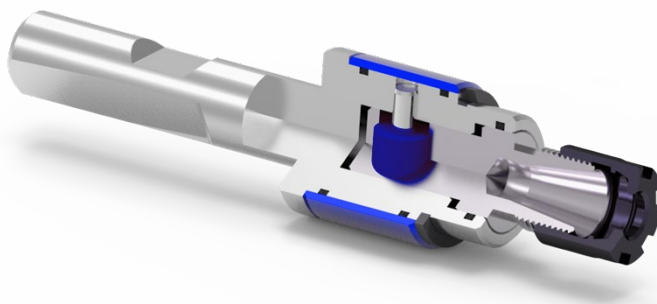
► Please observe these instructions!



### Note

Marks application instructions and other useful information.

Sectional view:



Collet holder NORIS HELIXPRO  $\mu$

## 1 Application range, safety instructions and technical data

### 1.1 Application range, determined use

The collet holders type NORIS HELIXPRO  $\mu$  are used on CNC machining centres with synchronous control. They are intended for clamping of small taps/cold-forming taps for thread production.

The integrated minimal length compensation on tension and compression compensates arising minimal pitch differences between synchronous spindle and tap/cold-forming tap which would lead to high thread flank friction forces. An eventual increase of the axial force during the thread producing cycle is reduced to a minimum. The resulting advantages are:

- No mis-cutting of the threads
- Optimised tap/cold-forming tap life

Normally the collet holders are equipped with one of the following shanks:

- Cylinder shank according to DIN 1835 B+E
- Cylinder shank according to DIN 1835 A

The cutting range of each type is indicated in table 1, page 6

The tool is locked via the collets according to DIN ISO 15488.

The collets must be chosen depending on the used tap/cold-forming tap, please see chapter 2.4 page on page 8.

The collet holders type NORIS HELIXPRO  $\mu$  are **not** suitable for internal coolant supply.

**The non-determined use exempts the manufacturer from any liability.**

### 1.2 Specifications

Further features of the collet holders type NORIS HELIXPRO  $\mu$  are:

- Small and compact overhang
- The standardized cylinder shank according to DIN 1835 B+E allows a simple adaptation with the required adaptation shank. For adaptation shanks please refer to the REIME NORIS main catalogue.

### 1.3 Safety instructions and hints

For all works, i.e. putting into operation, production and maintenance, please observe the details given in the operating instructions.

All relevant safety regulations as well as local instructions are to be observed when working with the collet holders.

Below please find some basic rules:



#### Attention



- ▶ Please wear gloves during tool change to avoid injury.
- ▶ Basically change the tool yourself to avoid the sudden start of the spindle caused by mis-operating.



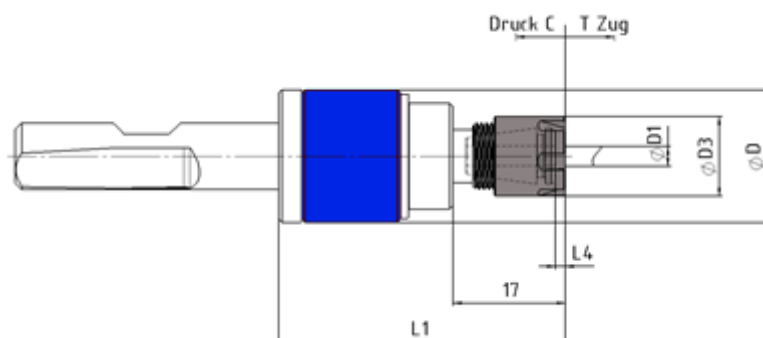
- ▶ Hold the tool when loosening the tool clamping to avoid it falling down and damaging the tool and the work piece.
- ▶ Keep the tool adaption clean.
- ▶ There are maximum values for cutting speeds and feeds for every kind of machining. Please observe such data.
- ▶ Please observe the maximum tool dimensions.
- ▶ Furthermore, the instructions of the tool manufacturers are valid!

### 1.4 Proprietary rights

The entire contents of these operating instructions are subject to German proprietary rights legislation.

Any form of multiplication, processing, broadcasting, passing on to third parties - also in the form of extracts - and any kind of use outside the boundaries of proprietary rights requires the written consent of REIME NORIS GmbH.

## 1.5 Dimensions and technical data



Picture 1: Collet holder NORIS HELIXPRO  $\mu$

Table 1: Technical Data of the collet holder type NORIS HELIXPRO  $\mu$

Type	Cutting range	Clamping range $\varnothing D_1$ [mm]	Collet size <sup>1</sup>	$\varnothing D$ [mm]	$\varnothing D_3$ [mm]	$L_1$ [mm]	$L_4$ [mm]	$C^2$ [mm]	$T^3$ [mm]
NORIS HELIXPRO $\mu$	M0,5 - M4 (Nr.0 - Nr.8)	2 – 4,5	ER 8	20	12	43,5	1,5	0,2	0,2

Further outer dimensions of the individual types depend on the required shank.

The dimensions may be taken from the REIME NORIS main catalogue.

<sup>1</sup> Dimension according to DIN ISO 15488

<sup>2</sup> Length compensation on compression

<sup>3</sup> Length compensation on tension


## 2 Putting the collet holders into operation

### 2.1 Unpacking

- Take the collet holder from the packing
- Clean the collet holder with a duster to remove any conservation oil

#### Note

- ▶ Do not use any aggressive solvents.
- ▶ Do not use fibrous materials i.e. steel wool.

 The collet holder is now ready for operation.

### 2.2 First putting into operation

The collet holders are inserted into the machine manually or - if provided - by the tool exchanger.

#### Attention

- ▶ The exchange of the collet holder must not be executed while the machine spindle rotates!
- ▶ Only use tool shanks suitable for the specific machine.
- ▶ Make sure the tool is correctly clamped.  
Otherwise: Risk of accident by spinning of tool!
- ▶ Please see also the indications in the operating instruction of your machine tool!

### 2.3 Re-putting into operation

If the collet holder is back into operation as described in chapter 4, page 11, please go through the following steps:

- Clean the collet holder with a duster to remove any conservation oil

#### Note

- ▶ Do not use any aggressive solvents.
- ▶ Do not use fibrous materials i.e. steel wool.

- If necessary, prepare the collet holder as described in chapter 2.2, page 7

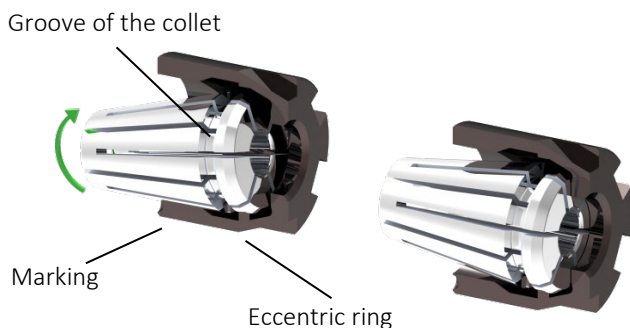
## 2.4 Collets

### 2.4.1 Application

The adaptation of the tap/cold-forming tap is executed via collets type ER 08. The tap/cold-forming tap is centered and clamped via the shank diameter.

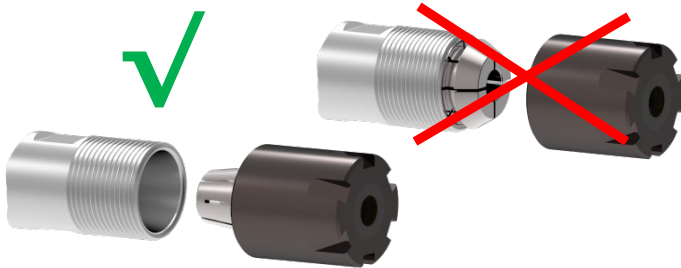
The clamping diameter is indicated by the used tap/cold-forming tap.

### 2.4.2 Assembly instruction for the collets and tap/cold-forming tap

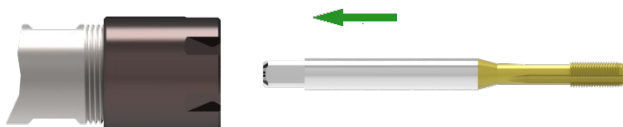


1. Insert collet into the clamping nut, tilt collet.  
The groove of the collet must engage in the eccentric ring of the clamping nut at the marked position. Tilt collet in opposite direction until it clearly engages

→ Collet is flush with the clamping nut

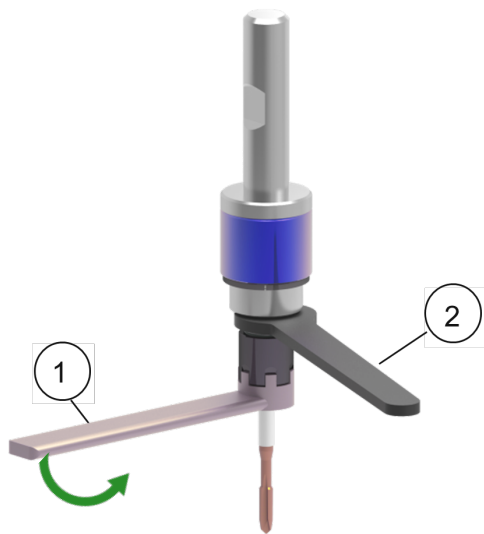


2. Screw the collet with the engaged clamping nut manually onto the thread of the collet holder



3. Insert tap/cold-forming tap





4. Tighten the clamping nut with the appropriate wrench.

The tightening torques for the clamping nut may be taken from table 3, page 9



#### Attention

In order to avoid damaging the collet holder it is necessary to support the spindle with the open-ended spanner② when tightening the clamping nut with the wrench①.  
The tool set see table 2, page 9

Table 2: Tool set

Collet holder	Article number of the tool set
NORIS HELIXPRO $\mu$	AZWZ0E70008

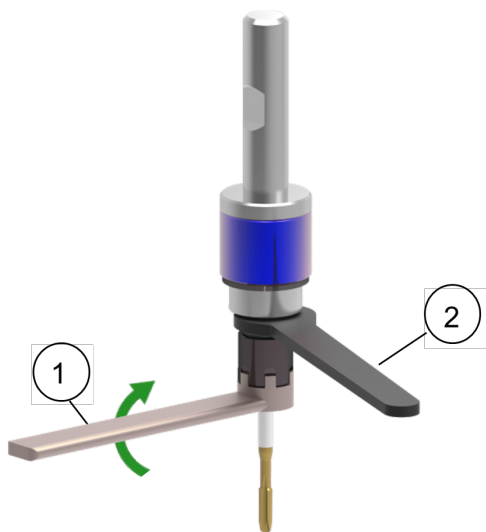
Tool set for HELIXPRO  $\mu$  consists of wrench① for the clamping nut and spanner② to support the spindle

Table 3: Tightening torques for clamping nuts

Type	Recommended tightening torque [Nm]
Hi-Q/ERM 8	6

The maximum tightening torque must not be more than 25% above the recommended tightening torque values. Higher torques may result in the damage of the collet holder.

### 2.4.3 Remove tap/cold-forming tag and clamping nut



1. Remove the clamping nut with wrench



#### Attention

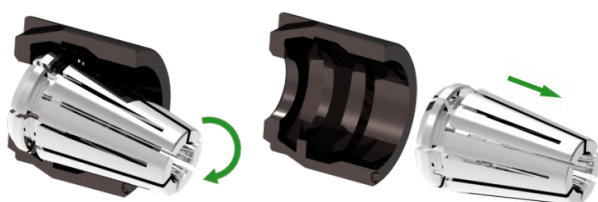
In order to avoid damaging the collet holder it is necessary to support the spindle with the open-ended spanner② when loosening the clamping nut with the wrench①. The tool set see table 2, page 9



2. Pull out the tap/cold-forming tap



3. Screw the clamping nut off



4. Tilt collet up to the marking until it is removed from the eccentric ring.

### 3 Maintenance

#### 3.1 Maintenance schedule

What?	When?	Who?
External cleaning	Periodically, depending on the degree of dirt	Operator

#### 3.2 External cleaning

Clean the collet holder at periodic intervals with a duster, depending on how dirty the holder is.



#### Attention

- ▶ Do not use any aggressive solvents.
- ▶ Do not use fibrous materials i.e. steel wool.
- ▶ Do not clean and dry the collet holder in an automatic washplace, as a result the built-in dampers and seals may be damaged.

### 4 Storage when not in use

If the collet holder is taken out of service, please go through the following steps:

- Clean the collet holder with a duster, see chapter 3.2
- Spray the collet holder with preservation oil to avoid rusting



#### Attention

Before storage, all evidence of coolant and machining residues must be removed!


**REIME NORIS collet holder NORIS HELIXPRO  $\mu$**   
**Operating instruction**


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Please keep the operating instruction for future use!


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