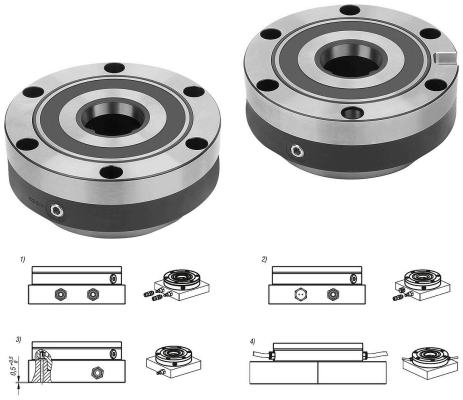
Item description/product images



Description

Material:
Steel.

Version:
Contact faces case-hardened and ground.

Note:
The UNILOCK clamp modules can be mounted in any position, with or without projection on machine tables or as part of fixtures (plates, cubes, towers etc).
The pneumatic control of the clamping modules can be carried out independently or together,thus an individual zero-point clamping system can be fabricated.The modular design allows the number of and distance between the clamp modules to be ideally adjusted to suit the clamping task. The set-up times are significantly reduced and so the running times of the machines are extended.

The high clamping forces are generated by the integrated spring package (the unit is clamped without constant air pressure).
The release process is pneumatic.
Even in the event of a pressure drop or fluctuations in the compressed air supply, the full traction force is maintained.

All clamping modules have a turbo function included as standard. A short air impulse at the "Turbo" air port increases the normal traction force, achieved by the springs, significantly. Consequently, the clamping modules can also be used for heavy-feed machining.

Use of the turbo function for maximum traction force is recommended.

The following clamping forces are possible with the UNILOCK clamping bolt in conjunction with M10, M12, M16 fastening screws:
- Clamping force (M10) 35,000 N
- Clamping force (M12) 50,000 N
- Clamping force (M16) 75,000 N
Clamping force with DIN EN ISO 4762 -12.9 cap screws

Clamping bolts may only be clamped in conjunction with a mounted interchangeable unit in the clamping module.

A consistent clamping bolt size for all clamping modules and compatibility with the 5-axis module clamping system 80 guarantees diverse combinations of application possibilities.

The ESM clamping modules are available with and without rotation lock.

Technical data:
- Traction force with turbo from 25 kN.
- System pressure: 6 bar, lubricated air.
- Repeat accuracy ≤0.005 mm.
- Temperature range 5 °C to 60 °C.
- Optional port for blow-out air.
- The third air port can be used as a query function to report if clamping slides are open or closed.

Advantages:

Item description/product images

- Automation-capable through various query options.
- Turbo-function as standard.
- Repeat accuracy ≤0.005 mm.
- Positioning via short taper.
- High traction force.
- Setup time optimisation.

Supplied with:
1x clamping module.
1x O-ring Ø110x1.
3x O-rings Ø9x1.5 for media feed.
6x fastening screws.
6x end caps for fastening screws.

Accessory:
Clamping pin 42208
Protective bolt for clamping module 42796
Protective plug for clamping module 42796

Note:
Recommended nominal hose size:
- Up to four clamping modules, hose size 6 mm.
- From five clamping modules, hose size 8 mm.

Functional principle:
The clamping modules can be connected either via the connections on the baseplate or directly on the clamping module via the threaded port.

In order to guarantee the function of the clamping slides, the venting of the upper piston chamber must be carried out via the "Turbo" air port.

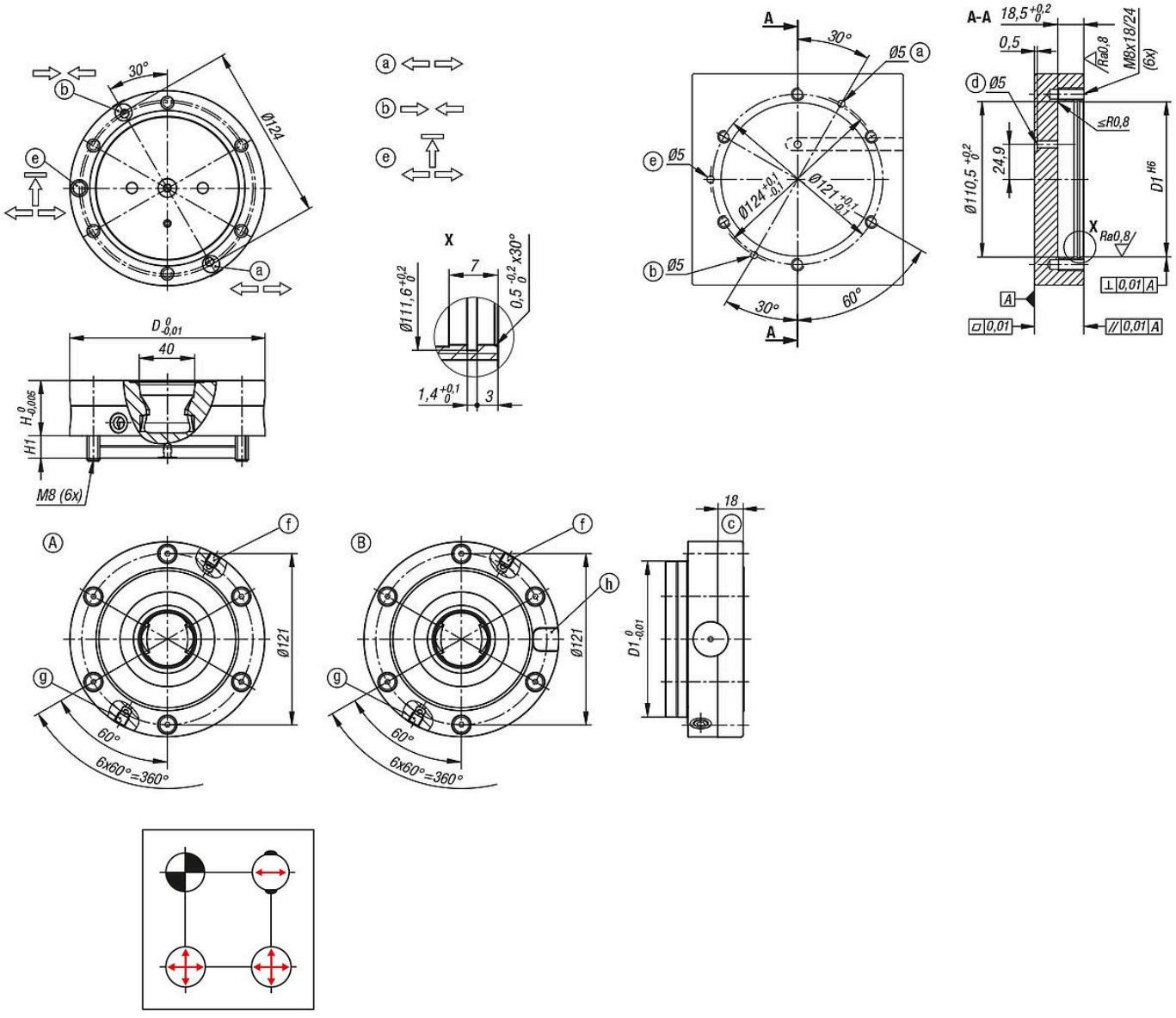
This can be implemented through one of four options:
1) Connection and use of the turbo function in the baseplate next to the "Open" port. This also enables the clamping module to be additionally tensioned with a short air pulse if required. (recommended)
2) Simple hole in the baseplate connected to the turbo port to permit air to escape. To seal the bore against dirt, use a vent screw instead of a connection with a shut-off function.
3) In the third case, the piston chamber must be vented via a bore that is connected below the baseplate via a transverse slot. This bore must join with the turbo port so that venting can take place.
4) If the clamping module is controlled from the side, the one vent screw must also be inserted at this point.

Drawing reference:
a) Underside hose-less port (open)
O-ring Ø9x1.5
b) Underside hose-less port (turbo)
O-ring Ø9x1.5
c) Centring rim
d) Vent
e) Underside hose-less port (dynamic pressure detection / clamp slider position)
O-ring Ø9x1.5
f) Lateral connection G1/8# (actuator open)
g) Lateral connection G1/8# (turbo)
h) Rotation lock Ø14 H7, 8 mm deep

Item description/product images

The connections for the clamping modules are labelled with arrow symbols on the outside diameter.

Drawings



centring clamping bolt = Form A	fixes in x and y axis (reference point)
compensation clamping bolt = Form B	fixes the free axis (bayonet pin)
clamping bolt = Form C	clamping bolt with undersize (no centring function, clamping only)

Overview of items

Order No.	Form	Form definition	D	D1	H	H1	P=operating pressure bar	Retraction force with turbo kN
42780-10-138390	A	without rotation lock	138	110	39	16,7	6	25
42780-10-138391	B	with rotation lock	138	110	39	16,7	6	25