

NORIS UNI HP

Quick-change tap holder NORIS UNI HP

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.

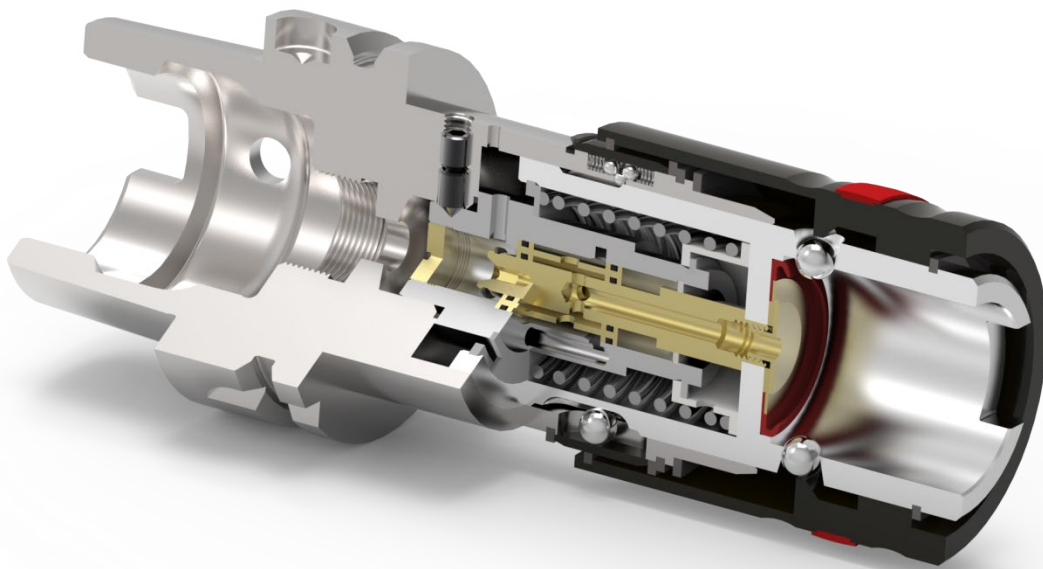
▶ Please observe these instructions!



Note

Marks application instructions and other useful information.

Sectional view:



Quick-change tap holder NORIS UNI HP

1 Application range, safety instructions and technical data

1.1 Application range, determined use

The quick-change tap holders type NORIS UNI HP are mainly used on CNC machining centres, CNC turning machines and conventional machine tools with internal coolant-lubricant supply. They are intended for clamping of taps/cold-forming taps for thread production.

The quick-change tap holders are marked by a red ring at the grip sleeve, see Picture 1, page 7.

The quick-change tap holders are equipped with one of the following shanks:

- Hollow taper shank (HSK) according to DIN 69893 A or DIN 69893 C
- Cylindrical shank according to DIN ISO 10889 (DIN 69880) or DIN1835 B+E or ASME B

94.19

For the cutting range of each type please refer to Table 1, page 7

The locking of the tap/cold-forming tap is executed via quick-change adapters type WE. The quick-change adapters must be chosen depending on their size and the used tap/cold-forming tap, see chapter 2.4, page 11.

The quick-change tap holders type NORIS UNI HP are equipped with a length compensation on tension and on compression, with a pressure point mechanism and a front release, see chapter 1.2, page 5.

The quick-change tap holders type NORIS UNI HP are suitable for internal-lubricant coolant supply up to 50 bar, see chapter 1.2, page 5.

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

1.2 Specifications

Further features of the quick-change tap holders type NORIS UNI HP are:

- Small and compact overhang length
- **Length compensation in compression direction:**

Compensates differences between spindle feed and the pitch of the thread to be produced. When using quick-change adapters with overload clutch, the length compensation on compression takes on the spindle feed as soon as the overload clutch is activated.
- **Length compensation in tension direction:**

Compensates differences between spindle feed and the pitch of the thread to be produced as well as an overrun of the spindle in the reversing point of the thread producing cycle.
- **Front release:**

The front release protects the quick-change tap holder, the used quick-change adapter and the tap/cold-forming tap as well as the workpiece against damage caused by excessive axial tension. Such tension may occur if the length compensation path is exceeded due to after running of the spindle at the point of reversal, or when the fast-feed function of the tap/cold-forming tap retraction movement is activated before the tap/cold-forming tap has come free from the workpiece. In these situations, the quick-change adapter is detached from the quick-change tap holder automatically, avoiding expensive damage.
- **Pressure point mechanism:**

The pressure point mechanism guarantees the safe cutting of the tap/cold-forming tap. Only when the effective occurring axial force exceeds the allowed cutting force, the pressure point mechanism releases the length compensation movement.

⇒ Repeatable and regular thread depths are reached.
- **Internal coolant-lubricant supply:**

Due to the special construction the coolant is guided from the spindle to the tap/cold-forming tap. The length compensation remains – independent from the coolant-lubricant pressure – in function.

The maximum coolant-lubricant pressure is 50 bar.

Filtering of the coolant: <0,030 mm
- High-quality surface protection against corrosion.
- Suited for right – and left-hand rotation
⇒ applicable on machines with reversion of rotation

1.3 Safety instructions and hints

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

All relevant safety regulations as well as local instructions are to be observed when working with the quick-change tap 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.

▶ There are maximum values for cutting speeds and feeds for every kind of machining. Please observe such data.

▶ Keep the tool adaptation clean.

▶ Please observe the maximum tool dimensions.

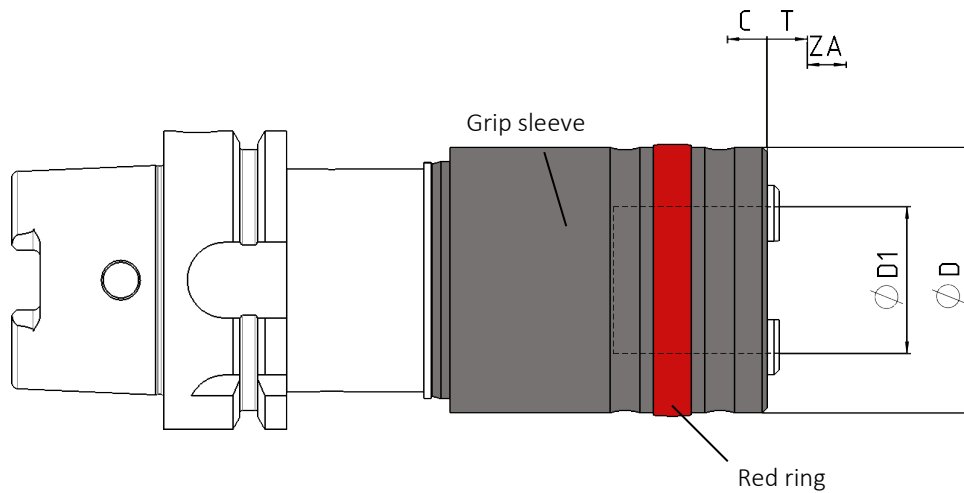
▶ Furthermore, the instructions of the tool manufacturers are valid!

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: Quick-change tap holders type NORIS UNI HP

Table 1: Technical data of the quick-change tap holders type NORIS UNI HP

Type	Cutting range	Quick-change adapter size	ØD [mm]	ØD ₁ [mm]	C ¹ [mm]	T ² [mm]	ZA ³ [mm]
NORIS UNI HP 1	M3 – M14 (Nr.4 – 9/16)	EM 01	40	19	5	7,5	2,5
NORIS UNI HP 3	M4,5 – M24 (Nr.10 – 1)	EM 03	56	31	7	10	3
NORIS UNI HP 4	M14 – M36 (9/16 – 1 3/8)	EM 04	80	48	15	20	5
NORIS UNI HP 5	M22 – M48 (7/8 – 1 3/4)	EM 05	95	60	18	23	10

Note

The maximum coolant-lubricant pressure is 50 bar.

Further outer dimensions depend on the required shank. These dimensions may be taken from the REIME NORIS main catalogue or your REIME NORIS representative.

¹ Length compensation on compression

² Length compensation on tension

³ Front realise


2 Putting the quick change tap holders into operation

2.1 Unpacking

- Take the quick-change tap holder from the packing
- Clean the quick-change tap 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 quick-change tap holder is now ready for operation.

Exception:

Type with **hollow taper shank (HSK)**. Please refer to chapter 2.2.1, on page 9, for how to put this quick-change tap holder into operation.

2.2 First putting into operation

Note

For quick-change tap holders with HSK-shank (hollow taper shank) the coolant-lubricant tube must be mounted prior to putting into operation, chapter 2.2.1, page 9

When working with internal coolant supply:

The tap holders NORIS UNI HP are made for coolant pressure up to max. **50 bar**.
Filtering of the coolant: **<0,030 mm**.

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

Attention

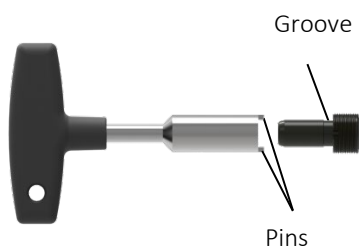
- ▶ The exchange of the tool must not be executed while the machine spindle rotates!
- ▶ Only use tool shanks suitable for the specific machine.
- ▶ Make sure the tool is correctly clamped.
Otherwise: Risk of accident by spinning of the tool!
- ▶ Please see also the indications in the operating instruction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

2.2.1 Assembly of the coolant-lubricant tube for quick-change tap holders with shank type HSK (hollow taper shank DIN 69893A)

Note

Required tool:

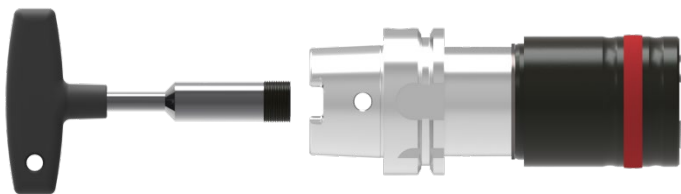
Choose appropriate assembly wrench for the shank size



1. Plug assembly wrench on the coolant-lubricant tube

Note

Watch the position of the pins against the grooves!



2. Screw coolant-lubricant tube in the shank

2.3 Re-putting into operation

If the quick-change tap holder is back into operation as described in chapter 4, page 15, please go through the following steps:

1. Clean the quick-change tap holder with a duster to remove the conservation oil

 Note

- | |
|---|
| <ul style="list-style-type: none">▶ Do not use any aggressive solvents.▶ Do not use fibrous materials i.e. steel wool. |
|---|

2. Check function of the length compensation:
 - Stretch the quick-change tap holder at the grip sleeve, let off the grip sleeve
⇒ the quick-change tap holder must independently return to its initial position
 - Compress the quick-change tap holder at the grip sleeve, let off the grip sleeve
⇒ the quick-change tap holder must independently return to its initial position
3. Exchange the quick-change tap holder into the machine as described in chapter 2.2, page 8

2.4 Application and choice of other quick-change adapters

Type	Description	Recommended Applications
WE	Rigid type	Through hole threads
WE MKBA	Rigid type, with internal coolant supply through channels along the tap/cold-forming tap shank.	Blind hole threads
WE U	With adjustable overload clutch	Blind hole threads
WE U MKBA	With adjustable overload clutch, and internal coolant supply through channels along the tap/cold-forming tap shank.	Blind hole threads
WE..-L	With length adjustment	On multi-spindle heads and transfer lines
WE..-UL	With adjustable overload clutch and length adjustment	Blind hole threads on multi-spindle heads
WE..-Z	Rigid type with adaptation for collets according to DIN ISO 15488	Clamping of carbide tools High coolant-lubricant pressures High-speed machining
WE..L/ER/MKB	With length adjustment and adaptation for collets according to DIN ISO 15488	On multi-spindle heads and transfer lines Clamping of carbide tools High coolant-lubricant pressures High-speed machining
WE..-PGR	Rigid type with adaptation for collets according to type PGR (GB)	Clamping of carbide tools High coolant-lubricant pressures High-speed machining
WE..-SE	Rigid type with adaptation for dies according to DIN 223	External threads

**Note**

Working **with** internal coolant-lubricant supply:

For the following quick-change adapters it is necessary to use tap/cold-forming taps **with** oil channel:

WE, WE-U, WE-L, WE-UL, WE-L/ER/MKB, WE-PGR

For the following quick-change adapters, tap/cold-forming taps **without** oil channel are used:

WE-MKBA, WE-U/MKBA

All quick-change adapters are suited for producing right- and left-hand threads.

The quick-change adapter sizes for the appropriate quick-change tap holder may be taken from Table 1, page 7. The clamping diameter is defined by the used tap/cold-forming tap. Each diameter requires a separate quick-change adapter.

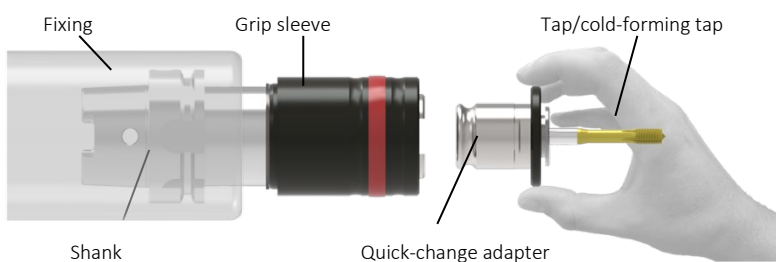
2.5 Insert quick-change adapter

! Note

Insert of the tap/cold-forming tap, please see the appropriate operating instruction.

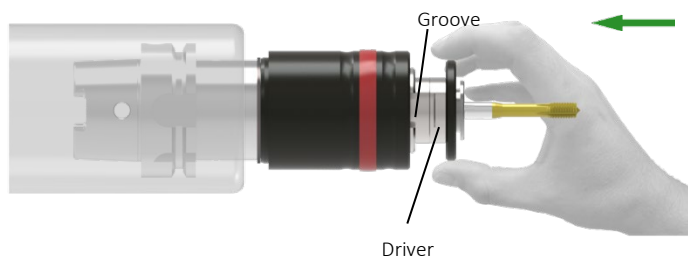
! Attention

▶ The quick-change adapters must not be fitted while the machine spindle rotates!



1. Fix the shank

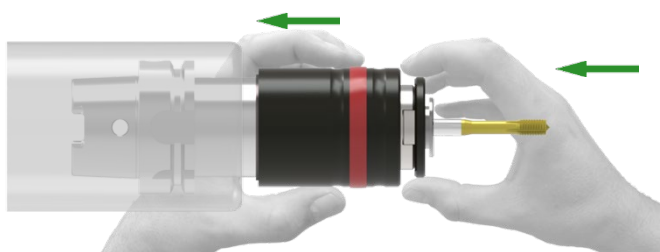
i.e. by adapting the holder in the machine spindle



2. Move in quick-change adapter

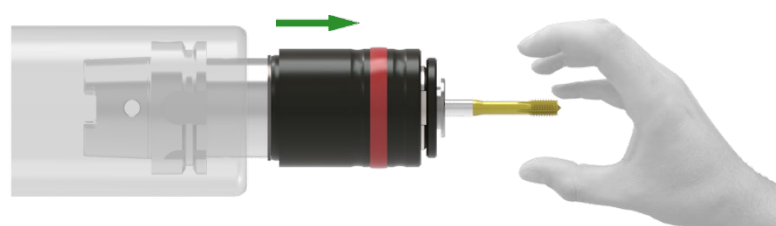
! Attention

Check position of driver and groove!



3. Strongly press the grip sleeve in direction of the shank and hold it.

Push quick-change adapter backwards.



4. Pull the grip sleeve forward, let go

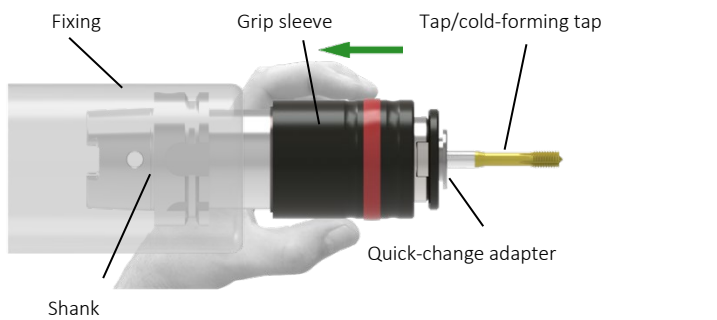
! Attention

Check, whether grip sleeve is in front position

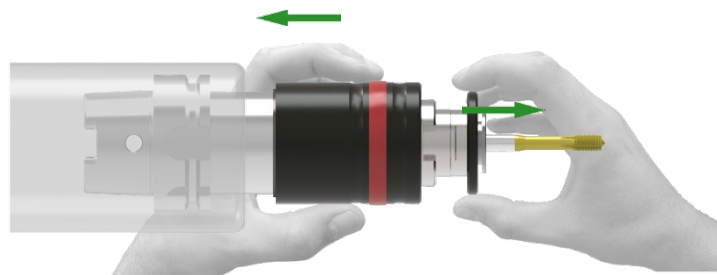
2.6 Remove quick-change adapter

⚠ Attention

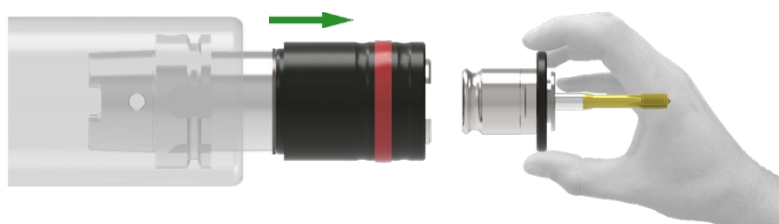
▶ The quick-change adapters must not be fitted while the machine spindle rotates!



1. Strongly press the grip sleeve in direction of the shank and hold it.



2. Remove quick-change adapter



3. Let go of the grip sleeve

ⓘ Note

Remove of the tap/cold-forming tap, please see the appropriate operating instruction.

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 quick-change tap holder at periodic intervals, depending on how dirty the holder is.

Note

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

4 Storage when not in use

If the quick-change tap holder is taken out of service, please go through the following steps:

- Clean the quick-change tap holder with a duster, see chapter 3.2
- Spray the quick-change tap holder with a preservation oil to avoid rusting and to preserve the easy running of the quick-change tap holder.

Attention

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

REIME NORIS quick-change tap holder NORIS UNI HP


Bedienungsanleitung

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Please keep the operating instruction for future use!


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