VDI / BMT TOOLHOLDERS INSTRUCTIONS

Thank you for choosing our products.
For best results, please follow below instructions.

GENERALITIES

Each toolholder has passed a QC test and has a documented specification, attesting his geometric precision.

Our toolholders are equipped with high-quality sealed bearings that ensure a long service life. The grease that is used is Kluber or Isoflex.

Each toolholder is checked for temperature and vibration parameters on the test bench. This means that the toolholder is ready to start working in the production process!

PLEASE NOTE

Keep these instructions, with care, to have them whenever needed for consultation.

Be aware of any state law to avoid accidents for yourself and others by using live toolholders. Be careful when handling the toolholders to prevent it from falling, which could cause injury to yourself and others. Until the toolholder is attached to the turret, use rubber or plastic tool sleeves to avoid injuries caused by the tool cutting sharp edges.

If the toolholders are overloaded, there may be major damage in the operation of the product. In this brochure it is using symbolic representations. Some accessories shown are not included, as standard, with delivered toolholders.

2. INSTALLATION AND FUNCTIONIN

2.1 Cleaning and care

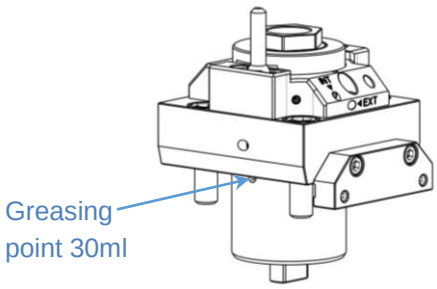
For cleaning, use a soft cloth. Do not use compressed air to clean the toolholders.

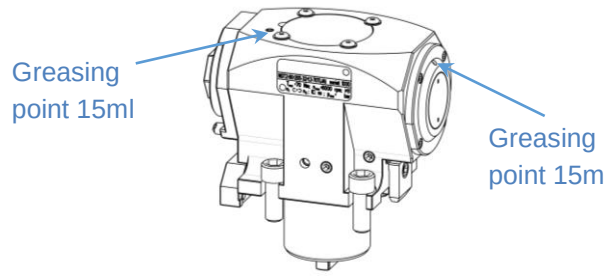
To achieve a long life of toolholders, please do not use strong chemical cleaners.

Protect the surfaces of the toolholders with oil or other anti-corrosion products during storage.

2.2. Transmission, bearings and lubrication

Gears are lubricated with high quality lubricants for the lifetime of toolholder. All the toolholders with tapered roller bearing need to be greased within a 6 month interval, see pictures below. In order to grease, pull out the screw wich cover the greasing hole.





Additional data such as torque, maximum speed, etc. can be taken from the product datasheet.

2.3. Fixing on the turret

In principle, in order to guarantee an optimal function of the toolholder, a clean surface of the turret interface and the couplings is required. Only this ensures the highest possible accuracy in the cutting process.

2.3.1. Mounting the toolholders on the turret

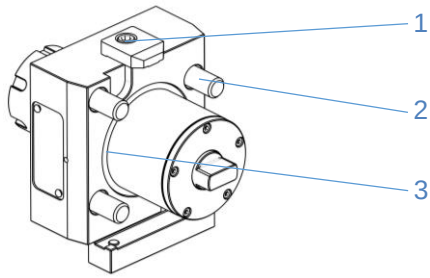
Please inspect the contact surface of the turret. It must be clean and without chips.

Please check that the ring O-ring (3) is not damaged.

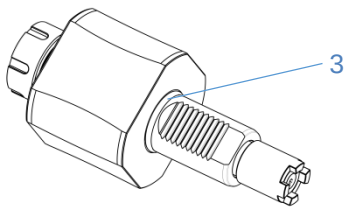
Insert the cylindrical part of the toolholder into the turret. Please ensure that the drive shaft engages with the turret drive.

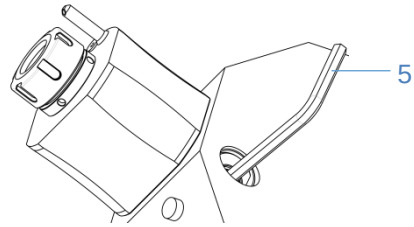
Enter the toolholder inside turret until the interface contact is well done. Ensure the toolholder is firmly

Okuma BMT turret: Mount the toolholder on turret and slightly tighten the bolts (2). The toolholder will be centered by tighten the screw (1). Tighten firmly the screws (2).

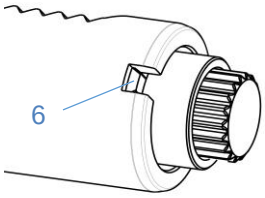


VDI turret: mount the holder on turret and tighten the rack screw with the hexagon key (5) firmly.





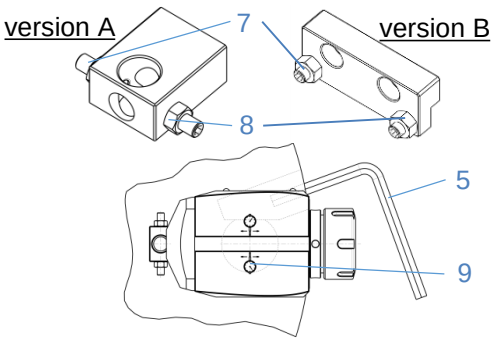
NOTE: The coupling of toolholder must be aligned with similar coupling from inside turret interface. If the toolholder cannot easily be inserted into the turret, then remove the toolholder from the turret surface. In this case, please use the machine's operating instructions.



Particular case: for Live Toolholders with coupling type DIN 5480, for making coupling, toolholder's shaft need to be in locked position, so no rotation. This position is realized when ring beak (6) is in position from this picture.
ATTENTION! When cutting tool is fixing in toolholder, the ring (6) will be moved from locked position, by axial pushing and turned, by hand, not to forcing ring pawl.

2.3.1. Aligning the VDI angular toolholder

The angular toolholders can be equipped for alignment with one of the following systems:

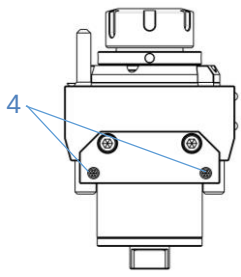


The toolholder will be set as follows: gently squeeze the toolholder on the turret through toothed rack in the recess by tightening a hex key (5) to allow the alignment. Align the toolholder with a dial comparator clock (9), by displacing it along the whole length of aligning area (surface), using for adjusting threaded pins (7). Once you have aligned the toolholder, you must tighten the threaded pins (7) and secure them with nuts (8), then firmly tighten the rack screw with the hexagon key (5).

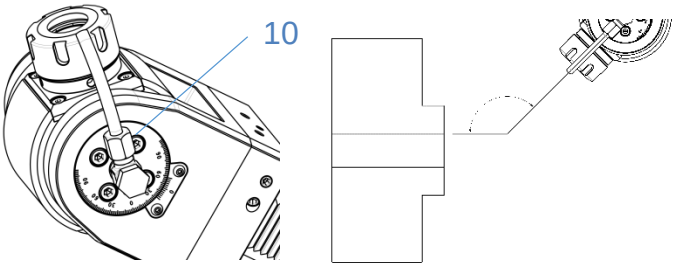
At the end of alignment operation check again position set-up.

2.3.2. Aligning the Okuma BMT toolholder

The toolholders do not need any setup, but if from some reasons you need to fine tune the position of the toolholder then you have 2 screws (4), to do this job. You must do this setup before the final tightening of the screws (2).



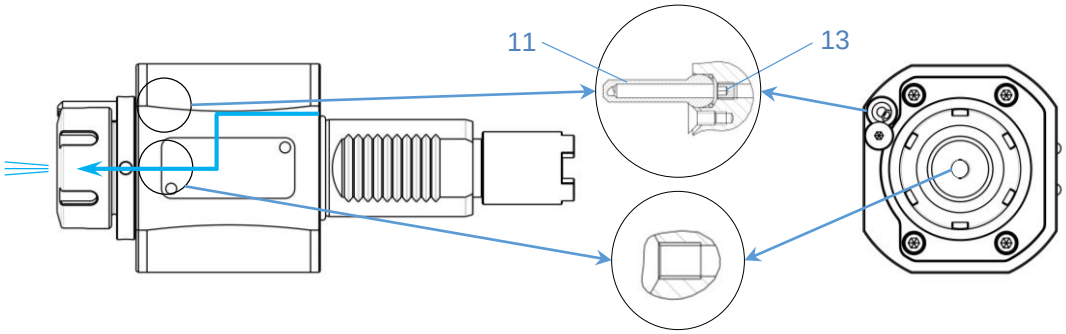
2.4. Variable Angle Toolholder - Angle setting



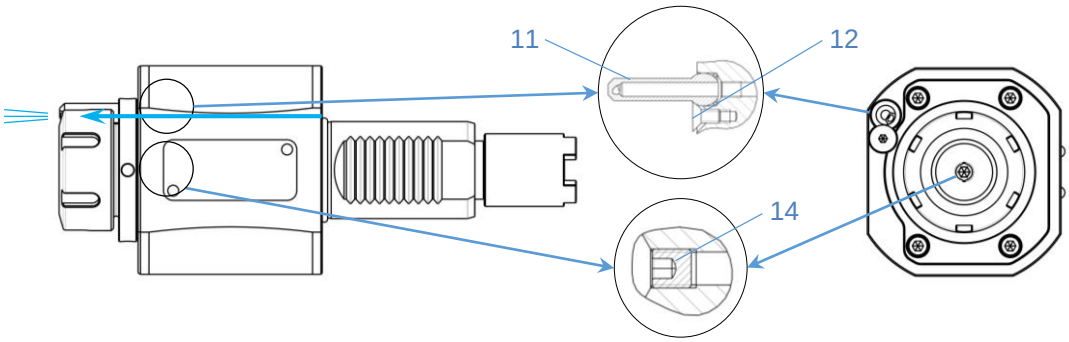
The screws (10) will be loosen. Set the desired angle and firmly tighten the screws (10).
Check the set angle, with a Digital Angle Finder or a Protractor, measuring by comparison the angle between the cutting tool and axle of the spindle (chuck).

2.5. Cooling system of the Toolholder

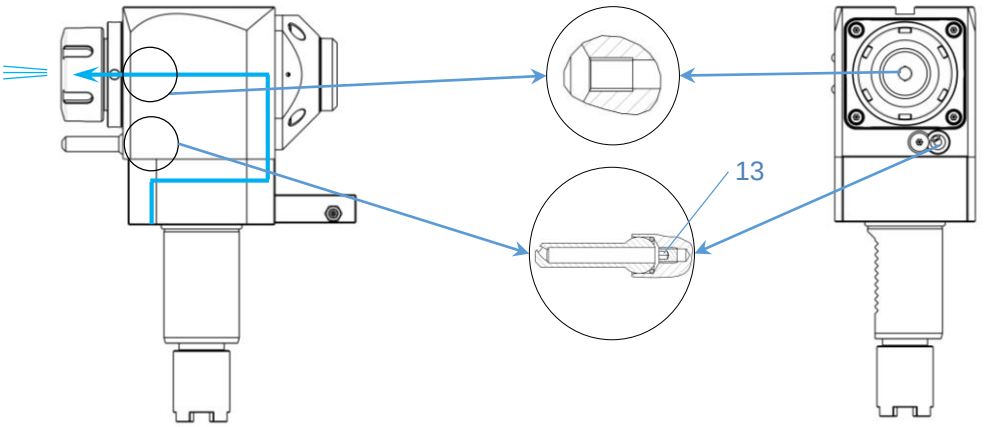
Internal cooling (VDI straight): The toolholders with internal cooling are prepared for this option from factory. Toolholders provide coolant through the shaft, respectively by the cutting tool. For the internal cooling of the cutting tool, remove the plug (14) with a hexagon Allen key and put in place the plug (13).



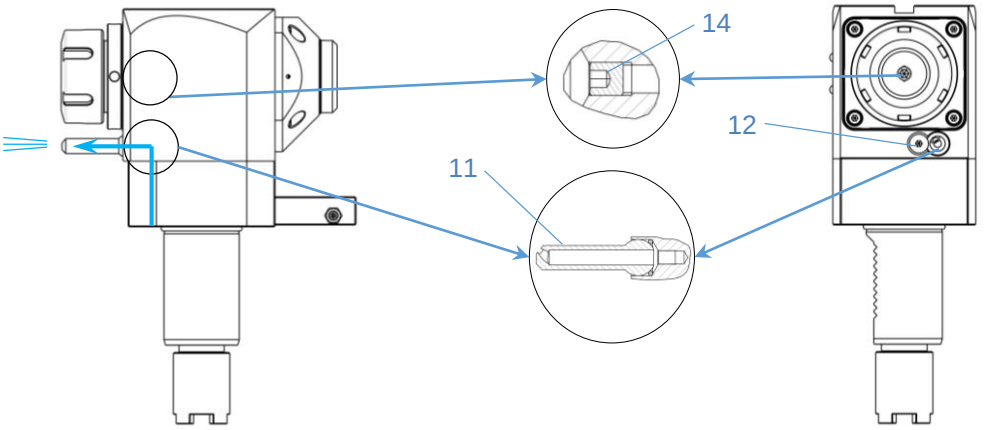
External cooling (VDI straight): Toolholders provides coolant through pipes. For external cooling you have to: Remove the plug (13) using a hexagonal Allen key and put in place the plug (14). Adjust the orientation of the external cooling fluid with the spherical joint (11) and fasten it with setting screw (12).



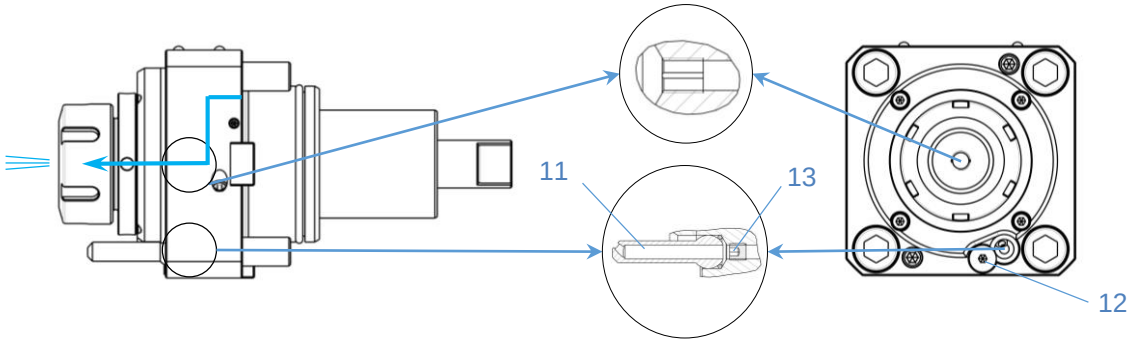
Internal cooling (VDI angular): The toolholders with internal cooling are prepared for this option from factory. Toolholders provides coolant through the shaft, respectively by the cutting tool. For the internal cooling of the cutting tool, remove the plug (14) with a hexagon Allen key and put in place the plug (13).



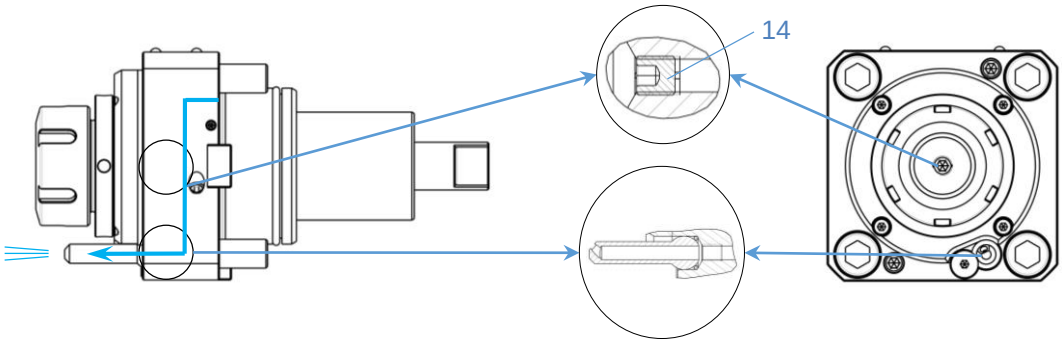
External cooling (VDI straight): Toolholders provides coolant through pipes. For external cooling you have to: Remove the plug (13) using a hexagonal Allen key and put in place the plug (14). Adjust the orientation of the external cooling fluid with the spherical joint (11) and fasten it with setting screw (12).



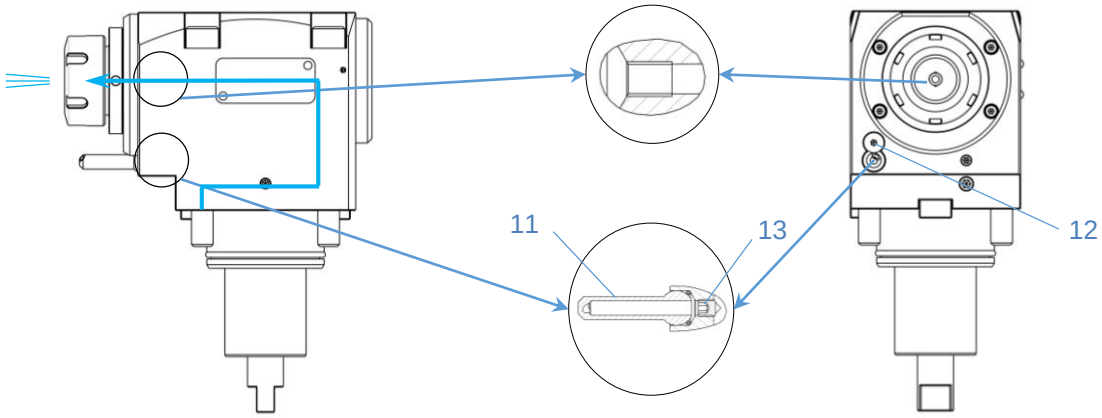
Internal cooling (BMT straight): The toolholders with internal cooling are prepared for this option from factory. Toolholders provide coolant through the shaft, respectively by the cutting tool. For the internal cooling of the cutting tool, remove the plug (14) with a hexagon Allen key and put in place the plug (13).



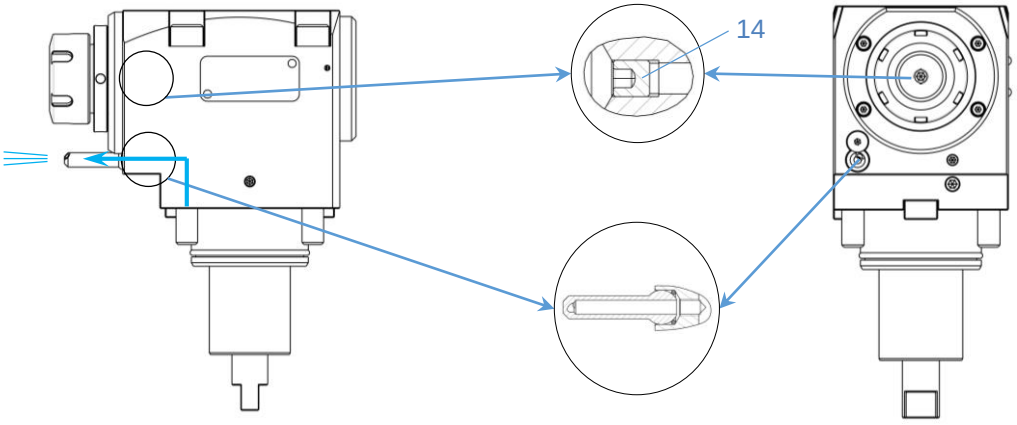
External cooling (BMT straight): Toolholders provides coolant through pipes.For external cooling you have to: Remove the plug (13) using a hexagonal Allen key and put in place the plug (14). Adjust the orientation of the external cooling fluid with the spherical joint (11) and fasten it with setting screw (12).



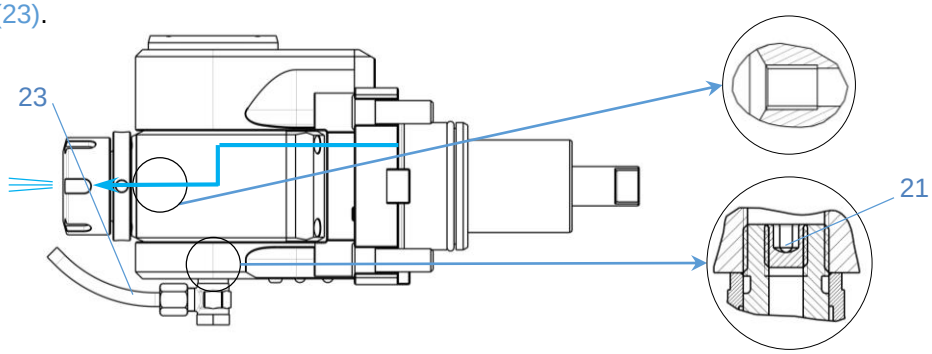
Internal cooling (BMT angular): The toolholders with internal cooling are prepared for this option from factory. Toolholders provides coolant through the shaft, respectively by the cutting tool. For the internal cooling of the cutting tool, remove the plug (14) with a hexagon Allen key and put in place the plug (13).



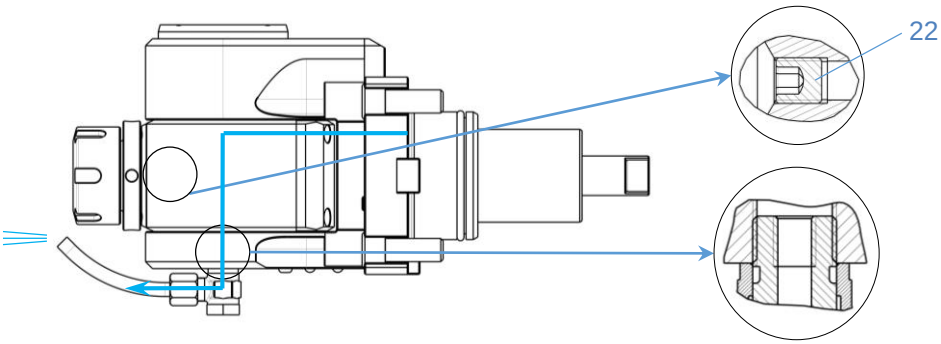
External cooling (BMT straight): Toolholders provides coolant through pipes.For external cooling you have to: Remove the plug (13) using a hexagonal Allen key and put in place the plug (14). Adjust the orientation of the external cooling fluid with the spherical joint (11) and fasten it with setting screw (12).



Internal cooling (BMT variable angle): The toolholders with internal cooling are prepared for this option from factory. Toolholders provides coolant through the shaft, respectively by the cutting tool. For the internal cooling of the cutting tool, remove the plug (22) with a hexagon Allen key and put in place plug (21) removing the pipe assembly (23).

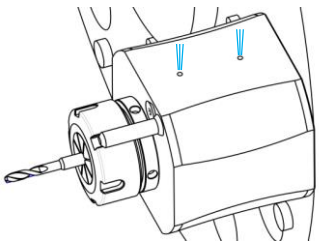


External cooling (BMT variable angle): Toolholders provides coolant through pipes. For external cooling you have to: insert the plug (22) using a hexagonal Allen key, remove plug (21) and adjust the orientation of the external cooling fluid from 90 degree fitting and the pipe.



You can set the cooling type in 3 ways: external, internal or external + internal.

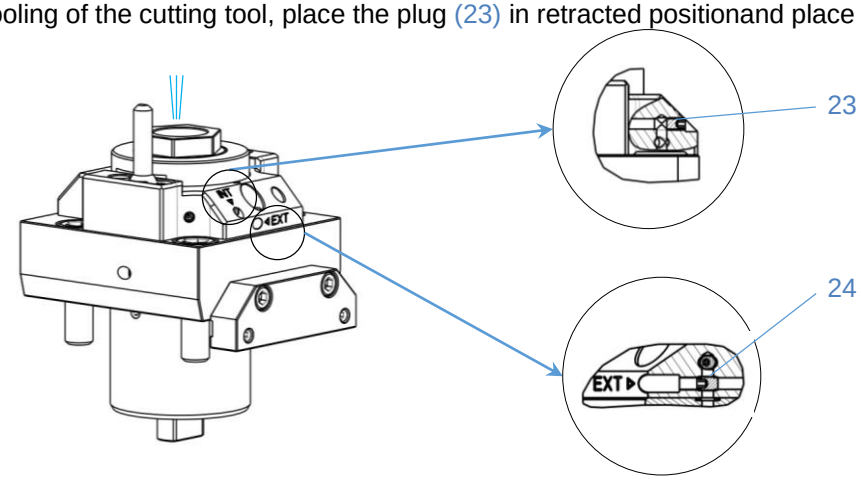
ATTENTION! *NEVER WORK WITHOUT COOLING LIQUIDS WHEN USING TOOLHOLDERS WITH INTERNAL COOLANT*



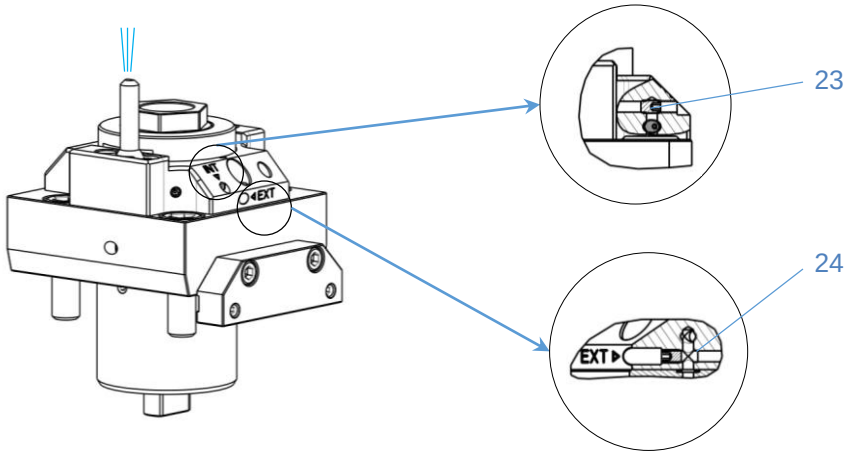
WARNING ! *TOOLHOLDERS WITH INTERNAL COOLANT*

If we have the situation in the picture or when coolant leaks occur during the use of the toolholder, the operation of the toolholder will be stop and please contact the manufacturer / seller.

Internal cooling (BMT straight tapered roller bearing): The toolholders with internal cooling are prepared for this option from factory. Toolholders provide coolant through the shaft, respectively by the cutting tool. For the internal cooling of the cutting tool, place the plug (23) in retracted positionand place the plug (24) in advanced position.



External cooling (BMT straight tapered roller bearing): For the external cooling of the cutting tool, place the plug (23) in advanced positionand place the plug (24) in retracted position.

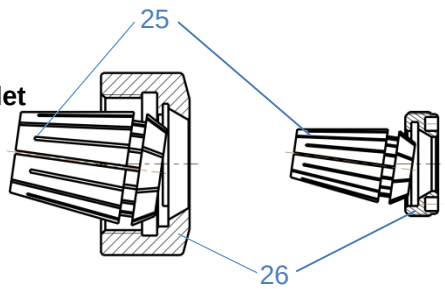


Internal cooling (BMT angular tapered roller bearing): The settings are the same with standard toolholders.

External cooling (BMT angular tapered roller bearing): The settings are the same with standard toolholders.

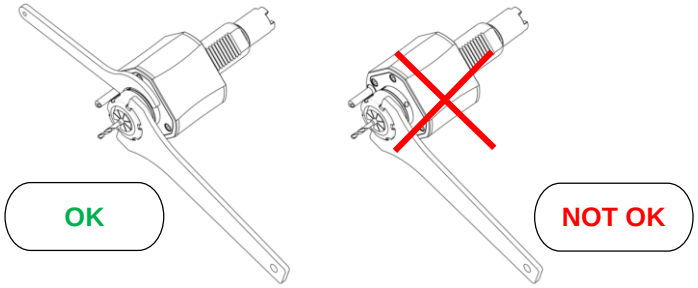
2.6. Clamping the tool

2.6.1. Fixing the cutting tool in collet

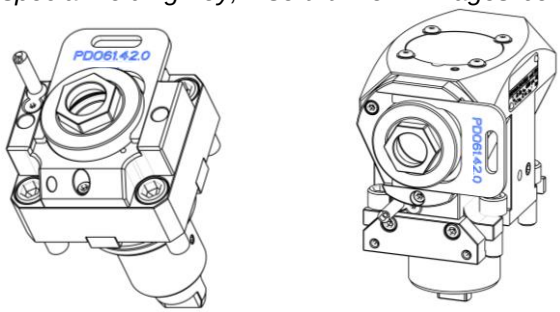


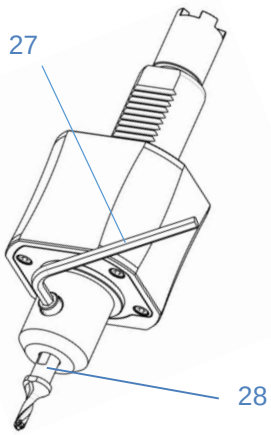
Insert the collet (25) into the ER clamping nut (26) until it enters inside locking way.

Firmly tighten the ER clamping nut using 2 (two) keys, as in bellow picture.



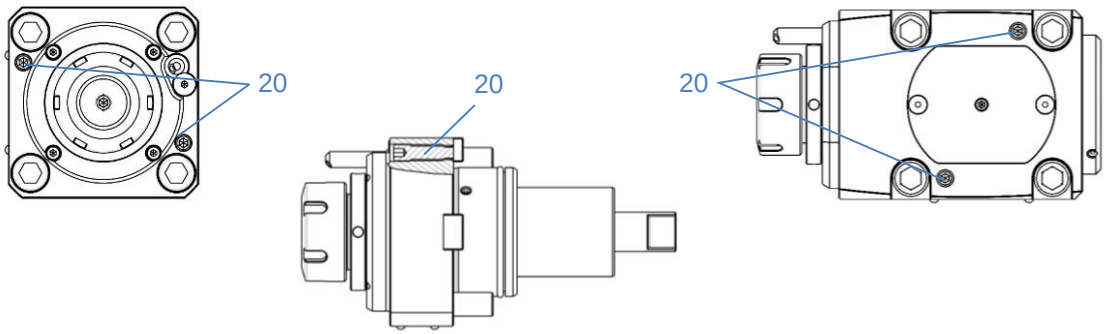
In case your toolholder is equippted with special holding key, insert it like in images below and firmly tighten the ER clamping nut using one key.





2.6.2. Fixing the cutting tool in Weldon output

Insert the cutting tool (27) (with the milled surface against the retaining pin) into the shaft hole and lock with the threaded pin using the hexagon key (28).



In order to remove the toolholder from the turret, just rotate the two set screws (20) clockwise. After the toolholder is released, you must rotate back the set screws until they are positioned below the mating surface of the toolholder with the turret, see picture above.

3. EVENTS IN OPERATION

If a malfunction may appear during operation, lathe operator must stop immediately the using of the toolholder and customer needs to send a Service Request Document, if a such fault (failure) has been detected.

If there are problems or malfunctions with the toolholder, please contact the manufacturer / seller to return product for inspection, along with the service document.

Service Document, is stated at last page of present Instructions.

3.1. Instructions for products returning:

In order to keep the shortest repair times, please:

- Notify in advance that the product will be returned and propose a delivery date so that the repair can be scheduled in the internal service program. Products received without a service document will have a lower priority.
- Provide product with a detailed description of the occurred problem, including as much information as possible.
- Without a service document, se
- rvice department will not be able to repair the product on time.

3.2. Goods returned because of incorrect order, issued by the customer

In the event of a wrong order issued by the customer, the return of the product must be approved by the manufacturer / seller in advance. If approved, manufacturer will agree with the customer the replacement of toolholder. All transport costs will be bear by customer, in this case.

4. WARRANTY

a) Defects that occur within 12 months from delivery date will be covered by producer warranty.

b) The warranty does not cover damages or defects resulting from the negligence or improper use by the buyer personnel or if the products or their parts have been modified or repaired without the manufacturer's authorization.

c) Repairs during the warranty period must be performed by the manufacturer or by a company / person approved by the manufacturer.

d) The warranty is void if the product has previously been disassembled / repaired by unauthorized personnel.

e) If repair is considered in warranty condition, this includes replacing of components that are subject to wear due to their intrinsic characteristics. However, the normal wear of these components cannot be considered as the sole reason for confirming the warranty.

f) The seller or manufacturer will not be responsible for defects in materials or projects provided by the buyer.

g) In particular, the manufacturer will not be held responsible for defects caused during transport and storage, misuse of the product by the customer (collisions), use outside normal working conditions, failure to observe the operating instructions and maintenance rules prescribed by producer.

h) Repairs during the warranty period are made on the basis of a written complaint sent by the buyer, which must include a detailed description of the defect and which can be verified by the producer.

Repairs outside the warranty

For toolholders that are no longer covered by warranty, a standard toll charge of 30 EUR / toolholder, will be applied for disassemble and evaluation of the product state. If the Repair Offer is accepted by the customer and a Repair Order is received, this fee will not be paid by customer.