

TRIBOS-R

Polygonal toolholder



Superior Clamping and Gripping



2 Basic safety notes

2.1 Appropriate use

- The product is used to clamp rotationally symmetric tools or workpieces.
- The product is intended for industrial use.
- The product is intended for installation in a machine/ automated system. The applicable guidelines for the machine/ automated system must be observed and complied with.
- The product may only be used and operated within the scope of the technical data and the specifications in this manual, ▶ 3 [Page 1].

2.2 Inappropriate use

- The product is not being used as intended if:
- The information in the technical data is not observed when using and operating the product ▶ 3 [Page 1].
 - The maintenance and storage instructions are not observed ▶ 5 [Page 2].
 - The product is used with heat shrinking technology.

2.3 Ambient conditions and operating conditions

The ambient and operating conditions must correspond or be adapted to the version of the product and the specifications in the technical data.

1 General

1.1 Definition of terms

The term "product" replaces the product name on the first page in this manual.

1.2 About this manual

This manual is part of the product and contains important information for safe and correct use. It must be kept accessible at all times. Personnel must have read and understood this manual before starting any work. All safety notes and the associated specifications in particular must be observed and complied with. Illustrations may differ from the actual design.

1.3 Applicable documents

- General terms of business
 - Catalog data sheet of the purchased product
- The other applicable documents can be downloaded from **schunk.com**.

1.4 Warranty

The warranty is valid for 24 months from the date of delivery from the production facility if the product is used as intended and in compliance with the prescribed operating data. Wear parts and parts that come in contact with the tool or machine are not covered by the warranty.

2.4 Structural changes, spare parts

Structural changes such as modification and reworking, e.g. additional threads, bore holes or attachments, may only be carried out with the written approval of SCHUNK. Only use original spare parts and spares authorized by SCHUNK.

2.5 Notes on safe operation

- Long, projecting or heavy tools may only be clamped if the speed of rotation is reduced according to the ambient and operating conditions on site. The level of reduction is the responsibility of the operator and must ensure safe operation of the product.
- Never combine multiple product extensions.
- Maintain and service the product on a regular basis.
- Only use SCHUNK intermediate sleeves and always insert up to the fixed backstop point.
- The operational safety and function of the product must not be impaired by external influences.
- All repair work must be performed by SCHUNK.
- Follow the country-specific applicable safety, accident prevention, and environmental protection regulations for the application field of the product.

1.5 Illustration of warnings

⚠ WARNING

Dangers for persons!
Non-observance can lead to irreversible injury and even death.

⚠ CAUTION

Dangers for persons!
Non-observance can cause minor injuries.

CAUTION

Material damage!
Information about avoiding material damage.

1.6 Scope of delivery

- Product
- Assembly and Operating Manual
- depending on the product version, additional parts may be included in the scope of delivery (accessory kit)

1.7 Accessories

The following accessories for the product are available separately:

- Hexagon socket wrench for length adjustment
- GZB-S intermediate sleeves for clamping several different shank diameters
- GZB-S sleeve remover for removing intermediate sleeves

2.6 Personnel qualifications

- All operations may only be carried out by personnel that are qualified and instructed for the respective operation.
- Personnel qualifications must comply with the on-site country-specific requirements and laws.

2.7 Personal protective equipment

- When working on and with the product, follow the respective country-specific legal requirements for occupational health and safety, and wear the necessary personal protective equipment.
- Follow country-specific accident prevention regulations and the general safety notes.

2.8 Transport

To avoid product damage, the transport and handling of the product must be adapted according to the version, weight and packaging of the product. If necessary, use additional aids.

3 Technical data

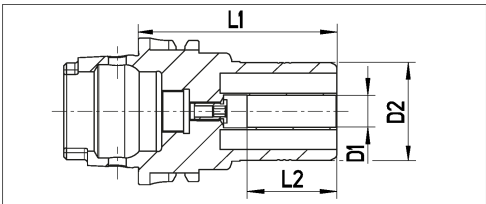
Operating temperature range [°C]:	+20 ... +50
Max. coolant pressure [bar]:	100
Max. speed of rotation [RPM]*:	55000
Max. speed of rotation [RPM]*, L1 = 150 mm:	32400
Max. speed of rotation [RPM]*, L1 = 200 mm:	20380
Adjustment travel of the length adjustment screw [mm]:	10
Tool shank tolerance:	h6
Min. tool shank hardness [HRC]:	50
Min. tool shank strength [N/mm²]:	1000

* depending on the interface of the spindle and tool

Clamping Ø [mm]	Min. transmittable torque** [Nm]	Permissible radial force F on the product at 50 mm projecting length [N]
6	8	225
8	12	370
10	20	540
12	30	650
14	50	900
16	70	1410
18	100	1580
20	150	1860
25	200	4400
32	280	6500

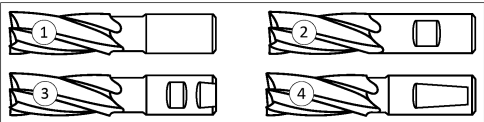
** depending on the shank tolerance

The loading limits of the spindle must be observed.



D1 Clamping Ø [mm]	D2 Outer Ø [mm]	L2 minimum clamping depth [mm]
6	25	27
8	28	27
10	35	32
12	42	37
14	48	37
16	48	38
18	48	38
20	48	42
25	60	47
32	67	51

3.1 Permitted shank types



- ① Shank type according to DIN 1835-1 form A and DIN 6535 form HA
- ② Shank type according to DIN 1835-1 form B and DIN 6535 form HB (Ø up to 20 mm)
- ③ Shank type according to DIN 1835-1 form B and DIN 6535 form HB (Ø from 25 mm)
- ④ Shank type according to DIN 1835-1 form E and DIN 6535 form HE

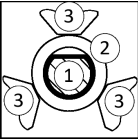
Impairments may occur with the following shank types:

Shank type ② ③ ④	Concentricity impaired
Tool shanks that fall below h6 tolerance	no torque transmittable
Tool shanks that exceed h6 tolerance	not joinable
Tool shanks with warped areas/markings	difficult joining / not joinable

NOTE: Observe the minimum hardness and minimum strength of the tool shank. ▶ 3 [Page 1]

4.2 Mounting tool

- Use the appropriate SVP clamping device to mount the tool.
- Join the tool to the product according to the operating manual of the SVP clamping device.
NOTE: Observe the max. pressure specification on the product.
- Remove the product from the SVP clamping device with the joined tool.



CAUTION: When clamping tool shanks ① of form E or HE (shank type ④), observe the position of the reliefs to the pressure segments ③! When the shank system is correctly positioned in the product ②, the clamping surfaces are in contact with the full shank.
NOTE: SRE reduction inserts are required for assembling the tool with SVP clamping devices SVP 2 and 2D.

4 Operation

4.1 Basic information

WARNING
Risk of injury due to ejected parts!
The max. speed of rotation of the machine/automated system must be reduced when using long, projecting or heavy tools and with extensions.

CAUTION
Risk of injury from tools with sharp edges!
Sharp edges on tools can cause cuts.

- Wear protective gloves when assembling the tool.

CAUTION

Material damage due to burrs and dirt!

- The tool must be free of burrs and dirt at the shank.

4.3 Assembling the product

- Position the product with tool correctly in the machine interface and tighten. **NOTE:** Observe the machine manufacturer's specifications!
- Check that the product is in the correct position and securely clamped in the machine.

IMPORTANT! Safe clamping of the product in the machine must be ensured!

- 4.4 Tool change**
- Remove the tool according to the operating manual of the SVP clamping device. **NOTE:** If the tool sticks to the product due to fine particles, it can be loosened through the rear opening with a punch by pushing it or lightly knocking it.
 - Join the new tool according to the operating manual of the SVP clamping device. **NOTE:** Observe the max. pressure specification on the product.
 - Remove the product from the SVP clamping device with the joined tool.

NOTE: SRE reduction inserts are required for assembling the tool with SVP clamping devices SVP 2 and 2D.

6 Disposal

- Follow local regulations on dispatching product components for recycling or proper disposal.
- Alternatively, you can return the product to SCHUNK for correct disposal.

CAUTION

Material damage due to exceeding the permissible pressure!
Excessive pressure causes deformation of the product and leads to loss of function.

- Observe and adhere to the pressure specifications of the product.

CAUTION

Material damage due to incorrect minimum clamping depth!
Too small a clamping depth of the tool leads to a loss of accuracy and torque on the product.

- Observe the minimum clamping depth of the tool.

NOTE

The product may only be equipped with an SVP clamping device. Observe the operating manual of the corresponding SVP clamping device.

5 Maintenance and storage

- Clean the clamping bore and mounting taper before each use.
- Check the product for visible signs of damage. Do not use the product any more if damaged.
- For storage, clean the product and lubricate it lightly.
- Only store the product in a clean and dry environment.

All repair work must be performed by SCHUNK!
If you have any questions regarding maintenance and servicing, our technical after-sales service is available during our business hours:
Service telephone: +49-7133-103-2956
service.toolholder@de.schunk.com

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