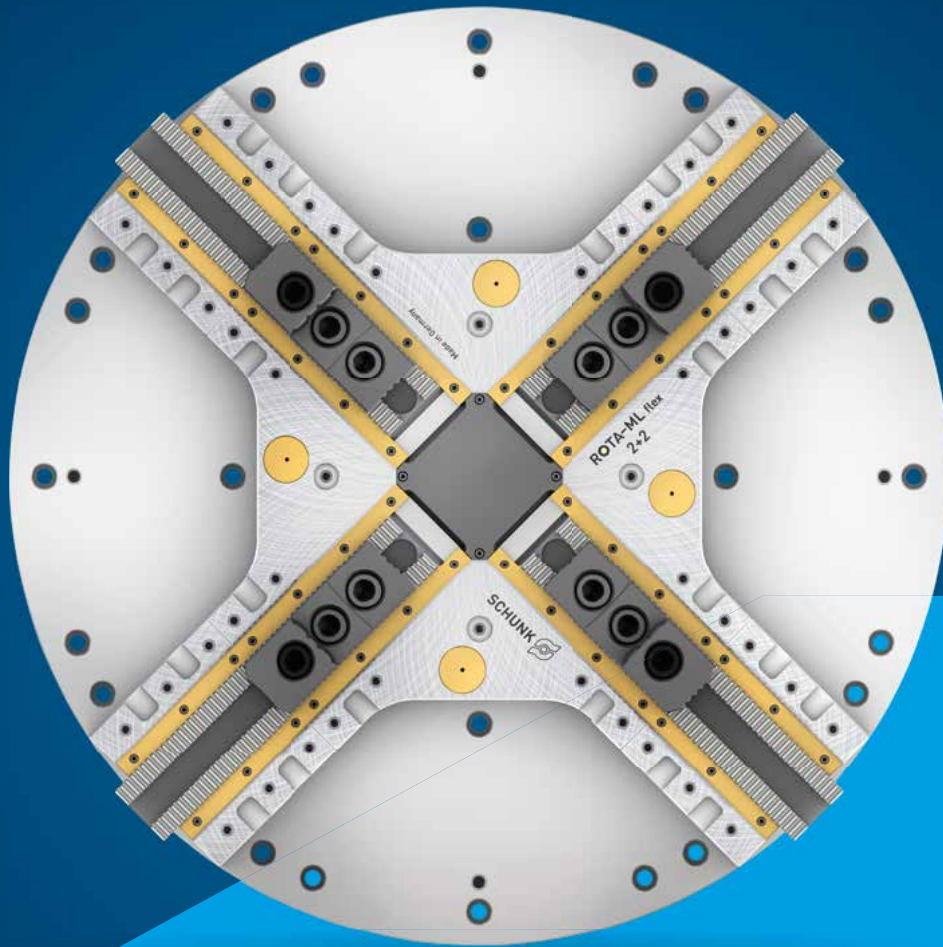


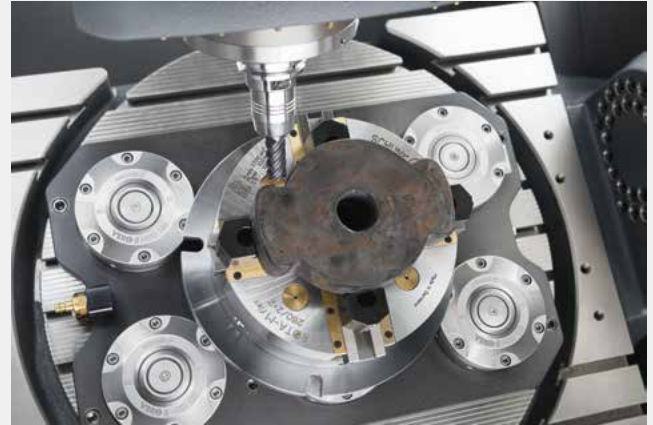


## **ROTA-ML *flex* 2+2**

**Universal manual chuck  
for all clamping tasks  
on lathes and  
milling machines**

# Centrally compensating workpiece clamping of any workpiece geometry

Clamping of round, cubic, and geometrically unshaped parts – no problem for the ROTA-ML flex 2+2. Thanks to the patented drive concept with coupled jaw pairs, any workpiece geometry can be clamped centrally and without overdetermination. The chucks are used, in particular, in storage solutions and mill/turn machines, but can also be used on lathes. The chuck weights of the large chucks with Ø 500 mm or more have been reduced by up to 40% compared to the previous version, so that an even higher workpiece weight can be loaded.



## Advantages – your benefits

- + Sealed manual lathe chuck**  
For significantly longer maintenance intervals
- + Patented drive concept**  
Independent installation of the jaw pairs with subsequent centrally compensating workpiece clamping
- + Flexible clamping system**  
For clamping round, cubic, or geometrically unshaped workpieces
- + Compensation mechanism**  
Enables centric clamping of any workpiece geometries
- + Optimized chuck heights and weights for the new ROTA-ML flex 2+2 versions from Ø 500 mm**  
For a maximum additional payload of workpiece weight
- + High efficiency of the wedge bar system**  
Process-reliable clamping due to high clamping forces
- + Lubrication system with grease circulation**  
Ensures permanent grease supply for constant clamping forces
- + Visual clamping release**  
As an indicator for the range in which safe clamping can be ensured
- + All sides of the functional parts are ground and hardened**  
Ensures a long service life

## Technical data

| Description           | Max. speed of rotation [RPM] | Max. clamping force [kN] | Max. torque [Nm] | Stroke/jaw [mm] | Compensation stroke/jaw [mm] |
|-----------------------|------------------------------|--------------------------|------------------|-----------------|------------------------------|
| ROTA-M flex 2+2 260   | 2700                         | 100                      | 120              | 9.5             | 5.1                          |
| ROTA-M flex 2+2 315   | 2200                         | 100                      | 120              | 9.5             | 5.1                          |
| ROTA-M flex 2+2 400   | 1500                         | 150                      | 200              | 14.5            | 7.9                          |
| ROTA-ML flex 2+2 500  | 1500                         | 180                      | 210              | 17.3            | 12                           |
| ROTA-ML flex 2+2 630  | 1300                         | 180                      | 210              | 17.3            | 12                           |
| ROTA-ML flex 2+2 800  | 1100                         | 180                      | 210              | 17.3            | 12                           |
| ROTA-ML flex 2+2 1000 | 850                          | 180                      | 210              | 17.3            | 12                           |
| ROTA-ML flex 2+2 1200 | 750                          | 180                      | 210              | 17.3            | 12                           |

## Significant weight reduction in the new generation ROTA-ML flex 2+2

The large sizes of the ROTA-ML flex 2+2 from Ø 500 mm have undergone a complete facelift. The main focus has been on reducing the overall height and the associated reduction in chuck weight. Thanks to design modifications, the chuck height has been significantly reduced and the weight has been cut by as much as 40% compared to its predecessor. This means that even larger and heavier workpieces can now be processed. Another positive side effect of the weight reduction is that higher table speeds are now possible due to the lower mass.

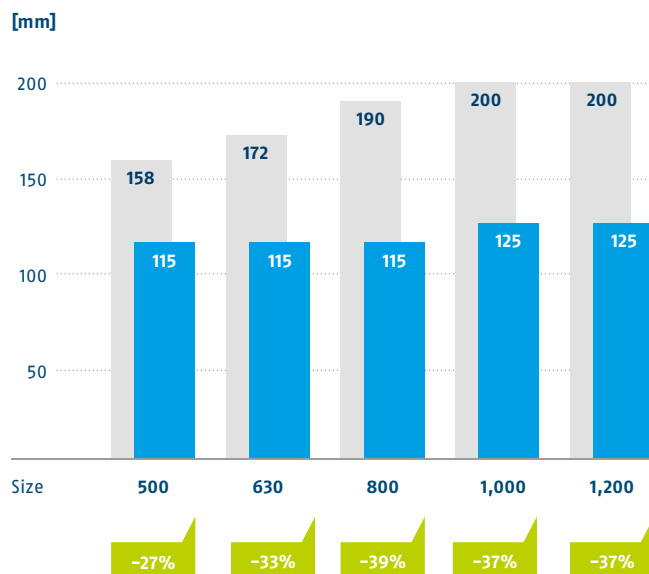


### NEW

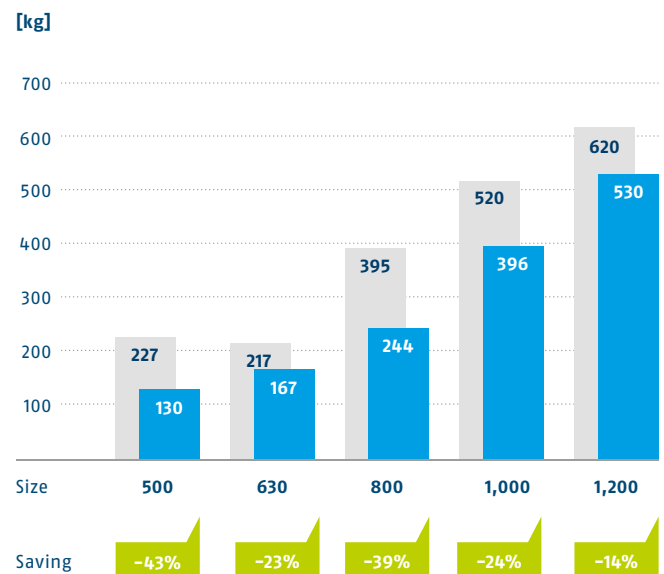
#### ROTA-ML flex 2+2 - the new generation

- + Up to 30% lower
- + Up to 40% less weight
- + Processing of larger and heavier workpieces possible

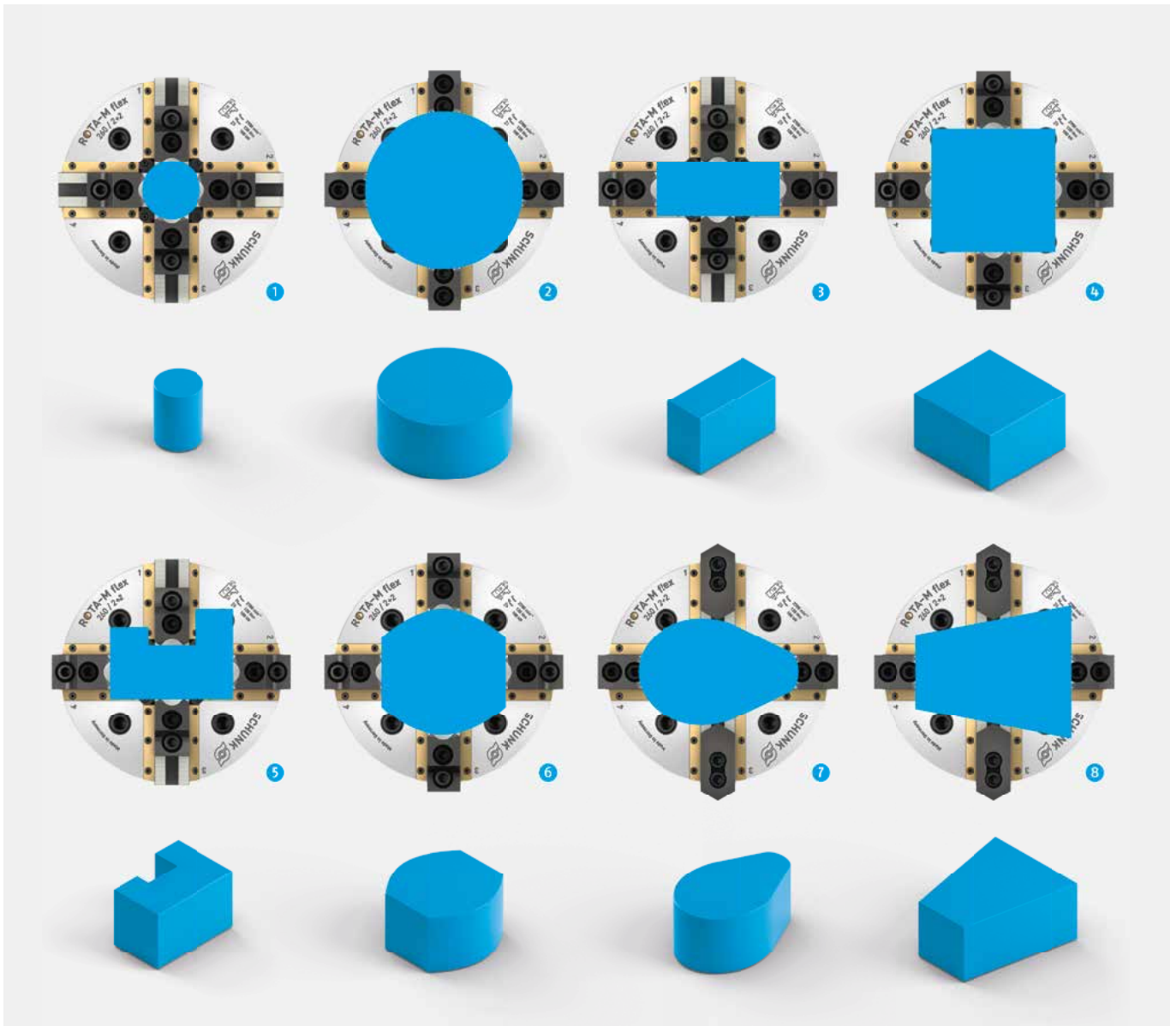
### Height comparison



### Weight comparison



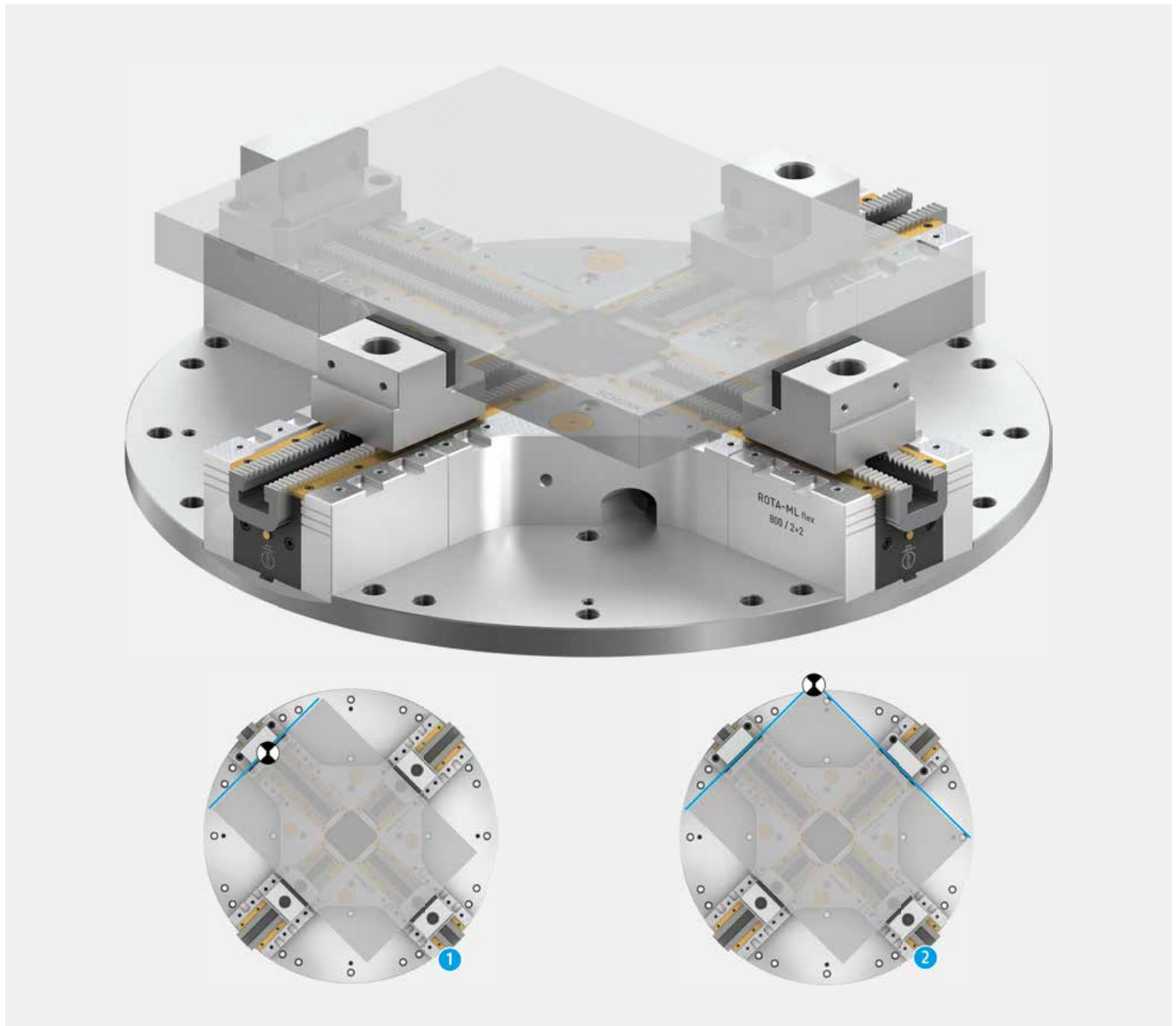
## Highest flexibility



The ROTA-ML flex 2+2 is impressive with its high degree of flexibility. With this centrally compensating manual lathe chuck, there is virtually no workpiece that cannot be clamped with this clamping device. By choosing the top jaws, round, cubic, and a variety of geometrically unshaped parts can be clamped.

- ① Small workpieces
- ② Large workpieces
- ③ Rectangular workpieces
- ④ Square workpieces
- ⑤ Free-form parts
- ⑥ Semicircular and angular workpieces
- ⑦ Cams
- ⑧ Inclined workpieces

## Console clamping



If one or two fixed zero points are required on mill/turn centers instead of centric compensating clamping, the ROTA-ML flex 2+2 can be converted into a "fixed jaw clamping vise" using special jaws. Via grooves in the chuck face, the fixed jaws can be connected to the chuck. As a result, you get a defined, repeatable zero point, which is required in particular for precise OP20 machining.

### 1 Clamping against a fixed jaw

The workpiece is clamped against a fixed jaw.  
As a result, this one jaw forms the precise zero point in a plane.  
Attention: For this clamping set-up, the clamping force is reduced by 25% compared to the maximum clamping force specified for the chuck.

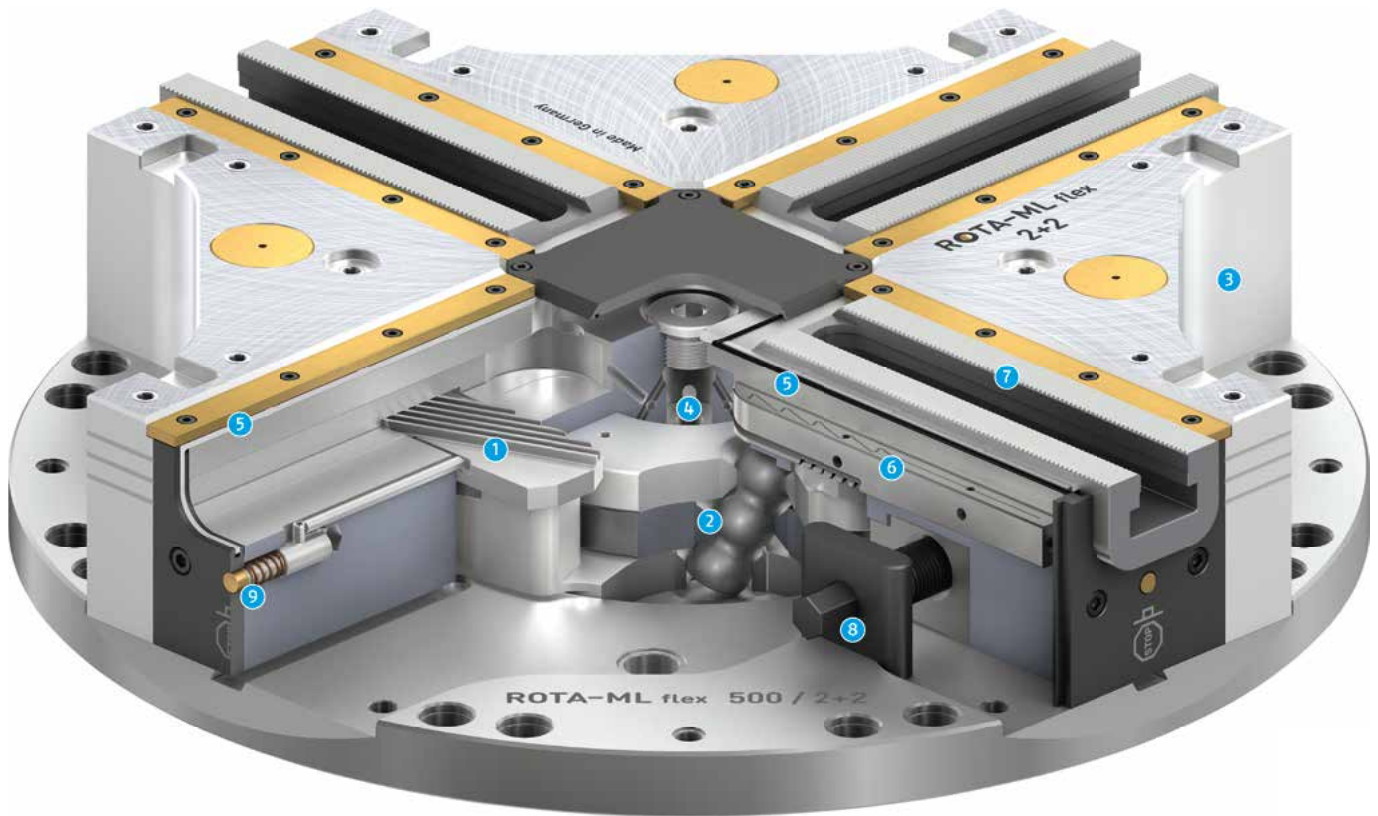
### 2 Clamping against two fixed jaws

The workpiece is clamped against two fixed jaws.  
The two fixed stops form the precise zero point at the intersection of the two stop lines.  
For this clamping set-up, the maximum clamping force of the chuck is maintained.

ⓘ Attention: Fixed stops are not intended for use under rotation!

## Function ROTA-ML flex 2+2

A patented drive ring system transfers the rotational motion of the threaded spindle onto the jaws. The opposing pairs of jaws contact the workpiece one after the other and center it in the corresponding plane. The workpiece is then clamped evenly at full clamping force.

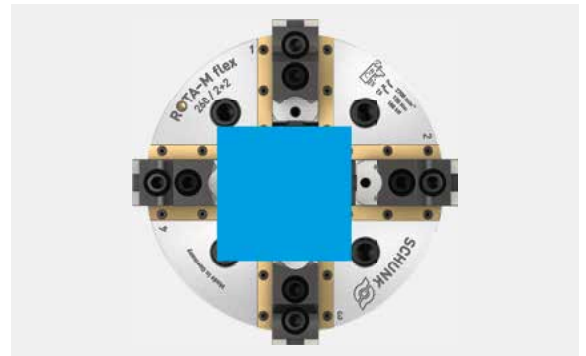


- 1 Wedge bar actuation system**  
Offers high run-out accuracies
- 2 Patented drive concept**  
As a basis for centrally compensating workpiece clamping
- 3 Hardened and extremely rigid base body**  
Ensures a longer service life at highest precision. Even with maximum clamping force
- 4 Central lubrication system with grease reservoir**  
Provides sufficient grease during machining. The actuation as well as the centrifugal force during machining also ensure that the grease is circulated in the chuck
- 5 Sealing of the lathe chuck**  
Consists of a gasket and O-rings for the initial tension
- 6 Long jaw guidance**  
Offers optimal support for O.D. and I.D. clamping
- 7 Standard chuck jaw interface**  
For the use of standard top jaws from SCHUNK
- 8 Actuation via hexagon connection**  
This ensures easy operation
- 9 Indicator pin**  
For monitoring the jaw position via drive ring movement

## Functionality: Compensating workpiece clamping

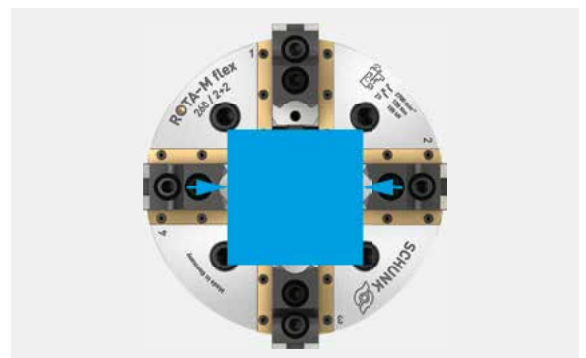
### Step 1: Insert the workpiece

Round, cubic, or geometrically unshaped parts can be inserted in open position.



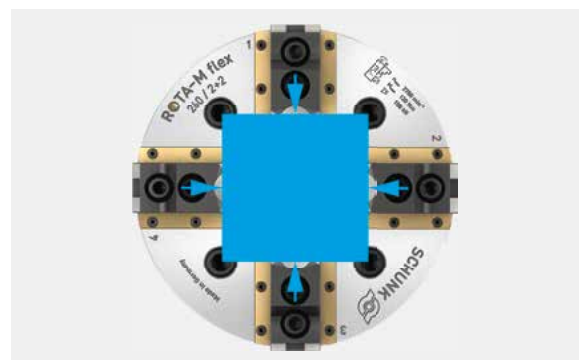
### Step 2: Install the first pair of jaws

By actuating the manual lathe chuck, the first pair of jaws contacts the workpiece. The workpiece is now centered in this plane.



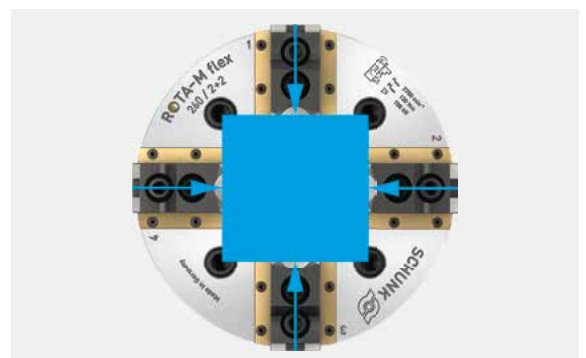
### Step 3: Install the second pair of jaws

During further actuation, the second pair of jaws also contacts the workpiece and moves the workpiece in this plane to the center.



### Step 4: Clamp the workpiece

If both pairs of jaws are in contact with the workpiece, the workpiece is clamped evenly and centrally with the full clamping force (depending on the torque).



## Compensating workpiece clamping

Due to the innovative drive concept, round, cubic, and geometrically unshaped workpieces can be clamped in a compensating manner. The opposing jaws are always connected to each other via a drive ring system. Overdetermination is prevented by the compensation mechanism.

- ❶ First pair of jaws
- ❷ Second pair of jaws



## Sealed manual lathe chuck

A sealing system consisting of a pre-loaded gasket and O-rings prevents grease from being flushed out during machining and the penetration of dirt or chips. This means that cast or forged parts can also be machined without hesitation.



## Visual clamping release

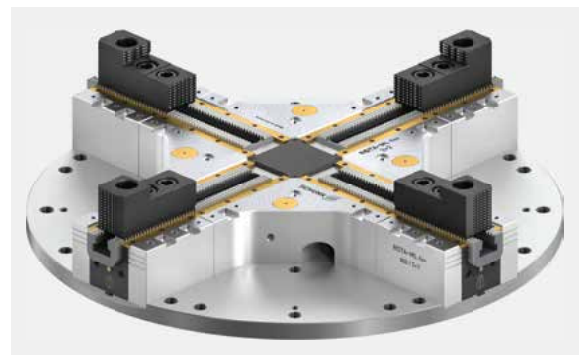
To ensure safe working, an indicator pin shows when the chuck mechanism is close to the stroke end position. As soon as the indicator pin moves outwards, the workpiece is no longer clamped correctly and machining must not be started.

- ❶ Indicator pin



## Stationary version

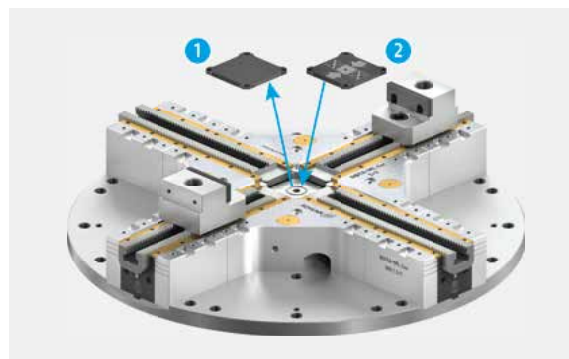
From size  $\varnothing$  500 the ROTA-ML flex 2+2 is designed in an extremely weight-reduced monolithic design, and is now even flatter. As a result, a weight reduction of up to 60% can be achieved compared to conventional chucks of the same size.



## 2-jaw clamping

The ROTA-ML flex 2+2 can be converted from a 4-jaw chuck into a 2-jaw chuck with one simple adjustment. All you have to do is to exchange the central locking cover.

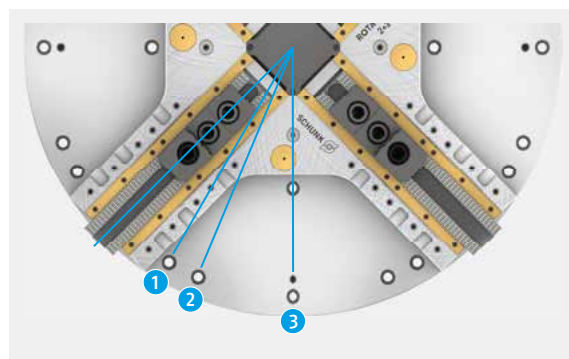
- ❶ **Locking cover without stop**  
Both pairs of jaws are freely movable
- ❷ **Locking cover with stop**  
One pair of jaws is blocked, the other one clamps centrally



## Versatile mounting options

With the new ROTA-ML flex 2+2, additional mounting options have been incorporated into the base plate. This means that the chucks can be used even more flexibly on the machine tables of the individual machine manufacturers.

- ❶ **22.5° star slot**  
For up to 16 radial T-slots
- ❷ **30° star slot**  
For up to 12 radial T-slots
- ❸ **45° star slot**  
For up to 8 radial T-slots



CUSTOMER TESTIMONIALS

## 4-jaw manual lathe chuck ROTA-ML flex 2+2 from SCHUNK in use at Schumacher

**Flexibility thanks to a new lathe chuck:** In order to be able to react flexibly to customer requirements, the family-owned business Josef Schumacher has purchased a new turn/mill center – equipped with a ROTA-ML flex 2+2 lathe chuck from SCHUNK, in order to be quickly and optimally equipped for all part geometries.



Satisfied with the collaboration (from left to right): Sotirios Vlachosotiros, Technical Consultant and Sales for Clamping Technology at SCHUNK, Christian Hutflies, Managing Director at Josef Schumacher GmbH, Alice Winkel, Authorized Signatory at Josef Schumacher GmbH, and skilled worker Enes Demirel



With the ROTA-ML flex 2+2 centrally compensating manual lathe chuck, round, square, or cubic parts as well as various geometrically unshaped parts can be clamped using suitable top jaws. Long jaw guidance offers optimal support. If one or two fixed zero points are required on mill/turn centers rather than centrally compensating clamping, the ROTA-ML flex 2+2 can be converted to a "fixed jaw clamping vise" using special jaws.



As a subcontracted manufacturer, Josef Schumacher GmbH, a small medium-sized company in Brühl near Cologne, has to react permanently and flexibly to new customer requirements. "Our orders come from surrounding industry," explains Managing Director Christian Hutfly. "We have no idea today what requirements and customer wishes will await us tomorrow. This means our machines and tools always have to conform to the latest state-of-the-art technology. And we have to be able to use them variably and in a variety of ways." Therefore, it has recently become necessary to purchase a new milling center in order to be prepared for all machining cases. A DMU 105 FD monoBLOCK from DMG Mori has now been present in the production hall for several weeks. With a machine-integrated tool rack for 60 places and a large door opening, this five-axis machining center is designed for machining components that weigh up to 1,500 kilograms. For Schumacher, there were no reservations when it came to integrating a lathe chuck by SCHUNK right from the start. "We've known SCHUNK since 1999," says Hutfly, adding: "Their quality is entirely convincing and their service is second-to-none. We needed a versatile lathe chuck that would allow us to react quickly and directly, and the best place to acquire this is from SCHUNK."

#### **Four jaws for maximum flexibility**

The ROTA-ML flex 2+2 4-jaw manual lathe chuck was selected – in size 1000 with an impressive diameter of one meter. This allows the user to clamp any workpiece geometry completely flexible using suitable top jaws.



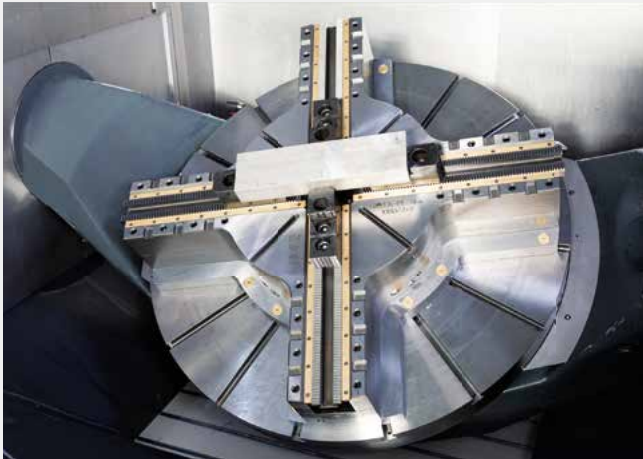
One meter diameter: With the new lathe chuck ROTA-ML flex 2+2 1000 Schumacher can machine all parts specifically and efficiently in its DMU 105 FD mono-BLOCK five-axis machining center from DMG Mori.

Small, large, rectangular, semicircular, cubic, or chamfered workpieces can also be clamped without any problem, as well as any free-form parts or cams. When designing this lathe chuck, SCHUNK combined the advantages and functions of two, three, and four-jaw chucks on lathes, vises as well as on mill/turn machines. First of all, the workpiece is inserted and the first pair of jaws is fitted by actuating the manual lathe chuck. This way, the workpiece is centred on this plane. During further actuation of the manual lathe chuck, the second pair of jaws is also placed on the workpiece and moves the workpiece in this plane into the center. Once both pairs of jaws are in contact with the workpiece, the workpiece is clamped evenly and centrically with full clamping force depending on the torque for the machining. Because the ROTA-ML flex 2+2 transfers the power via both axes, higher holding forces on the workpieces, and corresponding machining parameters, are possible. This results in fast, precise, and economical part machining.

### **2+2: Two pairs of jaws are attached independently of each other**

The basis for the centrically compensating workpiece clamping is the patent-pending drive ring system, by which the two opposite jaws are connected to one another. The drive rings transmit the rotary movement of the thread spindle onto the jaws. The two pairs of jaws are arranged one after the other on the workpiece as already described, and center it on the corresponding plane. The workpiece is then clamped evenly with the maximum possible clamping force. A compensation mechanism enables centric clamping including of thin-walled workpieces.

A special seal, consisting of a pre-loaded gasket and O-rings, prevents chips and coolant from entering the manual lathe chuck and grease from being flushed out.



One lathe chuck for everything: The compensation mechanism enables a significantly larger compensation stroke with the SCHUNK ROTA-ML flex than with comparable lathe chucks. This increases the flexibility with regard to the clampable workpiece geometries.



Machining this complex-shaped guide seat for vibrating heads, which shake off sand in the foundry, is no problem for the lathe chuck ROTA-ML flex 2+2.

This protects the internal mechanics so that cast or forged parts can also be machined without hesitation. A central lubrication system with a grease reservoir permanently and consistently supplies the mechanism. In this way, the clamping forces remain constant. The centrifugal force pushes the grease outwards into the guideways. Grease that has accumulated behind the jaws is pushed back in front of the jaws through holes when the chuck is opened and is thereby circulated constantly in the chuck.

### Visual clamping release

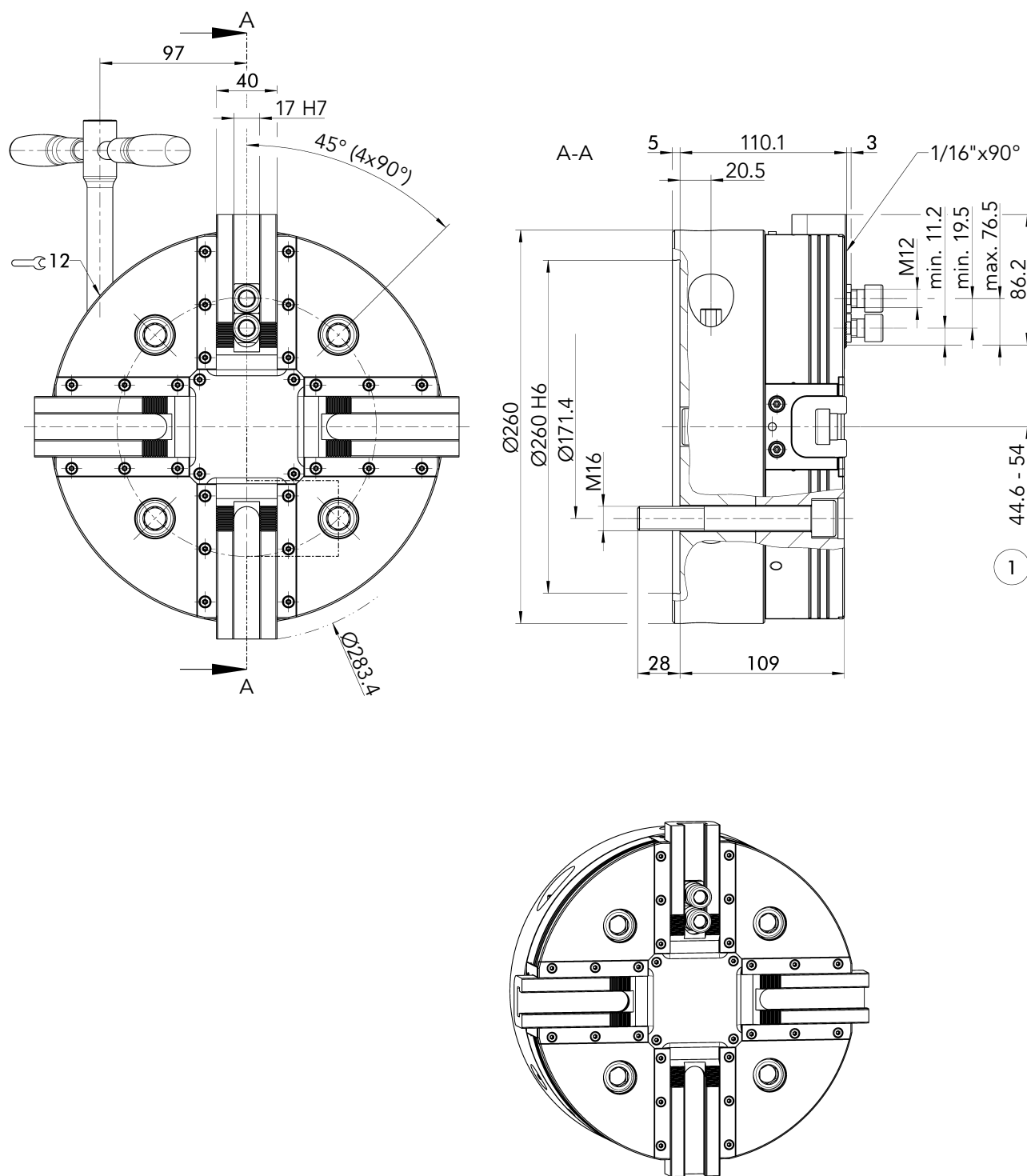
From size 500 on, lathe ROTA-ML flex 2+2 by SCHUNK is designed in an extremely weight-reduced monolithic design. This saves around 60 percent of the weight of conventional chucks of the same size. This results in a maximum possible machine load of workpiece weight. A mechanical indicator pin provides information about the jaw position and indicates when the chuck mechanism is about to reach the stroke end position. As soon as the pin moves outward, the workpiece is no longer properly clamped and machining must not be started. This visual clamping release ensures safe workpiece machining in the machine.

### Equipped for every processing case

There have actually been customer requests in the past that could not be implemented with the four-jaw centering solution in use previously at Schumacher, or only with great effort. This is now a thing of the past. With the new ROTA-ML flex 2+2 lathe chuck in the 5-axis machining center, Schumacher can now specifically and efficiently machine any parts. Currently, a flywheel housing is in position on the table. "It used to be a complex case that we just had no solution to," Christian Hutflied concluded. "A casting like this is square on the outside, round on the inside, and also has lugs, so we wouldn't stand a chance with a conventional centric clamping vise. But now, we are fully flexible."



The DMU 105 monoBLOCK from DMG Mori in the production hall of Josef Schumacher in Brühl.



Chuck for shaft clamping shown in open position.  
Technical changes reserved.

① Distance to center of first tooth

## Technical data

| Spindle type | Spindle size | ID      | Serration   | Max. speed of rotation [RPM] | Max. clamping force [kN] | Max. torque [Nm] | Stroke/jaw [mm] | Compensation stroke/jaw [mm] | Weight [kg] |
|--------------|--------------|---------|-------------|------------------------------|--------------------------|------------------|-----------------|------------------------------|-------------|
| ISO 702-4    | No. 8 (Z220) | 1389670 | 1/16" x 90° | 2700                         | 100                      | 120              | 9.5             | 5.1                          | 41          |

## Scope of delivery

Chuck, T-nuts or mounting screws for top jaws, chuck mounting screws, actuation wrench, eye bolts, and operating manual; without top jaws, without locking cover

## Notes

### Stationary applications

For stationary use, the ROTA-M flex 2+2 can be retrofitted with standardized console and adapter plates (see accessories).

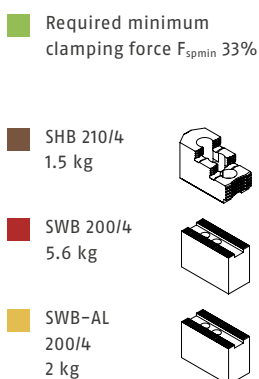
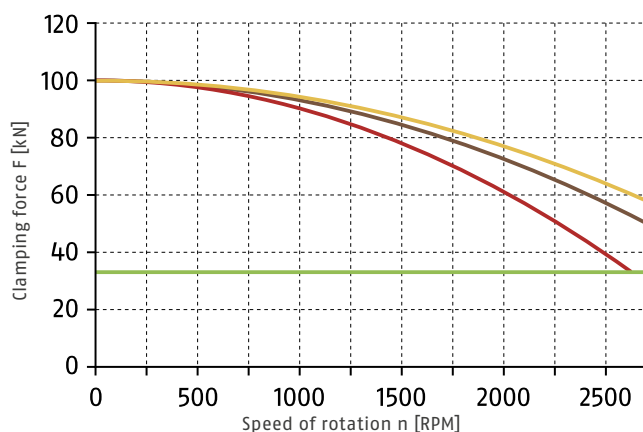
### Use of 2-jaw clamping

When using 2-jaw clamping, a locking cover is additionally required to block one pair of jaws (see accessories).

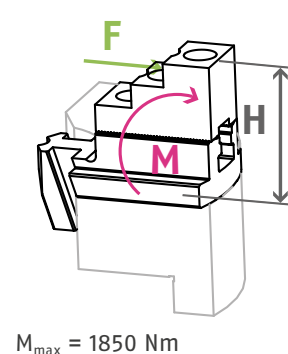
### Clamping force, 2-jaw clamping

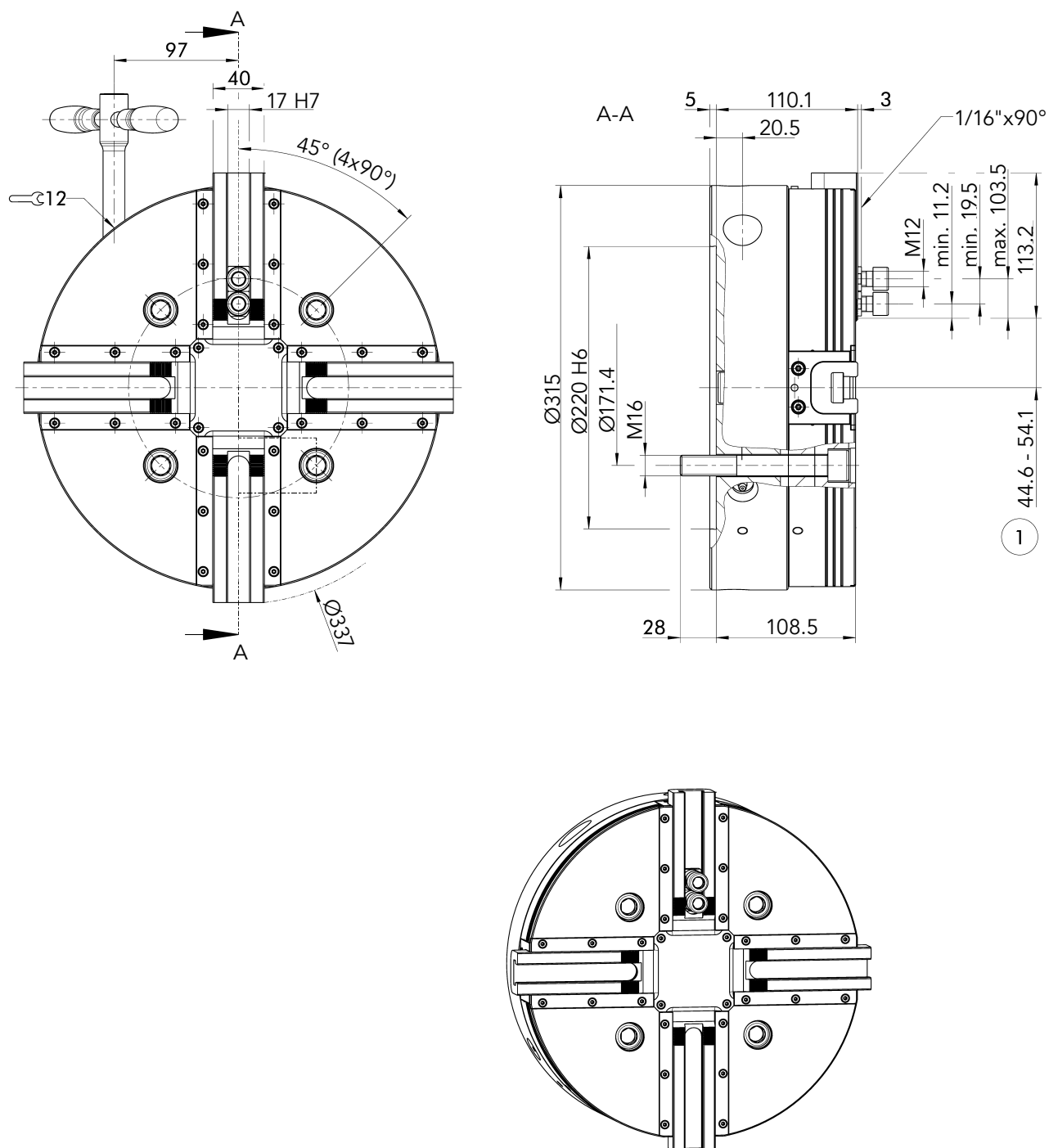
When changing to 2-jaw clamping, the maximum clamping force is halved at the same torque.

## Clamping force/RPM diagram



## Jaw guidance load





Chuck for shaft clamping shown in open position.  
Technical changes reserved.

① Distance to center of first tooth

## Technical data

| Spindle type | Spindle size | ID      | Serration   | Max. speed of rotation [RPM] | Max. clamping force [kN] | Max. torque [Nm] | Stroke/jaw [mm] | Compensation stroke/jaw [mm] | Weight [kg] |
|--------------|--------------|---------|-------------|------------------------------|--------------------------|------------------|-----------------|------------------------------|-------------|
| ISO 702-4    | No. 8 (Z220) | 1400911 | 1/16" x 90° | 2200                         | 100                      | 120              | 9.5             | 5.1                          | 63          |

## Scope of delivery

Chuck, T-nuts or mounting screws for top jaws, chuck mounting screws, actuation wrench, eye bolts, and operating manual; without top jaws, without locking cover

## Notes

### Stationary applications

For stationary use, the ROTA-M flex 2+2 can be retrofitted with standardized console and adapter plates (see accessories).

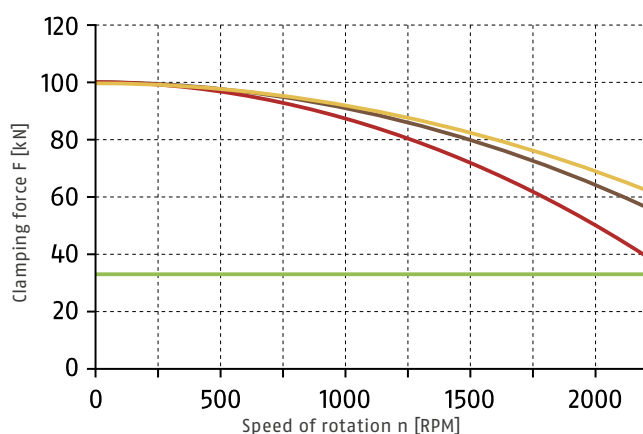
### Use of 2-jaw clamping

When using 2-jaw clamping, a locking cover is additionally required to block one pair of jaws (see accessories).

### Clamping force, 2-jaw clamping

When changing to 2-jaw clamping, the maximum clamping force is halved at the same torque.

## Clamping force/RPM diagram



Required minimum clamping force  $F_{spmin}$  33%

SHB 210/4  
1.5 kg



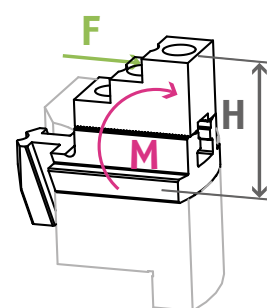
SWB 200/4  
5.6 kg



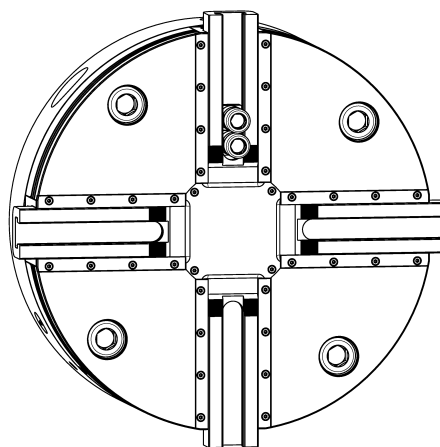
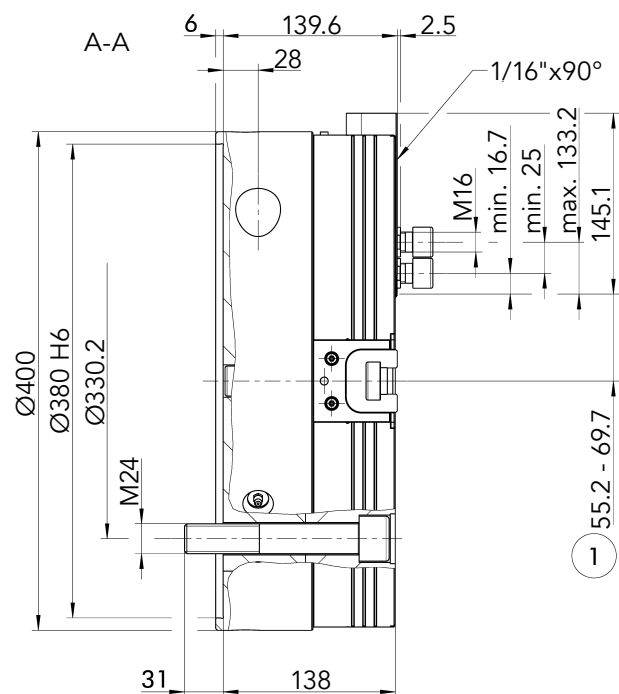
SWB-AL  
200/4  
2 kg



## Jaw guidance load



$$M_{\max} = 1850 \text{ Nm}$$



① Distance to center of first tooth

## Technical data

| Spindle type | Spindle size  | ID      | Serration   | Max. speed of rotation [RPM] | Max. clamping force [kN] | Max. torque [Nm] | Stroke/jaw [mm] | Compensation stroke/jaw [mm] | Weight [kg] |
|--------------|---------------|---------|-------------|------------------------------|--------------------------|------------------|-----------------|------------------------------|-------------|
| ISO 702-4    | No. 15 (Z380) | 1407684 | 1/16" x 90° | 1500                         | 150                      | 200              | 14.5            | 7.9                          | 125         |

## Scope of delivery

Chuck, T-nuts or mounting screws for top jaws, chuck mounting screws, actuation wrench, eye bolts, and operating manual; without top jaws, without locking cover

## Notes

### Stationary applications

For stationary use, the ROTA-M flex 2+2 can be retrofitted with standardized console and adapter plates (see accessories).

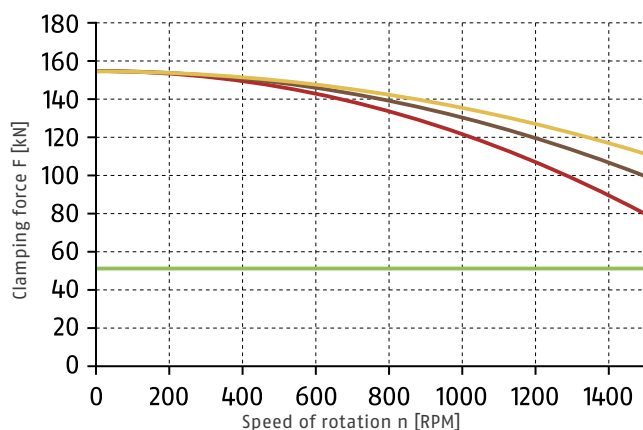
### Use of 2-jaw clamping

When using 2-jaw clamping, a locking cover is additionally required to block one pair of jaws (see accessories).

### Clamping force, 2-jaw clamping

When changing to 2-jaw clamping, the maximum clamping force is halved at the same torque.

## Clamping force/RPM diagram



Required minimum clamping force  $F_{spmin}$  33%

SHB 250/4  
4.8 kg



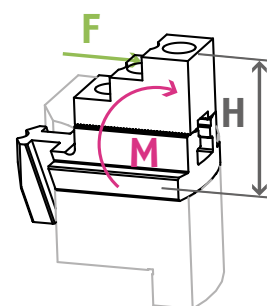
SWB 250/4  
12.4 kg



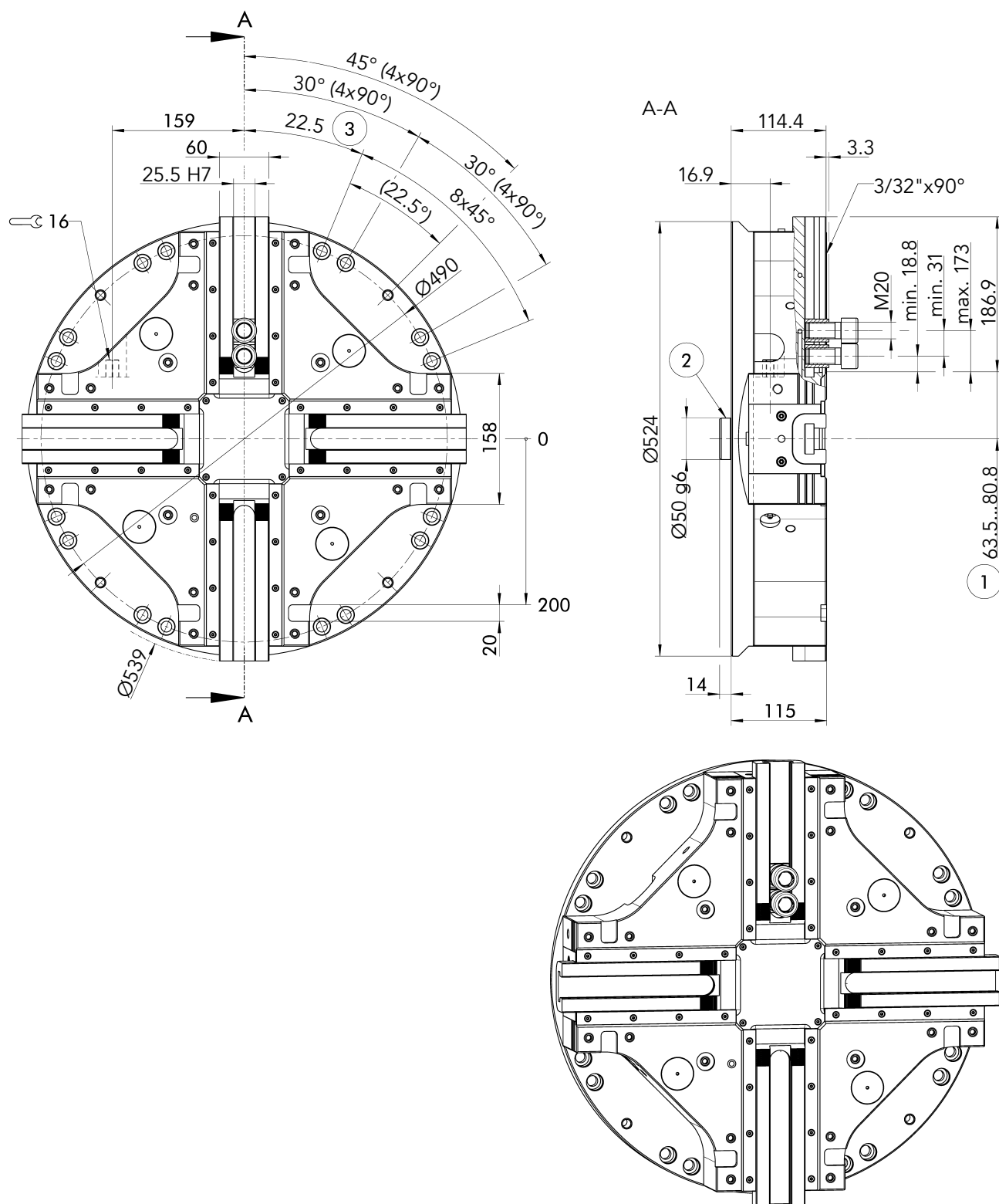
SWB-AL 250/4  
4.4 kg



## Jaw guidance load



$M_{max} = 3250 \text{ Nm}$



Chuck for shaft clamping shown in open position.  
Technical changes reserved.

- ① Distance to center of first tooth
- ② Centering pin for centering the clamping pallet
- ③ Lathe chuck suitable for a 22.5° or 30° star slot table

## Technical data

| ID      | Serration   | Max. speed of rotation<br>[RPM] | Max. clamping force<br>[kN] | Max. torque<br>[Nm] | Stroke/jaw<br>[mm] | Compensation stroke/jaw<br>[mm] | Weight<br>[kg] |
|---------|-------------|---------------------------------|-----------------------------|---------------------|--------------------|---------------------------------|----------------|
| 1583348 | 3/32" x 90° | 1500                            | 180                         | 210                 | 17.3               | 12                              | 130            |

## Scope of delivery

Chuck, centering pin, T-nuts, ratchet wrenches with adapter, eye bolt, mounting screws, nut for T-slots, bore closing cover, operating manual; without top jaws, without fixed workpiece stops, without locking cover

## Notes

### Use of 2-jaw clamping

When using 2-jaw clamping, a locking cover is additionally required to block one pair of jaws (see accessories).

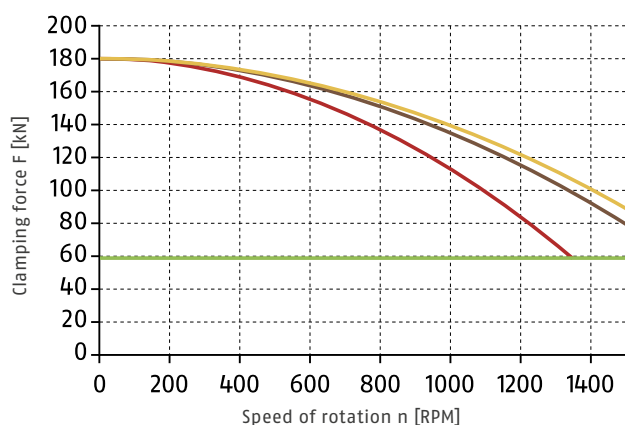
### Clamping force, 2-jaw clamping

When changing to 2-jaw clamping, the maximum clamping force is halved at the same torque.

### Version with straight recess mount

For use on lathes, the Ø 500 mm size with straight recess mount is available on request.

## Clamping force/RPM diagram



Required minimum clamping force  $F_{spmin}$  33%

SHB 400/4  
10.8 kg



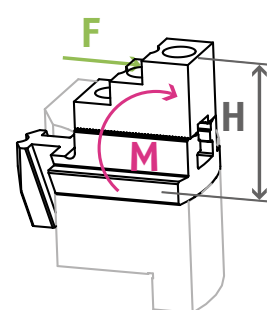
SWB 400/4  
21.6 kg



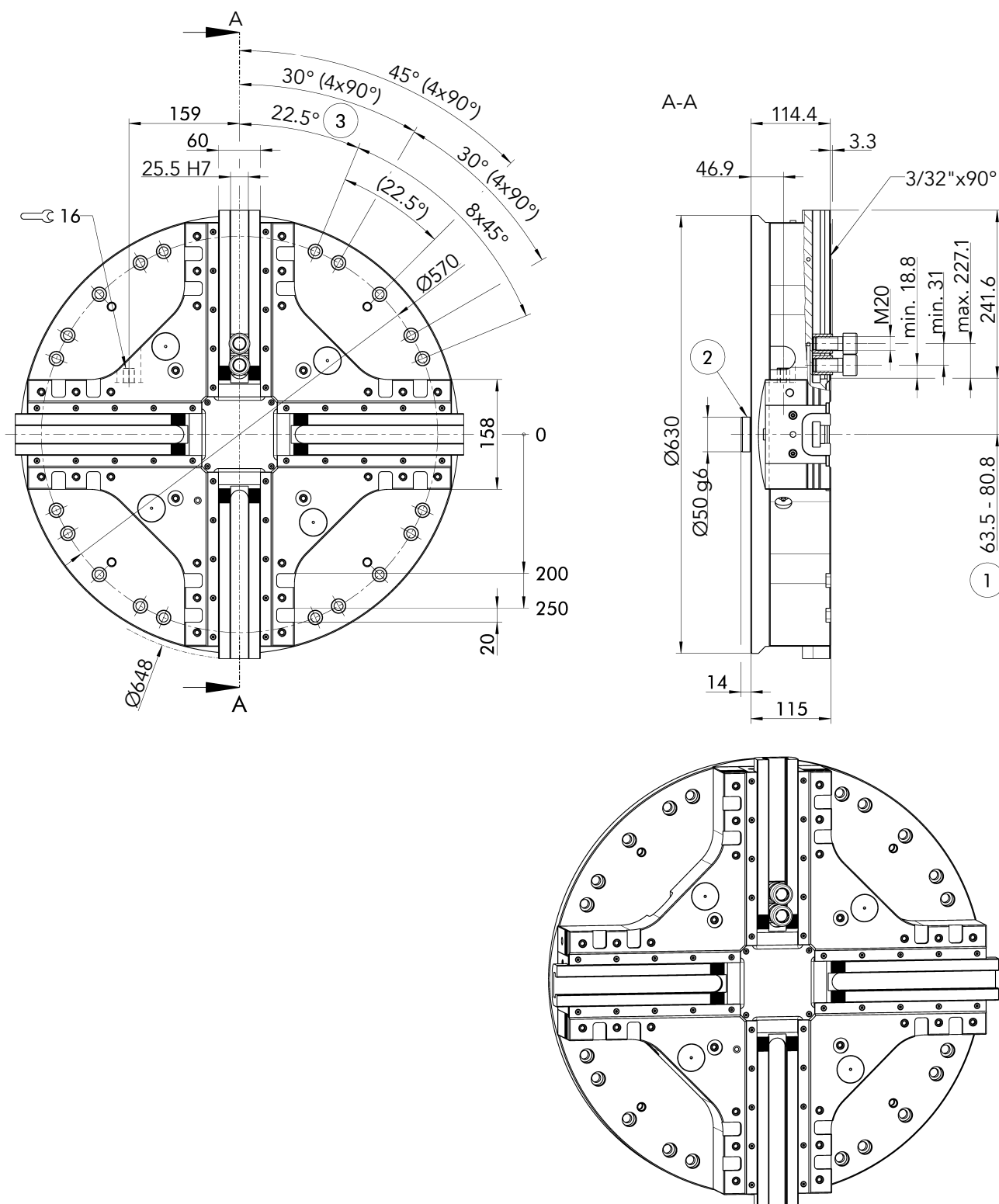
SWB-AL 400/4  
8.6 kg



## Jaw guidance load



$$M_{max} = 4550 \text{ Nm}$$



Chuck for shaft clamping shown in open position.  
Technical changes reserved.

- ① Distance to center of first tooth
- ② Centering pin for centering the clamping pallet
- ③ Lathe chuck suitable for a 22.5° or 30° star slot table

## Technical data

| ID      | Serration   | Max. speed of rotation<br>[RPM] | Max. clamping force<br>[kN] | Max. torque<br>[Nm] | Stroke/jaw<br>[mm] | Compensation stroke/jaw<br>[mm] | Weight<br>[kg] |
|---------|-------------|---------------------------------|-----------------------------|---------------------|--------------------|---------------------------------|----------------|
| 1570299 | 3/32" x 90° | 1300                            | 180                         | 210                 | 17.3               | 12                              | 167            |

## Scope of delivery

Chuck, centering pin, T-nuts, ratchet wrenches with adapter, eye bolt, mounting screws, nut for T-slots, bore closing cover, operating manual; without top jaws, without fixed workpiece stops, without locking cover

## Notes

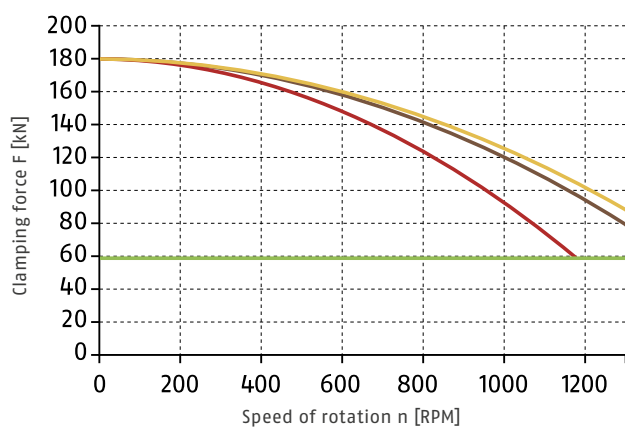
### Use of 2-jaw clamping

When using 2-jaw clamping, a locking cover is additionally required to block one pair of jaws (see accessories).

### Clamping force, 2-jaw clamping

When changing to 2-jaw clamping, the maximum clamping force is halved at the same torque.

## Clamping force/RPM diagram



Required minimum clamping force  $F_{spmin}$  33%

SHB 400/4  
10.8 kg



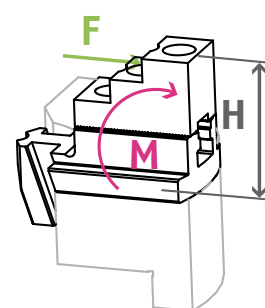
SWB 400/4  
21.6 kg



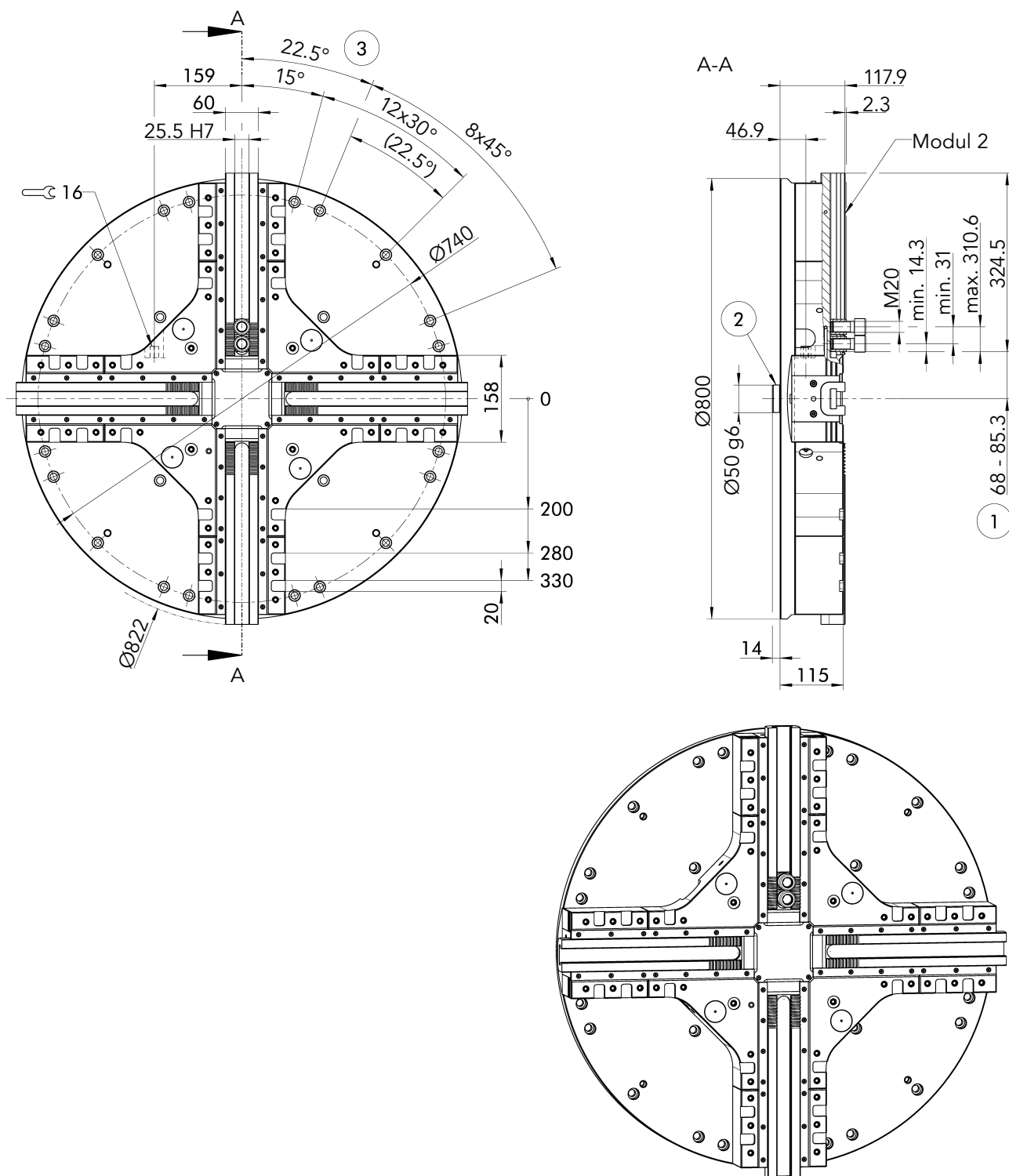
SWB-AL 400/4  
8.6 kg



## Jaw guidance load



$$M_{max} = 4550 \text{ Nm}$$



Chuck for shaft clamping shown in open position.  
Technical changes reserved.

- ① Distance to center of first tooth
- ② Centering pin for centering the clamping pallet
- ③ Lathe chuck suitable for a 22.5° or 30° star slot table

## Technical data

| ID      | Serration | Max. speed of rotation<br>[RPM] | Max. clamping force<br>[kN] | Max. torque<br>[Nm] | Stroke/jaw<br>[mm] | Compensation stroke/jaw<br>[mm] | Weight<br>[kg] |
|---------|-----------|---------------------------------|-----------------------------|---------------------|--------------------|---------------------------------|----------------|
| 1573345 | Modul 2   | 1100                            | 180                         | 210                 | 17.3               | 12                              | 244            |

## Scope of delivery

Chuck, centering pin, T-nuts, ratchet wrenches with adapter, eye bolt, mounting screws, nut for T-slots, bore closing cover, operating manual; without top jaws, without fixed workpiece stops, without locking cover

## Notes

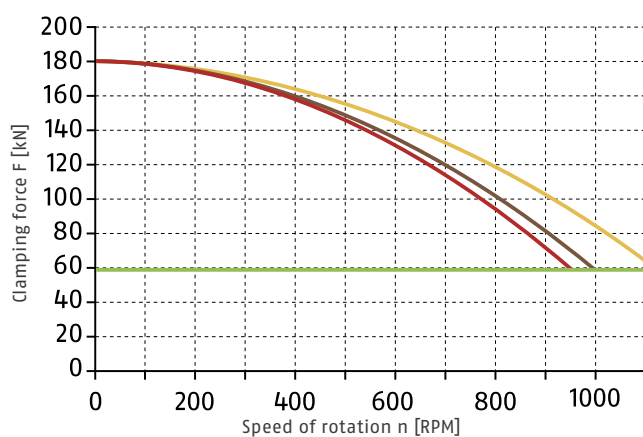
### Use of 2-jaw clamping

When using 2-jaw clamping, a locking cover is additionally required to block one pair of jaws (see accessories).

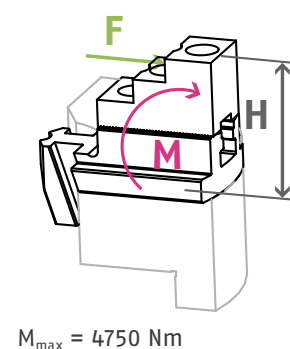
### Clamping force, 2-jaw clamping

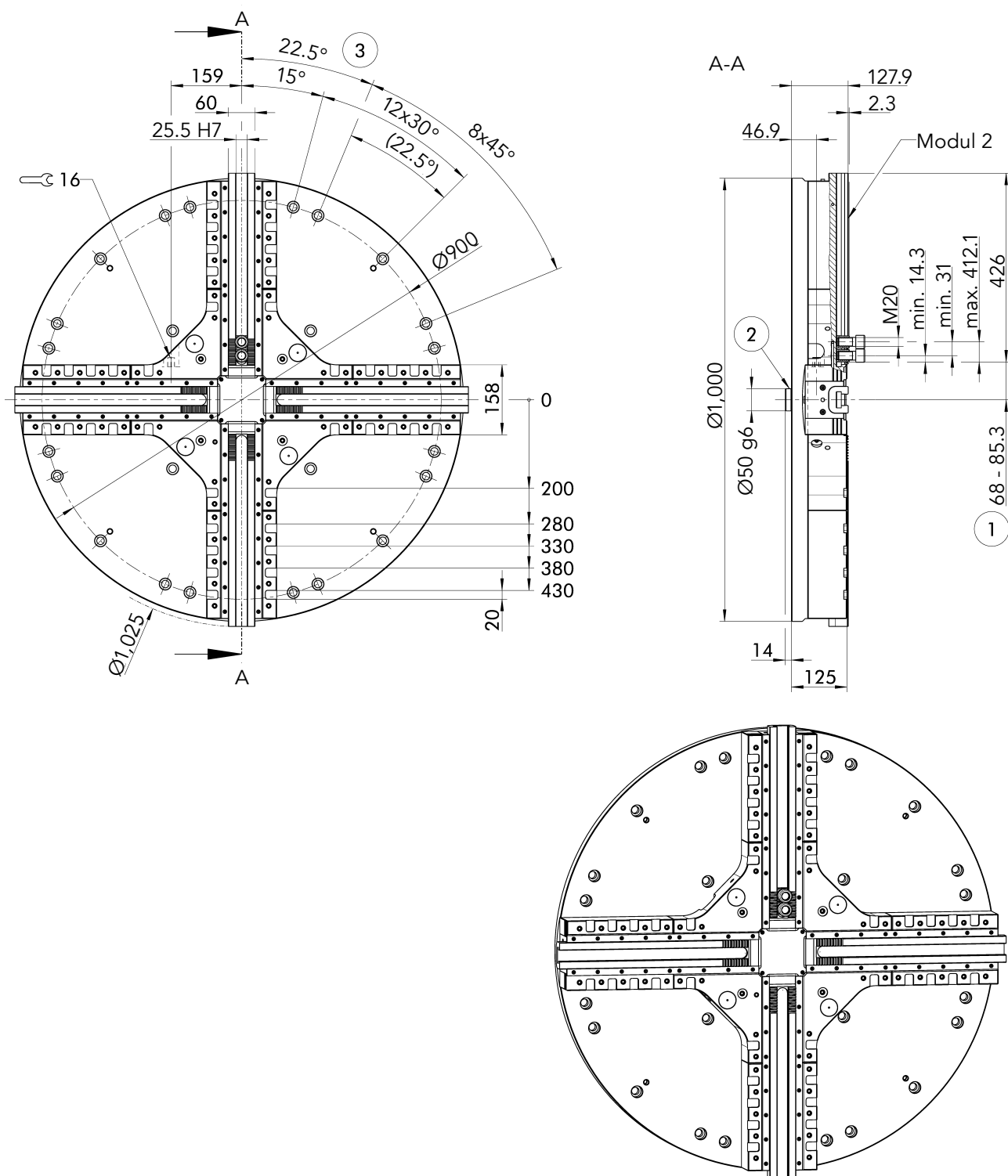
When changing to 2-jaw clamping, the maximum clamping force is halved at the same torque.

## Clamping force/RPM diagram



## Jaw guidance load





Chuck for shaft clamping shown in open position.  
Technical changes reserved.

- ① Distance to center of first tooth
- ② Centering pin for centering the clamping pallet
- ③ Lathe chuck suitable for a 22.5° or 30° star slot table

## Technical data

| ID      | Serration | Max. speed of rotation [RPM] | Max. clamping force [kN] | Max. torque [Nm] | Stroke/jaw [mm] | Compensation stroke/jaw [mm] | Weight [kg] |
|---------|-----------|------------------------------|--------------------------|------------------|-----------------|------------------------------|-------------|
| 1573346 | Modul 2   | 850                          | 180                      | 210              | 17.3            | 12                           | 396         |

## Scope of delivery

Chuck, centering pin, T-nuts, ratchet wrenches with adapter, eye bolt, mounting screws, nut for T-slots, bore closing cover, operating manual; without top jaws, without fixed workpiece stops, without locking cover

## Notes

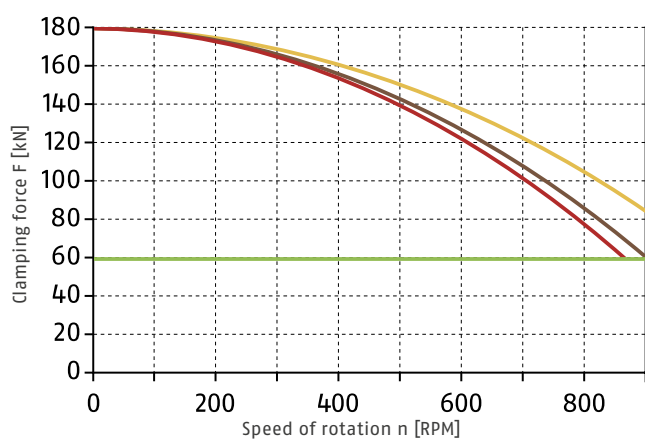
### Use of 2-jaw clamping

When using 2-jaw clamping, a locking cover is additionally required to block one pair of jaws (see accessories).

### Clamping force, 2-jaw clamping

When changing to 2-jaw clamping, the maximum clamping force is halved at the same torque.

## Clamping force/RPM diagram



Required minimum clamping force  $F_{spmin}$  33%

SP-HB-M  
400-500/4  
13.6 kg



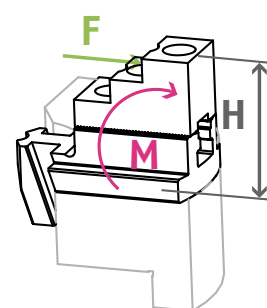
SWB-M 400/4  
21.8 kg



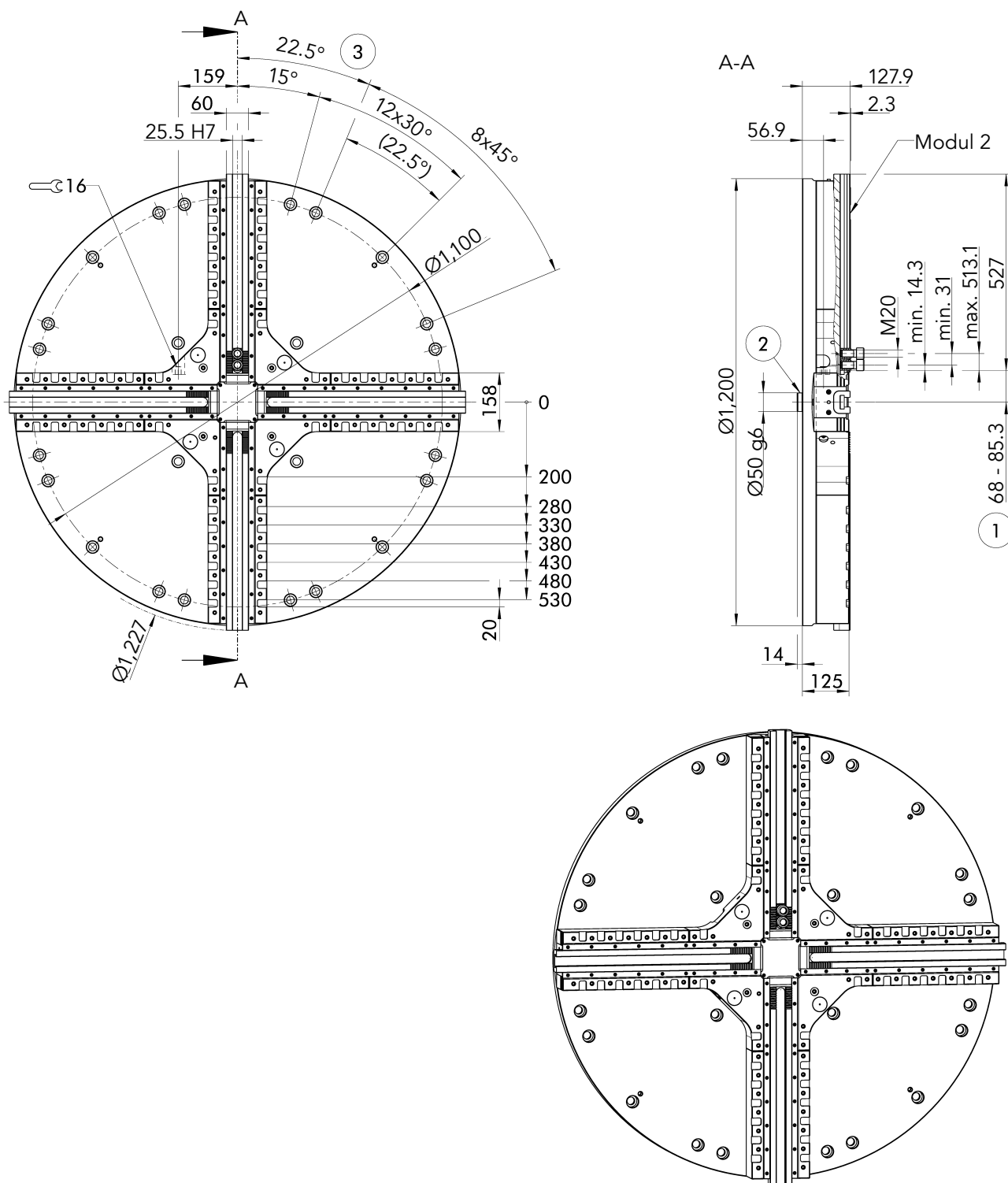
SWBL-M  
400/4  
9 kg



## Jaw guidance load



$$M_{max} = 4750 \text{ Nm}$$



Chuck for shaft clamping shown in open position.  
Technical changes reserved.

- ① Distance to center of first tooth
- ② Centering pin for centering the clamping pallet
- ③ Lathe chuck suitable for a 22.5° or 30° star slot table

## Technical data

| ID      | Serration | Max. speed of rotation<br>[RPM] | Max. clamping force<br>[kN] | Max. torque<br>[Nm] | Stroke/jaw<br>[mm] | Compensation stroke/jaw<br>[mm] | Weight<br>[kg] |
|---------|-----------|---------------------------------|-----------------------------|---------------------|--------------------|---------------------------------|----------------|
| 1573347 | Modul 2   | 750                             | 180                         | 210                 | 17.3               | 12                              | 530            |

## Scope of delivery

Chuck, centering pin, T-nuts, ratchet wrenches with adapter, eye bolt, mounting screws, nut for T-slots, bore closing cover, operating manual; without top jaws, without fixed workpiece stops, without locking cover

## Notes

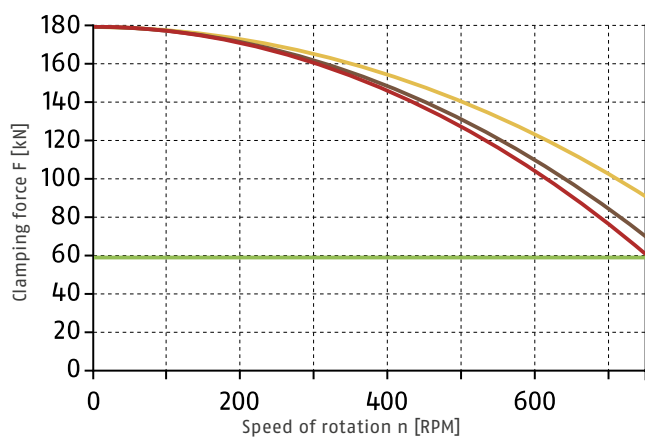
### Use of 2-jaw clamping

When using 2-jaw clamping, a locking cover is additionally required to block one pair of jaws (see accessories).

### Clamping force, 2-jaw clamping

When changing to 2-jaw clamping, the maximum clamping force is halved at the same torque.

## Clamping force/RPM diagram



Required minimum clamping force  $F_{spmin}$  33%

SP-HB-M  
400-500/4  
13.6 kg



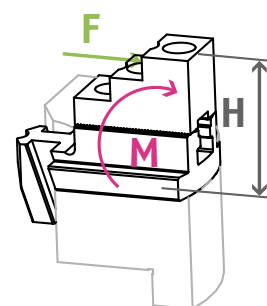
SWB-M 400/4  
21.8 kg



SWBL-M  
400/4  
9 kg



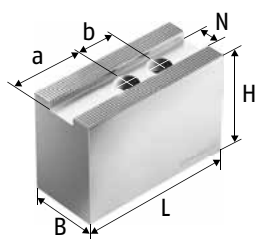
## Jaw guidance load



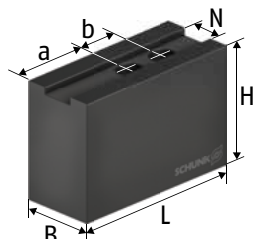
$M_{max} = 4750 \text{ Nm}$

## Soft top jaws

with fine serration 90°



SWB-AL  
Soft top jaws



SWB  
Soft top jaws

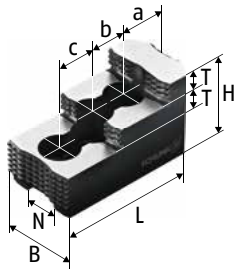
## Technical data

| Chuck type           | Description  | ID      | N<br>[mm] | B<br>[mm] | H<br>[mm] | L<br>[mm] | a<br>[mm] | b<br>[mm] | Screws | m/SET<br>[kg] |
|----------------------|--------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|--------|---------------|
| ROTA-M flex 2+2 260  | SWB-AL 200/4 | 1457304 | 17        | 40        | 60        | 90        | 43        | 22        | M12    | 2.0           |
| ROTA-M flex 2+2 260  | SWB 200/4    | 1455397 | 17        | 40        | 60        | 90        | 43        | 22        | M12    | 5.6           |
| ROTA-M flex 2+2 315  | SWB-AL 200/4 | 1457304 | 17        | 40        | 60        | 90        | 43        | 22        | M12    | 2.0           |
| ROTA-M flex 2+2 315  | SWB 200/4    | 1455397 | 17        | 40        | 60        | 90        | 43        | 22        | M12    | 5.6           |
| ROTA-M flex 2+2 400  | SWB-AL 250/4 | 1457305 | 21        | 50        | 80        | 120       | 62        | 28        | M16    | 4.4           |
| ROTA-M flex 2+2 400  | SWB 250/4    | 1457272 | 21        | 50        | 80        | 120       | 62        | 28        | M16    | 12.4          |
| ROTA-ML flex 2+2 500 | SWB-AL 400/4 | 1457306 | 25.5      | 60        | 100       | 155       | 90        | 35        | M20    | 8.6           |
| ROTA-ML flex 2+2 500 | SWB 400/4    | 1457273 | 25.5      | 60        | 90        | 155       | 90        | 35        | M20    | 21.6          |
| ROTA-ML flex 2+2 630 | SWB-AL 400/4 | 1457306 | 25.5      | 60        | 100       | 155       | 90        | 35        | M20    | 8.6           |
| ROTA-ML flex 2+2 630 | SWB 400/4    | 1457273 | 25.5      | 60        | 90        | 155       | 90        | 35        | M20    | 21.6          |

Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](http://schunk.com)

## Hard stepped top jaws

with fine serration 90°



SHB  
Hard stepped top jaws

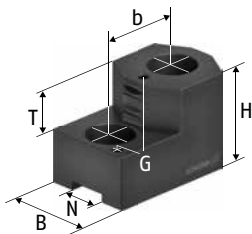
### Technical data

| Chuck type           | Description | ID      | N<br>[mm] | B<br>[mm] | H<br>[mm] | L<br>[mm] | T<br>[mm] | a<br>[mm] | b<br>[mm] | c<br>[mm] | Screws | m/SET<br>[kg] |
|----------------------|-------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|---------------|
| ROTA-M flex 2+2 260  | SHB 210/4   | 1457276 | 17        | 40        | 49        | 84.2      | 12        | 28.7      | 19        | 19        | M12    | 1.5           |
| ROTA-M flex 2+2 315  | SHB 210/4   | 1457276 | 17        | 40        | 49        | 84.2      | 12        | 28.7      | 19        | 19        | M12    | 1.5           |
| ROTA-M flex 2+2 400  | SHB 250/4   | 1457277 | 21        | 50        | 58        | 103.5     | 14        | 34        | 25        | 25        | M16    | 4.8           |
| ROTA-ML flex 2+2 500 | SHB 400/4   | 1457278 | 25.5      | 60        | 75        | 140       | 18        | 53        | 31        | 31        | M20    | 10.8          |
| ROTA-ML flex 2+2 630 | SHB 400/4   | 1457278 | 25.5      | 60        | 75        | 140       | 18        | 53        | 31        | 31        | M20    | 10.8          |

Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](http://schunk.com)

## Universal claw jaws

with fine serration 90°



SZAU  
Claw jaws

### Technical data

| Chuck type           | Clamping<br>range ØD<br>[mm] | Swing<br>diameter<br>SDmax<br>[mm] | Description | ID      | N<br>[mm] | B<br>[mm] | H<br>[mm] | T<br>[mm] | G<br>[mm] | b<br>[mm] | Screws | m/SET<br>[kg] |
|----------------------|------------------------------|------------------------------------|-------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|--------|---------------|
| ROTA-M flex 2+2 260  | 82 – 205                     | 292                                | SZAU 200/4  | 1457355 | 17        | 40        | 52        | 25        | M6        | 35        | M12    | 2             |
| ROTA-M flex 2+2 315  | 82 – 259                     | 346                                | SZAU 200/4  | 1457355 | 17        | 40        | 52        | 25        | M6        | 35        | M12    | 2             |
| ROTA-M flex 2+2 400  | 104 – 331                    | 444                                | SZAU 200/4  | 1457356 | 21        | 50        | 55        | 25        | M6        | 45        | M16    | 4.1           |
| ROTA-ML flex 2+2 500 | 102 – 426                    | 571                                | SZAU 400/4  | 1457357 | 25.5      | 60        | 75        | 33        | M6        | 60        | M20    | 8.2           |
| ROTA-ML flex 2+2 630 | 102 – 534                    | 679                                | SZAU 400/4  | 1457357 | 25.5      | 60        | 75        | 33        | M6        | 60        | M20    | 8.2           |

## T-nut

with fine serration 90°



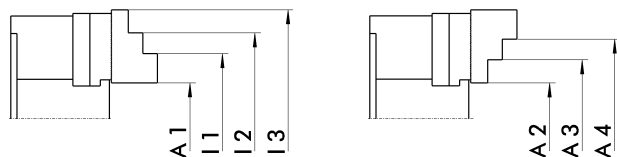
NS  
T-nut

| Chuck type            | Description | ID       | H    | H1   | G   | Cyl. screw | Max. adm. tightening torque |
|-----------------------|-------------|----------|------|------|-----|------------|-----------------------------|
|                       |             |          | [mm] | [mm] |     |            | [Nm]                        |
| ROTA-M flex 2+2 260   | NS 120      | 014-0101 | 23   | 9    | M12 | M12 x 30   | 70                          |
| ROTA-M flex 2+2 315   | NS 120      | 014-0101 | 23   | 9    | M12 | M12 x 30   | 70                          |
| ROTA-M flex 2+2 400   | NS 160      | 014-0102 | 27   | 11   | M16 | M16 x 35   | 150                         |
| ROTA-ML flex 2+2 500  | NS 200      | 014-0103 | 29   | 11   | M20 | M20 x 40   | 220                         |
| ROTA-ML flex 2+2 630  | NS 200      | 014-0103 | 29   | 11   | M20 | M20 x 40   | 220                         |
| ROTA-ML flex 2+2 800  | NS 200      | 014-0103 | 29   | 11   | M20 | M20 x 40   | 220                         |
| ROTA-ML flex 2+2 1000 | NS 200      | 014-0103 | 29   | 11   | M20 | M20 x 40   | 220                         |
| ROTA-ML flex 2+2 1200 | NS 200      | 014-0103 | 29   | 11   | M20 | M20 x 40   | 220                         |

Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](http://schunk.com)

## Hard stepped top jaws

with fine serration 90°



Jaw position I

Jaw position II

### O.D. clamping

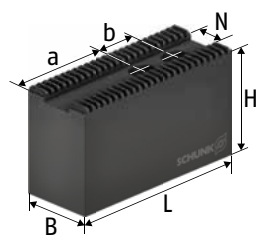
| Chuck type           | Description | ID      | A1<br>[mm] | A2<br>[mm] | A3<br>[mm] | A4<br>[mm] |
|----------------------|-------------|---------|------------|------------|------------|------------|
| ROTA-M flex 2+2 260  | SHB 210/4   | 1457276 | 23 - 161   | 48 - 173   | 98 - 223   | 143 - 260  |
| ROTA-M flex 2+2 315  | SHB 210/4   | 1457276 | 23 - 215   | 47 - 240   | 97 - 290   | 143 - 315  |
| ROTA-M flex 2+2 400  | SHB 250/4   | 1457277 | 38 - 282   | 66 - 312   | 148 - 394  | 221 - 400  |
| ROTA-ML flex 2+2 500 | SHB 400/4   | 1457278 | 49 - 335   | 62 - 375   | 164 - 478  | 266 - 500  |
| ROTA-ML flex 2+2 630 | SHB 400/4   | 1457278 | 49 - 444   | 62 - 500   | 164 - 605  | 266 - 630  |

### I.D. clamping

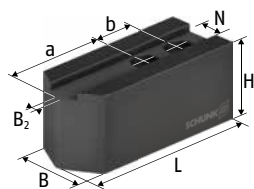
| Chuck type           | Description | ID      | I1<br>[mm] | I2<br>[mm] | I3<br>[mm] |
|----------------------|-------------|---------|------------|------------|------------|
| ROTA-M flex 2+2 260  | SHB 210/4   | 1457276 | 98 - 236   | 144 - 282  | 192 - 330  |
| ROTA-M flex 2+2 315  | SHB 210/4   | 1457276 | 98 - 289   | 144 - 335  | 192 - 384  |
| ROTA-M flex 2+2 400  | SHB 250/4   | 1457277 | 91 - 335   | 164 - 408  | 244 - 488  |
| ROTA-ML flex 2+2 500 | SHB 400/4   | 1457278 | 130 - 410  | 228 - 513  | 328 - 615  |
| ROTA-ML flex 2+2 630 | SHB 400/4   | 1457278 | 130 - 519  | 228 - 622  | 328 - 724  |

## Soft top jaws

### Modul 2



SWB-M/4  
Soft top jaws



SWBL-M/4  
Soft top jaws

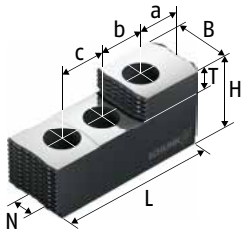
### Technical data

| Chuck type            | Description  | ID      | N<br>[mm] | B<br>[mm] | H<br>[mm] | L<br>[mm] | a<br>[mm] | b<br>[mm] | Screws | m/SET<br>[kg] |
|-----------------------|--------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|--------|---------------|
| ROTA-ML flex 2+2 800  | SWBL-M 400/4 | 1457325 | 25.5      | 60        | 90        | 195       | 110       | 35        |        | 9.0           |
| ROTA-ML flex 2+2 800  | SWB-M 400/4  | 1457324 | 25.5      | 60        | 90        | 157       | 30        | 35        | M20    | 21.8          |
| ROTA-ML flex 2+2 1000 | SWBL-M 400/4 | 1457325 | 25.5      | 60        | 90        | 195       | 110       | 35        |        | 9.0           |
| ROTA-ML flex 2+2 1000 | SWB-M 400/4  | 1457324 | 25.5      | 60        | 90        | 157       | 30        | 35        | M20    | 21.8          |
| ROTA-ML flex 2+2 1200 | SWBL-M 400/4 | 1457325 | 25.5      | 60        | 90        | 195       | 110       | 35        |        | 9.0           |
| ROTA-ML flex 2+2 1200 | SWB-M 400/4  | 1457324 | 25.5      | 60        | 90        | 157       | 30        | 35        | M20    | 21.8          |

Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](https://www.schunk.com)

## Hard stepped top jaws

### Modul 2



SP-HB-M/4  
Hard stepped top jaws

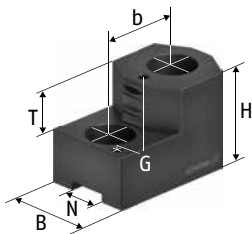
### Technical data

| Chuck type            | Description       | ID      | N<br>[mm] | B<br>[mm] | H<br>[mm] | L<br>[mm] | T<br>[mm] | a<br>[mm] | b<br>[mm] | c<br>[mm] | Screws | m/SET<br>[kg] |
|-----------------------|-------------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|---------------|
| ROTA-ML flex 2+2 800  | SP-HB-M 400-500/4 | 1457323 | 25.5      | 57.5      | 73        | 159.1     | 22        | 38.3      | 42        | 42        | M20    | 13.6          |
| ROTA-ML flex 2+2 1000 | SP-HB-M 400-500/4 | 1457323 | 25.5      | 57.5      | 73        | 159.1     | 22        | 38.3      | 42        | 42        | M20    | 13.6          |
| ROTA-ML flex 2+2 1200 | SP-HB-M 400-500/4 | 1457323 | 25.5      | 57.5      | 73        | 159.1     | 22        | 38.3      | 42        | 42        | M20    | 13.6          |

Our complete range of chuck jaws can be found online in our Chuck Jaw Quickfinder and on [schunk.com](http://schunk.com)

## Universal claw jaws

### Modul 2



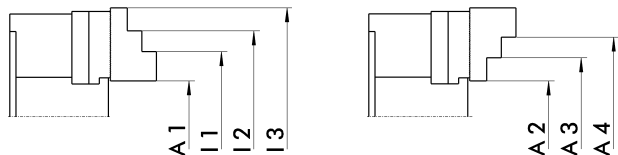
SZAU  
Claw jaws

### Technical data

| Chuck type            | Clamping<br>range $\varnothing D$<br>[mm] | Swing<br>diameter<br>SDmax<br>[mm] | Description  | ID      | N<br>[mm] | B<br>[mm] | H<br>[mm] | T<br>[mm] | G<br>[mm] | b<br>[mm] | Screws | m/SET<br>[kg] |
|-----------------------|-------------------------------------------|------------------------------------|--------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|--------|---------------|
| ROTA-ML flex 2+2 800  | 102 – 710                                 | 855                                | SZAU-M 400/4 | 1457627 | 25.5      | 60        | 75        | 33        | M6        | 20        | M20    | 8.2           |
| ROTA-ML flex 2+2 1000 | 102 – 913                                 | 1058                               | SZAU-M 400/4 | 1457627 | 25.5      | 60        | 75        | 33        | M6        | 20        | M20    | 8.2           |
| ROTA-ML flex 2+2 1200 | 102 – 1115                                | 1260                               | SZAU-M 400/4 | 1457627 | 25.5      | 60        | 75        | 33        | M6        | 20        | M20    | 8.2           |

## Hard stepped top jaws

### Modul 2



Jaw position I

Jaw position II

### O.D. clamping

| Chuck type            | Description       | ID      | A1<br>[mm] | A2<br>[mm] | A4<br>[mm] |
|-----------------------|-------------------|---------|------------|------------|------------|
| ROTA-ML flex 2+2 800  | SP-HB-M 400-500/4 | 1457323 | 49 - 614   | 57 - 630   | 245 - 800  |
| ROTA-ML flex 2+2 1000 | SP-HB-M 400-500/4 | 1457323 | 49 - 815   | 57 - 831   | 245 - 1000 |
| ROTA-ML flex 2+2 1200 | SP-HB-M 400-500/4 | 1457323 | 49 - 1016  | 57 - 1031  | 245 - 1200 |

### I.D. clamping

| Chuck type            | Description       | ID      | I1<br>[mm] | I3<br>[mm] |
|-----------------------|-------------------|---------|------------|------------|
| ROTA-ML flex 2+2 800  | SP-HB-M 400-500/4 | 1457323 | 181 - 744  | 366 - 933  |
| ROTA-ML flex 2+2 1000 | SP-HB-M 400-500/4 | 1457323 | 181 - 944  | 366 - 1133 |
| ROTA-ML flex 2+2 1200 | SP-HB-M 400-500/4 | 1457323 | 181 - 1146 | 366 - 1335 |

## Console jaws

### Console jaw, movable

With 3/32" x 90° or modul 2 serration.  
For suitable top jaws, see "Interface" column.



| Suitable for                                                           | Description   | Interface | ID      |
|------------------------------------------------------------------------|---------------|-----------|---------|
| ROTA-ML flex 2+2 500<br>ROTA-ML flex 2+2 630                           | SKB-SV90° 100 | W-100-1   | 1572700 |
| ROTA-ML flex 2+2 800<br>ROTA-ML flex 2+2 1000<br>ROTA-ML flex 2+2 1200 | SKB-M2 100    | W-100-1   | 1572701 |

### Console jaw, fixed

Can be positioned in the chuck face via T-slots.  
For suitable top jaws, see "Interface" column.



| Suitable for                                                                                                           | Description | Interface | ID      |
|------------------------------------------------------------------------------------------------------------------------|-------------|-----------|---------|
| ROTA-ML flex 2+2 500<br>ROTA-ML flex 2+2 630<br>ROTA-ML flex 2+2 800<br>ROTA-ML flex 2+2 1000<br>ROTA-ML flex 2+2 1200 | SKB-F 100   | W-100-1   | 1572658 |

## Top jaws

### Jaw profiled

For increasing the friction between jaw and workpiece without clamping impressions.



| Description   | Width [mm] | Height [mm] | Depth [mm] | Interface | ID      |
|---------------|------------|-------------|------------|-----------|---------|
| GBD 100-35-10 | 100        | 35          | 10         | W-100-1   | 1373346 |

### Stepped jaw

With ground step, 8 mm.



| Description     | Width [mm] | Height [mm] | Depth [mm] | Interface | ID      |
|-----------------|------------|-------------|------------|-----------|---------|
| GBS 100-35-10-5 | 100        | 35          | 10         | W-100-1   | 1373325 |

### Hewn jaw

For increasing the friction between jaw and workpiece with minimal impression marks.



| Description   | Width [mm] | Height [mm] | Depth [mm] | Interface | ID      |
|---------------|------------|-------------|------------|-----------|---------|
| GBC 100-35-11 | 100        | 35          | 11         | W-100-1   | 1373267 |

### Stepped jaw

With coated step, 5 mm.



| Description       | Width [mm] | Height [mm] | Depth [mm] | Interface | ID      |
|-------------------|------------|-------------|------------|-----------|---------|
| GBS-W 100-35-10-5 | 100        | 35          | 10         | W-100-1   | 1395510 |

### Ground jaw

With a completely ground clamping face.



| Description   | Width [mm] | Height [mm] | Depth [mm] | Interface | ID      |
|---------------|------------|-------------|------------|-----------|---------|
| GBP 100-35-10 | 100        | 35          | 10         | W-100-1   | 1373272 |

### Stepped jaw

With grip step, 3 mm.  
For embossed clamping of unhardened materials up to 22 HRC.



| Description      | Width [mm] | Height [mm] | Depth [mm] | Interface | ID      |
|------------------|------------|-------------|------------|-----------|---------|
| GBS-G3 100-35-10 | 100        | 35          | 10         | W-100-1   | 1373330 |

### Soft jaw

Hardenable jaws for rework at the customer site, e.g. for incorporating contours or special shapes.



| Description   | Width [mm] | Height [mm] | Depth [mm] | Interface | ID      |
|---------------|------------|-------------|------------|-----------|---------|
| GBW 100-35-16 | 100        | 35          | 16         | W-100-1   | 1373287 |

### Stepped jaw

With grip step, 5 mm.  
For embossed clamping of unhardened materials up to 22 HRC.



| Description      | Width [mm] | Height [mm] | Depth [mm] | Interface | ID      |
|------------------|------------|-------------|------------|-----------|---------|
| GBS-G5 100-35-10 | 100        | 35          | 10         | W-100-1   | 1373333 |

### Stepped jaw

With grip step, 8 mm.  
For embossed clamping of unhardened materials up to 22 HRC.



| Description      | Width<br>[mm] | Height<br>[mm] | Depth<br>[mm] | Interface | ID      |
|------------------|---------------|----------------|---------------|-----------|---------|
| GBS-G8 100-35-10 | 100           | 35             | 10            | W-100-1   | 1373337 |

### Stepped jaw

With carbide grip step, 3 mm.  
For embossed clamping of hardened materials up to 58 HRC.



| Description       | Width<br>[mm] | Height<br>[mm] | Depth<br>[mm] | Interface | ID      |
|-------------------|---------------|----------------|---------------|-----------|---------|
| GBS-CG3 100-35-10 | 100           | 35             | 10            | W-100-1   | 1428440 |

### Stepped jaw

With carbide grip step, 5 mm.  
For embossed clamping of hardened materials up to 58 HRC.



| Description       | Width<br>[mm] | Height<br>[mm] | Depth<br>[mm] | Interface | ID      |
|-------------------|---------------|----------------|---------------|-----------|---------|
| GBS-CG5 100-35-12 | 100           | 35             | 12            | W-100-1   | 1428441 |

### Grip jaw

For embossed clamping of unhardened materials up to 22 HRC.



| Description   | Width<br>[mm] | Height<br>[mm] | Depth<br>[mm] | Interface | ID      |
|---------------|---------------|----------------|---------------|-----------|---------|
| GBG 100-35-10 | 100           | 35             | 10            | W-100-1   | 1373282 |

### Spring plate pull-down jaw

For an active jaw pull-down with a light impression mark on the workpiece for more precise machining results.



| Description   | Width<br>[mm] | Height<br>[mm] | Depth<br>[mm] | Interface | ID      |
|---------------|---------------|----------------|---------------|-----------|---------|
| GFA 100-35-10 | 100           | 35             | 10            | W-100-1   | 1373301 |

### Spring plate pull-down jaw

For an active jaw pull-down with a light impression mark on the workpiece for more precise machining results.



| Description   | Width<br>[mm] | Height<br>[mm] | Depth<br>[mm] | Interface | ID      |
|---------------|---------------|----------------|---------------|-----------|---------|
| GFB 100-34-10 | 100           | 35             | 10            | W-100-1   | 0430191 |

## Accessories

### Clamping force tester

For measuring the jaw clamping force of 2-, 3-, and 6-jaw chucks up to 6,000 RPM.



| Suitable for          | Description | ID      |
|-----------------------|-------------|---------|
| ROTA-M flex 2+2 260   | IFT Set     | 1404235 |
| ROTA-M flex 2+2 315   |             |         |
| ROTA-M flex 2+2 400   |             |         |
| ROTA-ML flex 2+2 500  |             |         |
| ROTA-ML flex 2+2 630  |             |         |
| ROTA-ML flex 2+2 800  |             |         |
| ROTA-ML flex 2+2 1000 |             |         |
| ROTA-ML flex 2+2 1200 |             |         |

### Measuring head adapter for 4-jaw clamping

For use as an extension of the IFT measuring head for measuring the jaw clamping force of 4-jaw chucks.



| Suitable for          | Description | ID      |
|-----------------------|-------------|---------|
| ROTA-M flex 2+2 260   | IFT MA4     | 1452686 |
| ROTA-M flex 2+2 315   |             |         |
| ROTA-M flex 2+2 400   |             |         |
| ROTA-ML flex 2+2 500  |             |         |
| ROTA-ML flex 2+2 630  |             |         |
| ROTA-ML flex 2+2 800  |             |         |
| ROTA-ML flex 2+2 1000 |             |         |
| ROTA-ML flex 2+2 1200 |             |         |

### Extension set for large chucks

For use as an extension of the IFT measuring head for measuring the jaw clamping force of large chucks of Ø 400 mm and more.



| Suitable for          | Description     | ID      |
|-----------------------|-----------------|---------|
| ROTA-M flex 2+2 400   | IFT Adapter Set | 1498512 |
| ROTA-ML flex 2+2 500  |                 |         |
| ROTA-ML flex 2+2 630  |                 |         |
| ROTA-ML flex 2+2 800  |                 |         |
| ROTA-ML flex 2+2 1000 |                 |         |
| ROTA-ML flex 2+2 1200 |                 |         |

### Torque wrench

Torque wrench for actuation of SCHUNK manual chucks.



| Suitable for          | Description       | ID      |
|-----------------------|-------------------|---------|
| ROTA-M flex 2+2 260   | SSH-D-1/2" 40-200 | 9938065 |
| ROTA-M flex 2+2 315   |                   |         |
| ROTA-M flex 2+2 400   |                   |         |
| ROTA-ML flex 2+2 500  | SSH-D-1/2" 60-300 | 1301281 |
| ROTA-ML flex 2+2 630  |                   |         |
| ROTA-ML flex 2+2 800  |                   |         |
| ROTA-ML flex 2+2 1000 |                   |         |
| ROTA-ML flex 2+2 1200 |                   |         |

## Wrenches

Ratchet for fast actuation of SCHUNK manual lathe chucks.



| Suitable for          | Description    | ID      |
|-----------------------|----------------|---------|
| ROTA-M flex 2+2 260   |                |         |
| ROTA-M flex 2+2 315   |                |         |
| ROTA-M flex 2+2 400   |                |         |
| ROTA-ML flex 2+2 500  |                |         |
| ROTA-ML flex 2+2 630  |                |         |
| ROTA-ML flex 2+2 800  |                |         |
| ROTA-ML flex 2+2 1000 |                |         |
| ROTA-ML flex 2+2 1200 | SSH-K 1/2"-350 | 1151118 |

## Hexagon spanner wrench

Spanner wrench for manual actuation of the SCHUNK manual lathe chucks with hexagonal connections.



| Suitable for        | Description     | ID      |
|---------------------|-----------------|---------|
| ROTA-M flex 2+2 260 |                 |         |
| ROTA-M flex 2+2 315 | SSH-SK SW12-160 | 1330869 |
| ROTA-M flex 2+2 260 |                 |         |
| ROTA-M flex 2+2 315 | SSH-SL SW12-260 | 8704921 |
| ROTA-M flex 2+2 400 | SSH-SK SW16-230 | 1330894 |
| ROTA-M flex 2+2 400 | SSH-SL SW16-330 | 8704923 |

## Hexagon spanner wrench adapter with ejector

For use as an attachment for a torque wrench and ratchet for actuating SCHUNK manual lathe chucks with hexagonal connection.



| Suitable for          | Description     | ID      |
|-----------------------|-----------------|---------|
| ROTA-M flex 2+2 260   |                 |         |
| ROTA-M flex 2+2 315   | SAS-I 1/2"-SW12 | 8705487 |
| ROTA-M flex 2+2 400   |                 |         |
| ROTA-ML flex 2+2 500  |                 |         |
| ROTA-ML flex 2+2 630  |                 |         |
| ROTA-ML flex 2+2 800  | SAS-I 1/2"-SW16 | 8705471 |
| ROTA-ML flex 2+2 1000 | SAS-I 1/2"-SW16 | 1583509 |
| ROTA-ML flex 2+2 1200 | SAS-I 1/2"-SW16 | 1583524 |

## Grease

### LINOMAX plus

High-performance grease as standard for regularly lubricating SCHUNK manual and power lathe chucks and steady rests.



| Bundle    | Description            | ID      |
|-----------|------------------------|---------|
| Cartridge | LINOMAX plus cartridge | 1342585 |
| Can       | LINOMAX plus can       | 1342586 |
| Bucket    | LINOMAX plus bucket    | 1342587 |

## Console plate

For mounting the ROTA-M flex 2+2 manual lathe chucks on T-slot tables. The console plate must still be adapted to the respective machine table.



| Suitable for        | Description  | ID      |
|---------------------|--------------|---------|
| ROTA-M flex 2+2 260 | KSL flex 260 | 1452440 |
| ROTA-M flex 2+2 315 | KSL flex 315 | 1452441 |
| ROTA-M flex 2+2 400 | KSL flex 400 | 1452442 |

## Adapter plate

As a standard size for sizes Ø 260 to Ø 400 mm.

Suitable for clamping station VERO-S ...



| Suitable for      | Description         | ID      |
|-------------------|---------------------|---------|
| NSL3 400          | ADP-NSL3 400        | 1454646 |
| NSL3 turn 450-3   | ADP-NSL3 turn 450   | 1454659 |
| NSL3 turn 450-3-Z | ADP-NSL3 turn 450-Z | 1454670 |
| NSL3 turn 570-5   | ADP-NSL3 turn 570   | 1454668 |
| NSL3 turn 570-5-Z | ADP-NSL3 turn 570-Z | 1454671 |

## Locking cover

For blocking a pair of jaws for 2-jaw clamping



| Suitable for          | Description  | ID      |
|-----------------------|--------------|---------|
| ROTA-M flex 2+2 260   |              |         |
| ROTA-M flex 2+2 315   | SLC 260-315  | 1471984 |
| ROTA-M flex 2+2 400   | SLC 400      | 1471987 |
| ROTA-ML flex 2+2 500  |              |         |
| ROTA-ML flex 2+2 630  |              |         |
| ROTA-ML flex 2+2 800  |              |         |
| ROTA-ML flex 2+2 1000 |              |         |
| ROTA-ML flex 2+2 1200 | SLC 500-1200 | 1471989 |

## Grease gun

Auxiliary tools for lubrication of all kinds of SCHUNK products. The grease gun can be used for cartridges of all types of SCHUNK grease.



| Bundle    | Description | ID      |
|-----------|-------------|---------|
| Cartridge | Grease gun  | 9900543 |



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