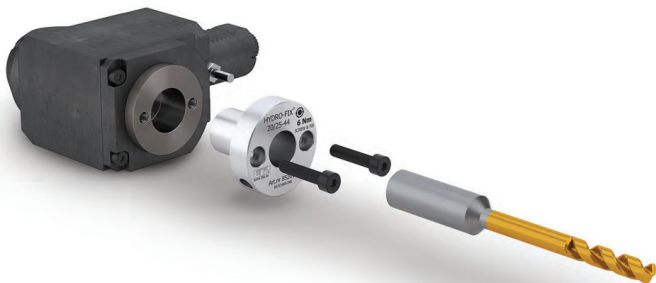
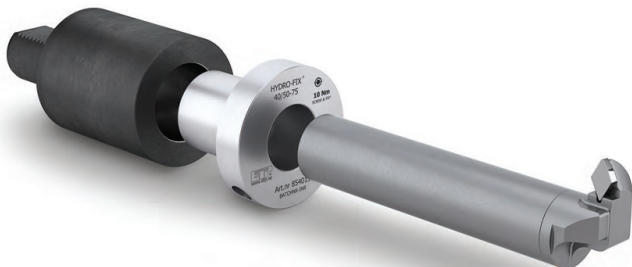


**Metalworking**

**ETP**  
HYDRO-GRIP



# ETP HYDRO-FIX

## OPERATING INSTRUCTION

## DESCRIPTION

**ETP HYDRO-FIX** clamping sleeves are excellent for static boring bars for internal and external turning as well as in driven/live toolholders.

With the one screw fix system it is quick and easy to handle. The clamping centers the tool in the bore while uniformly clamping around the tool; therefore the tool life is improved.

The clamping system absorbs and reduces vibration, improves surface quality and best of all increases your productivity!

### BENEFITS & FEATURES

- Reduced vibrations
- Increased speed and/or feed
- Improved surface quality
- Increased tool life
- Quick and easy handling
- Increased overhang possible
- Safe clamping of solid carbide tools



## INFORMATION

### TOLERANCES

Tool shank/boring bar shank h6 or h7 can be used.

For ID sizes 12 mm, 1/2", 3/4" and 20 mm:

When using a non-cylindrical tool shank/boring bar – we recommend the use of a reducing sleeve to avoid damage of ETP HYDRO-FIX.

Recommended ID tolerance of static block or driven/live toolholder - H7.

### BALANCING

ETP HYDRO-FIX clamping sleeves are balanced by design.

For use above 3 000 rpm - we recommend individual balancing.

### PRESSURE SCREW

Max. recommended tightening torque is marked on the ETP HYDRO-FIX sleeve.

Use a fixed torque wrench.

| Recommended tightening torque   | Nm |
|---------------------------------|----|
| ETP HYDRO-FIX dim 12-40 mm      | 6  |
| ETP HYDRO-FIX dim 42-60 mm      | 10 |
| ETP HYDRO-FIX dim 1/2" - 1 1/2" | 6  |
| ETP HYDRO-FIX dim 2" - 2 1/2"   | 10 |

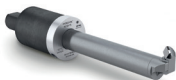
## ASSEMBLY INSTRUCTIONS



**1.** Clean all contact surfaces between the tool shank/boring bar, reduction sleeve (if used), HYDRO-FIX and static block or driven/live toolholder thoroughly with isopropyl alcohol. This is to remove any dirt, oil or rust preventative from storage and ensure a good contact surface.



**2.** Slide HYDRO-FIX into the static block or driven/live toolholder. Always ensure HYDRO-FIX is pushed flush against the face of the static block or driven/live toolholder. Slide the tool shank/boring bar into HYDRO-FIX. Always ensure the tool shank/boring bar is fully inserted.



**3.** Mount the tool shank/boring bar and HYDRO-FIX by tightening the pressure screw to the recommended tightening torque, marked on HYDRO-FIX. Use a fixed torque wrench.

## IN DRIVEN/LIVE TOOL APPLICATIONS

Follow step 1 and 2 above



**3.** Lightly mount the socket head cap screws, just to ensure location.

**Note: Do not tighten all of the way.**



**4.** Mount/center the tool shank and HYDRO-FIX by tightening the pressure screw to the recommended tightening torque, marked on HYDRO-FIX. Use a fixed torque wrench.

**5.** Fully tighten the socket cap head screws.

## HANDLING

**ETP HYDRO-FIX** is a hydraulic high precision clamping sleeve and should be handled with care for optimal performance.

- Before inserting a tool, check for damages on the tool and HYDRO-FIX.
- Never tighten the pressure screw of HYDRO-FIX unless it is fully assembled.
- Tools should be of correct dimension and tolerance (h6 or h7), and cleaned.
- Do not use force to insert tool or clamping sleeve, they should easily slide in position.
- All HYDRO-FIX can be used with reduction sleeves when needed.
- Mount tools and HYDRO-FIX by tightening the pressure screw to the recommended tightening torque, marked on HYDRO-FIX. Use a fixed torque wrench.
- When stored, lubricate HYDRO-FIX with a thin oil for corrosion resistance.
- Do not use HYDRO-FIX at working temperatures above 85 degrees C / 185 degrees F. (This may increase the pressure in the clamping sleeve and influence it negatively).



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