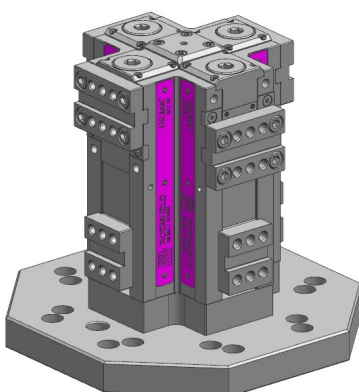
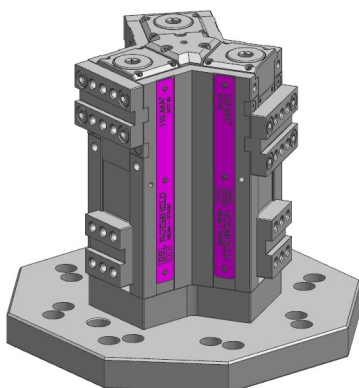
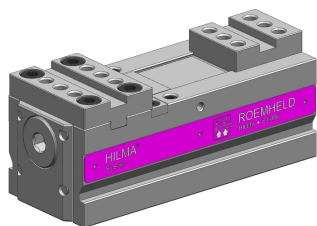




Super-Compact Workholding Systems

Jaw width 80 + 120 mm



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1. Validity of documentation

This documentation is valid for the following products:

1.1. Super-compact workholding systems SCS

9.4672.0101	SCS 80-160 M
9.4672.0201	SCS 80-200 M
9.4673.0101	SCS 120-250 M
9.3673.0201	SCS 120-350 M
9.4682.0101	SCS 80-200 H
9.4683.0101	SCS 120-250 H

1.2. Compact clamping towers SCT

9.5572.0101	SCT 80/4-240 M
9.5572.0201	SCT 80/3-240 M
9.5573.0101	SCT 120/4-290 M
9.5573.0201	SCT 120/3-290 M
9.5582.0101	SCT 80-240 H

2. Product description

2.1. General description

The products are designed for universal external workpiece clamping on machine tools. The SCS series is available in widths of 80 and 120 mm. The different lengths are designated after the width. There are mechanical variants (M), and there are sizes in hydraulic design (H). These are always single-acting systems. The clamping towers SCT are available in widths of 80 and 120 mm.

2.2. Mechanical design (M)

The mechanical workholding systems are operated manually via an Allen key. By turning clockwise, the clamping slide is moved in the direction of the fixed jaw and thus the system is clamped. Torque-force chart see 12.1. "Clamping forces". Unclamping is done by turning in counterclockwise direction. Please observe the safety note below 9.

The mounting to the machine can be realized by means of claws or from below on a pallet.

2.3. Hydraulic design (H)

The hydraulic workholding systems are preset to the workpiece width using an Allen key. The actual clamping (clamping stroke) is then done hydraulically. The presetting must not be used for clamping. Please observe the safety note below 9. The control with the machine hydraulics can be realized either by piping on the face with G1/4 or by plug connector Ø10 on the support surface of the workholding system.

The clamping towers are mounted by means of a base plate and the hydraulics are also transferred with it.

See also "Hydraulic transfer" 7.7 or 7.9.

3. Target group

The target group is considered to be specialists, fitters and set-up men of machines and installations with hydro-mechanical expert knowledge.

3.1. Qualification of the personnel

Expert knowledge means that the personnel must:

- be in the position to read and completely understand technical specifications such as circuit diagrams and product-specific drawing documents,
- have expert knowledge of the function and design of the corresponding components.

A specialist is somebody who has due to his professional education and experiences sufficient knowledge and is familiar with the relevant regulations so that he

- can judge the entrusted works,
- can recognize the possible dangers,
- can take the required measures to eliminate dangers,
- knows the acknowledged standards, rules and guidelines of the technology,
- has the required knowledge for repair and mounting.

4. Symbols and signal words



WARNING

Personal damage

Stands for a possibly dangerous situation.
If it is not avoided, death or very severe injuries can be the consequences.



CAUTION

Light injuries / property damage

Stands for a possibly dangerous situation.
If it is not avoided, minor injuries or property damages can be the consequences.

Hazardous to the environment



The symbol stands for important information for the proper handling with materials that are hazardous to the environment. Ignoring these notes can lead to heavy damages to the environment.



NOTE

Mandatory signs with important information

This symbol stands for tips for users or especially useful information. This is no signal word for a dangerous or harmful situation.

5. For your safety

5.1. Basic information

The operating manual serves for information and avoidance of dangers when installing the products into the machine as well as information and references for transport, storage and maintenance.
Only in strict compliance with this operating manual, accidents and property damages can be avoided as well as trouble-free operation of the products can be guaranteed.

Furthermore, the consideration of the operating instructions will :

- avoid injuries,
- reduced down times and repair costs,
- increased service life of the products.

5.2. Safety instructions

The product was manufactured in accordance with the generally accepted rules of the technology.

Observe the safety instructions and the operating instructions given in this manual to avoid personal or material damage.

- Read this operating manual thoroughly and completely, before you work with the product.
- Keep this operating manual so that it is accessible to all users at any time.
- Pay attention to the current safety regulations, regulations for accident prevention and environmental protection of the country in which the product will be used.
- Use the product only in perfect technical condition.
- Observe all notes on the product.
- Use only accessories and spare parts approved by the manufacturer to exclude danger to persons because of not suited spare parts.
- Respect the intended use.
- You only may start up the product, when it has been found that the incomplete machine or machine, in which the product shall be mounted, corresponds to the country-specific provisions, safety regulations and standards.
- Perform a risk analysis for the incomplete machine, or the machine.
Interactions between the product and the machine/fixture or its environment may result in risks, which may only be identified and minimized by the user, e.g. :
 - forces generated,
 - movements initiated,
 - influence of hydraulic and electrical control,
 - etc.
- Use of personal protective equipment is to be considered for all work steps.

6. Use

6.1. Intended use

The products are exclusively designed for external clamping workpieces in industrial applications.

The hydraulic workholding systems may only be operated with appropriate hydraulic oil.

In addition, use in compliance with the intended purpose includes:

- Use within the capacity indicated in the technical data sheets.
- Use as described in this operating manual.
- Compliance with maintenance intervals.
- Qualified and trained personnel for the corresponding activities.
- Mounting of spare parts only with the same specifications as the original part.
- Only filtered HLP hydraulic oils may be used.
Filter performance = 10 µm.
- Only clamping jaws may be moved.
- Only suitable tools, e.g. torque wrench, Allen key, etc., may be used.

6.2. Inappropriate use



WARNING

Injuries, material damages or malfunctions!

Do not modify the product!

The use of these products is not admitted:

- For domestic use.
- On pallets or machine tool tables in primary shaping and metal forming machine tools.
- If due to physical/chemical effects (vibrations, welding currents or others), damages of the products or seals can be caused.
- In machines, on pallets or machine tool tables that are used to change the characteristics of the material (magnetise, radiation, photochemical procedures, etc.).
- In areas for which special guidelines apply, especially installations and machines:
 - For the use on fun fairs and in amusement parks.
 - In food processing or in areas with special hygiene regulations.
 - For military purposes.
 - In mines.
 - In explosive and aggressive environments.
 - In medical engineering.
 - In the aerospace industry.
 - For passenger transport.
- For other operating and environmental conditions e.g.:
 - Higher operating pressures than indicated on the data sheet or installation drawing.
 - With hydraulic fluids that do not correspond to the specifications.
 - Higher flow rates than indicated on the data sheet or installation drawing.

Note: Special solution requests must be clarified with the manufacturer.

7. Mounting

7.1. Risk of injury from hydraulic oil:



WARNING

7.1.1. Injury due to high-pressure injection!

(Squirting out of hydraulic oil under high pressure)

- Improper connection can lead to escapes of oil under high pressure at the connections.
- Mounting or dismounting of the element must only be made in depressurised mode of the hydraulic system.
- Connection of the hydraulic line as per DIN 3852/ISO 1179.
- Unused connections have to be locked professionally.
- Use all mounting holes.
- Wear, damage of the seals, ageing and incorrect mounting of the seal kit by the operator can lead to escapes of oil under high pressure.

7.1.2. Poisoning due to contact with hydraulic oil!

- Wear, damage of the seals, ageing and incorrect mounting of the seal kit by the operator can lead to escapes of oil.
- Incorrect connection can lead to escapes of oil at the ports.
- For handling with hydraulic oil consider the material safety data sheet.
- Wear protection equipment.

7.2. Risk of injury from dropping



CAUTION

Injury by dropping parts!

- Some product types have a considerable weight.

Weight specifications see chapter "Technical data".

The product must be secured against dropping during transport and handling.

- Should the product nevertheless drop, it must be checked for damage to exclude any potential danger.
- Keep hands and other parts of the body out of the working area.
- Wear appropriate personal protection equipment!

7.3. Things to know



NOTE

Aggressive media:

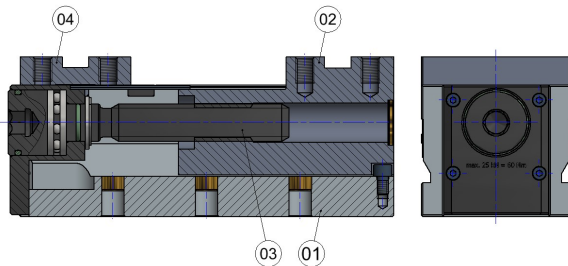
If there is a possibility that aggressive cutting and cooling liquids including swarf may ingress the inside of the clamping device, the clamping device inside must be cleaned by the customer.

Ease of movement:

When mounting, always ensure that the system runs smoothly.

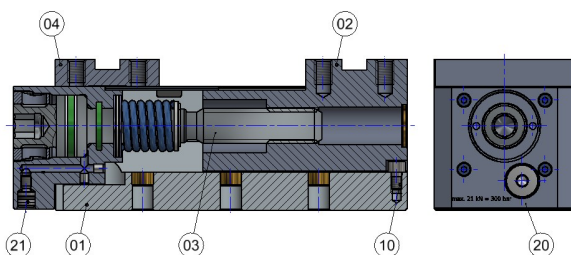
7.4. Technical structure

7.4.1. Mechanical workholding system (M) shown by the example: SCS80-200M



In the case of the mechanical workholding system, the spindle (03) is operated manually via an Allen key.
By turning clockwise, the clamping slide (02) is moved in the direction of the fixed jaw (04) and thus the system is clamped. The clamping force is applied with a torque wrench. Corresponding force charts can be found under 12.1. "Technical data".

7.4.2. Hydraulic workholding system (H) shown by the example: SCS80-200H



The hydraulic workholding systems are preset to the workpiece width using an Allen key. Similar to the mechanical system. See also 9.2.
The actual clamping (clamping stroke) is then carried out hydraulically by the piston spindle (03) pulling the clamping slide (02) towards the fixed jaw (04) by oil pressure. Torque-force chart see 12.1.
The presetting must not be used for clamping the workpiece.
The control with the machine hydraulics can be realized either by piping on the face with G1/4 or by plug connector Ø10.

7.5. Types of mounting

7.5.1. Alignment

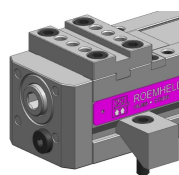
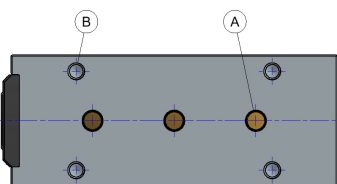
Positioning holes (A) of diameter 12 F7 in the centre of the workholding system are used to align the workholding system

7.5.2. Fixing:

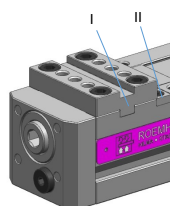
The workholding system can be fixed with external clamping claws, 2 on each side, or directly via the threaded holes (B) in the base.

The thread size depends on the size of the workholding system:

Size	Fixing thread
SCS 80	4x M10
SCS 120	6x M12



Fixing with clamping claws



7.6. Mounting the interchangeable clamping jaws

Before mounting the interchangeable clamping jaws on the fixed jaw (04) and the clamping slide (02), make sure that the fixed jaws (04) is in the optimum position for the production process.

Most SCS workholding systems have two or more mounting options for the fixed jaw (04) to be optimally adapted to the workpiece size:

- Larger workpieces to position (I)
- Smaller workpieces to position (II)
- For SCS 120-350M and H (III)
- First fix the clamping jaws with approx. 30 Nm.
- Clamp parallel workpiece with maximum clamping force.
- Tighten the screws with approx. 70 Nm.



WARNING

- Only use recommended fixing screws!
For tightening torques, see 12.1. "Technical data".

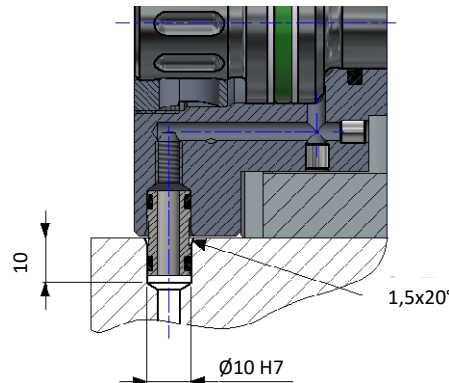
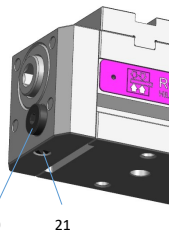
- The thread of the fixing screws must not protrude more than 14 mm at the bottom of the interchangeable jaw.
- It is recommended to use only original SCS clamping jaws.

7.7. Hydraulic transfer

The hydraulic products are realised with two media transfer options

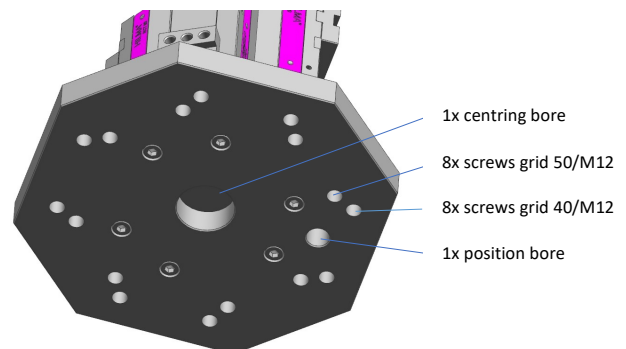
1. Per piping, port with G1/4 thread (20).
2. Per plug connector into the mounting fixture.
With connector Ø10 (21).

Plug connector Part no.: 8.0530.0023



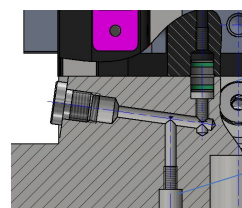
7.8. Mounting of clamping towers

For mounting the clamping towers on the machine, the base plate is used.
The clamping towers are oriented to the base plate via two dowel pins and bolted from below with socket head cap screws. Alignment of the base plate to the machine is done by a centring bore and an additional lateral positioning bore.



7.9. Hydraulic transfer for clamping towers

The hydraulic transfer is customer-specific, as the connections are usually different. Sealing is normally made via plug connectors.



Connection clamping tower – base plate by plug connector Ø10 mm.

Connection base plate – machine table or pallet by plug connector Ø10 mm.

7.10. General safety instructions for mounting



WARNING

7.10.1. Risk of injuries due to improper product fixing!

If the product is fixed improperly, it may loosen from the machine table or pallet and be damaged during clamping or machining.

- Mount the product as instructed in the present operating manual.
- Before mounting the product, make sure that the mounting surface of the product base and the machine table are clean.
- The mounting surface of the product base must be even and have a minimum overlap of 75% on the machine table.
- The mounting surface must be free of contamination.
- Mount the product in accordance with the torque specified in the operating manual.
- Fix the product so that it may not be displaced by the machining forces.

7.10.2. Bruises, burns and bone fractures caused by dropping workpieces!

Workpieces may cause injuries when dropping.

- Protective footwear with a safety level of at least 1 (S1) must be worn during the work.

7.10.3. Injuries due to improperly attached actuation keys.

An improperly attached actuation key, such as an Allen key or torque wrench, can slip off during operation and cause injuries to the operator.

- The actuation key must be checked for correct fit.

7.10.4. Risk of injury due to restricted range of movement of the actuation keys

When cranking or turning, limbs can be crushed between the operating tool and objects in the range of movement.

- The range of movement of the actuation key must be freely accessible.

8. Start-up



WARNING

Risk of injury and poisoning from hydraulic oil.
See "Mounting".



NOTE

8.1. Lubrication before start-up!

The elements are delivered with minimal lubrication.

The sliding surfaces have to be lubricated lightly with slide way oil, ISO VG 220, before start-up.

8.2. Product operation on grinding machines

When the workholding system is used on grinding machines, the product will be more heavily contaminated.

- Clean product from contamination regularly.

8.3. Observe clamping force and temperature difference!

The product is to be used in such a way that the temperatures occurring as intended do not lead to inadmissible clamping forces. In particular, the following points must be observed:

- Durability of seals
- Expansion of media.
- Admissible temperature difference of the product in clamped condition is max. $\pm 10^\circ\text{C}$.



CAUTION

Check the correct tightening torque of all fixing screws and, if necessary, tighten according to the chart value ("Technical data").



WARNING

Risk of injuries or damage to property by collision with system components!

In the range of motion of the system components, persons may be injured by collision with system components, or damage to property may be caused by collision with other system components.

- Check the range of motion of the system components before start-up.

9. Operation

9.1. Hazard note when operating the product



WARNING

9.1.1. Danger of crushing when adjusting the workpiece width!

There is a danger of crushing when adjusting the loading position of the slide.

- During cranking or turning, no part of the body may be in the clamping zone of the workholding system.

9.1.2. Risk of injuries when loading the workpiece!

In unclamped mode, the gap between the workpiece and the clamping jaws can be greater than 4 mm, especially with the mechanical workholding types.

- Make sure that the gap for loading the workpiece is less than 3 mm.

Workpieces can be sharp-edged.

- Appropriate safety precautions must be taken when loading by hand.

9.1.3. Risk of injuries when clamping the workpiece!

The workpiece properties may induce personal injuries during clamping if the workpiece is not clamped properly.

Please note the following:

- Remove contamination on the clamping surfaces before clamping.
- Observe the material properties of the workpiece.
Flexible or soft workpieces can be insufficiently clamped due to their properties.
- Observe the shape of the workpiece.
- Observe the contour and condition of the clamping surface of the workpiece.
- Observe the mass inertia of the workpiece.

Vibration affects the workpiece fixture and results in an improperly fixed workpiece.

An improperly clamped workpiece may be catapulted off the product during machining and result in personal injuries or damage to property.

- Exclude vibration on the product if possible.

9.1.4. Risk of injury due to insufficient clamping force!

If the clamping force of the product is insufficient and the workpiece is therefore insufficiently clamped, it can be thrown out of the workholding system during machining and cause damage to property and personal injury.

- Have the product checked for its operational reliability by a qualified expert after extended downtimes, repair work, and at regular intervals.
- Have the product checked for its defined clamping force by a qualified expert.
- Have the product checked for visual damage or wear by a qualified expert.
- Check whether the product is fixed properly before product start-up.
- Check whether the workpiece is clamped properly before product start-up.

9.1.5. Clamping with grip clamping jaws!

Grip jaws penetrate into the workpiece during the clamping process. This leads to a plastic deformation and thus to a loosening of the clamping. To compensate for this effect, the workpiece should be clamped twice.

The penetration into the workpiece must be taken into account when designing the clamping stroke.

9.1.6. Risk of injuries by crushing of extremities during the clamping process!

The product is to be used in a manner so that the operator's own or other persons' extremities may not be squeezed during clamping.

- Keep your own or other persons' extremities off the clamping area during clamping.

9.1.7. Risk of injury when unclamping!

When unclamping, higher forces have to be overcome initially. Persons may slip off the product during unclamping and be injured.

- Be careful and proceed slowly when unclamping the product.

9.1.8. Risks of burns caused by hot workpieces!

Machining can cause temperatures of over 70°C to occur on the surface of the workpiece and the clamping device. This can lead to burns if parts of the body are touched.

- Wear heat-resistant protective clothing.

9.1.9. Risk of injury in case of pressure drop!

The clamping device is not protected against pressure drop.

An appropriate check valve to maintain the clamping pressure in the event of a pressure drop on the machine side must be provided on the machine side.



NOTE

Machining with the actuation key attached is not permitted!

- All loose parts such as Allen key or torque wrench must be removed before machining.

9.2. Setting the clamping range



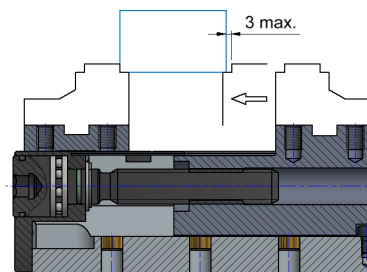
WARNING

See: "9.1. Hazard note when operating the product"

Item: "Danger of crushing when adjusting the workpiece width!"

After mounting the clamping jaws, the workholding system can be adjusted to the workpiece width.

1. By turning the spindle clockwise, the clamping slide is moved in the direction of the fixed jaw.
2. The system should be adjusted so that the gap between the workpiece and the clamping jaws does not exceed 3 mm when open.
There are two reasons for this:
 - The risk of crushing is reduced.
 - The hydraulic products have a maximum clamping stroke of 4 mm. Therefore, the gap should be as small as possible so that the system still has enough travel to perform the clamping optimally.
3. Check the system to see if there is enough clamping stroke to ensure safe clamping.



Adjustment of the loading clearance.

Optimally less than 3 mm.

10. Maintenance

10.1. Hazard note when maintaining the product



WARNING

10.1.1. Risks of burns caused by hot parts!

Machining can cause temperatures of over 70°C to occur on the surface of the workpiece and the clamping device. This can lead to burns if parts of the body are touched.

- Maintenance and repair work should only be performed in a cooled down condition and/or with protective gloves.

10.1.2. Risk of injury from broken parts on the product!

Due to overload or faulty operation during operation, product parts may break, and this may cause personal injuries.

Observe maintenance intervals for all parts pursuant to this Operating Manual.

10.1.3. Injury due to high-pressure injection!

(Squirting out of hydraulic oil under high pressure)

In case of improper handling of the hydraulic system, fluids can splash out under high pressure and injure people.

Work on hydraulic equipment should only be carried out by qualified personnel with relevant knowledge in this area.

10.2. Maintenance plan

Maintenance works	Interval	Realisation
Cleaning	As required	Operator
Lubrication	After cleaning	Operator
Regular checks	daily	Operator
Repair	As required	Qualified personnel

10.3. Cleaning

The element must be cleaned at regular intervals. The frequency depends strongly on the application and must be assessed by the operator.



CAUTION

Damage to moving components!

Damage to the moving components and sealing elements must be avoided.

Aggressive cleaning agents

The product must not be cleaned with the following, otherwise sealing elements may be damaged:

corrosive or caustic substances or organic solvents such as halogenated or aromatic hydrocarbons and ketones (cellulose thinner, acetone, etc.).

10.4. Regular checks

- Check tightness of hydraulic connections (visual control).
- Leakage check on the workholding system (visual control).
- Clamping force control by pressure control.
- Check compliance with the maintenance intervals.

10.5. Exchange seal kit

The exchange of the seal kit of hydraulic systems has to be made in case of external leakages. In multi-shift operation, we recommend to change the seals at the latest after 1,000,000 cycles or 2 years.

The seal kits are available as spare parts.

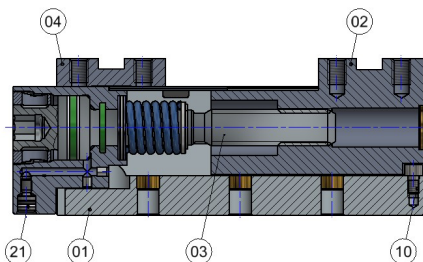


NOTE

Seal kits:

- Do not install seal kits that were exposed to light for a longer time.
- Observe storage conditions (see chapter "Technical data").
- Only use original seals.

10.6. Maintenance and care



A hydraulic system is shown. However, the issue also applies to mechanical systems.

The clamping systems are sealed, but there is internal contamination due to the use of coolant. To remove this and to renew the lubrication, the clamping slide can be disassembled.

Clamping slide disassembly

1. Remove the stroke limitation screw (10).
2. Move the clamping slide (02) backwards by means of the spindle (03) using an Allen key and remove it.
3. Remove all contamination. Observe the following safety instructions.
4. Lubricate the thread of the spindle with grease. Also lubricate the guides of the clamping slide.
Recommendation:
EP2 grease, DIN51825: KP2 K-30, ISO/DIN6743g: ISO-L-XCCHB2
5. Assembly in reverse sequence
6. Check the smooth running of the system.



CAUTION

When removing contaminations, dangerous parts such as sharp swarf can be whirled up when blowing out with compressed air.

This can lead to injuries, especially to the eyes.

- It is essential to take protective measures to avoid this.

11. Troubleshooting

Trouble	Possible cause	Remedy
Clamping slide has too much play.	Guide worn out.	Replace clamping device or corresponding components.
Sluggish actuation	Contaminations in the system.	Cleaning the system.
	Damage to the system.	Replace clamping device or corresponding components.
Breakage of parts	Improper use of the system.	Replace clamping device or corresponding components.
	Wear	Replace clamping device or corresponding components.
Leakage	Wear of the seals	Replace the seals.
	Damage to the seals during assembly.	

12. Technical data

12.1. Clamping forces

Please observe the following safety instructions for the clamping forces!

Mechanical workholding systems SCS 80 – ... M						max.
Torque (Nm)	12	24	36	48		60
Clamping force [kN]	5.0	10.0	15.0	20.0		25.0

Hydraulic workholding systems SCS 80 – ... H						
Max. operating pressure [bar]	50	100	150	200	250	300
Clamping force [kN]	3.0	6.5	10.0	13.0	16.5	21.0

Mechanical workholding systems SCS 120 – ... M								max.
Torque (Nm)	12.5	25	37.5	50	62.5	75		100
Clamping force [kN]	5.0	10.0	15.0	20.0	25.0	30.0		40.0

Hydraulic workholding systems SCS 120 – ... H						
Max. operating pressure [bar]	50	100	150	200	250	300
Clamping force [kN]	7.0	14.5	22.1	29.5	33.5	37.5



CAUTION

Clamping forces:

The previously specified clamping forces refer to the utilisation of the complete clamping width. Using interchangeable jaws with reduced width, the clamping force is reduced as follows:

Clamping device type	Clamping step standard jaw	Reduction	Resulting clamping force [kN] max.
SCS 80	50 mm	- 30 %	approx. 14.0
	25 mm	- 60 %	approx. 7.0
SCS 120	84 mm	- 30 %	approx. 31.0
	40 mm	- 60 %	approx. 15.5



CAUTION

For workpieces smaller than the clamping width, the clamping force must be further reduced in percentage.

12.2. Tightening torques for fixing screws related to fixed jaws and clamping jaws



NOTE

Tightening torques for fixed and clamping jaw assembly on the SCS workholding systems.

Manufacturer's recommendation:

Type	Thread	Screw class		Tightening torque [Nm]	
SCS 80	M10	10.9	12.9	80	90
SCS 120	M12			90	100

Further technical data can be found in catalogue sheet 4.5500 and 5.4600 or at www.roemheld-group.com



NOTE

The values given are to be regarded as guide values.

The basis is a coefficient of friction of 0.14μ and corresponds to approx. 2/3 of the yield strength.

Depending on the application, these values may be reduced.

In this case, they are to be designed by the user.

12.3. Tightening torques for further fixing screws



NOTE

For tightening torques, see corresponding standard.

Workpieces and set screws made of steel with metric thread and connecting surface dimensions as per DIN ISO 4762, 4014, 4017 and 4032.

The table values for the tightening torque (MA refer to:

- Design steel on steel, friction value $\mu = 0.14$, not oiled.
- Utilization of the minimum yield point = 90%

12.4. Weight

The weight of the workholding systems without clamping jaws is:

- | | |
|-----------------------------------|-----------------|
| • SCS 80-160 M | approx. 6.0 kg |
| • SCS 80-200 M and SCS 80-200 H | approx. 8.8 kg |
| • SCS 120-250 M and SCS 120-250 H | approx. 15.4 kg |
| • SCS 120-350 M | approx. 21.6 kg |

The weight of the workholding systems without clamping jaws is:

- | | |
|-------------------|------------------|
| • SCT 80/3-240 M | approx. 41.0 kg |
| • SCT 80/4-240 M | approx. 52.0 kg |
| • SCT 80/4-240 H | approx. 50.0 kg |
| • SCT 120/3-290 M | approx. 100.0 kg |
| • SCT 120/4-290 M | approx. 100.0 kg |

12.5. Storage



CAUTION

Proper storage:

- The product must not be exposed to direct sunlight.
- The product must be stored in a dry place and at an even temperature.

SCS workholding systems are lubricated with grease and mineral oil as standard. The exterior of the products is protected against corrosion. These measures ensure six months of internal corrosion protection when stored properly.



NOTE

For extended storage periods, the product must be filled with a non-resinating corrosion inhibitor, and the outside surfaces have to be treated.

12.6. Accessories and spare parts



NOTE

Due to the large number of accessories and spare parts, we ask you to refer to our clamping device catalogue.

If you have any questions, please feel free to contact us.
Contact see "12.7. Service".

12.7. Service

Maintenance by the manufacturer:

Please return the product freight prepaid with a short description of the error.

Contact: Hilma-Römheld GmbH
Auf der Landeskronen 2
57234 Wilnsdorf-Wilden
Germany

Phone maintenance: +49 (0) 6405 / 89-400
E-mail: service@roemheld.de

Phone service/repair: +43 (0) 5522 / 37400-0
E-mail: service@starc-inc.com

13. Disposal

Hazardous to the environment



To avoid potential environmental damage, the individual components have to be disposed of by approved expert companies.

All materials have to be disposed of in compliance with the applicable codes and regulations as well as environment protection regulations.

Particular importance is to be attached to the disposal of components containing residues of pressure liquids. The notes regarding disposal in the safety data sheet have to be observed.

As regards the disposal of electrical and electronic components the country-specific statutory requirements and regulations have to be complied with.

14. Declaration of incorporation

Manufacturer: Hilma-Römheld GmbH
Auf der Landeskronen 2
57234 Wilnsdorf-Wilden
Germany

Phone: +49 (0) 2739 / 4037-0

E-mail: info@hilma.de

The products:

9.4672.0101	9.5572.0101
9.4672.0201	9.5572.0201
9.4673.0101	9.5573.0101
9.3673.0201	9.5573.0201
9.4682.0101	9.5582.0101
9.4683.0101	

are designed and manufactured in line with the relevant versions of the directives 2006/42/EC (EC MSRL) and in compliance with the valid technical rules and standards. In accordance with EC-MSRL and EN 4412, these products are components that are not yet ready for use and are exclusively designed for the installation in a machine, a fixture or a plant.

According to the pressure equipment directives the products are not to be classified as pressure reservoirs but as hydraulic placing devices, since pressure is not the essential factor for the design, but the strength, inherent stability and solidity with regard to static or dynamic operating stress.

The products may only be put into operation after it was assessed that the incomplete machine / machine, in which the product shall be installed, corresponds to the machinery directives (2006/42/EC).

The manufacturer commits to transmit the special documents of the products to state authorities on request.

The technical documentation as per appendix VII part B was prepared for the products.

15. List of the used standards

Product Safety Act - ProdSG; November 2011

DIN EN ISO 12100 2001-03	Safety of machinery; basic concepts, general principles for design (Replacement for parts 1 and 2)
DIN EN ISO 13857 2008-06	Safety of machinery; safety distances to prevent hazard zones being reached by upper and lower limbs. (Replaces: DIN EN 294)
DIN EN 349 2008-09	Safety of machinery, minimum gaps to avoid crushing of parts of the human body.
DIN EN 81714-2 2007-08	Design of graphical symbols for use in the technical documentation of products.
DIN EN ISO 4413 2011-04	Fluid technology - General rules and safety re- quirements for hydraulic systems and their compo- nents.
DIN EN ISO 82079 2010-10	Preparation of instructions, structuring, content and presentation - Part 1

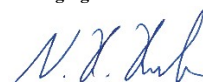
Technical documentation officer:

Thomas Willingshofer, Tel.: +49 (0) 2739 / 4037-193

Hilma-Römheld GmbH

Nico Hanke

Managing director



Wilnsdorf-Wilden, July 1.2021