Somatec GmbH • Gewerbestr. 19 • DE 88636 Illmensee

SOMATEC®

Components for mech. engineering

Our produkts for the window machine construction

Punching machine UNI Power

Olive unit pneumatic

Reduction drill gaer

Fixed corner bearing drill head

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Other produkts

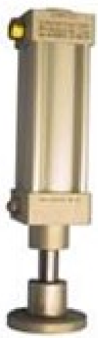
- **Pneumatic turret stop**

- **Pneumatic rotational stop**
- **Rotary switchin element**

- **Drilling unit B63** *direct- and beltdrive*

- **Drilling unit B100**
- **Taping unit GBE63**
- **Combination drill & tapping unit B63/80**

- **Drilling spindle ER25 and ER32**
- **Drilling heads** *adjustable / customer specific*
- **Milling spindle SK40 / HSK**
- **Safty clamping Cylinder**



- **Oil brake cylinder**
- **Hydropneumatic power cylinder**
- **Pneumatic-hydraulic pressure booster**

- **Hand- and foot valve**

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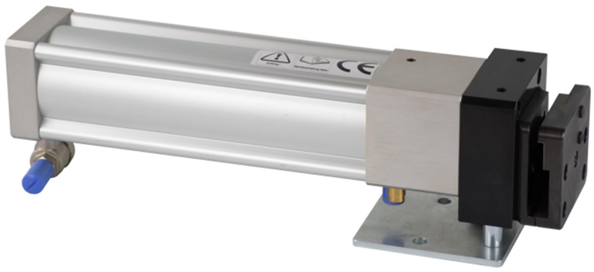
Punching machine UNI – POWER

for processing all common window hardware

Tool for chain sections

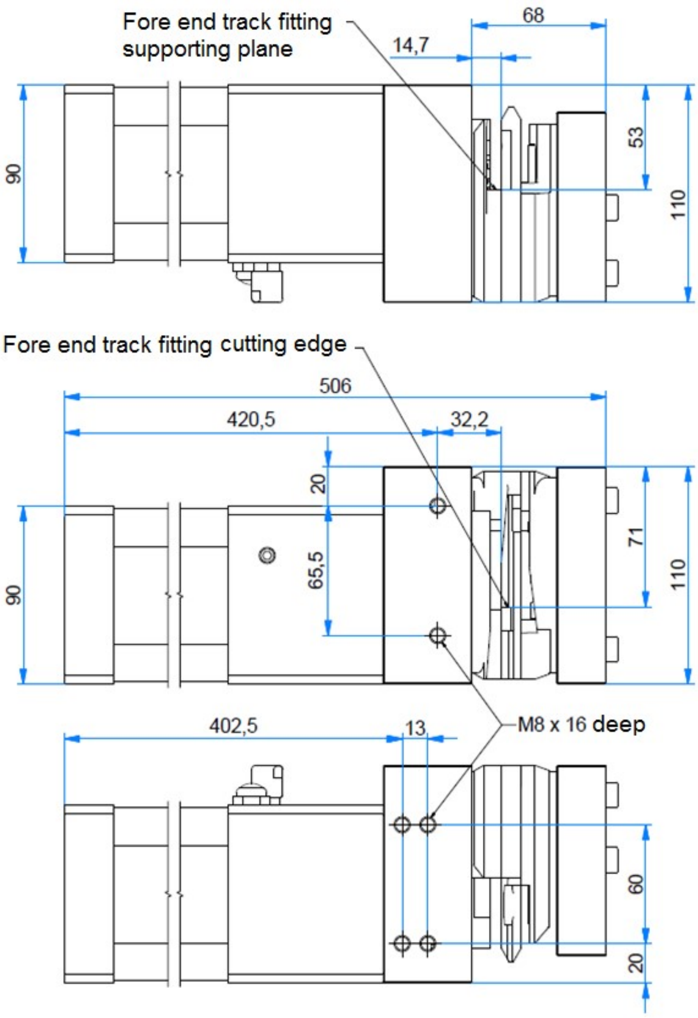


Tool Schere

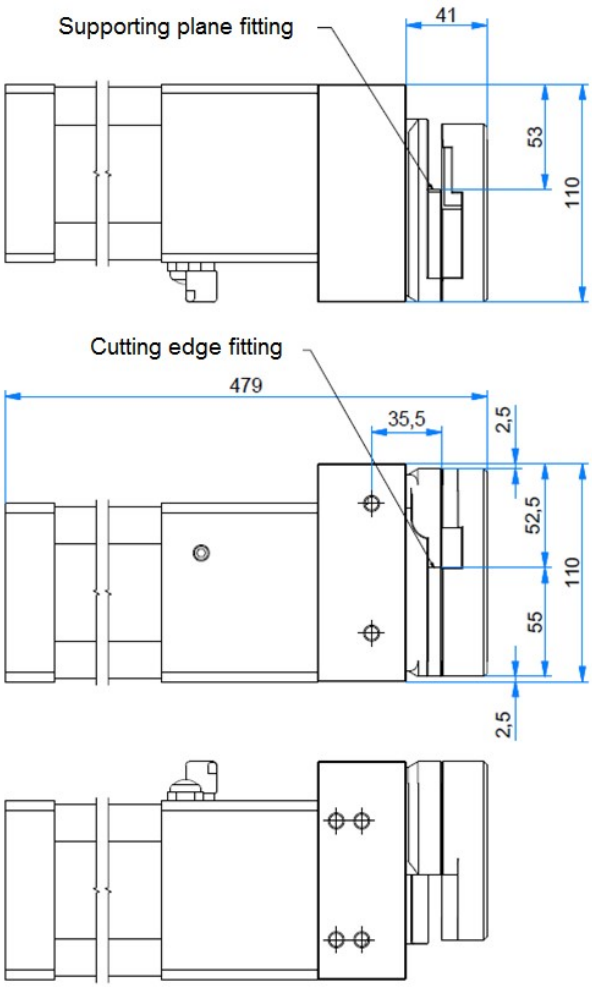
Our punching machine has the following advantages:

- Through its compact and enclosed design with a large oil reserve, a long maintenance-free operation is ensured in any mounting position.
- The hydro-pneumatic operation achieves high-cutting forces during impact-free punching.
- The punching machine is available in two designs:
  - Attachment on the left with the fitting process of the right
  - Attachment on the right with the fitting process of the left
- Our punching machine needs a 5/2 way valve to operate and a filter regulator with a preset operating pressure of 5 - 6 bar.
- The delivered state of the punch is without accessories. For an additional charge, a connection kit consisting of a fixed filter regulator, set and secured at 5 - 6 bar and a 5/2 way foot valve with pluggable NW 6 mm hose connections with 6m hose is available and a base for bolting to the work table. A linear stop is also available at an additional cost.
- The angle punch is primarily used for confined areas.
- With this tool system, which has been well thought out down to every detail, it is possible to easily change the hole punch, die and cutting punch when they are worn out or broken in a few minutes and also without the risk of any oil loss.

Tool for chain sections



Fitting punch Schere

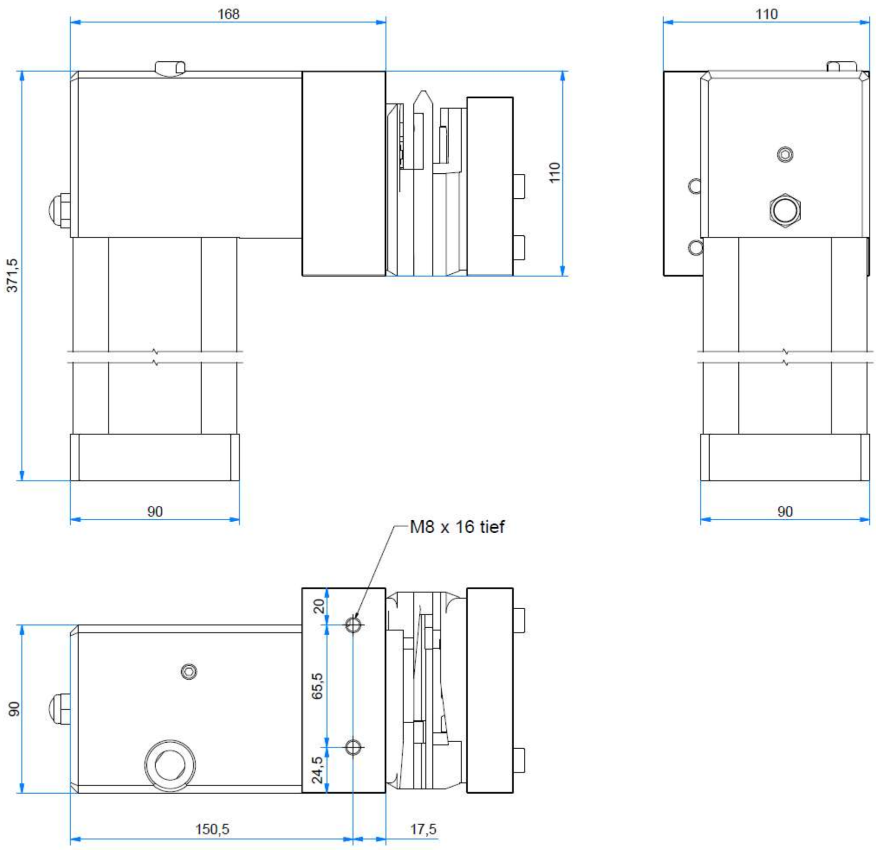


- On our punching machine, the tools for the various types of fittings can be exchanged without much effort. The different tools have been designed so that the cutting edge and support on the face plate is always at the same level.

Currently we stock the tools for the following types of fittings:

- Straight cut (Schere)
- Siegenia Aubi (Aubi A300, Favorit with hole Ø4,5, Titan IP)
- Winkhaus
- Roto
- Maco Multi Matic
- ARTech

Each also available in version angle punch:



Technical data:

Operating pressure:	5 - 8 bar recommended for low tool wear max. 6 bar
Cutting load stroke force:	30,9 KN at 6 bar
Stroke:	13 mm
Transmission ratio:	1:10,25
Air consumption:	At 6 bar 5,3NL/ stroke
Nominal with for air connection:	7 mm ¼“
Oil used - Type:	Esso–Univis N46
Weight:	10,6 kg straight version with tool chain sections
	9,8 kg straight version with tool Schere
	11,2 kg execution of angle punch with tool chain sections
	10,4 kg execution of angle punch with tool Schere
Mounting thread:	2 x M8

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Hydro-pneumatic punching machine

for chain sections with self-inclination
of the window hardware during punching

patented

Our punching machine has the following advantages:

Quick and easy processing of all window hardware, since the insertion of the window hardware into the tool is carried out without manual spread and subsequent punching of the fitting is spread only minimally.

This is particularly advantageous:

- For difficult punching in the areas of bearings in which the spreading and the subsequent punching can bend the fitting.
- For punching fittings with add-on parts, where the spreading and the subsequent punching can result in the attachments coming off or being damaged

Other advantages are:

- The hydro-pneumatic operation achieves high-cutting forces during impact-free punching.
- The self-contained oil system with an external reserve tank and visible oil level indicator guarantees a long maintenance-free operation in any mounting position.

Design:

The punching machine is mostly made of anodized aluminium and corrosion-free/corrosion-resistant material. For operating, clean and dry air is required. To ensure trouble-free operation, the **tool should be lubricated on a daily basis!**

Equipment:

The punching machine is connected and ready for operation, however, a 5/2 way valve and a filter regulator with a maximum preset operating pressure of 6 bar is required.

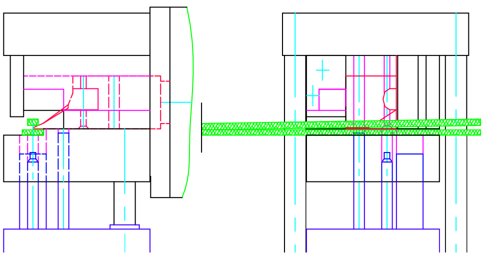
Special equipment:

- The delivered state of the punch is without accessories. For an additional charge, a connection kit consisting of a fixed filter regulator, set and secured at 5 - 6 bar and a 5/2 way foot valve with pluggable NW 6 mm hose connections with 6m hose is available.
- A linear stop is also available at an additional cost.

Operation of the punch

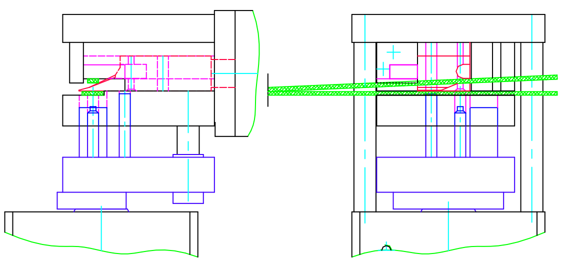
1. Work step:

Initial position; for applying the fitting



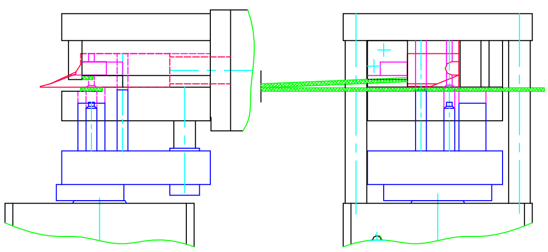
2. Work step:

Start of the first cutting process with the spreading of the fitting and the stamping of the drive

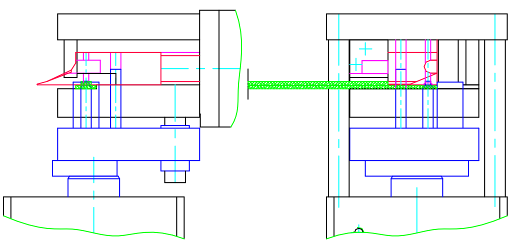


3. Work step:

End of the first cutting process and onset of the second cutting process with the cutting and punching of the lock plate.



End of the cutting process; the punch can be placed in the starting position.



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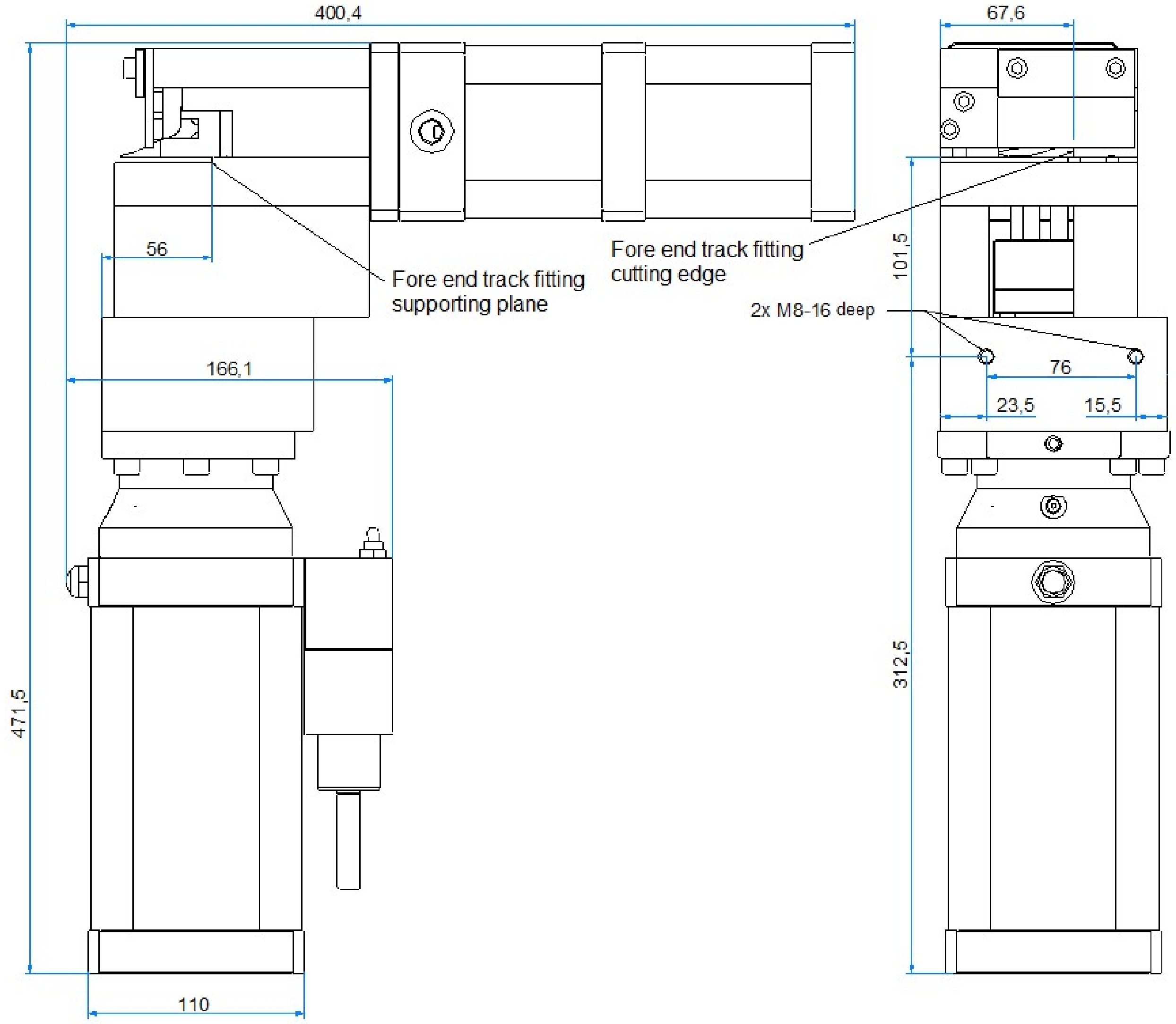

Technical data:

Operating pressure:	5 - 8 bar, recommended for low tool wear max. 6 bar
Cutting load stroke force:	45 KN at 6 bar
Transmission ratio:	1:39
Air consumption:	At 6 bar 7.5 NL/ stroke
Nominal width for air connection:	7mm ¼"
Oil used - Type:	Esso–Univis N46
Weight:	21.5 kg
Mounting thread:	2 x M8

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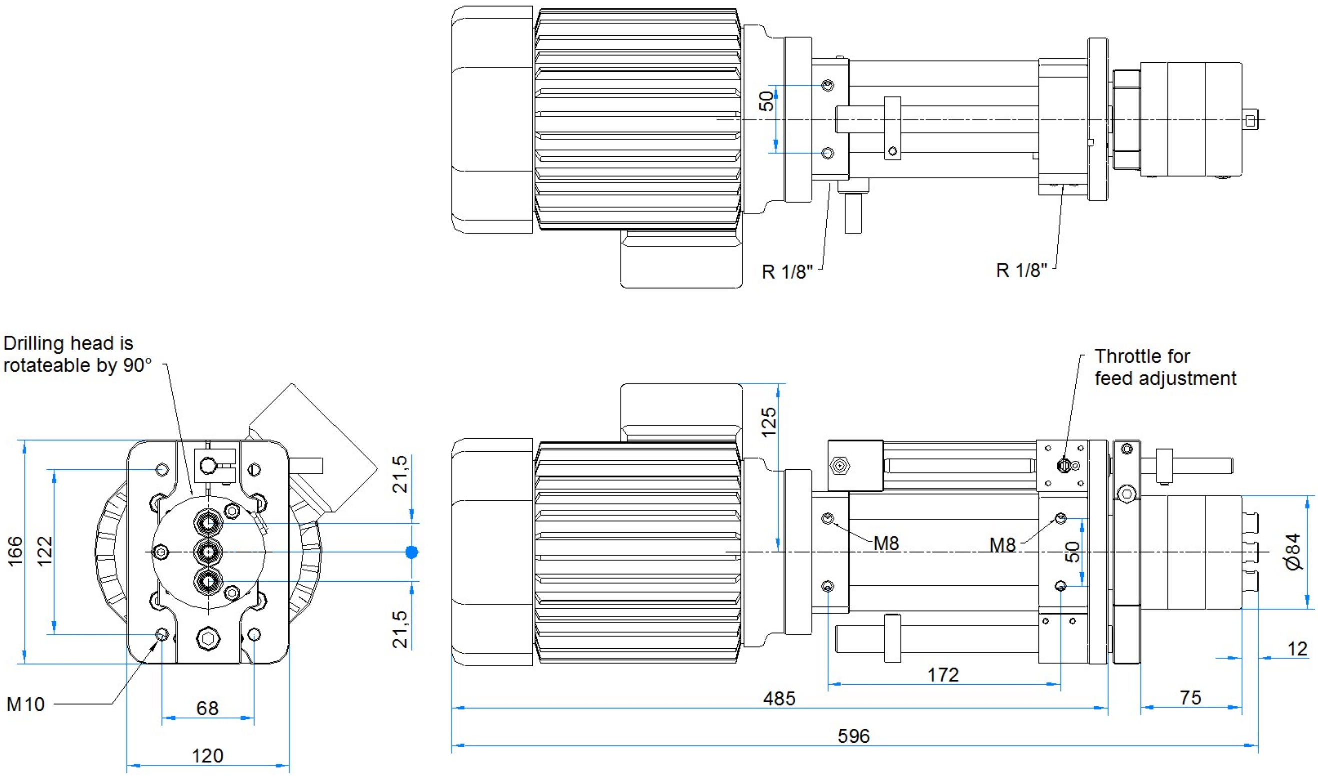
Olive unit, pneumatic

for aluminum and plastic window processing

Our Olive unit has the following advantages:

- Compact design:
  Cylinder and motor are fixedly connected together and constitute one unit.
- No overhung loads, since the piston rod of the cylinder serve as a guidance of the drill head.
- The unit is working hydro pneumatically. The feed can be infinitely variable adjusted by the planted oil brake cylinder.
- Easy to install and easy to use. The unit is equipped with two 3/2-ventils (for pre and feedback signal). As an option of accessories, at an additional cost, it has a 4-position turret stop and measuring scale and can be equipped with a non-contact signaling and electronic cylinder switches for end of travel.
- The unit is almost maintenance free. Piston rod and guide rod are hard-chrome plated, all aluminum parts are anodized and aluminum cylinder tubes hard-coded. Seals and bearings are maintenance free, but the unit must be operated without oiler with clean, dry air.



Technical Data:

Drive power:	1.1 KW 980 U/min
Spindle speed:	Spindle central 980 U/min, Spindle external 1090 U/min
Feed:	hydro pneumatic 80 mm stroke,
	infinitely adjustable with an oil brake cylinder
Feed force:	at 6 bar 2260 N
Tool holder:	Standard: Spindle central thread M10 right,
	Spindles external thread 2 x M10 left
	Or: Spindle central thread M10 left,
	Spindles external thread 2 x M10 right
Weight:	approx. 28.2 kg
Application:	flange plate 4 x M10 (drilling pattern: 122 x 68 mm)
	on the cylinder 4 x M8 (drilling pattern: 50 x 172 mm) see drawing
Air consumption:	at 6 bar approx. 1.962 NL/ stroke

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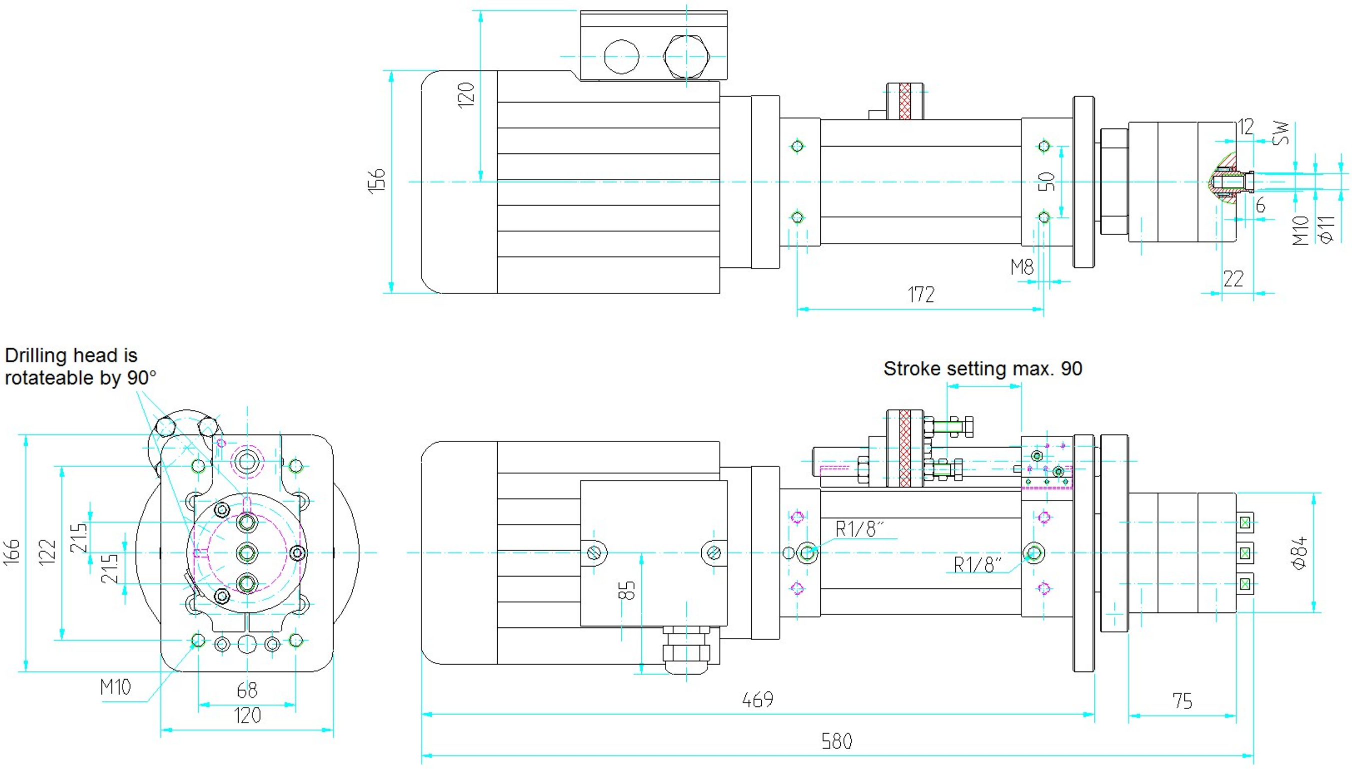
Olive unit, pneumatic
for wood window processing

Our Olive unit has the following advantages:

- Compact design:
  Cylinder and motor are fixedly connected together and constitute a unit.
- No overhung loads, since the piston rod of the cylinder serve as a guidance of the drill head.
- Easy to install and easy to use. The unit is equipped with two 3/2-ventils (for pre and feedback signal). As an option of accessories, at an additional cost, it has a 4-position turret stop and measuring scale and can be equipped with a non-contact signaling and electronic cylinder switches for end of travel.
- The unit is almost maintenance free. Piston rod and guide rod are hard-chrome plated, all aluminum parts are anodized and aluminum cylinder tubes hard-coded. Seals and bearings are maintenance free, but the unit must be operated without oiler with clean, dry air.
- The unit can be fitted at any time, at an additional cost, with an oil brake cylinder (but not normally required for woodworking).



Technical Data:

Drive power: 1.1 KW; 2830 U/min

Spindle speed: Spindle central 2830 U/min, Spindle external 3300 U/min

Feed: pneumatic 90 mm stroke,
infinitely adjustable with an oil brake cylinder

Feed force: at 6 bar 2260 N

Tool holder: Standard: Spindle central thread M10 right,
Spindles external thread 2 x M10 left
Or: Spindle central thread M10 left,
Spindles external thread 2 x M10 right

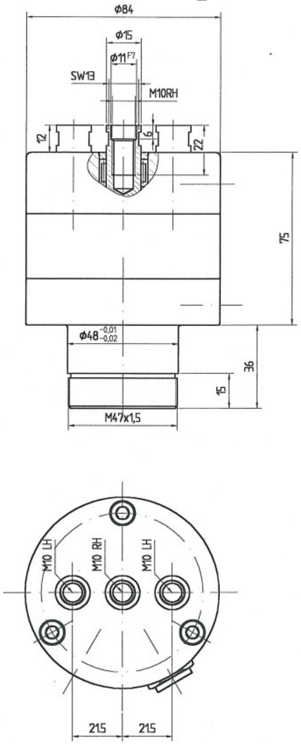
Weight: approx. 14.5 kg

Application: flange plate 4 x M10 (drilling pattern: 122 x 68 mm)
on the cylinder 4 x M8 (drilling pattern: 50 x 172 mm) see drawing

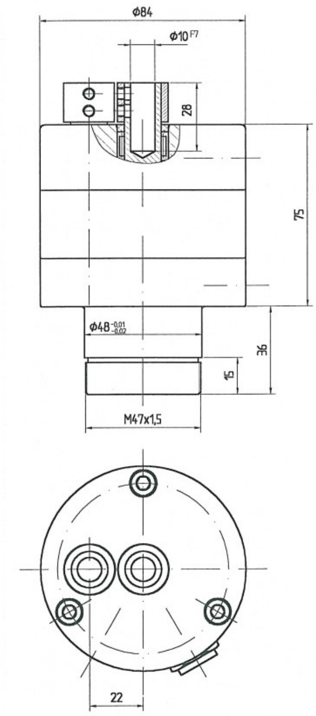
Air consumption: at 6 bar approx. 1.962 NL/ stroke

The olive units for wood- aluminum- and plastic window manufacturing
can be equipped with the following drill heads:

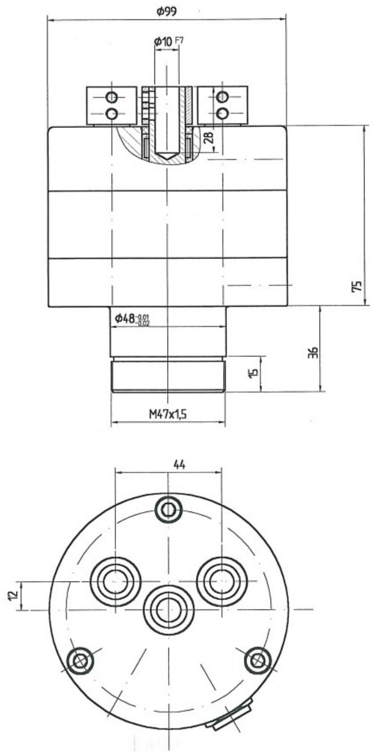
Olive drill head for wood- aluminum- and plastic window processing



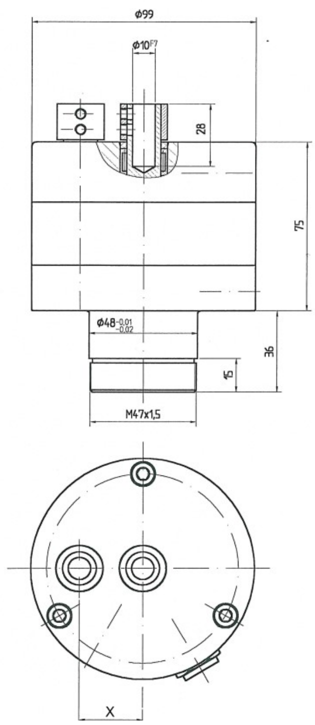
Corner bearing head for the wooden window manufacturing
Sigenia fitting



Corner bearing head for the wooden window manufacturing
Roto fitting



Corner bearing head for the wooden window manufacturing
Winkhaus fitting X = 28 mm
Gretsch-Unitas fitting X = 25 mm



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Fixed corner bearing drill head MSK-606-SR
for window machine construction

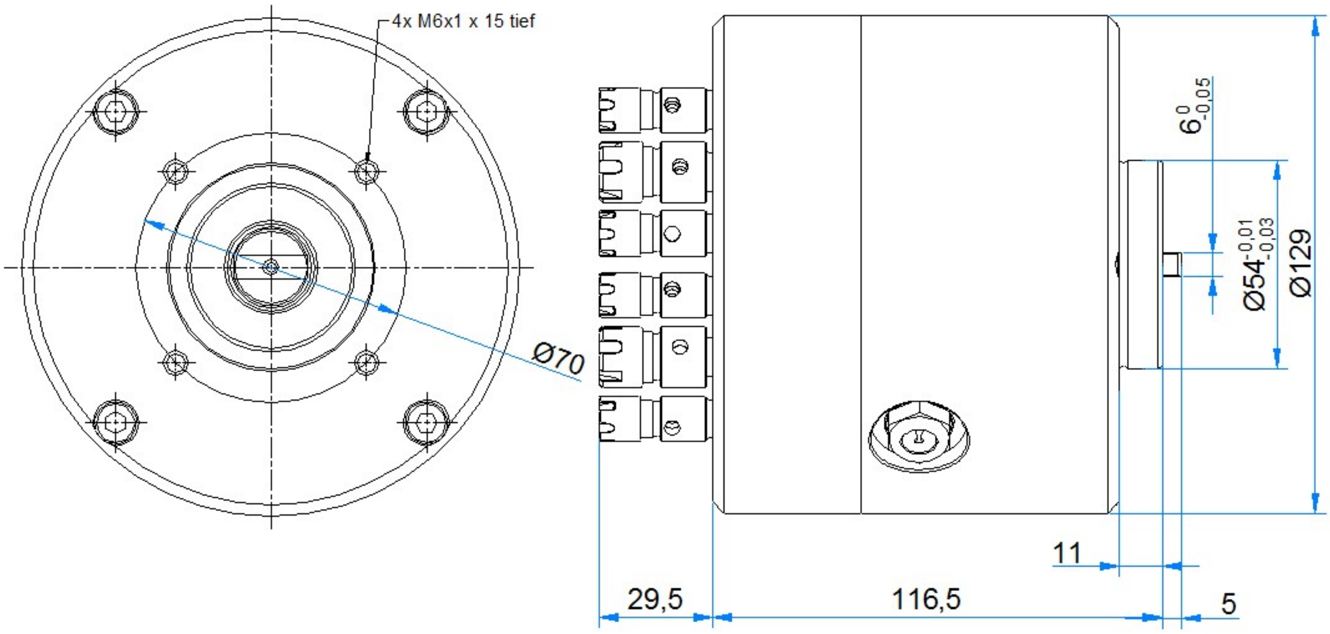
The benefits of our drill heads:

- The spindle rows are situated in the drill head centre, and therefore, the drive unit does not have to be newly aligned when changing the fitting/drill head.
- No different (right and left) drills need to be used, as the spindles rotate in any drive direction to the right.
- Tool clamping:
  Our spindles are equipped with ER 8 and ER 11 chuck holders with a clamping nut. Thus, our spindles are shorter and more stable and standard parts can be utilized. Therefore, no special chucks need to be obtained from the drill head manufacturer.
- The spindles operate with, the respective bore diameters suitable speed at an input speed of 1.500 U / min.
  - The spindles with the collet chuck size **ER 8 thus have a transmission ratio of i = 0.5** and are suitable for drilling up to Ø 3.5 mm
  - The spindles with the collet chuck size **ER 11 have a transmission ratio of i = 0.8** and are suitable for drilling up to Ø 7 mm

The drill bit types, according to the following list, are generally available within two weeks since all the components for assembly are in stock.

Design:

The housing and the spindle plate are made of high-strength aluminium.
The spindles and gear wheels are hardened, ground and run in an oil bath.



Technical data:

Drilling capacity in St 50:	max. 7 mm
Smallest drill distance:	12 mm
Transmission ratio at ER 8:	i = 0,5
Tool clamping:	Chuck ER 8 clamping range from 0.5 mm to max. 5 mm clamping diameter in increments of 0,5 mm
Transmission ratio at ER 11:	i = 0,8
Tool clamping:	Chuck ER 11 clamping range from 0.5 mm to max. 7 mm clamping diameter in increments of 0,5 mm
Transmission oil used:	Mobil Teresstic T 32
Weight:	approx. 4,2 kg
Mounting thread:	see drawing

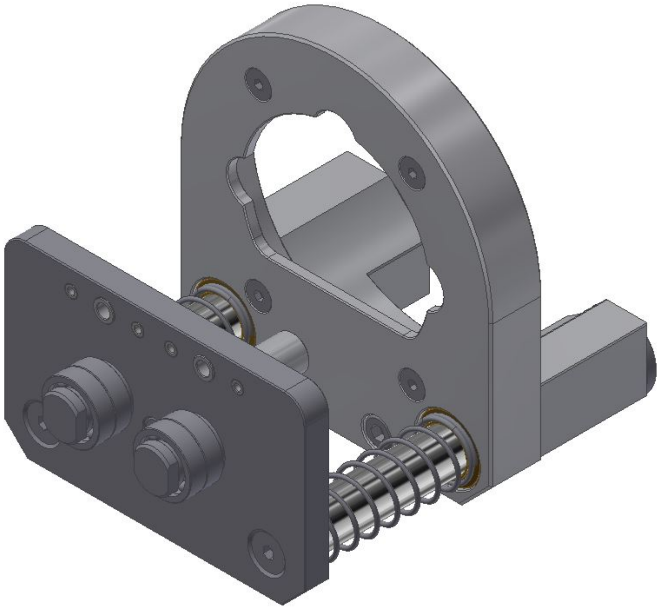
Name	Hole spacing										
MSK 08 01 00 1000 Roto	•	16	•	16	•	16	•	16	•	16	•
ER8 Transmission i = 0,5	x		x		x		x		x		x
MSK 08 01 00 1001 Roto NT	•	16	•	16	•	16	•	16	•	16	•
ER8 Transmission i = 0,5	x				x		x				x
ER11 Transmission i = 0,8			x						x		
MSK 08 01 00 1003 Winkhaus	•	16	•	16	•	16	•	16	•	16	•
ER8 Transmission i = 0,5			x		x		x		x		
ER11 Transmission i = 0,8	x										x
MSK 08 01 00 1004 Maco Trend	•	14	•	14	•	14	•	14	•	14	•
ER8 Transmission i = 0,5			x		x		x		x		
ER11 Transmission i = 0,8	x										x
MSK 08 01 00 1005 Maco Trend	•	14	•	14	•	14	•	14	•	14	•
ER8 Transmission i = 0,5	x		x		x		x		x		x
MSK 08 01 00 1006 Siegenia	•	14,5	•	14,5	•	17	•	14,5	•	14,5	•
ER8 Transmission i = 0,5	x				x		x				x
ER11 Transmission i = 0,8			x						x		
MSK 08 01 00 1007 GU Euro	•	15	•	16,2	•	21,6	•	16,2	•	15	•
ER8 Transmission i = 0,5			x		x		x		x		
ER11 Transmission i = 0,8	x										x
MSK 08 01 00 1008 Aubi	•	16,6	•	16,6	•	16,6	•	16,6	•	16,6	•
ER8 Transmission i = 0,5	x		x		x		x		x		x
MSK 08 01 00 1009 GU	•	15	•	16,2	•	21,6	•	16,2	•	15	•
ER8 Transmission i = 0,5	x		x		x		x		x		x
MSK 08 01 00 1010	•	14	•	12	•	12	•	12	•	14	•
ER8 Transmission i = 0,42	x		x		x		x		x		x
MSK 08 01 00 1011 ROMB SV	•	12	•	12	•	24	•	12	•	12	•
ER8 Transmission i = 0,42	x		x		x		x		x		x
MSK 08 01 00 1013 Siegenia Neu	•	14,5	•	14,5	•	17	•	14,5	•	14,5	•
ER8 Transmission i = 0,5			x		x		x		x		
ER11 Transmission i = 0,8	x										x
MSK 08 01 00 1015 Siegenia Neu	•	14,5	•	14,5	•	17	•	14,5	•	14,5	•
ER8 Transmission i = 0,5	x		x		x		x		x		x
MSK 08 01 00 1016 ARTech	•	12	•	13,5	•	14	•	13,5	•	12	•
ER8 Transmission i = 0,5			x		x		x		x		
ER8 Transmission i = 0,82	x										x
MSK 08 01 00 1017 FUHR	•	16,5	•	13,5	•	18	•	13,5	•	16,5	•
ER8 Transmission i = 0,5	x		x		x		x		x		x
MSK 08 01 00 1018 Multi Mammut	•	19	•	19	•	19	•	19	•	22	•
ER11 Transmission i = 0,5			x		x		x		x		
ER16 Transmission i = 1,24	x										x

Accessories for our standard drill heads:

Our drill heads can be equipped with a spring-loaded drill guide plate upon request. The cost-effective option ist he attached drill guide..

This is designed so that it can be retrofitted to our standard corner bearing drill heads.

Only the drill guedi plate is adapted tot he specific hardware type according tot he drilling pattern and corner bearing.



Integrated spring-loaded drill guide plate as a special drill head

We would be happy to produce your individual drilling pattern with an integrated spring-load drill guide plate.

The left image shows the drilling pattern „GU“ in the special version with an integrated spring-loaded drill guide and customer-specific drive flange.

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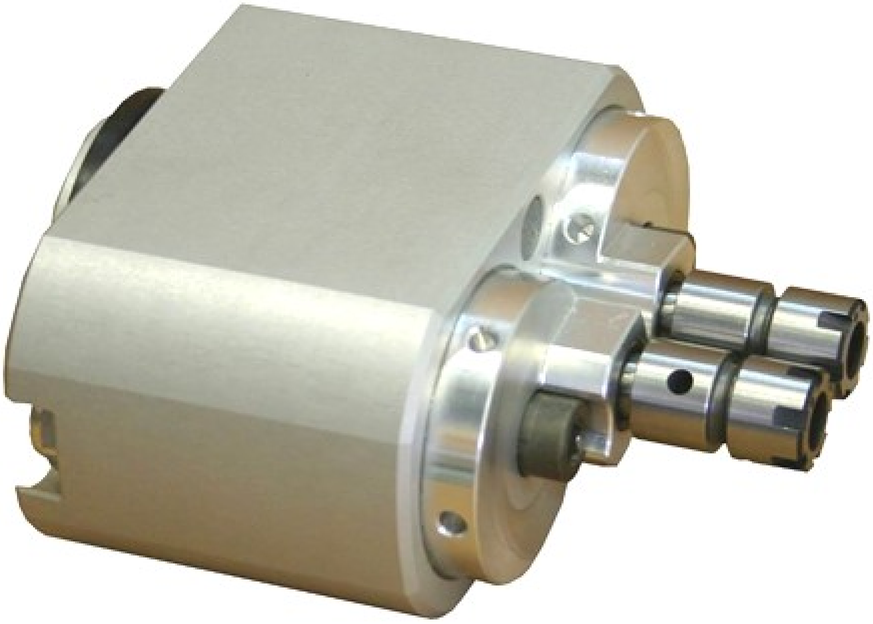
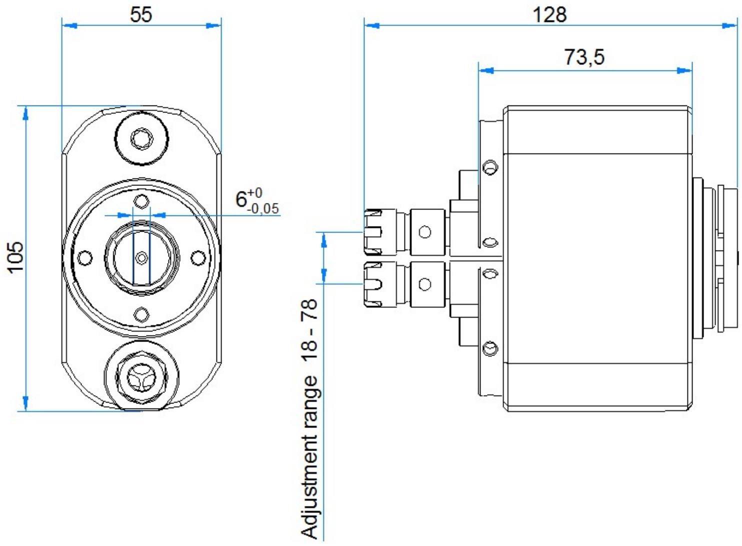
Adjustable two-spindle drill
V-MSK 7-2



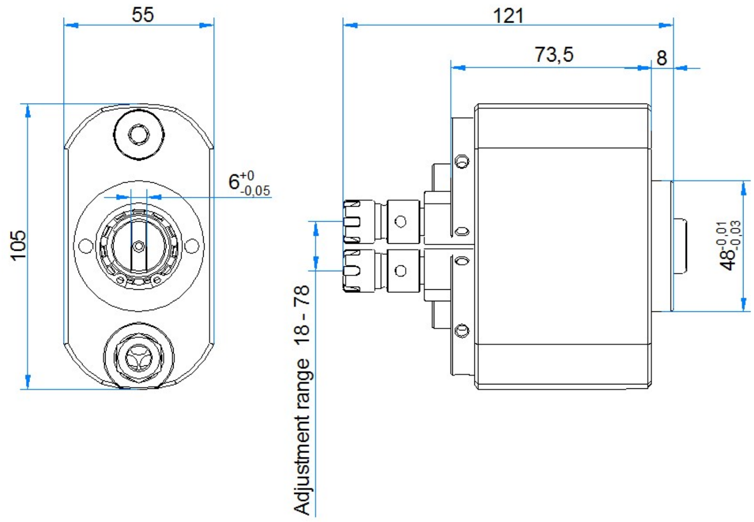
Technical data:

Drilling capacity in St 50:	max. 7 mm
Adjustment range:	min. 18 mm, max. 78 mm
Transmission ratio:	i = 0,88
Tool clamping:	Chuck ER 11 clamping range from 0,5 mm to max. 7 mm clamping diameter in increments of 0,5 mm
Transmission lubricant used:	Gear grease GLG 16 / N000
Weight:	1,25 kg
Assembly:	see drawing

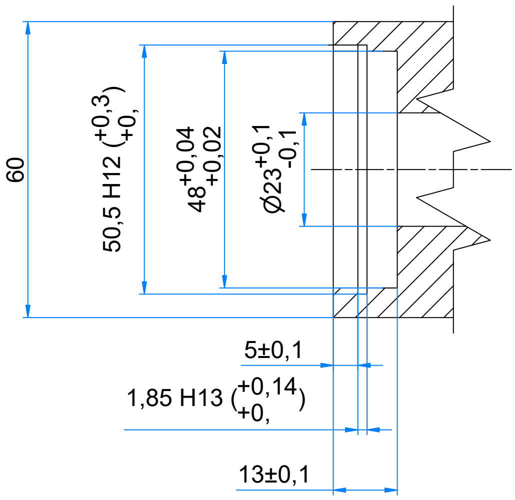
Attachment variant 1: with locking ring :



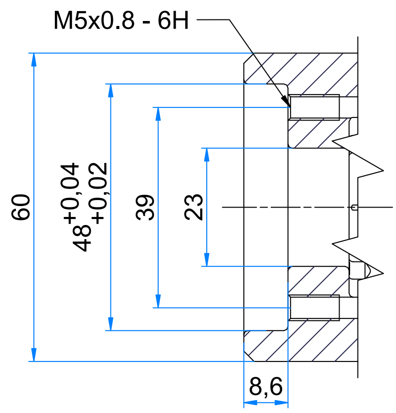
Attachment variant 2: screwed



Reception flange for variant 1:
with locking ring



Reception flange for variant 2:
screwed



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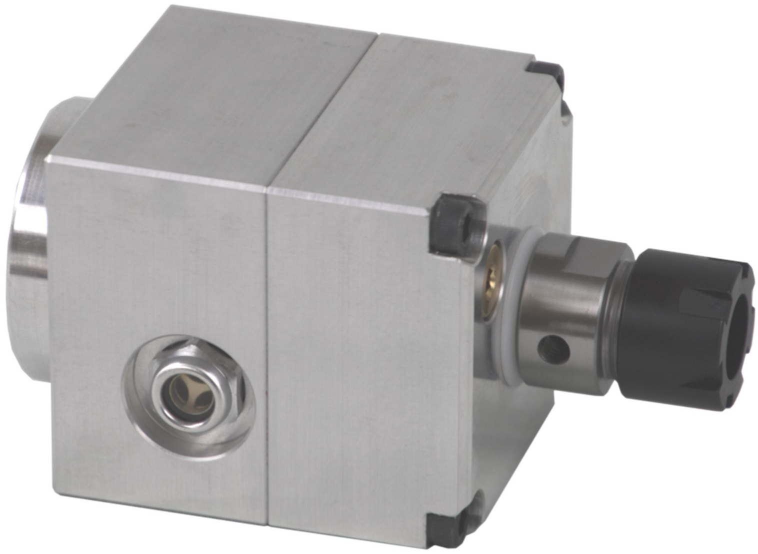
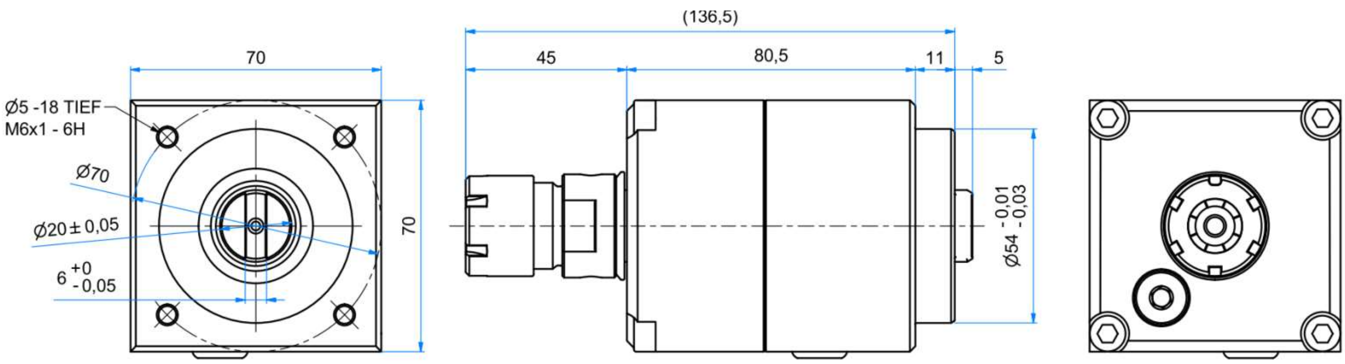
Reduction drill gear 1-spindle



Drilling gear with one drilling spindle with tool holder ER20
Reduction: i = 2: 1
Drilling capacity in ST50: max. Ø 13 mm
Max. Input speed: 4,000 rpm

Equipment:
Collets from Ø 1 - 13mm available in 1mm increments



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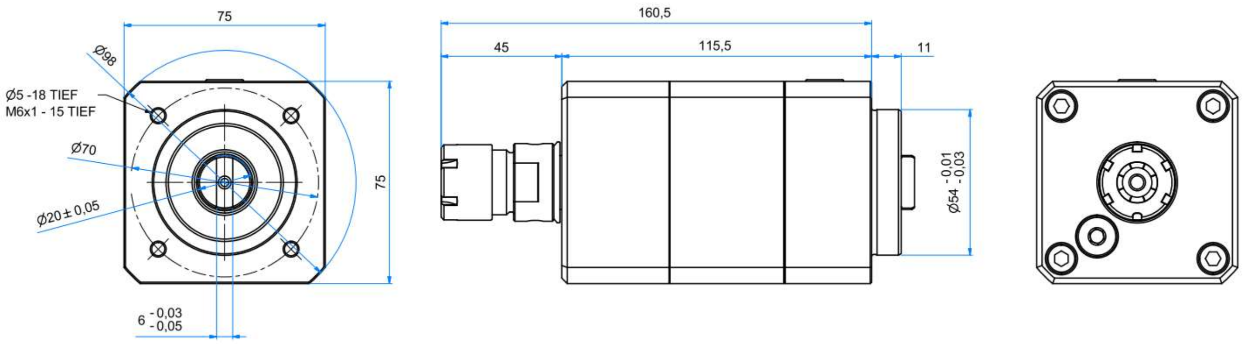
Reduction drill gear 1-spindle

Drilling gear with one drilling spindle with tool holder ER20
Reduction: i = 5: 1
Drilling capacity in ST50: max. Ø 13 mm
Max. Input speed: 4,000 rpm

Equipment:
Collets from Ø 1 - 13mm available in 1mm increments



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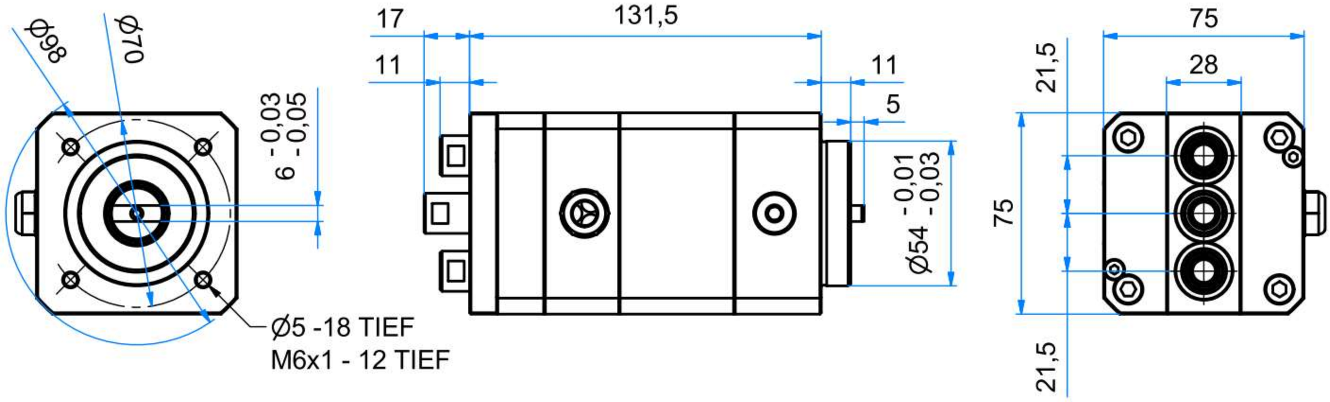
Olive drilling gear 3 spindles

Olive drilling head 3 times with planetary precursor
Center distance: M10- 21.5 / 21.5
<u>Execution:</u>
- Reduction planetary stage i = 5: 1
- Gear ratio spur gear distributor stage i = 1: 1,26
- Spindle center: direction of rotation right
- Spindles outside: direction of rotation left
- Max. Input speed 4,000 rpm



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Drilling heads - variants

Further designs of adjustable drill heads / custom-made special drill heads can be found on our homepage