

ETP HYDRO-FIX®

Hydraulic high precision clamping holders



Swiss type
Lathes

New
Backworking
Versions

Driven tools
& Static Bo-
ring bars



ETP HYDRO-FIX S[®]

Hydraulic high precision clamping holders

Increases your productivity!



ETP HYDRO-FIX S clamping holders are excellent for static front and back operations such as drilling, reaming and boring. With the one screw fix system it is quick and easy to handle. Precision hydraulic tool centering is achieved and therefore the tool life and setup time is improved.

The clamping holders allows for larger/deeper drilling, quick tool changes, absorbs/reduces vibration, improves surface quality and best of all: increases your productivity!

Static front & back working tools

BENEFITS & FEATURES

- Replaces ER11 – ER32 collet holders
- Use larger and longer tools
- Shank clamping range: 1 to 25 mm and 1/8" to 13/16" using reduction sleeves
- Quick and easy handling
- Reduced vibrations
- Improved surface quality
- Increased tool life

Designs

Cylindrical

Hydraulic clamping on the tool shank and expansion of the holder inside the machine block!

Perfect centering



Flat

Hydraulic clamping on the tool shank!

Easy length adjustability



What some of our clients say

”

ETP Transmission has brought our deep hole drilling capabilities to a completely new level.

Nick Hamel
Computer Numerical Control
Programmer at Mount Mfg.



ETP SWISS Toolholders -
“a game changer” at Mount Mfg

The medical device manufacturing company Mount MFG reached out to ETP Transmission with the hopes to streamline and improve their workflow within swiss turning.

A couple of months later the manufacturing company can say that the result is beyond their expectations.

”

The versatility offered by ETP is amazing and from a safety perspective, these holders allow effortless tool changes in tight spaces without the wrenches slipping off. I can't wait to see what they produce next.

Seth Nickerson
Machine Technician Autocam Medical



Medical Manufacturer Autocam Medical Chooses ETP – Requires the Best of the Best Tooling for Extremely Tight Tolerances

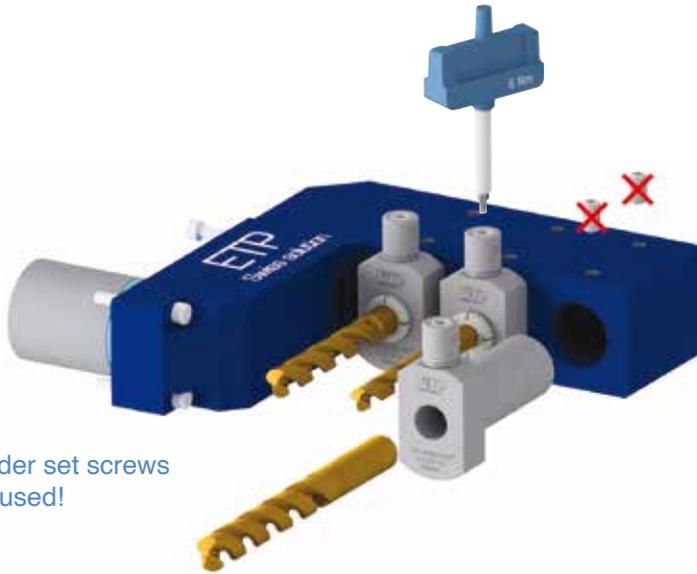
The leading medical manufacturer,

Autocam Medical, requires extreme precision to make their products, later used by a very demanding industry that performs life-changing procedures. In February, the company made their first purchase of

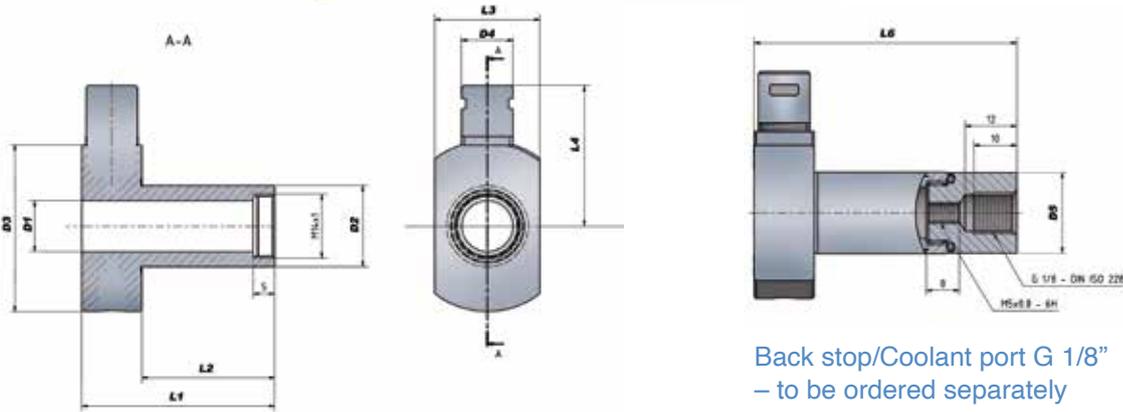
ETP HYDRO-FIX SWISS® and the versatility of the product makes them return, over and over again.

ETP HYDRO-FIX SFC[®]

Front activation – Cylindrical design



Block/holder set screws are NOT used!



Back stop/Coolant port G 1/8” – to be ordered separately

Technical Specification

| Part no. | Item description | Dimensions, mm | | | | | | | | Dimensions with Back stop/Coolant port G 1/8” | | |
|----------|-----------------------------|----------------|-------|----|----|----|----|------|------|---|-------|---|
| | | D1* | D2** | D3 | D4 | L1 | L2 | L3 | L4 | L6 | D5 | Part no. - Back stop/Coolant port G 1/8” Includes adjustment screw M5x0.8-16*** |
| 670000 | HYDRO-FIX SFC-12/16-24 | 12 | 16 | 33 | 12 | 38 | 24 | 18.5 | 30.5 | | | |
| 664090 | HYDRO-FIX SFC-12/3/4"-31 | 12 | 19.05 | 40 | 12 | 45 | 31 | 21.5 | 33 | 61 | 18.85 | 664000-10 |
| 664100 | HYDRO-FIX SFC-12/20-31 | 12 | 20 | 40 | 12 | 45 | 31 | 22.5 | 33 | 61 | 18.85 | 664000-10 |
| 663740 | HYDRO-FIX SFC-12/22-31 | 12 | 22 | 40 | 12 | 45 | 31 | 24.5 | 33 | 61 | 18.85 | 664000-10 |
| 664110 | HYDRO-FIX SFC-12/25-31 | 12 | 25 | 40 | 12 | 45 | 31 | 27.5 | 33 | 61 | 18.85 | 664000-10 |
| 664120 | HYDRO-FIX SFC-12/1"-31 | 12 | 25.4 | 40 | 12 | 45 | 31 | 27.5 | 33 | 61 | 18.85 | 664000-10 |
| 663750 | HYDRO-FIX SFC-20/25-30* | 20 | 25 | 44 | 12 | 44 | 30 | 27.5 | 35 | | | |
| 664130 | HYDRO-FIX SFC-20/1"-30* | 20 | 25.4 | 44 | 12 | 44 | 30 | 27.5 | 35 | | | |
| 664140 | HYDRO-FIX SFC-25/1 1/4"-34* | 25 | 31.75 | 50 | 12 | 48 | 34 | 34.5 | 38 | | | |
| 663760 | HYDRO-FIX SFC-25/32-34* | 25 | 32 | 50 | 12 | 48 | 34 | 34.5 | 38 | | | |

*) These sizes are NOT threaded with an M14x1 for a Back stop/coolant port. Pressure screw angled 15°.

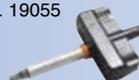


Information:

- *) Tool/toolbar shank h6 or h7 can be used.
- **) Recommended tolerance of toolholder bore - H7.
- ***) Adjustment screw M5x0.8-16 can also be ordered separately as spare part. Part no. S041

Accessories:

Use preset Torque Wrench to ensure correct mounting of tools. 6 Nm - Part no. 19055



ETP HYDRO-FIX can be used with reduction sleeves. For additional information see section Accessories.



Adaptors:

Male G 1/8” to Female 1/8” NPT Part no. 19151

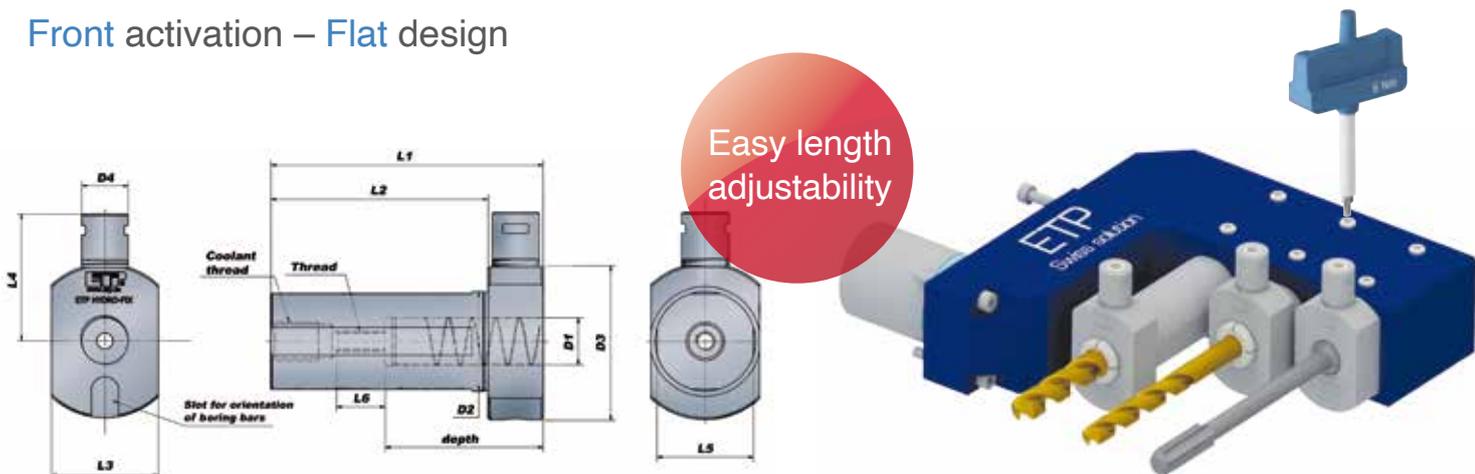


Male G 1/8” to Male 1/4” JIC Part no. 19150



ETP HYDRO-FIX SFF®

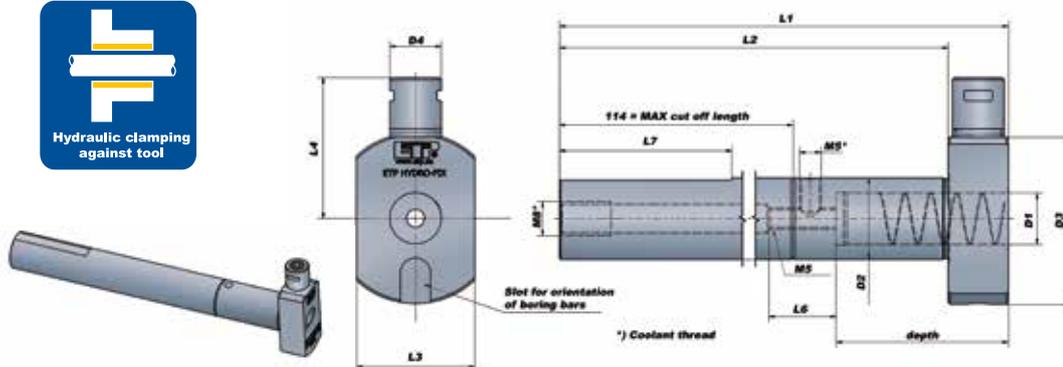
Front activation – Flat design



Set screws are used to clamp on the milled flat, after adjusting the length of the assembly.

Technical Specification

| Part no. | Item description | Dimensions, mm | | | | | | | | | | | Thread | L6 | Coolant thread DIN ISO 228 |
|----------|--------------------------|----------------|-------|----|----|-----|-----|-------|------|----|-------|-------------|--------|-------|-------------------------------|
| | | D1 | D2 | D3 | D4 | L1 | L2 | depth | L3 | L4 | L5 | | | | |
| 706010 | HYDRO-FIX SFF-12/3/4"-50 | 12 | 19.05 | 40 | 12 | 64 | 50 | 40 | 21.5 | 33 | 18.05 | M5x0.8 - 6H | 7 | G 1/8 | |
| 706158 | HYDRO-FIX SFF-12/3/4"-75 | 12 | 19.05 | 40 | 12 | 89 | 75 | 40 | 21.5 | 33 | 18.05 | M5x0.8 - 6H | 16 | G 1/8 | |
| 706159 | HYDRO-FIX SFF-12/20-75 | 12 | 20 | 40 | 12 | 89 | 75 | 40 | 22.5 | 33 | 19 | M5x0.8 - 6H | 16 | G 1/8 | |
| 706012 | HYDRO-FIX SFF-12/25-150 | 12 | 25 | 40 | 12 | 164 | 150 | 40 | 27.5 | 33 | 24 | M5x0.8 - 6H | 16 | G 1/8 | |
| 706053 | HYDRO-FIX SFF-12/1"-55 | 12 | 25.4 | 40 | 12 | 69 | 55 | 40 | 27.5 | 33 | 24.4 | M5x0.8 - 6H | 12 | G 1/8 | |
| 706011 | HYDRO-FIX SFF-12/1"-100 | 12 | 25.4 | 40 | 12 | 114 | 100 | 40 | 27.5 | 33 | 24.4 | M5x0.8 - 6H | 16 | G 1/8 | |



Cut to length

With the below range of SFF versions you have the possibility to cut your holder to a desired length!

Technical Specification

| Part no. | Item description | Dimensions, mm | | | | | | | | | | Thread | L6 |
|----------|---------------------------|----------------|-------|----|----|-----|-----|-------|------|----|----|--------------|----|
| | | D1 | D2 | D3 | D4 | L1 | L2 | depth | L3 | L4 | L7 | | |
| 664200 | HYDRO-FIX SFF-12/3/4"-150 | 12 | 19.05 | 40 | 12 | 164 | 150 | 40 | 19.5 | 33 | 40 | M5x0.8 - 6H | 16 |
| 664210 | HYDRO-FIX SFF-12/20-150 | 12 | 20 | 40 | 12 | 164 | 150 | 40 | 22.5 | 33 | 40 | M5x0.8 - 6H | 16 |
| 664220 | HYDRO-FIX SFF-12/22-150 | 12 | 22 | 40 | 12 | 164 | 150 | 40 | 24.5 | 33 | 40 | M5x0.8 - 6H | 16 |
| 664230 | HYDRO-FIX SFF-12/25-150 | 12 | 25 | 40 | 12 | 164 | 150 | 40 | 27.5 | 33 | 40 | M5x0.8 - 6H | 16 |
| 664240 | HYDRO-FIX SFF-12/1"-150 | 12 | 25.4 | 40 | 12 | 164 | 150 | 40 | 27.5 | 33 | 40 | M5 x0.8 - 6H | 16 |

Information:

- *) Tool/toolbar shank h6 or h7 can be used.
 - **) Recommended tolerance of toolholder bore - H7.
- Adjustment screw M5x0.8-16 included in shipment. It can also be ordered separately as spare part. Part no. S041

Accessories:

Use preset Torque Wrench to ensure correct mounting of tools. 6 Nm - Part no. 19055



ETP HYDRO-FIX can be used with reduction sleeves. For additional information see section Accessories.



Adaptors:

- Male G 1/8" to Female 1/8" NPT Part no. 19151
- Male G 1/8" to Male 1/4" JIC Part no. 19150
- Male M8x1.25 to Male 1/4" JIC Part no. 19152



ETP HYDRO-FIX SBF®

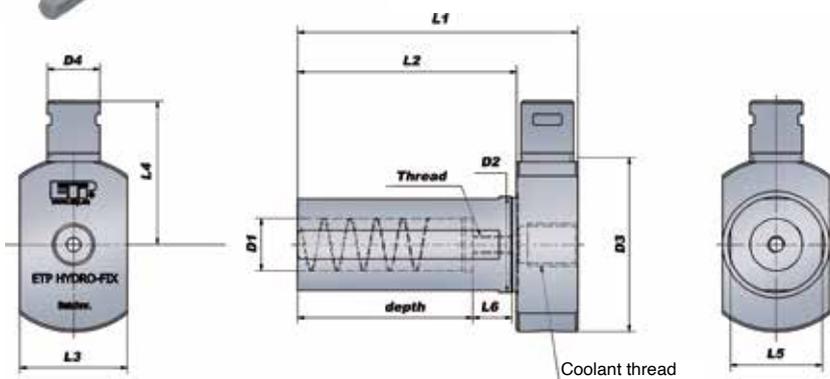
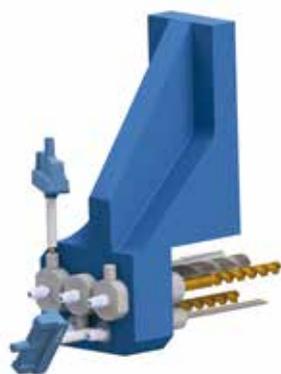
Back activation – Flat design



Set screws are used to clamp on the milled flat, after adjusting the length of the assembly.



Easy length adjustability



Technical Specification

| Part no. | Item description | Dimensions, mm | | | | | | | | | | | Thread | L6 | Coolant thread DIN ISO 228 |
|----------|---------------------------|----------------|-------|----|----|-----|-----|-------|------|----|------|-------------|--------|-------|-------------------------------|
| | | D1 | D2 | D3 | D4 | L1 | L2 | depth | L3 | L4 | L5 | | | | |
| 664000 | HYDRO-FIX SBF-12/3/4"-50 | 12 | 19.05 | 40 | 12 | 64 | 50 | 40 | 21.5 | 33 | 21 | M5x0.8 - 6H | 9 | G 1/8 | |
| 664010 | HYDRO-FIX SBF-12/3/4"-75 | 12 | 19.05 | 40 | 12 | 89 | 75 | 40 | 21.5 | 33 | 21 | M5x0.8 - 6H | 10 | G 1/8 | |
| 664020 | HYDRO-FIX SBF-12/3/4"-100 | 12 | 19.05 | 40 | 12 | 114 | 100 | 40 | 21.5 | 33 | 21 | M5x0.8 - 6H | 10 | G 1/8 | |
| 706337 | HYDRO-FIX SBF-12/20-50 | 12 | 20 | 40 | 12 | 64 | 50 | 40 | 22.5 | 33 | 19 | M5x0.8 - 6H | 7 | G 1/8 | |
| 664030 | HYDRO-FIX SBF-12/20-75 | 12 | 20 | 40 | 12 | 89 | 75 | 40 | 22.5 | 33 | 21 | M5x0.8 - 6H | 10 | G 1/8 | |
| 664040 | HYDRO-FIX SBF-12/20-100 | 12 | 20 | 40 | 12 | 114 | 100 | 40 | 22.5 | 33 | 21 | M5x0.8 - 6H | 10 | G 1/8 | |
| 663700 | HYDRO-FIX SBF-12/22-50 | 12 | 22 | 40 | 12 | 64 | 50 | 40 | 24.5 | 33 | 21 | M5x0.8 - 6H | 9 | G 1/8 | |
| 663770 | HYDRO-FIX SBF-12/22-75 | 12 | 22 | 40 | 12 | 89 | 75 | 40 | 24.5 | 33 | 21 | M5x0.8 - 6H | 10 | G 1/8 | |
| 663720 | HYDRO-FIX SBF-12/22-100 | 12 | 22 | 40 | 12 | 114 | 100 | 40 | 24.5 | 33 | 21 | M5x0.8 - 6H | 10 | G 1/8 | |
| 663780 | HYDRO-FIX SBF-12/22-115 | 12 | 22 | 40 | 12 | 129 | 115 | 40 | 24.5 | 33 | 21 | M5x0.8 - 6H | 10 | G 1/8 | |
| 663710 | HYDRO-FIX SBF-12/25-50 | 12 | 25 | 40 | 12 | 64 | 50 | 40 | 27.5 | 33 | 24 | M5x0.8 - 6H | 9 | G 1/8 | |
| 663790 | HYDRO-FIX SBF-12/25-75 | 12 | 25 | 40 | 12 | 89 | 75 | 40 | 27.5 | 33 | 24 | M5x0.8 - 6H | 10 | G 1/8 | |
| 663730 | HYDRO-FIX SBF-12/25-100 | 12 | 25 | 40 | 12 | 114 | 100 | 40 | 27.5 | 33 | 24 | M5x0.8 - 6H | 10 | G 1/8 | |
| 664050 | HYDRO-FIX SBF-12/1"-50 | 12 | 25.4 | 40 | 12 | 64 | 50 | 40 | 27.5 | 33 | 24 | M5x0.8 - 6H | 9 | G 1/8 | |
| 664060 | HYDRO-FIX SBF-12/1"-75 | 12 | 25.4 | 40 | 12 | 89 | 75 | 40 | 27.5 | 33 | 24 | M5x0.8 - 6H | 10 | G 1/8 | |
| 664070 | HYDRO-FIX SBF-12/1"-100 | 12 | 25.4 | 40 | 12 | 114 | 100 | 40 | 27.5 | 33 | 24 | M5x0.8 - 6H | 10 | G 1/8 | |
| 664080 | HYDRO-FIX SBF-20/32-50 | 20 | 32 | 40 | 12 | 64 | 50 | 52 | 34.5 | 33 | 30.8 | M5x0.8 - 6H | 9 | - | |
| 663810 | HYDRO-FIX SBF-20/32-75 | 20 | 32 | 40 | 12 | 89 | 75 | 52 | 34.5 | 33 | 30.8 | M5x0.8 - 6H | 10 | G 1/8 | |
| 663820 | HYDRO-FIX SBF-20/32-100 | 20 | 32 | 40 | 12 | 114 | 100 | 52 | 34.5 | 33 | 30.8 | M5x0.8 - 6H | 10 | G 1/8 | |

Information:

- *) Tool/toolbar shank h6 or h7 can be used.
- **) Recommended tolerance of toolholder bore - H7.

Adjustment screw included in shipment.
Can also be ordered separately as spare part.
M5x0.8-16 Part no. S041

Accessories:

Use preset Torque Wrench to ensure correct mounting of tools.
6 Nm - Part no. 19055



ETP HYDRO-FIX can be used with reduction sleeves.
For additional information see section Accessories.



Adaptors:

Male G 1/8" to Female 1/8" NPT
Part no. 19151

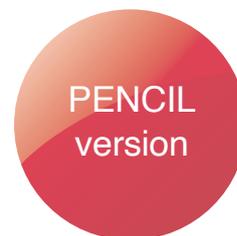
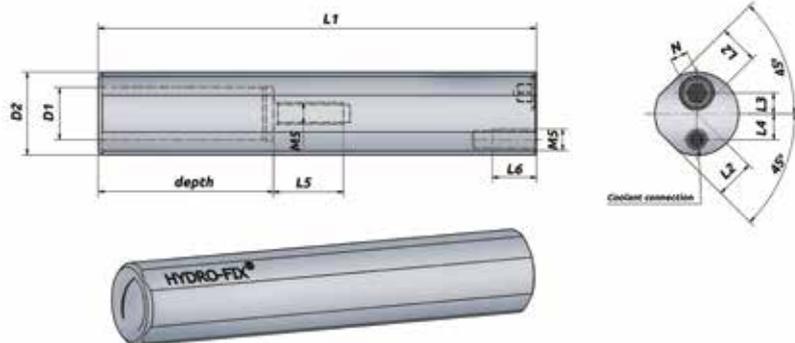
Male G 1/8" to Male 1/4" JIC
Part no. 19150

Male M5 to Male 1/4" JIC
Part no. 19153



ETP HYDRO-FIX SP[®]

PENCIL – Back activation – Flat design



Technical Specification

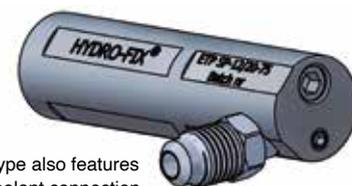
| Part no. | Item description | Dimensions, mm | | | | | | | | Center thread | | Coolant connection | |
|----------|----------------------------|----------------|-------|-----|-------|------|----|-------|---|---------------|----|--------------------|----|
| | | D1 | D2 | L1 | L2 | L3 | L4 | depth | N | size | L5 | size | L6 |
| 665000 | HYDRO-FIX SP-6/16-65* | 6 | 16 | 65 | 7.5** | 2.7 | | 27 | 4 | | | | |
| 665070 | HYDRO-FIX SP-12/3/4"-75*** | 12 | 19.05 | 75 | 9 | 4.75 | 6 | 40 | 4 | M5 | 8 | M5 | 10 |
| 665010 | HYDRO-FIX SP-12/3/4"-100 | 12 | 19.05 | 100 | 9 | 4.75 | 6 | 40 | 4 | M5 | 16 | M5 | 10 |
| 665080 | HYDRO-FIX SP-12/20-75*** | 12 | 20 | 75 | 9.5 | 4.75 | 6 | 40 | 4 | M5 | 8 | M5 | 10 |
| 665020 | HYDRO-FIX SP-12/20-100 | 12 | 20 | 100 | 9.5 | 4.75 | 6 | 40 | 4 | M5 | 16 | M5 | 10 |
| 665090 | HYDRO-FIX SP-12/22-75*** | 12 | 22 | 75 | 10.5 | 4.75 | 6 | 40 | 4 | M5 | 8 | M5 | 10 |
| 665030 | HYDRO-FIX SP-12/22-100 | 12 | 22 | 100 | 10.5 | 4.75 | 6 | 40 | 4 | M5 | 16 | M5 | 10 |
| 665040 | HYDRO-FIX SP-12/25-100 | 12 | 25 | 100 | 12 | 4.75 | 6 | 40 | 4 | M5 | 16 | M5 | 10 |
| 665050 | HYDRO-FIX SP-12/1"-100 | 12 | 25.4 | 100 | 12.2 | 4.75 | 6 | 40 | 4 | M5 | 16 | M5 | 10 |
| 665060 | HYDRO-FIX SP-20/32-100 | 20 | 32 | 100 | 15.5 | 8.5 | 7 | 52 | 4 | M8 | 25 | M8 | 10 |

*) No center thread or coolant connection.

**) Only one flat surface.

Application area

| Machine Mfg. | Machine type | 665000 | 665010 665070 | 665020 665080 | 665030 665090 | 665040 | 665050 | 665060 |
|--------------|-------------------|--------|------------------|------------------|------------------|--------|--------|--------|
| CITIZEN | C | | • | | | | • | |
| | L20 | | • | | | | | |
| | L32 | | | | | | • | |
| | M | | | | | | • | |
| | M16 | | • | | | | | |
| STAR | 12 SERIES | | | | • | | | |
| | 20 SERIES | | | | • | | | |
| NOMURA | NN-20 SERIES | | | | • | | | |
| | NN-3X | • | | | | | | |
| NEXTURN* | - | | • | | | • | | |
| TSUGAMI | 20 | | | • | | | | |
| | B012 | | | • | | | | |
| | S20 | | | • | | | | |
| | 32 SERIES | | | | | • | | |
| HANWHA | SL 12H | | | • | | | | |
| | 20 SERIES | | | | | • | | |
| | XD 38II | | | | | | | • |
| TORNOS | DELTA 20 | | | | • | | | |
| | GAMMA 20 | | | • | • | | | |
| | DECO (7/19/13/20) | | | | | • | | |
| | NANO | • | | | | | | |



***) This type also features a radial coolant connection.



* depending on machine type

Information:

*) Tool/toolbar shank h6 or h7 can be used.
 **) Recommended tolerance of toolholder bore - H7.
 Adjustment screw included in shipment.
 Can also be ordered separately as spare part.
 M5x0.8-16 Part no. S041

Accessories:

Use preset Torque Wrench to ensure correct mounting of tools.
 6 Nm - Part no. 19055



ETP HYDRO-FIX can be used with reduction sleeves.
 For additional information see section Accessories.



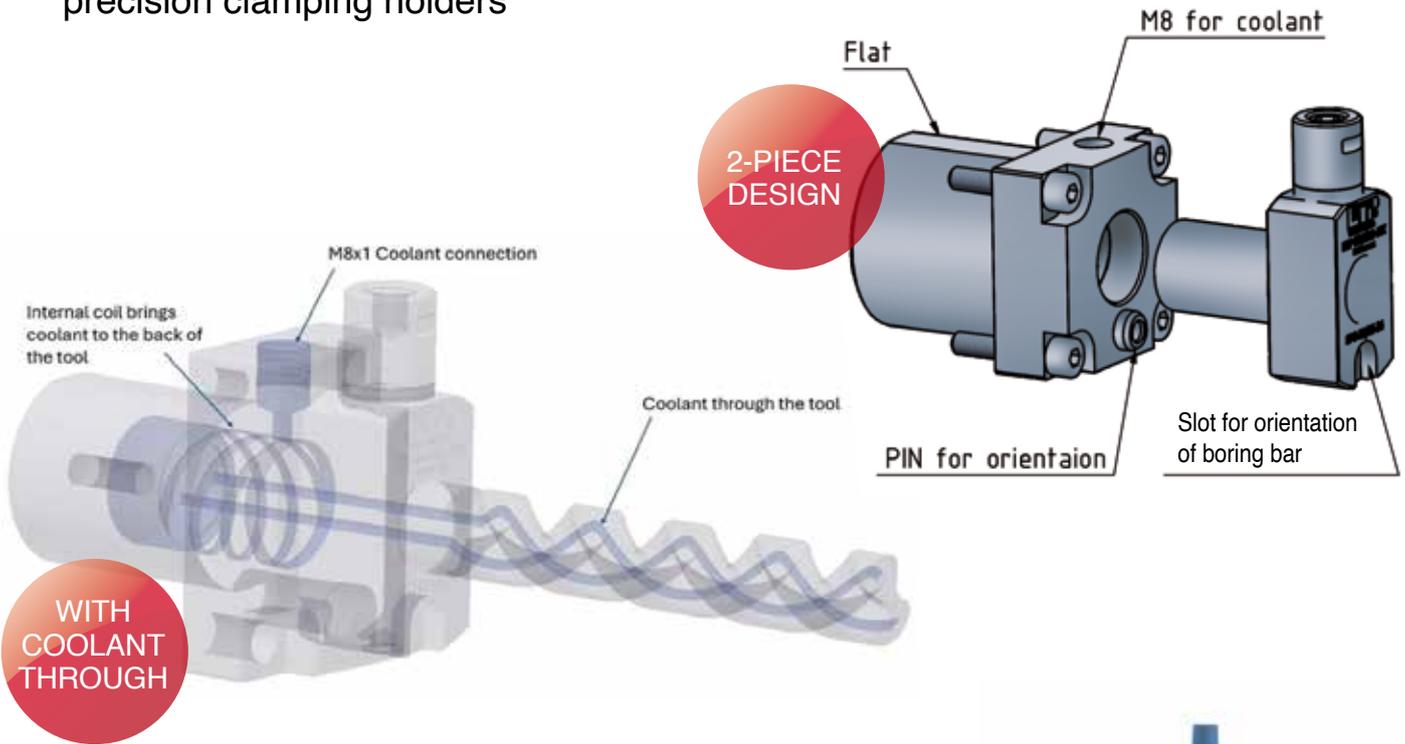
Adaptors:

Male M8x1.25 to Male 1/4" JIC Part no. 19152
 Male M5 to Male 1/4" JIC Part no. 19153



ETP HYDRO-FIX SBW[®]

Hydraulic Swiss Back-Working precision clamping holders



ETP SWISS backworking application

- 1 . FIND YOUR MACHINE
- 2 . CHOOSE SUITABLE ETP HYDRO-FIX HOLDER
- 3 . CHOOSE YOUR ACCESSORIES

| 1. MACHINE | | 2. CHOOSE ETP HYDRO-FIX HOLDER | | | | | | |
|--------------|--------------|--------------------------------|--------|--------|--------|--------|--------|--------|
| Machine Mfg. | Machine type | 670010 | 670020 | 670030 | 670040 | 670050 | 670060 | 670070 |
| STAR | SB20 | • | • | | | | | |
| | SR20 | • | • | | | | | |
| | SR20J | • | • | | | | | |
| | SR32J | • | • | | | | | |
| | SR32JII | • | • | | | | | |
| | SR38 | • | • | | | | | |
| | SV-38R | | | • | | | | |
| | SX38 | | | • | | | | |
| CITIZEN | L12 | | | | • | | | |
| | L20 | | | | | • | | |
| | L32X | | | | | | • | • |
| MAZAK | SYNCREX 20/8 | | | • | | | | |
| | SYNCREX 25/8 | | | • | | | | |
| | SYNCREX 38/8 | | | • | | | | |



Additional information:
 Tool/toolbar shank h6 or h7 can be used.
 Adjustment screw included in shipment. Can also be ordered separately as spare part.
 M5x0.8-16 Part no. S041
 or
 M8x1.25-25 Part no. S057

Accessories:
 Use a preset torque wrench to ensure correct mounting of tools.
 6 Nm - Part no. 19055

 50mm long bit for wrench
 Part no. ETP-630



ETP HYDRO-FIX can be used with reduction sleeves.
 R1912.****
 R1920.****
 R1925.****



Extractors available for all sleeves
 E7321.12000 - 12mm
 E7321.20000 - 20mm
 E7321.25000 - 25mm

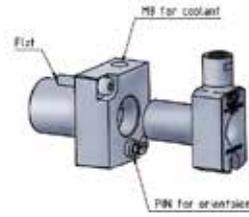
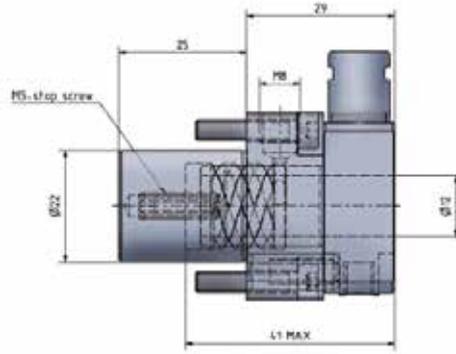
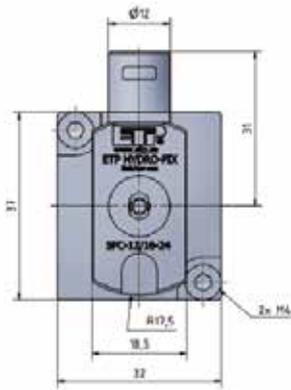
Coolant adaptors:
 Male M8x1.25 to Male 1/4" JIC
 Part no. 19152



Orientation kit
 For quick and easy tool setting,
 see page 17-18.



670010 - ETP HYDRO-FIX SBW-12/22-25 F1

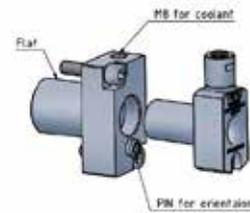
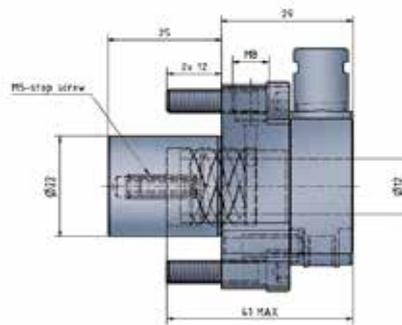
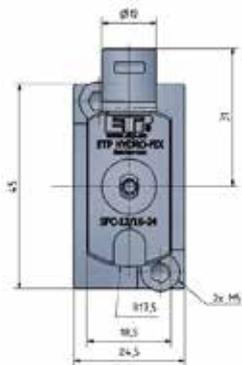


Machine type

- SB20
- SR20
- SR20J
- SR32J
- SR32JII
- SR38



670020 - ETP HYDRO-FIX SBW-12/22-25 F2

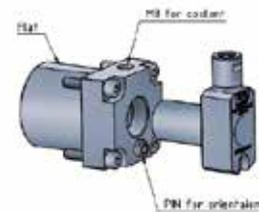
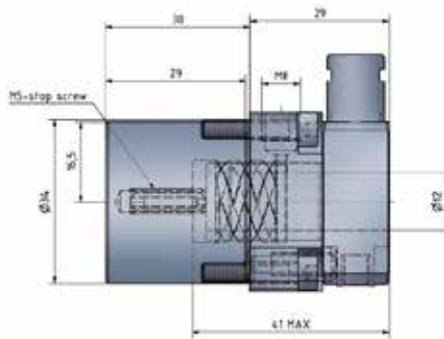
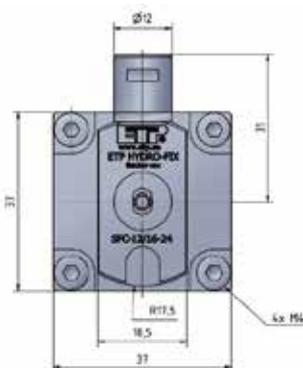


Machine type

- SB20
- SR20
- SR20J
- SR32J
- SR32JII
- SR38



670030 - ETP HYDRO-FIX SBW-12/34-30 F1



Machine type

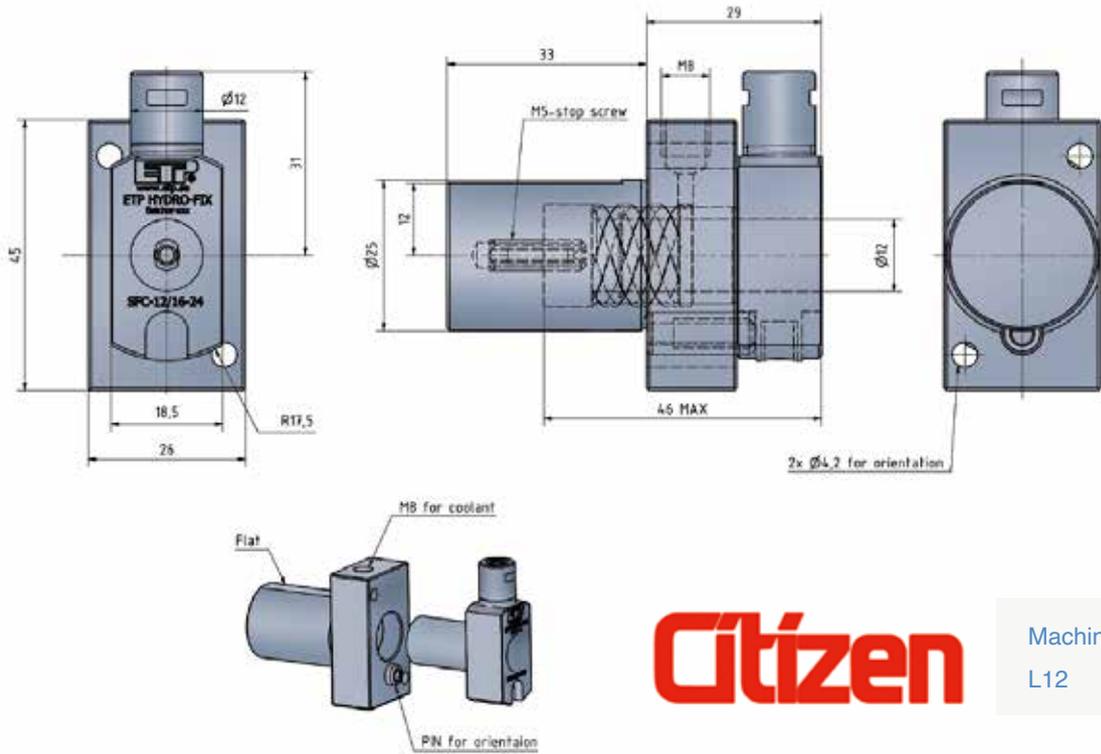
- SV-38R
- SX38



Machine type

- SYNCREX 20/8
- SYNCREX 25/8
- SYNCREX 38/8

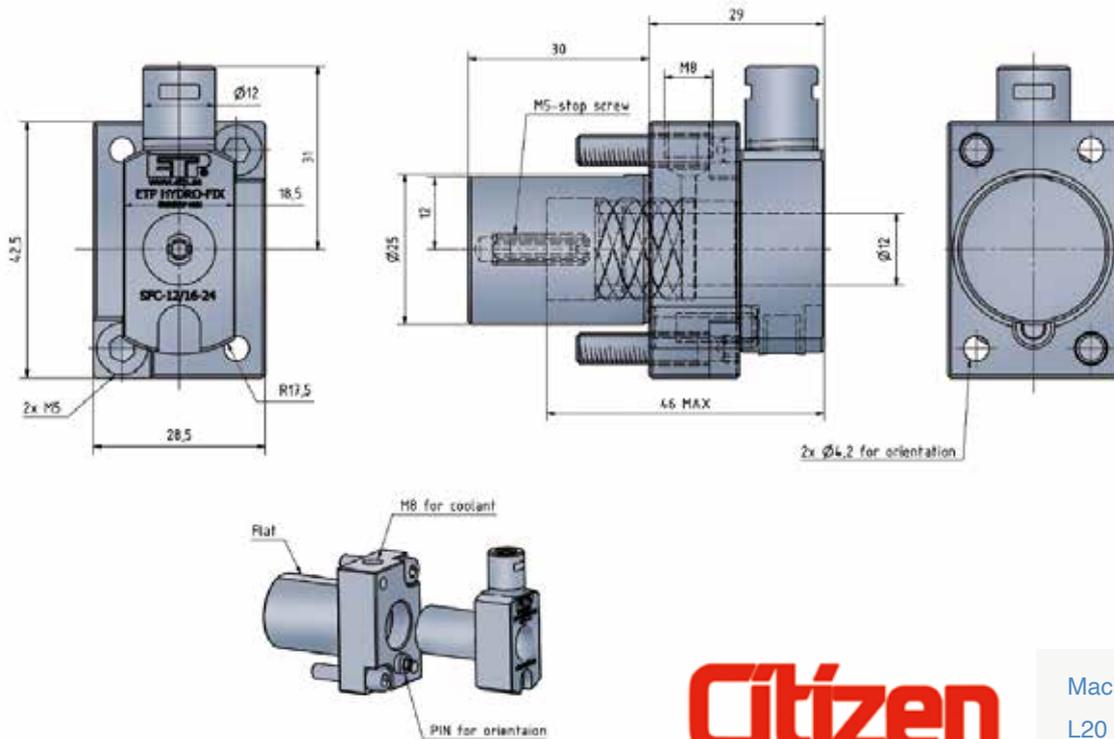
670040 - ETP HYDRO-FIX SBW-12/25-33 F1



Citizen

Machine type
L12

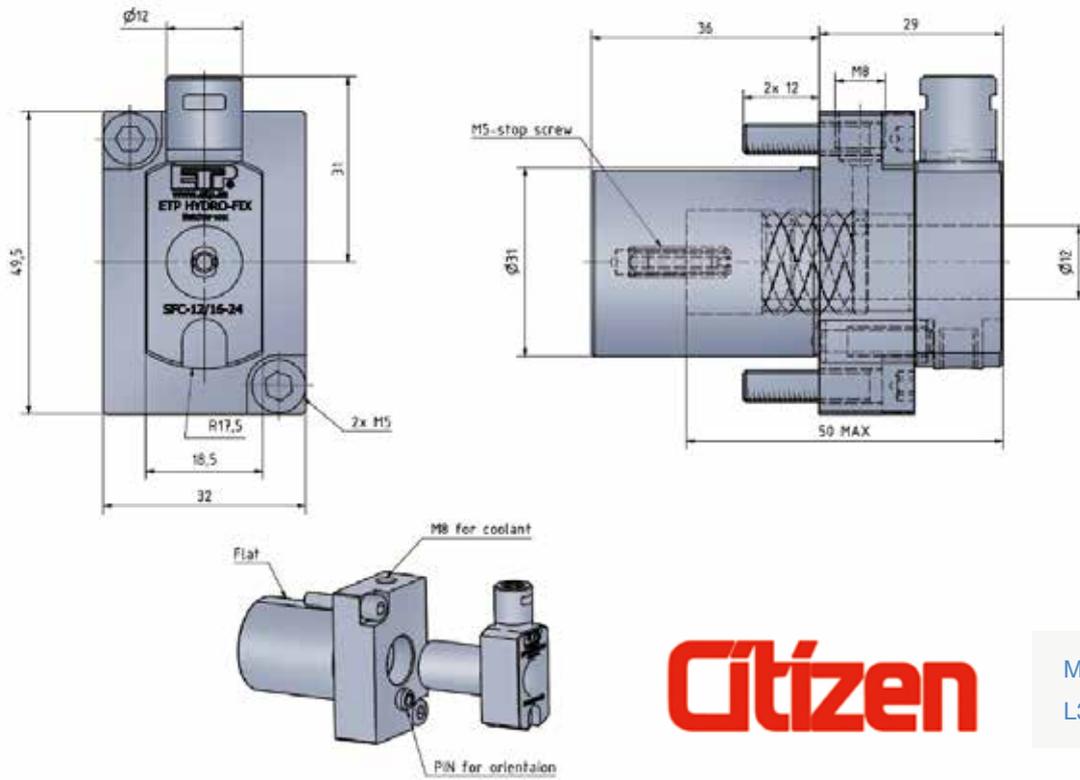
670050 - ETP HYDRO-FIX SBW-12/25-30 F1



Citizen

Machine type
L20

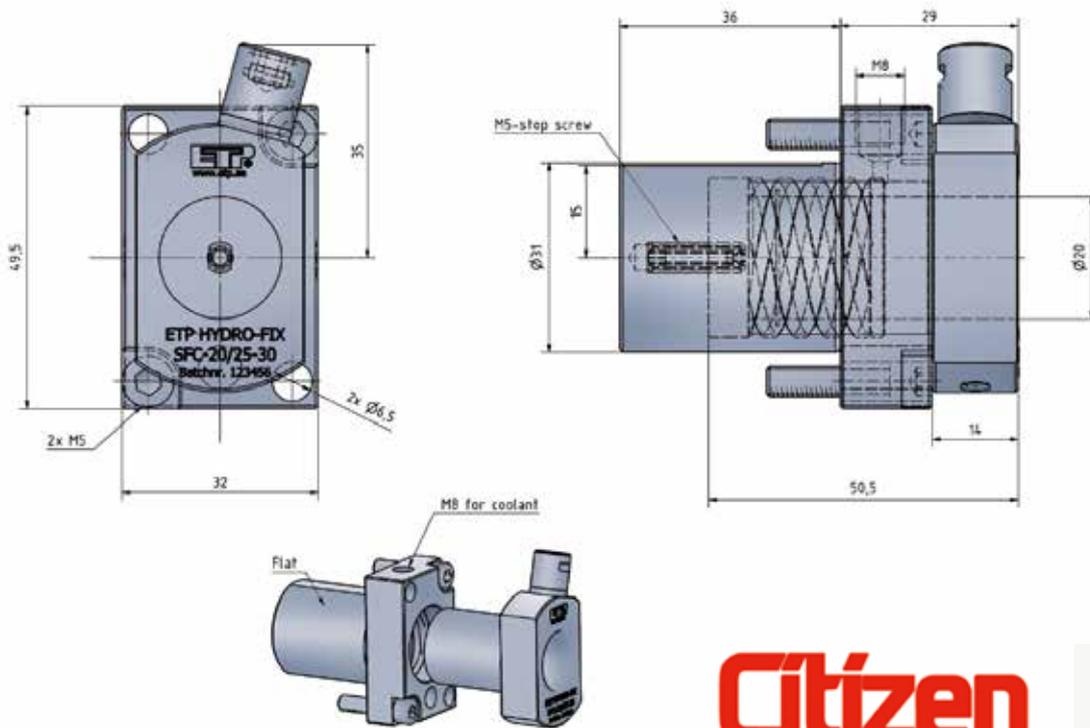
670060 - ETP HYDRO-FIX SBW-12/31-36 F1



Citizen

Machine type
L32X

670070 - ETP HYDRO-FIX SBW-20/31-36 F1



Citizen

Machine type
L32X

Accessories ETP HYDRO-FIX Orientation kit

EASY
TOOL
SETTING



BENEFITS & FEATURES

- Quick and Easy tool setting
- Less down-time
- Fits tools from 4 - 12 mm
- Pre-set your tools outside of machine
- Can be used for both round bars as well as Easy-Fix bars

Quick and Easy tool setting with our Orientation kit!

With our new ETP HYDRO-FIX orientation kit you can now enjoy quick and easy tool setups even outside of your machine.

With our external orientation fixture and the accompanying orientation discs, that come in all sizes ranging

from 4 - 12 mm, allow you now to pre-set any tools and keep ready for installation. Both standard round tool bars as well as Easy-Fix tool bars can be used!

Start now and reduce your downtime!

Accessories ETP HYDRO-FIX Orientation kit



This orientation kit allows you to easily and with precision set your tool bar outside of the machine and transfer the settings to your installed ETP HYDRO-FIX clamping holder.

| Part no. | Description |
|----------|------------------------------------|
| 664180 | ETP HYDRO-FIX Orientation kit |
| | Fixture Ø 12 mm. |
| | Incl. Stop plug with set screw |
| | Orientation discs |
| | Orientation disc Ø 4 mm. |
| | Orientation disc Ø 6 mm. |
| | Orientation disc Ø 8 mm. |
| | Orientation disc Ø 12 mm. |
| | Reduction sleeves |
| | HS 12 / 4 mm. |
| | HS 12 / 6 mm. |
| | HS 12 / 8 mm. |
| | Wrenches & Accessories |
| | Torque wrench 0.45 Nm (2.5 mm Hex) |
| | Allen key (1.5 mm) |
| | Screw M3x8 |

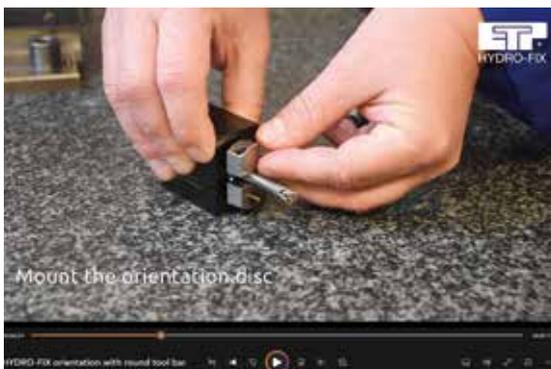


Accessories/Spare parts

| Part no. | Description |
|-----------|---------------------------|
| 664180-4 | Orientation disc Ø 4 mm. |
| 664180-5 | Orientation disc Ø 5 mm. |
| 664180-6 | Orientation disc Ø 6 mm. |
| 664180-7 | Orientation disc Ø 7 mm. |
| 664180-8 | Orientation disc Ø 8 mm. |
| 664180-10 | Orientation disc Ø 10 mm. |
| 664180-12 | Orientation disc Ø 12 mm. |

View video instructions

Scan the codes to see the complete procedure on how to use your ETP HYDRO-FIX orientation kit!



Using round bars



Using Easy-Fix bars



ETP HYDRO-FIX®

Hydraulic high precision clamping sleeve



New Generation



ETP HYDRO-FIX clamping sleeves are excellent for boring bars for internal and external turning as well as in driven toolholders. With the one screw fix system it is quick and easy to handle.

The clamping is uniform around the

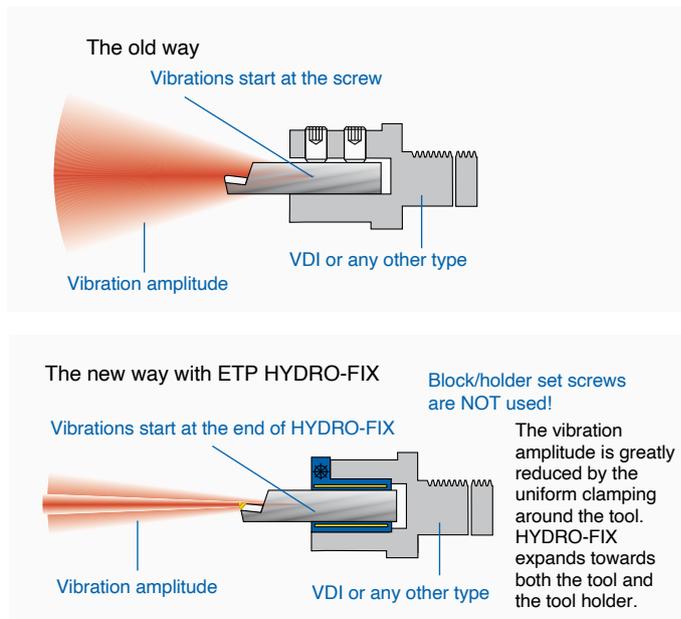
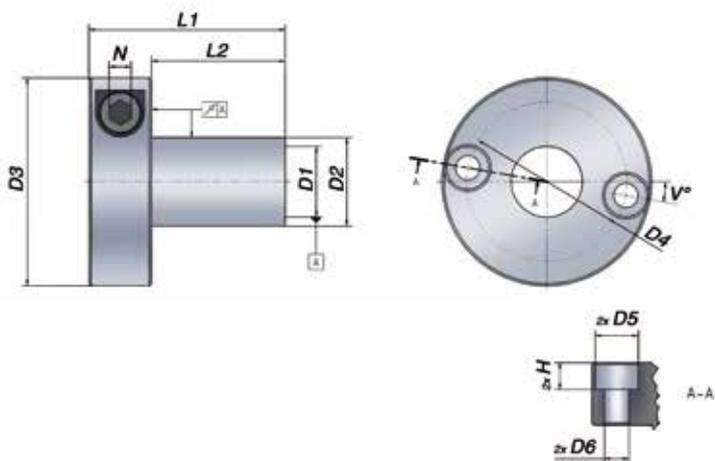
tool and therefore the tool life is improved. The clamping system absorbs and reduces vibration, improves surface quality and best of all increases your productivity!

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. No risk of damages

ETP HYDRO-FIX®

For Driven tools & Static Boring bars



Metric range

Technical Specification

| Part no. | Item description | Dimensions, mm | | | | | Recommended screws DIN 915, 12.9 | | | | | Pressure screw | | Runout mm | T* Nm | Weight kg |
|----------|--------------------|----------------|------|-------|----|----|-------------------------------------|-----|-----|---|----|----------------|-------------|--------------|----------|--------------|
| | | D1* | D2** | D3 | L1 | L2 | D4 | D5 | D6 | H | V° | N | Tt*** Nm | | | |
| 851215 | HYDRO-FIX 12/16-38 | 12 | 16 | 43.5 | 38 | 24 | 28 | 9.5 | 5.5 | 6 | 5 | 5 | 6 | 0.006 | 60 | 0.15 |
| 851615 | HYDRO-FIX 16/20-44 | 16 | 20 | 47 | 44 | 30 | 36 | 9.5 | 5.5 | 6 | 10 | 5 | 6 | 0.006 | 165 | 0.17 |
| 852015 | HYDRO-FIX 20/25-44 | 20 | 25 | 52 | 44 | 30 | 36 | 11 | 6.5 | 7 | | 5 | 6 | 0.006 | 260 | 0.21 |
| 852515 | HYDRO-FIX 25/32-48 | 25 | 32 | 59 | 48 | 34 | 44 | 11 | 6.5 | 7 | | 5 | 6 | 0.010 | 350 | 0.30 |
| 853215 | HYDRO-FIX 32/40-53 | 32 | 40 | 69.5 | 53 | 39 | 52 | 11 | 6.5 | 7 | | 5 | 6 | 0.010 | 630 | 0.43 |
| 854015 | HYDRO-FIX 40/50-69 | 40 | 50 | 79 | 69 | 55 | | | | | | 5 | 6 | 0.015 | 320 | 0.96 |
| 854215 | HYDRO-FIX 42/50-76 | 42 | 50 | 89 | 76 | 56 | | | | | | 8 | 10 | 0.015 | 800 | 0.94 |
| 855015 | HYDRO-FIX 50/60-80 | 50 | 60 | 98.5 | 80 | 60 | | | | | | 8 | 10 | 0.015 | 800 | 1.23 |
| 856015 | HYDRO-FIX 60/80-90 | 60 | 80 | 115.5 | 90 | 70 | | | | | | 8 | 10 | 0.015 | 800 | 2.34 |

Inch range

Technical Specification

| Part no. | Item description | Dimensions, inch | | | | | Recommended screws DIN 915, 12.9 | | | | | Pressure screw | | Runout inch | T* ft-lb | Weight kg |
|----------|----------------------------|------------------|-------|-------|-------|-------|-------------------------------------|-------|-------|-------|----|----------------|-------------|----------------|-------------|--------------|
| | | D1* | D2** | D3 | L1 | L2 | D4 | D5 | D6 | H | V° | N | Tt*** Nm | | | |
| 851315 | HYDRO-FIX 1/2"/5/8"-38 | 0.500 | 0.625 | 1.713 | 1.496 | 0.945 | 1.102 | 0.374 | 0.217 | 0.236 | 5 | 0.197 | 6 | 0.00024 | 44 | 0.15 |
| 851515 | HYDRO-FIX 5/8"/3/4"-44 | 0.625 | 0.750 | 1.850 | 1.732 | 1.181 | 1.417 | 0.374 | 0.217 | 0.236 | 10 | 0.197 | 6 | 0.00024 | 121 | 0.17 |
| 851915 | HYDRO-FIX 3/4"/1"-44 | 0.750 | 1.000 | 2.047 | 1.732 | 1.181 | 1.417 | 0.433 | 0.256 | 0.276 | | 0.197 | 6 | 0.00039 | 191 | 0.21 |
| 852615 | HYDRO-FIX 1"/1 1/4"-48 | 1.000 | 1.250 | 2.323 | 1.890 | 1.339 | 1.732 | 0.433 | 0.256 | 0.276 | | 0.197 | 6 | 0.00039 | 258 | 0.30 |
| 853125 | HYDRO-FIX 32/1 1/2"-53 | 1.260 | 1.500 | 2.736 | 2.087 | 1.535 | 2.047 | 0.433 | 0.256 | 0.276 | | 0.197 | 6 | 0.00039 | 465 | 0.43 |
| 853115 | HYDRO-FIX 1 1/4"/1 1/2"-53 | 1.250 | 1.500 | 2.736 | 2.087 | 1.535 | 2.047 | 0.433 | 0.256 | 0.276 | | 0.197 | 6 | 0.00039 | 465 | 0.43 |
| 853351 | HYDRO-FIX-1 1/4"/2"-60 | 1.250 | 2.000 | 3.110 | 2.362 | 1.811 | | | | | | 0.197 | 6 | 0.00039 | 465 | 0.90 |
| 853915 | HYDRO-FIX 1 1/2"/2"-69 | 1.500 | 2.000 | 3.110 | 2.717 | 2.165 | | | | | | 0.197 | 6 | 0.00059 | 118 | 1.06 |
| 855115 | HYDRO-FIX 2"/2 1/2"-80 | 2.000 | 2.500 | 3.996 | 3.150 | 2.362 | | | | | | 0.315 | 10 | 0.00059 | 590 | 1.42 |
| 856315 | HYDRO-FIX 2 1/2"/3"-93 | 2.500 | 3.000 | 4.685 | 3.661 | 2.874 | | | | | | 0.315 | 10 | 0.00059 | 885 | 1.98 |

***) T_t = Recommended tightening torque for the screw in Nm! Further tightening does not increase the pressure.

*) T = Transmittable torque using a h6 cylindrical tool, full depth (L1) insert.

For dimensions 12 mm (1/2") – 20 mm (3/4"):

When using a non-cylindrical tool/toolbar – we recommend the use of a reduction sleeve to avoid plastic deformation of ETP HYDRO-FIX.

Information:

*) Tool/toolbar shank h6 or h7 can be used.

***) Recommended tolerance of toolholder bore - H7.

Balanced by design. For use above

3 000 rpm - we recommend individual balancing.

Accessories:

Use preset Torque Wrench to ensure correct mounting of tools.

6 Nm - Part no. 19050

10 Nm - Part no. 19054



Digital Spirit Level

For easy toolbar alignment use the ETP Digital Spirit Level *
Part no. 885010



*) 3x CR2032 battery - not included.

ETP ER PLUG & PLAY



Turn your lathe live ER chucks into quick change hydraulic chucks

With ETP ER you can easily turn your standard ER collet driven tools into high precision hydraulic holders. Thus you can easily enjoy all the positive benefits of hydraulic clamping such as easy handling and precision, at an impressive competitive price level.

This enables more users to benefit from decrease tool wear and increased productivity, when compared to using ER collet holders. Simply put it, just Plug & Play!



BENEFITS & FEATURES

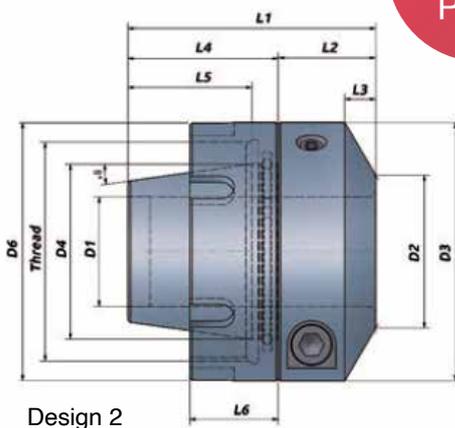
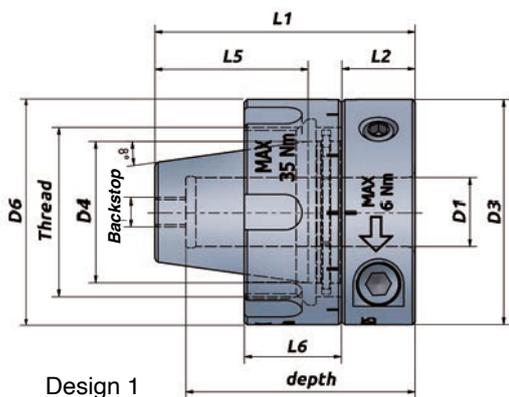
- Turn ER driven tools into hydraulic
- Easy handling and precision
- Excellent repeatability



NO MORE:

- Time-consuming tool changes
- Runout issues
- Limited clamping force

ETP ER PLUG & PLAY



Simple mounting procedure

1. Mount the ETP ER in the output shaft and twist to seal
2. Tighten the thread nut to the recommended tightening torque



View video instruction

Scan the code to see the complete procedure how to mount your ETP ER holder!



Metric range

Technical Specification

| Design | ER Size | Part no. | Description | Dimensions, mm | | | | | | | | | | | | | Internal thread nut | | Transmittable torque | | Features | | Use Torque wrench | |
|--------|---------|----------|--------------------|----------------|----|----|----|----|------|----|------|------|-------|----|----|---------|---------------------|---------|----------------------|----------|----------|----------|-------------------|--|
| | | | | D1 | D2 | D3 | D4 | L1 | L2 | L3 | L4 | L5 | depth | D6 | L6 | Thread | Tt** Nm | T* Nm | Max.Runout mm | Backstop | Part no. | Tt*** Nm | | |
| 1 | 16 | 671115 | HYDRO-FIX-6/ER16 | 6 | - | 25 | 16 | 30 | 8 | - | - | 16 | 27.5 | 28 | 12 | M22x1,5 | 25 | 12-22 | 0.01 | M3 | 19070 | 2 | | |
| 1 | 16 | 671116 | HYDRO-FIX-6/ERM16 | 6 | - | 25 | 16 | 30 | 8 | - | - | 16 | 27.5 | 25 | 12 | M19x1 | 25 | 12-22 | 0.01 | M3 | 19070 | 2 | | |
| 1 | 20 | 671125 | HYDRO-FIX-6/ER20 | 6 | - | 28 | 20 | 36 | 9 | - | - | 21 | 27.5 | 30 | 12 | M25x1,5 | 30 | 12-22 | 0.01 | M3 | 19070 | 2 | | |
| 1 | 20 | 671126 | HYDRO-FIX-6/ERM20 | 6 | - | 28 | 20 | 36 | 9 | - | - | 21 | 27.5 | 28 | 12 | M24x1 | 30 | 12-22 | 0.01 | M3 | 19070 | 2 | | |
| 1 | 25 | 671135 | HYDRO-FIX-12/ER25 | 12 | - | 40 | 25 | 46 | 13 | - | - | 27 | 40.5 | 42 | 17 | M32x1,5 | 35 | 60-125 | 0.01 | M5 | 19055 | 6 | | |
| 1 | 25 | 671136 | HYDRO-FIX-12/ERM25 | 12 | - | 40 | 25 | 46 | 13 | - | - | 27 | 40.5 | 40 | 17 | M30x1 | 35 | 60-125 | 0.01 | M5 | 19055 | 6 | | |
| 2 | 25 | 671130 | HYDRO-GRIP-12/ER25 | 12 | 26 | 48 | 25 | 46 | 22 | 7 | 24 | 18 | - | 48 | 17 | M32x1,5 | 35 | 50-90 | 0.02 | No | 19050 | 6 | | |
| 2 | 32 | 671150 | HYDRO-GRIP-20/ER32 | 20 | 30 | 52 | 32 | 52 | 21.5 | 7 | 30.5 | 24.5 | - | 52 | 19 | M40x1,5 | 40 | 230-370 | 0.02 | No | 19050 | 6 | | |
| 2 | 40 | 671160 | HYDRO-GRIP-25/ER40 | 25 | 35 | 59 | 40 | 56 | 22 | 7 | 34 | 28 | - | 59 | 20 | M50x1,5 | 50 | 420-600 | 0.02 | No | 19050 | 6 | | |

Inch range

Technical Specification

| Design | ER Size | Part no. | Description | Dimensions, inch | | | | | | | | | | | | | Internal thread nut | | Transmittable torque | | Features | | Use Torque wrench | |
|--------|---------|----------|----------------------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|---------------------|-----------|----------------------|----------|----------|----------|-------------------|--|
| | | | | D1 | D2 | D3 | D4 | L1 | L2 | L3 | L4 | L5 | depth | D6 | L6 | Thread | Tt** Nm | T* ft·lb | Max.Runout mm | Backstop | Part no. | Tt*** Nm | | |
| 1 | 16 | 671210 | HYDRO-FIX-1/4"/ER16 | 0.250 | - | 0.984 | 0.630 | 1.181 | 0.315 | - | - | 0.630 | 1.083 | 1.102 | 0.472 | M22x1.5 | 25 | 8.8 - 16 | 0.01 | M3 | 19070 | 2 | | |
| 1 | 16 | 671216 | HYDRO-FIX-1/4"/ERM16 | 0.250 | - | 0.984 | 0.630 | 1.181 | 0.315 | - | - | 0.630 | 1.083 | 0.984 | 0.472 | M19x1 | 25 | 8.8 - 16 | 0.01 | M3 | 19070 | 2 | | |
| 1 | 25 | 671235 | HYDRO-FIX-1/2"/ER25 | 0.500 | - | 1.575 | 0.984 | 1.811 | 0.512 | - | - | 1.063 | 1.594 | 1.654 | 0.669 | M32x1.5 | 35 | 37 - 66 | 0.01 | M5 | 19055 | 6 | | |
| 2 | 25 | 671230 | HYDRO-GRIP-1/2"/ER25 | 0.500 | 1.024 | 1.575 | 0.984 | 1.811 | 0.512 | 0.276 | 1.063 | 1.063 | - | 1.890 | 0.669 | M32x1.5 | 35 | 37 - 66 | 0.02 | No | 19050 | 6 | | |
| 2 | 32 | 671250 | HYDRO-GRIP-3/4"/ER32 | 0.750 | 1.181 | 2.047 | 1.260 | 2.047 | 0.846 | 0.276 | 1.201 | 1.201 | - | 2.047 | 0.748 | M40x1.5 | 40 | 170 - 273 | 0.02 | No | 19050 | 6 | | |
| 2 | 40 | 671260 | HYDRO-GRIP-1"/ER40 | 1.000 | 1.378 | 2.323 | 1.575 | 2.205 | 0.866 | 0.276 | 1.339 | 1.339 | - | 2.323 | 0.787 | M50x1.5 | 50 | 310 - 443 | 0.02 | No | 19050 | 6 | | |

* T = Min. and Max transmittable torque using a h6 cylindrical tool, full depth insert.

** Tt = Recommended tightening torque of the thread nut.

*** Tt = Recommended tightening torque of the pressure screw.

Information:

- Tool shank h6 or h7 can be used.
- Balanced by design. Max. 25 000 rpm.

Accessories:

Use preset torque wrench to ensure correct mounting of tools. See table above for Part no. 19050

ETP ER can be used with reducing sleeves.



Suitable hook wrench for your initial mounting of your ETP ER Plug & Play holder. Part no: 19072.



ETP ECOGRIP™ ER

For outer threaded toolholders and driven tools



Metric range

| Technical Specification | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|----------|-------------------|----------------|----|------|----|----|------|----|------|------|----|-----|-------------------|-----|------|----|---------------------|----------|--|-------|
| ER size | Part no. | Item description | Dimensions, mm | | | | | | | | | | | Adjustment screws | | | | Internal thread nut | | | T* Nm |
| | | | D1 | D2 | D3 | D4 | L1 | L2 | L3 | L4 | L5 | D5 | No. | Dim. | N | D6 | L6 | Thread | | | |
| 16 | 686845 | ECOGRIP-6/ER16 | 6 | 16 | 34 | 16 | 30 | 14 | 5 | 16 | 14 | 28 | 2 | M3x16* | 2.5 | 34 | 10 | M22x1.5 | 6-14 | | |
| | 686846 | ECOGRIP-6/ERM16 | 6 | 16 | 34 | 16 | 30 | 14 | 5 | 16 | 14 | 28 | 2 | M3x16* | 2.5 | 34 | 10 | M19x1 | 6-14 | | |
| | 704952 | ECOGRIP-8/ER16 | 8 | 18 | 36 | 16 | 30 | 14 | 5 | 16 | 14 | 28 | 2 | M3x16* | 2.5 | 36 | 10 | M22x1.5 | 14 - 35 | | |
| | 705718 | ECOGRIP-8/ERM16 | 8 | 18 | 36 | 16 | 30 | 14 | 5 | 16 | 14 | 28 | 2 | M3x16* | 2.5 | 34 | 10 | M19x1 | 14 - 35 | | |
| 20 | 686855 | ECOGRIP-12/ER20 | 12 | 22 | 43.5 | 20 | 40 | 24 | 7 | 16 | 14 | 34 | 3 | M4x20 | 3 | 43.5 | 12 | M25x1.5 | 50-90 | | |
| | 686856 | ECOGRIP-12/ERM20 | 12 | 22 | 43.5 | 20 | 40 | 24 | 7 | 16 | 14 | 34 | 3 | M4x20 | 3 | 43.5 | 12 | M24x1 | 50-90 | | |
| 25 | 686905 | ECOGRIP-12/ER25 | 12 | 26 | 48 | 25 | 46 | 26 | 7 | 20 | 18 | 41 | 3 | M4x20 | 3 | 48 | 13 | M32x1.5 | 50-90 | | |
| | 686906 | ECOGRIP-12/ERM25 | 12 | 26 | 48 | 25 | 46 | 26 | 7 | 20 | 18 | 41 | 3 | M4x20 | 3 | 48 | 13 | M30x1 | 50-90 | | |
| | 686875 | ECOGRIP-16/ER25 | 16 | 26 | 48 | 25 | 46 | 26 | 7 | 20 | 18 | 41 | 3 | M4x20 | 3 | 48 | 13 | M32x1.5 | 120-200 | | |
| | 686876 | ECOGRIP-16/ERM25 | 16 | 26 | 48 | 25 | 46 | 26 | 7 | 20 | 18 | 41 | 3 | M4x20 | 3 | 48 | 13 | M30x1 | 120-200 | | |
| 32 | 686865 | ECOGRIP-20/ER32 | 20 | 30 | 52 | 32 | 52 | 25.5 | 7 | 26.5 | 24.5 | 45 | 3 | M4x20 | 3 | 52 | 15 | M40x1.5 | 230-370 | | |
| | 686885 | ECOGRIP-25/ER40 | 25 | 35 | 59 | 40 | 56 | 22 | 7 | 34 | 28 | 46 | 3 | M4x16 | 3 | 59 | 20 | M50x1.5 | 420-600 | | |
| 50 | 686895 | ECOGRIP-32/ER50** | 32 | 42 | 69.5 | 50 | 60 | 22 | 7 | 38 | 32 | 56 | 3 | M4x15 | 3 | 78 | 20 | M64x2 | 660-1000 | | |

Inch range

| Technical Specification | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|----------|-----------------------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------------------|-------|-------|-------|---------------------|---------|--|----------|
| ER size | Part no. | Item description | Dimensions, inch | | | | | | | | | | | Adjustment screws | | | | Internal thread nut | | | T* ft·lb |
| | | | D1 | D2 | D3 | D4 | L1 | L2 | L3 | L4 | L5 | D5 | No. | Dim. | N | D6 | L6 | Thread | | | |
| 16 | 686945 | ECOGRIP-1/4"/ER16 | 0.250 | 0.630 | 1.339 | 0.630 | 1.181 | 0.551 | 0.197 | 0.630 | 0.551 | 1.102 | 2 | M3x16* | 0.098 | 1.339 | 0.394 | M22x1.5 | 4.4-10 | | |
| 20 | 686955 | ECOGRIP-1/2"/ER20 | 0.500 | 0.866 | 1.713 | 0.787 | 1.575 | 0.945 | 0.276 | 0.630 | 0.551 | 1.339 | 3 | M4x20 | 0.118 | 1.713 | 0.472 | M25x1.5 | 37-66 | | |
| | 686956 | ECOGRIP-1/2"/ERM20 | 0.500 | 0.866 | 1.713 | 0.787 | 1.575 | 0.945 | 0.276 | 0.630 | 0.551 | 1.339 | 3 | M4x20 | 0.118 | 1.713 | 0.472 | M24x1 | 37-66 | | |
| 25 | 687005 | ECOGRIP-1/2"/ER25 | 0.500 | 1.024 | 1.890 | 0.984 | 1.811 | 1.024 | 0.276 | 0.787 | 0.709 | 1.614 | 3 | M4x20 | 0.118 | 1.890 | 0.512 | M32x1.5 | 37-66 | | |
| | 686975 | ECOGRIP-5/8"/ER25 | 0.625 | 1.024 | 1.890 | 0.984 | 1.811 | 1.024 | 0.276 | 0.787 | 0.709 | 1.614 | 3 | M4x20 | 0.118 | 1.890 | 0.512 | M32x1.5 | 89-148 | | |
| 32 | 686965 | ECOGRIP-3/4"/ER32 | 0.750 | 1.181 | 2.047 | 1.260 | 2.047 | 1.004 | 0.276 | 1.043 | 0.965 | 1.772 | 3 | M4x20 | 0.118 | 2.047 | 0.591 | M40x1.5 | 170-273 | | |
| 40 | 686985 | ECOGRIP-1"/ER40 | 1.000 | 1.378 | 2.323 | 1.575 | 2.205 | 0.866 | 0.276 | 1.339 | 1.102 | 1.811 | 3 | M4x16 | 0.118 | 2.323 | 0.787 | M50x1.5 | 310-443 | | |
| 50 | 686995 | ECOGRIP-1 1/4"/ER50** | 1.250 | 1.654 | 2.736 | 1.969 | 2.362 | 0.866 | 0.276 | 1.496 | 1.260 | 2.205 | 3 | M4x15 | 0.118 | 3.071 | 0.787 | M64x2 | 487-738 | | |

*) This size ECOGRIP ER has 2x M3x16 adjustment screws located 180 degrees apart. It also has an additional 2x M5x8 adjustment screws, located 180 degrees apart, at the back of the thread nut.

**) The thread nut width L6 of this size ECOGRIP ER is 20 mm. The thread depth is however only 15 mm.

*) T = Min. and Max transmittable torque using a h6 cylindrical tool, full depth insert. For additional information see section Technical Information.

Information:

- Runout accuracy - adjustable!
- When mounted correctly, an initial runout of approx. 0.020 mm is achieved. Adjust runout further by lightly tightening on the adjustment screws until your desired runout is achieved.
- Tool shank h6 or h7 can be used
- Balanced by design. For use above 5 - 10 000 rpm – we recommend individual balancing.

Accessories:

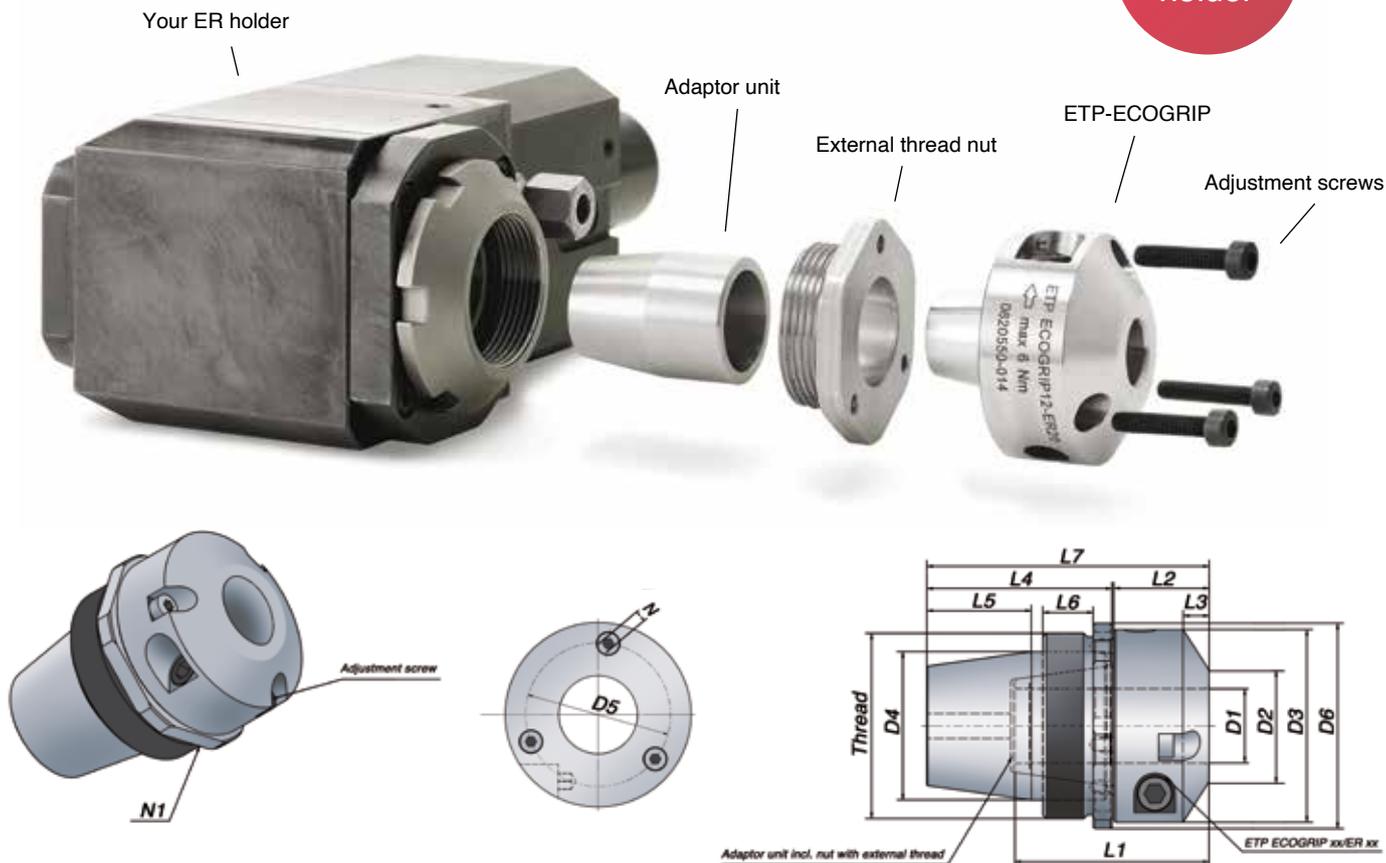
Use preset Torque Wrench, 6 Nm, to ensure correct mounting of tools. Part no. 19050. For ER16 Use Torque wrench Part no. 19055.

ETP ECOGRIP ER can be used with reducing sleeves. For additional information see section Accessories.



ETP ECOGRIP™ ER

For inner threaded driven tools



Metric range

| Technical Specification | | Dimensions, mm | | | | | | | | | | | Adjustment screws | | | | External thread nut | | | | | |
|-------------------------|----------|--------------------|----|----|------|----|----|------|----|------|------|------|-------------------|-----|-------|---|---------------------|------|---------|----|-------|---------|
| ER size | Part no. | Item description | D1 | D2 | D3 | D4 | L1 | L2 | L3 | L4 | L5 | L7 | D5 | No. | Dim. | N | D6 | L6 | Thread | N1 | Tt Nm | T* Nm |
| 25 | 687310 | ECOGRIP-12/ER20-25 | 12 | 22 | 43.5 | 25 | 40 | 24 | 7 | 36 | 18 | 60.5 | 34 | 3 | M4x16 | 3 | 43.5 | 10 | M32x1.5 | 40 | 50 | 50-90 |
| 32 | 687320 | ECOGRIP-12/ER25-32 | 12 | 26 | 48 | 32 | 46 | 26 | 7 | 44.5 | 24.5 | 71 | 41 | 3 | M4x16 | 3 | 48 | 12 | M40x1.5 | 44 | 104 | 50-90 |
| | 687330 | ECOGRIP-16/ER25-32 | 16 | 26 | 48 | 32 | 46 | 26 | 7 | 44.5 | 24.5 | 71 | 41 | 3 | M4x16 | 3 | 48 | 12 | M40x1.5 | 44 | 104 | 120-200 |
| 40 | 687340 | ECOGRIP-20/ER32-40 | 20 | 30 | 52 | 40 | 52 | 25.5 | 7 | 49.5 | 28 | 75.5 | 45 | 3 | M4x16 | 3 | 56 | 13.5 | M50x1.5 | 52 | 128 | 230-370 |

Inch range

| Technical Specification | | Dimensions, inch | | | | | | | | | | | Adjustment screws | | | | External thread nut | | | | | |
|-------------------------|----------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------------|-----|-------|-------|---------------------|-------|---------|-------|-------|----------|
| ER size | Part no. | Item description | D1 | D2 | D3 | D4 | L1 | L2 | L3 | L4 | L5 | L7 | D5 | No. | Dim. | N | D6 | L6 | Thread | N1 | Tt Nm | T* ft-lb |
| 25 | 687410 | ECOGRIP-1/2"/ER20-25 | 0.500 | 0.866 | 1.713 | 0.984 | 1.575 | 0.945 | 0.276 | 1.417 | 0.709 | 2.382 | 1.339 | 3 | M4x16 | 0.118 | 1.713 | 0.394 | M32x1.5 | 1.575 | 50 | 37-66 |
| 32 | 687420 | ECOGRIP-1/2"/ER25-32 | 0.500 | 1.024 | 1.890 | 1.260 | 1.811 | 1.024 | 0.276 | 1.752 | 0.965 | 2.795 | 1.614 | 3 | M4x16 | 0.118 | 1.890 | 0.472 | M40x1.5 | 1.732 | 104 | 37-66 |
| | 687430 | ECOGRIP-5/8"/ER25-32 | 0.625 | 1.024 | 1.890 | 1.260 | 1.811 | 1.024 | 0.276 | 1.752 | 0.965 | 2.795 | 1.614 | 3 | M4x16 | 0.118 | 1.890 | 0.472 | M40x1.5 | 1.732 | 104 | 89-148 |
| 40 | 687440 | ECOGRIP-3/4"/ER32-40 | 0.750 | 1.181 | 2.047 | 1.575 | 2.047 | 1.004 | 0.276 | 1.949 | 1.102 | 2.972 | 1.772 | 3 | M4x16 | 0.118 | 2.205 | 0.531 | M50x1.5 | 2.047 | 128 | 170-273 |

Tt: Recommended tightening torque in Nm for the External thread nut.

*) T = Min. and Max transmittable torque using a h6 cylindrical tool, full depth insert. For additional information see section Technical Information.

Direct shank - Full insertion required.

Information:

- Runout accuracy - adjustable!
- When mounted correctly, an initial runout of approx. 0.020 mm is achieved. Adjust runout further by lightly tightening on the adjustment screws until your desired runout is achieved.
- Tool shank h6 or h7 can be used
- Balanced by design

Accessories:

Use preset Torque Wrench, 6 Nm, to ensure correct mounting of tools. Part no. 19050.

ETP ECOGRIP ER can be used with reducing sleeves.

When using reduction sleeves:

- ER16/ER20 an M3 plug can be used for a solid backstop
- ER25 an M5 adjustment screw can be used for a backstop



Reduction Sleeves for ETP Clamping holders



Reduction sleeve HS - for internal cooling

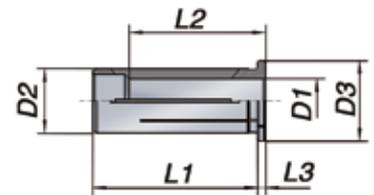
The reduction sleeves are designed to fit with the ETP clamping holders. They are specially suited for high precision clamping of cylindrical tool shanks per DIN 6335 form HA, HB and HE, as well as tool shanks per DIN 1835 form B, C, D and E.

The special design of the reduction sleeves allows an efficient use of coolant through cutting tools.

Reduction sleeve HS-CF - for peripheral cooling.

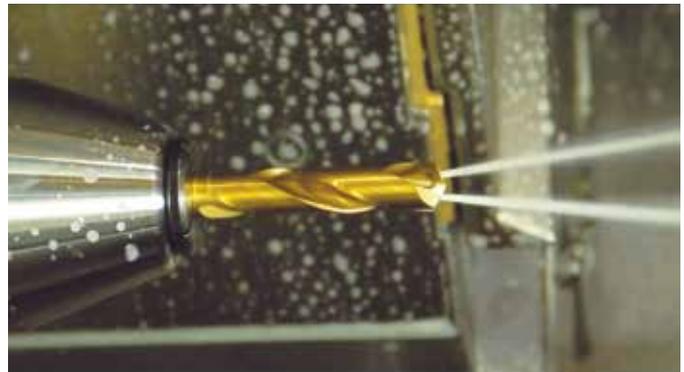
Outer-Ø of reduction sleeve corresponds to the type.

- HS12 = Ø 12 mm
- HS20 = Ø 20 mm
- HS25 = Ø 25 mm
- HS32 = Ø 32 mm



BENEFITS & FEATURES

- Standard version HS suited for internal cooling
Metal-to-metal seal for cutting tools with internal coolant channels.
- HS-CF version suited for peripheral cooling
The coolant flush reduction sleeves HS-CF can be used for peripheral cooling due to their coolant channels.
- Accurate precision
High runout accuracy < 3 µm.
- High flexibility
Clamping of different tool shank diameters. 12, 20, 25, 32 mm and 1/2", 3/4", 1", 1 1/4".
- Power increase
When using reduction sleeves the transmittable torque is increased.



Using Reduction sleeve HS - for internal cooling.



Using Reduction sleeve HS-CF - for peripheral cooling.

Reduction Sleeves mm to mm

| Reduction Sleeves mm to mm | | | | | | | | |
|---|-------------------|-------|--------|-------|-------|-------|-------|-------------------------|
| Part no. | Item description | D2 mm | D1 mm | D3 mm | L1 mm | L2 mm | L3 mm | Min. tool insert depth* |
| Reduction Sleeves HS 6 | | | | | | | | |
| R1906.01000 | HS 6 / 1 mm | 6 | 1 | 9 | 27 | 20 | 3 | 15.5 |
| R1906.02000 | HS 6 / 2 mm | 6 | 2 | 9 | 27 | 24 | 3 | 21 |
| R1906.03000 | HS 6 / 3 mm | 6 | 3 | 9 | 27 | 30 | 3 | 26 |
| R1906.04000 | HS 6 / 4 mm | 6 | 4 | 9 | 27 | 30 | 3 | 26 |
| Reduction Sleeves HS 8 | | | | | | | | |
| R1908.06000 | HS 8 / 6 mm | 8 | 6 | 11 | 27 | 30 | 3 | 26 |
| Reduction Sleeves HS 12-MB (Micro Bore) MB can not seal for coolant through tools. | | | | | | | | |
| R1912.01009 | HS 12-MB / 1 mm | 12 | 1.000 | 16 | 40 | 20 | 4 | 44 |
| R1912.01509 | HS 12-MB / 1,5 mm | 12 | 1.500 | 16 | 40 | 20 | 4 | 44 |
| R1912.02009 | HS 12-MB / 2 mm | 12 | 2.000 | 16 | 40 | 20 | 4 | 44 |
| R1912.02509 | HS 12-MB / 2,5 mm | 12 | 2.500 | 16 | 40 | 20 | 4 | 44 |
| Reduction Sleeves HS 12 | | | | | | | | |
| R1912.03000 | HS 12 / 3 mm | 12 | 3.000 | 16 | 40 | 29 | 4 | 25 |
| R1912.04000 | HS 12 / 4 mm | 12 | 4.000 | 16 | 40 | 29 | 4 | 27 |
| R1912.05000 | HS 12 / 5 mm | 12 | 5.000 | 16 | 40 | 30 | 4 | 28 |
| R1912.06000 | HS 12 / 6 mm | 12 | 6.000 | 16 | 40 | 36 | 4 | 34 |
| R1912.07000 | HS 12 / 7 mm | 12 | 7.000 | 16 | 40 | 37 | 4 | 34 |
| R1912.08000 | HS 12 / 8 mm | 12 | 8.000 | 16 | 40 | 37 | 4 | 34 |
| R1912.09000 | HS 12 / 9 mm | 12 | 9.000 | 16 | 40 | 37 | 4 | 34 |
| R1912.10000 | HS 12 / 10 mm | 12 | 10.000 | 16 | 40 | 40 | 4 | 37 |
| Reduction Sleeves HS 12-CF | | | | | | | | |
| R1912.03002 | HS 12-CF / 3 mm | 12 | 3.000 | 16 | 40 | 29 | 4 | 25 |
| R1912.04002 | HS 12-CF / 4 mm | 12 | 4.000 | 16 | 40 | 29 | 4 | 27 |
| R1912.05002 | HS 12-CF / 5 mm | 12 | 5.000 | 16 | 40 | 30 | 4 | 28 |
| R1912.06002 | HS 12-CF / 6 mm | 12 | 6.000 | 16 | 40 | 36 | 4 | 34 |
| R1912.08002 | HS 12-CF / 8 mm | 12 | 8.000 | 16 | 40 | 37 | 4 | 34 |
| Reduction Sleeves HS 20 | | | | | | | | |
| R1920.03000 | HS 20 / 3 mm | 20 | 3.000 | 25 | 50 | 28 | 4 | 25 |
| R1920.04000 | HS 20 / 4 mm | 20 | 4.000 | 25 | 50 | 28 | 4 | 25 |
| R1920.05000 | HS 20 / 5 mm | 20 | 5.000 | 25 | 50 | 28 | 4 | 25 |
| R1920.06000 | HS 20 / 6 mm | 20 | 6.000 | 25 | 50 | 36 | 4 | 34 |
| R1920.07000 | HS 20 / 7 mm | 20 | 7.000 | 25 | 50 | 38 | 4 | 34 |
| R1920.08000 | HS 20 / 8 mm | 20 | 8.000 | 25 | 50 | 37 | 4 | 35 |
| R1920.09000 | HS 20 / 9 mm | 20 | 9.000 | 25 | 50 | 38 | 4 | 35 |
| R1920.10000 | HS 20 / 10 mm | 20 | 10.000 | 25 | 50 | 40 | 4 | 37 |
| R1920.11000 | HS 20 / 11 mm | 20 | 11.000 | 25 | 50 | 40 | 4 | 37 |
| R1920.12000 | HS 20 / 12 mm | 20 | 12.000 | 25 | 50 | 45 | 4 | 42 |
| R1920.13000 | HS 20 / 13 mm | 20 | 13.000 | 25 | 50 | 45 | 4 | 42 |
| R1920.14000 | HS 20 / 14 mm | 20 | 14.000 | 25 | 50 | 45 | 4 | 42 |
| R1920.15000 | HS 20 / 15 mm | 20 | 15.000 | 25 | 50 | 45 | 4 | 42 |
| R1920.16000 | HS 20 / 16 mm | 20 | 16.000 | 25 | 50 | 48 | 4 | 44 |
| R1920.18000 | HS 20 / 18 mm | 20 | 18.000 | 25 | 50 | 48 | 4 | 46 |

*) Minimum tool insertion depth (in mm) to ensure correct sealing effect for HS sleeves or correct periphery cooling for HS-CF sleeves.

| Reduction Sleeves mm to mm | | | | | | | | |
|-----------------------------------|------------------|-------|--------|-------|-------|-------|-------|-------------------------|
| Part no. | Item description | D2 mm | D1 mm | D3 mm | L1 mm | L2 mm | L3 mm | Min. tool insert depth* |
| Reduction Sleeves HS 20-CF | | | | | | | | |
| R1920.03002 | HS 20-CF / 3 mm | 20 | 3.000 | 25 | 50 | 28 | 4 | 25 |
| R1920.04002 | HS 20-CF / 4 mm | 20 | 4.000 | 25 | 50 | 28 | 4 | 25 |
| R1920.05002 | HS 20-CF / 5 mm | 20 | 5.000 | 25 | 50 | 28 | 4 | 25 |
| R1920.06002 | HS 20-CF / 6 mm | 20 | 6.000 | 25 | 50 | 36 | 4 | 34 |
| R1920.08002 | HS 20-CF / 8 mm | 20 | 8.000 | 25 | 50 | 37 | 4 | 35 |
| R1920.10002 | HS 20-CF / 10 mm | 20 | 10.000 | 25 | 50 | 40 | 4 | 37 |
| R1920.12002 | HS 20-CF / 12 mm | 20 | 12.000 | 25 | 50 | 45 | 4 | 42 |
| R1920.14002 | HS 20-CF / 14 mm | 20 | 14.000 | 25 | 50 | 45 | 4 | 42 |
| R1920.16002 | HS 20-CF / 16 mm | 20 | 16.000 | 25 | 50 | 48 | 4 | 44 |
| Reduction Sleeves HS 25 | | | | | | | | |
| R1925.03000 | HS 25 / 3 mm | 25 | 3.000 | 30 | 56 | 29 | 4 | 24 |
| R1925.04000 | HS 25 / 4 mm | 25 | 4.000 | 30 | 56 | 29 | 4 | 25 |
| R1925.05000 | HS 25 / 5 mm | 25 | 5.000 | 30 | 56 | 29 | 4 | 27 |
| R1925.06000 | HS 25 / 6 mm | 25 | 6.000 | 30 | 56 | 37 | 4 | 34 |
| R1925.07000 | HS 25 / 7 mm | 25 | 7.000 | 30 | 56 | 37 | 4 | 34 |
| R1925.08000 | HS 25 / 8 mm | 25 | 8.000 | 30 | 56 | 37 | 4 | 34 |
| R1925.09000 | HS 25 / 9 mm | 25 | 9.000 | 30 | 56 | 38 | 4 | 35 |
| R1925.10000 | HS 25 / 10 mm | 25 | 10.000 | 30 | 56 | 40 | 4 | 37 |
| R1925.12000 | HS 25 / 12 mm | 25 | 12.000 | 30 | 56 | 46 | 4 | 41 |
| R1925.14000 | HS 25 / 14 mm | 25 | 14.000 | 30 | 56 | 47 | 4 | 42 |
| R1925.16000 | HS 25 / 16 mm | 25 | 16.000 | 30 | 56 | 48 | 4 | 43 |
| R1925.18000 | HS 25 / 18 mm | 25 | 18.000 | 30 | 56 | 48 | 4 | 44 |
| R1925.20000 | HS 25 / 20 mm | 25 | 20.000 | 30 | 56 | 50 | 4 | 44 |
| Reduction Sleeves HS 32 | | | | | | | | |
| R1932.03000 | HS 32 / 3 mm | 32 | 3.000 | 36 | 60 | 29 | 4 | 25 |
| R1932.04000 | HS 32 / 4 mm | 32 | 4.000 | 36 | 60 | 29 | 4 | 26 |
| R1932.05000 | HS 32 / 5 mm | 32 | 5.000 | 36 | 60 | 29 | 4 | 26 |
| R1932.06000 | HS 32 / 6 mm | 32 | 6.000 | 36 | 60 | 36 | 4 | 34 |
| R1932.07000 | HS 32 / 7 mm | 32 | 7.000 | 36 | 60 | 37 | 4 | 34 |
| R1932.08000 | HS 32 / 8 mm | 32 | 8.000 | 36 | 60 | 36 | 4 | 35 |
| R1932.09000 | HS 32 / 9 mm | 32 | 9.000 | 36 | 60 | 37 | 4 | 35 |
| R1932.10000 | HS 32 / 10 mm | 32 | 10.000 | 36 | 60 | 40 | 4 | 36 |
| R1932.11000 | HS 32 / 11 mm | 32 | 11.000 | 36 | 60 | 40 | 4 | 36 |
| R1932.12000 | HS 32 / 12 mm | 32 | 12.000 | 36 | 60 | 45 | 4 | 41 |
| R1932.13000 | HS 32 / 13 mm | 32 | 13.000 | 36 | 60 | 45 | 4 | 41 |
| R1932.14000 | HS 32 / 14 mm | 32 | 14.000 | 36 | 60 | 46 | 4 | 43 |
| R1932.15000 | HS 32 / 15 mm | 32 | 15.000 | 36 | 60 | 46 | 4 | 43 |
| R1932.16000 | HS 32 / 16 mm | 32 | 16.000 | 36 | 60 | 48 | 4 | 44 |
| R1932.17000 | HS 32 / 17 mm | 32 | 17.000 | 36 | 60 | 48 | 4 | 44 |
| R1932.18000 | HS 32 / 18 mm | 32 | 18.000 | 36 | 60 | 49 | 4 | 44 |
| R1932.19000 | HS 32 / 19 mm | 32 | 19.000 | 36 | 60 | 49 | 4 | 44 |
| R1932.20000 | HS 32 / 20 mm | 32 | 20.000 | 36 | 60 | 50 | 4 | 45 |
| R1932.22000 | HS 32 / 22 mm | 32 | 22.000 | 36 | 60 | 50 | 4 | 45 |
| R1932.25000 | HS 32 / 25 mm | 32 | 25.000 | 36 | 60 | 56 | 4 | 52 |
| Reduction Sleeves HS 32-CF | | | | | | | | |
| R1932.06002 | HS 32-CF / 6 mm | 32 | 6.000 | 36 | 60 | 36 | 4 | 34 |
| R1932.08002 | HS 32-CF / 8 mm | 32 | 8.000 | 36 | 60 | 36 | 4 | 35 |
| R1932.10002 | HS 32-CF / 10 mm | 32 | 10.000 | 36 | 60 | 40 | 4 | 36 |
| R1932.12002 | HS 32-CF / 12 mm | 32 | 12.000 | 36 | 60 | 45 | 4 | 41 |
| R1932.14002 | HS 32-CF / 14 mm | 32 | 14.000 | 36 | 60 | 46 | 4 | 43 |
| R1932.16002 | HS 32-CF / 16 mm | 32 | 16.000 | 36 | 60 | 48 | 4 | 44 |
| R1932.18002 | HS 32-CF / 18 mm | 32 | 18.000 | 36 | 60 | 49 | 4 | 44 |
| R1932.20002 | HS 32-CF / 20 mm | 32 | 20.000 | 36 | 60 | 50 | 4 | 45 |
| R1932.25002 | HS 32-CF / 25 mm | 32 | 25.000 | 36 | 60 | 56 | 4 | 52 |

Reduction Sleeves Inch to inch

mm to inch

| Reduction Sleeves inch to inch | | | | | | | | |
|---------------------------------------|---------------------|---------|---------|---------|---------|---------|---------|-------------------------|
| Part no. | Item description | D2 inch | D1 inch | D3 inch | L1 inch | L2 inch | L3 inch | Min. tool insert depth* |
| Reduction Sleeves HS 1/2" | | | | | | | | |
| R1913.03182 | HS 1/2" / 1/8" | 0.500 | 0.1250 | 0.630 | 1.575 | 1.142 | 0.157 | 26 |
| R1913.04762 | HS 1/2" / 3/16" | 0.500 | 0.1875 | 0.630 | 1.575 | 1.142 | 0.157 | 28 |
| R1913.06352 | HS 1/2" / 1/4" | 0.500 | 0.2500 | 0.630 | 1.575 | 1.417 | 0.157 | 34 |
| R1913.07942 | HS 1/2" / 5/16" | 0.500 | 0.3125 | 0.630 | 1.575 | 1.457 | 0.157 | 34 |
| R1913.09522 | HS 1/2" / 3/8" | 0.500 | 0.3750 | 0.630 | 1.575 | 1.575 | 0.157 | 37 |
| Reduction Sleeves HS 1/2"-CF | | | | | | | | |
| R1913.03183 | HS 1/2"-CF/1/8" | 0.500 | 0.1250 | 0.630 | 1.575 | 1.142 | 0.157 | 26 |
| R1913.06353 | HS 1/2"-CF / 1/4" | 0.500 | 0.2500 | 0.630 | 1.575 | 1.417 | 0.157 | 26 |
| R1913.09523 | HS 1/2"-CF / 3/8" | 0.500 | 0.3750 | 0.630 | 1.575 | 1.575 | 0.157 | 37 |
| Reduction Sleeves HS 3/4" | | | | | | | | |
| R1919.03182 | HS 3/4" / 1/8" | 0.750 | 0.1250 | 0.984 | 1.969 | 1.102 | 0.157 | 25 |
| R1919.04762 | HS 3/4" / 3/16" | 0.750 | 0.1875 | 0.984 | 1.969 | 1.102 | 0.157 | 25 |
| R1919.06352 | HS 3/4" / 1/4" | 0.750 | 0.2500 | 0.984 | 1.969 | 1.417 | 0.157 | 34 |
| R1919.07942 | HS 3/4" / 5/16" | 0.750 | 0.3125 | 0.984 | 1.969 | 1.457 | 0.157 | 35 |
| R1919.09522 | HS 3/4" / 3/8" | 0.750 | 0.3750 | 0.984 | 1.969 | 1.417 | 0.157 | 35 |
| R1919.11112 | HS 3/4" / 7/16" | 0.750 | 0.4375 | 0.984 | 1.969 | 1.575 | 0.157 | 37 |
| R1919.12702 | HS 3/4" / 1/2" | 0.750 | 0.5000 | 0.984 | 1.969 | 1.772 | 0.157 | 42 |
| R1919.14292 | HS 3/4" / 9/16" | 0.750 | 0.5625 | 0.984 | 1.969 | 1.772 | 0.157 | 42 |
| R1919.15882 | HS 3/4" / 5/8" | 0.750 | 0.6250 | 0.984 | 1.969 | 1.890 | 0.157 | 44 |
| Reduction Sleeves HS 3/4"-CF | | | | | | | | |
| R1919.06353 | HS 3/4"-CF / 1/4" | 0.750 | 0.2500 | 0.984 | 1.969 | 1.417 | 0.157 | 34 |
| R1919.09523 | HS 3/4"-CF / 3/8" | 0.750 | 0.3750 | 0.984 | 1.969 | 1.417 | 0.157 | 35 |
| R1919.12703 | HS 3/4"-CF / 1/2" | 0.750 | 0.5000 | 0.984 | 1.969 | 1.772 | 0.157 | 42 |
| R1919.15883 | HS 3/4"-CF / 5/8" | 0.750 | 0.6250 | 0.984 | 1.969 | 1.890 | 0.157 | 44 |
| Reduction Sleeves HS 1" | | | | | | | | |
| R1926.03182 | HS 1" / 1/8" | 1.000 | 0.1250 | 1.181 | 2.205 | 1.142 | 0.157 | 26 |
| R1926.04762 | HS 1" / 3/16" | 1.000 | 0.1875 | 1.181 | 2.205 | 1.142 | 0.157 | 27 |
| R1926.06352 | HS 1" / 1/4" | 1.000 | 0.2500 | 1.181 | 2.205 | 1.457 | 0.157 | 34 |
| R1926.07942 | HS 1" / 5/16" | 1.000 | 0.3125 | 1.181 | 2.205 | 1.457 | 0.157 | 34 |
| R1926.09522 | HS 1" / 3/8" | 1.000 | 0.3750 | 1.181 | 2.205 | 1.496 | 0.157 | 35 |
| R1926.11112 | HS 1" / 7/16" | 1.000 | 0.4375 | 1.181 | 2.205 | 1.575 | 0.157 | 37 |
| R1926.12702 | HS 1" / 1/2" | 1.000 | 0.5000 | 1.181 | 2.205 | 1.811 | 0.157 | 41 |
| R1926.14292 | HS 1" / 9/16" | 1.000 | 0.5625 | 1.181 | 2.205 | 1.850 | 0.157 | 42 |
| R1926.15882 | HS 1" / 5/8" | 1.000 | 0.6250 | 1.181 | 2.205 | 1.890 | 0.157 | 43 |
| R1926.17462 | HS 1" / 11/16" | 1.000 | 0.6875 | 1.181 | 2.205 | 1.890 | 0.157 | 44 |
| R1926.19052 | HS 1" / 3/4" | 1.000 | 0.7500 | 1.181 | 2.205 | 1.890 | 0.157 | 44 |
| Reduction Sleeves HS 1"-CF | | | | | | | | |
| R1926.06353 | HS 1"-CF / 1/4" | 1.000 | 0.2500 | 1.181 | 2.205 | 1.457 | 0.157 | 34 |
| R1926.09523 | HS 1"-CF / 3/8" | 1.000 | 0.3750 | 1.181 | 2.205 | 1.496 | 0.157 | 35 |
| R1926.12703 | HS 1"-CF / 1/2" | 1.000 | 0.5000 | 1.181 | 2.205 | 1.811 | 0.157 | 41 |
| R1926.15883 | HS 1"-CF / 5/8" | 1.000 | 0.6250 | 1.181 | 2.205 | 1.890 | 0.157 | 43 |
| R1926.19053 | HS 1"-CF / 3/4" | 1.000 | 0.7500 | 1.181 | 2.205 | 1.890 | 0.157 | 44 |
| Reduction Sleeves HS 1 1/4" | | | | | | | | |
| R1931.04762 | HS 1 1/4" / 3/16" | 1.250 | 0.1875 | 1.417 | 2.362 | 1.142 | 0.157 | 26 |
| R1931.06352 | HS 1 1/4" / 1/4" | 1.250 | 0.2500 | 1.417 | 2.362 | 1.417 | 0.157 | 34 |
| R1931.07942 | HS 1 1/4" / 5/16" | 1.250 | 0.3125 | 1.417 | 2.362 | 1.417 | 0.157 | 35 |
| R1931.09522 | HS 1 1/4" / 3/8" | 1.250 | 0.3750 | 1.417 | 2.362 | 1.457 | 0.157 | 35 |
| R1931.11112 | HS 1 1/4" / 7/16" | 1.250 | 0.4375 | 1.417 | 2.362 | 1.772 | 0.157 | 36 |
| R1931.12702 | HS 1 1/4" / 1/2" | 1.250 | 0.5000 | 1.417 | 2.362 | 1.772 | 0.157 | 42 |
| R1931.14292 | HS 1 1/4" / 9/16" | 1.250 | 0.5625 | 1.417 | 2.362 | 1.811 | 0.157 | 43 |
| R1931.15882 | HS 1 1/4" / 5/8" | 1.250 | 0.6250 | 1.417 | 2.362 | 1.811 | 0.157 | 44 |
| R1931.17462 | HS 1 1/4" / 11/16" | 1.250 | 0.6875 | 1.417 | 2.362 | 1.890 | 0.157 | 44 |
| R1931.19052 | HS 1 1/4" / 3/4" | 1.250 | 0.7500 | 1.417 | 2.362 | 1.969 | 0.157 | 44 |
| R1931.25402 | HS 1 1/4" / 1" | 1.250 | 1.000 | 1.417 | 2.362 | 2.205 | 0.157 | 52 |
| Reduction Sleeves HS 1 1/4"-CF | | | | | | | | |
| R1931.12703 | HS 1 1/4"-CF / 1/2" | 1.250 | 0.5000 | 1.417 | 2.362 | 1.772 | 0.157 | 42 |
| R1931.15883 | HS 1 1/4"-CF / 5/8" | 1.250 | 0.6250 | 1.417 | 2.362 | 1.811 | 0.157 | 44 |
| R1931.19053 | HS 1 1/4"-CF / 3/4" | 1.250 | 0.7500 | 1.417 | 2.362 | 1.969 | 0.157 | 44 |
| R1931.25403 | HS 1 1/4"-CF / 1" | 1.250 | 1.000 | 1.417 | 2.362 | 2.205 | 0.157 | 52 |

| Reduction Sleeves mm to inch | | | | | | | | |
|-----------------------------------|------------------|-------|---------|-------|-------|-------|-------|-------------------------|
| Part no. | Item description | D2 mm | D1 inch | D3 mm | L1 mm | L2 mm | L3 mm | Min. tool insert depth* |
| Reduction Sleeves HS 12 | | | | | | | | |
| R1912.03181 | HS 12 / 1/8" | 12 | 0.1250 | 16 | 40 | 29 | 4 | 25 |
| R1912.04761 | HS 12 / 3/16" | 12 | 0.1875 | 16 | 40 | 30 | 4 | 28 |
| R1912.06351 | HS 12 / 1/4" | 12 | 0.2500 | 16 | 40 | 36 | 4 | 34 |
| R1912.07941 | HS 12 / 5/16" | 12 | 0.3125 | 16 | 40 | 36 | 4 | 34 |
| R1912.09521 | HS 12 / 3/8" | 12 | 0.3750 | 16 | 40 | 37 | 4 | 37 |
| Reduction Sleeves HS 12-CF | | | | | | | | |
| R1912.03183 | HS 12-CF / 1/8" | 12 | 0.1250 | 16 | 40 | 29 | 4 | 25 |
| R1912.06353 | HS 12-CF / 1/4" | 12 | 0.2500 | 16 | 40 | 36 | 4 | 34 |
| Reduction Sleeves HS 20 | | | | | | | | |
| R1920.03181 | HS 20 / 1/8" | 20 | 0.1250 | 25 | 50 | 28 | 4 | 22 |
| R1920.04761 | HS 20 / 3/16" | 20 | 0.1875 | 25 | 50 | 28 | 4 | 25 |
| R1920.06351 | HS 20 / 1/4" | 20 | 0.2500 | 25 | 50 | 36 | 4 | 34 |
| R1920.07941 | HS 20 / 5/16" | 20 | 0.3125 | 25 | 50 | 37 | 4 | 35 |
| R1920.09521 | HS 20 / 3/8" | 20 | 0.3750 | 25 | 50 | 36 | 4 | 35 |
| R1920.11111 | HS 20 / 7/16" | 20 | 0.4375 | 25 | 50 | 40 | 4 | 37 |
| R1920.12701 | HS 20 / 1/2" | 20 | 0.5000 | 25 | 50 | 45 | 4 | 42 |
| R1920.14291 | HS 20 / 9/16" | 20 | 0.5625 | 25 | 50 | 45 | 4 | 42 |
| R1920.15881 | HS 20 / 5/8" | 20 | 0.6250 | 25 | 50 | 48 | 4 | 44 |
| Reduction Sleeves HS 25 | | | | | | | | |
| R1925.03181 | HS 25 / 1/8" | 25 | 0.1250 | 30 | 56 | 29 | 4 | 24 |
| R1925.06351 | HS 25 / 1/4" | 25 | 0.2500 | 30 | 56 | 37 | 4 | 34 |
| R1925.07941 | HS 25 / 5/16" | 25 | 0.3125 | 30 | 56 | 37 | 4 | 34 |
| R1925.09521 | HS 25 / 3/8" | 25 | 0.3750 | 30 | 56 | 38 | 4 | 35 |
| R1925.11111 | HS 25 / 7/16" | 25 | 0.4375 | 30 | 56 | 40 | 4 | 37 |
| R1925.12701 | HS 25 / 1/2" | 25 | 0.5000 | 30 | 56 | 46 | 4 | 41 |
| R1925.14291 | HS 25 / 9/16" | 25 | 0.5625 | 30 | 56 | 47 | 4 | 42 |
| R1925.15881 | HS 25 / 5/8" | 25 | 0.6250 | 30 | 56 | 48 | 4 | 43 |
| R1925.17461 | HS 25 / 11/16" | 25 | 0.6875 | 30 | 56 | 48 | 4 | 43 |
| R1925.19051 | HS 25 / 3/4" | 25 | 0.7500 | 30 | 56 | 48 | 4 | 44 |
| R1925.20631 | HS 25 / 13/16" | 25 | 0.8125 | 30 | 56 | 50 | 4 | 44 |
| Reduction Sleeves HS 32 | | | | | | | | |
| R1932.04761 | HS 32 / 3/16" | 32 | 0.1875 | 36 | 60 | 29 | 4 | 26 |
| R1932.06351 | HS 32 / 1/4" | 32 | 0.2500 | 36 | 60 | 36 | 4 | 34 |
| R1932.07941 | HS 32 / 5/16" | 32 | 0.3125 | 36 | 60 | 36 | 4 | 35 |
| R1932.09521 | HS 32 / 3/8" | 32 | 0.3750 | 36 | 60 | 37 | 4 | 35 |
| R1932.11111 | HS 32 / 7/16" | 32 | 0.4375 | 36 | 60 | 45 | 4 | 36 |
| R1932.12701 | HS 32 / 1/2" | 32 | 0.5000 | 36 | 60 | 45 | 4 | 42 |
| R1932.14291 | HS 32 / 9/16" | 32 | 0.5625 | 36 | 60 | 46 | 4 | 43 |
| R1932.15881 | HS 32 / 5/8" | 32 | 0.6250 | 36 | 60 | 46 | 4 | 44 |
| R1932.17461 | HS 32 / 11/16" | 32 | 0.6875 | 36 | 60 | 48 | 4 | 44 |
| R1932.19051 | HS 32 / 3/4" | 32 | 0.7500 | 36 | 60 | 50 | 4 | 44 |
| R1932.20631 | HS 32 / 13/16" | 32 | 0.8125 | 36 | 60 | 50 | 4 | 45 |
| R1932.22221 | HS 32 / 7/8" | 32 | 0.8750 | 36 | 60 | 50 | 4 | 45 |
| R1932.23811 | HS 32 / 15/16" | 32 | 0.9375 | 36 | 60 | 52 | 4 | 45 |
| R1932.25401 | HS 32 / 1" | 32 | 1.000 | 36 | 60 | 56 | 4 | 52 |

*) Minimum tool insertion depth (in mm) to ensure correct sealing effect for HS sleeves or correct periphery cooling for HS-CF sleeves.

Chip covers for reduction sleeves CC

| Chip covers | | | | |
|---|-----------------------------|----------------|-------|------------|
| Part no. | Type | Fits | [mm] | [inch] |
| Chip covers for reduction sleeves CC-HS 12 | | | | |
| R7331.04200 | CC-HS 12 – 1/2" / Ø 4.0 mm | HS 12, HS 1/2" | 3–4 | 1/8" |
| R7331.06600 | CC-HS 12 – 1/2" / Ø 6.0 mm | HS 12, HS 1/2" | 5–6 | 3/16"–1/4" |
| R7331.10200 | CC-HS 12 – 1/2" / Ø 10.0 mm | HS 12, HS 1/2" | 7–10 | 5/16"–3/8" |
| Chip covers for reduction sleeves CC-HS 20 | | | | |
| R7333.04200 | CC-HS 20 – 3/4" / Ø 4.0 mm | HS 20, HS 3/4" | 3–4 | 1/8" |
| R7333.06600 | CC-HS 20 – 3/4" / Ø 6.0 mm | HS 20, HS 3/4" | 5–6 | 1/16"–1/4" |
| R7333.10200 | CC-HS 20 – 3/4" / Ø 10.0 mm | HS 20, HS 3/4" | 7–10 | 5/16"–3/8" |
| R7333.14200 | CC-HS 20 – 3/4" / Ø 14.0 mm | HS 20, HS 3/4" | 11–14 | 7/16"–1/2" |
| R7333.16200 | CC-HS 20 – 3/4" / Ø 16.0 mm | HS 20, HS 3/4" | 15–16 | 9/16"–5/8" |
| R7333.18200 | CC-HS 20 – 3/4" / Ø 18.0 mm | HS 20, HS 3/4" | 18 | – |



Our chip cover is ideally suited for the removal of chips. The cover can simply be clicked-in at the head of our reduction sleeves.

Assembly: Assemble the sleeve and chip cover before inserting the tool and loading the sleeve into the holder. This ensures easier assembly and protects tools and fingers.

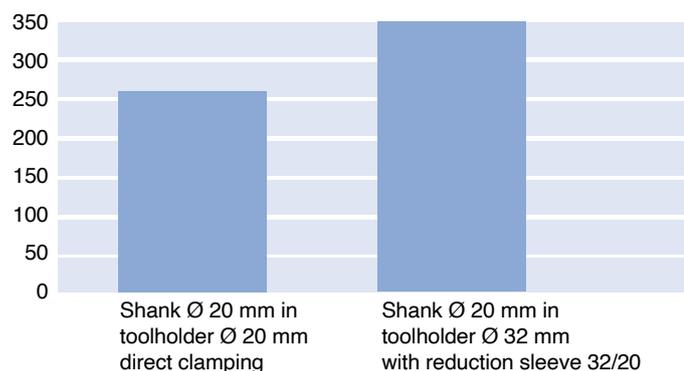
Fit: The chip cover allows a small gap between the holder face and sleeve lip, ensuring proper face contact without interference.

Precision: The cover's slightly larger hole does not affect runout or clamping force.

Removal: Use extractor wrench for easy disassembly, as removal may otherwise be difficult.

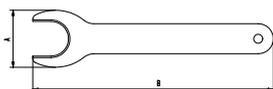
Accessories Torque wrench and Extractor

Comparison of Transmittable Torque at Ø 20 mm



Extractor

| Item description | Part no. | For Sizes | A B | |
|------------------|-------------|-----------|------|------|
| | | | [mm] | [mm] |
| EHS 12 - 1/2" | E7321.12000 | HS 12 | 24.6 | 100 |
| EHS 20 - 3/4" | E7321.20000 | HS 20 | 38.0 | 160 |
| EHS 25 - 1" | E7321.25000 | HS 25 | 51.0 | 180 |
| EHS 32 - 1 1/4" | E7321.32000 | HS 32 | 63.0 | 200 |



The extractor helps to remove the reduction sleeve from the clamping unit.

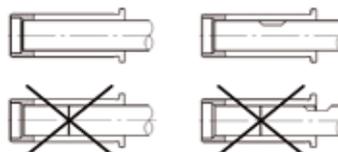


Torque wrench

Use torque wrench to ensure correct tightening independent on user. Should be used with all HYDRO-FIX® holders.

| Item description | Tightening torque: | | Part no. |
|--------------------------|--------------------|---------|----------|
| | Nm | ft · lb | |
| Torque wrench (3 mm Hex) | 1.8 | 1.3 | 19070 |
| Torque wrench (4 mm Hex) | 6 | 4.4 | 19055 |
| Torque wrench (5 mm Hex) | 6 | 4.4 | 19050 |
| Torque wrench (8 mm Hex) | 10 | 7.4 | 19054 |

- Improper assembly can damage the concentricity of the reduction sleeve.
- Insert tools the full length of the reduction sleeve.
- Tool shank h6 or h7 can be used.
- Do not clamp reduction sleeve without a tool. Reduction Sleeve will be damaged.

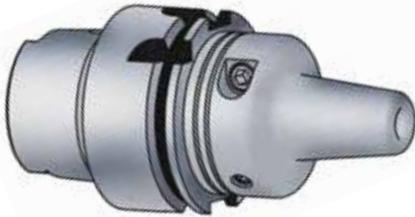




More Hydraulic high
precision toolholders
- see our main catalogue

Examples: Holders for Small parts machining

ETP HYDRO-GRIP®
HSK40 Form A



ETP HYDRO-GRIP®
HSK40 Form E



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