

A close-up photograph of a Schunk robotic gripper, which is black and silver, holding several colorful LEGO bricks (yellow, green, blue, and red). The gripper is part of a larger robotic arm, with a blurred industrial background. The Schunk logo is visible on the gripper's body.

Sales argumentation

SCHUNK ERT ↔ Weiss ST/TO

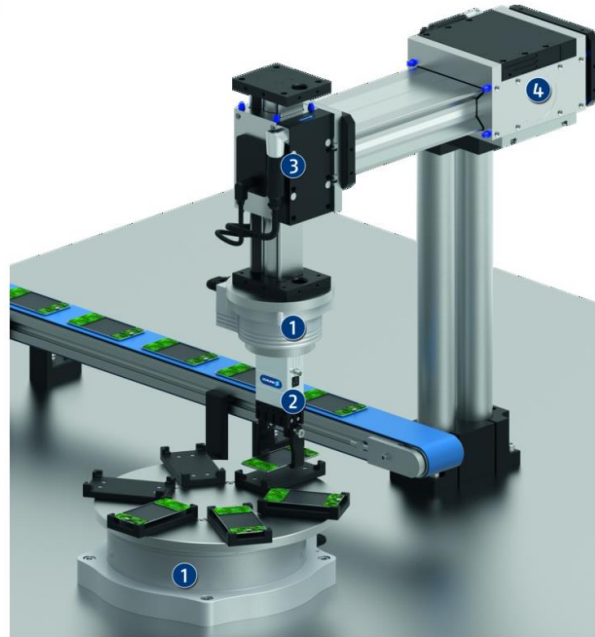
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Agenda

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6. Comparison of available options
7. Current price situation

1. ERT advantages



SCHUNK ERT:

- Extremely flat design
- Dynamic and precise
- Absolute measuring system
- Multiple interfaces
- Direct drive (no maintenance costs)
- Universally applicable
- Many options (brake/IP54)
- Very large center bore

2. Presentation of competitor product Weiss ST



ST Torque Rotating Unit

ROTATE AND PIVOT WITH PRECISION AND EXTREMELY HIGH DYNAMICS

The ST torque rotating unit, featuring a direct drive and absolute encoder, is exactly the right tool to use when fast, precise and highly dynamic rotating, tilting and gripping motions are required. Whether for feeding or orienting parts, in the process, as a swivel module for grippers or as a replacement for standard servomotors with planetary gears, the ST rotating unit provides the optimal solution.

Compatible control packages: [W.A.S. 2 COMPACT](#), [W.A.S. 2 SCALABLE](#)

3. Presentation of competitor product Weiss TO



TO Torque Rotary Table

MAXIMUM SWITCHING SPEED, HIGHEST PRECISION

The freely programmable, direct-drive TO torque rotary table impresses users with its swift dynamics and extremely high level of repeat accuracy.

Compatible control packages: W.A.S. 2 COMPACT, W.A.S. 2 SCALABLE

4. Statements Weiss Marketing

Weiss ST:

- Extreme dynamics
- High power density
- Freely positionable
- No maintenance
- Compact design
- Absolute measuring system
- Low weight

Weiss TO:

- Extremely high dynamics
- Extremely high repeatability
- Compact and space-saving
- High torque
- No wearing parts
- Matching control packages from Weiss
- Total supplier

5. Response SCHUNK to sales argumentation Weiss

Statement Weiss

Extreme dynamics

Response SCHUNK

The Weiss products have slightly better cycle times than the ERT. However, the difference is in the 50-100ms range and is therefore not significant. In addition, Weiss does not provide any information to break times, which are necessary! At SCHUNK, the cycle and break times are shown transparently in the catalog and sizing assistant (see homepage).

Statement Weiss

Freely positionable

Response SCHUNK

The SCHUNK ERT offers the same possibilities. The drive can also be positioned freely. As with the Weiss products, a single turn encoder is also installed in the ERT (a single turn encoder assigns a coded position value to each angular position. This means that the angle of rotation is only known within one rotation).

5. Response SCHUNK to sales argumentation Weiss

Statement Weiss

No maintenance/wearing parts

Response SCHUNK

The basic version of the SCHUNK ERT is also maintenance-free and lubricated for life.

Statement Weiss

Compact design/space-saving

Response SCHUNK

The ST product series is very compact in base area. The height depends on the used measuring system. In addition, a holding brake increases the height.

The TO product series always has the same height, since no holding brake is available. In any case, Weiss units are always higher than SCHUNK units.

5. Response SCHUNK to sales argumentation Weiss

Statement Weiss

Absolute measuring system

Response SCHUNK

The SCHUNK ERT is also equipped with an absolute encoder system. With the products of the Weiss company there are two variants of interfaces (Hiperface and EnDat2.2). A direct connection to Siemens drive controllers is not possible with these interfaces. An additional SME-Box is required. Weiss is very inflexible with requests for other interfaces.

The SCHUNK ERT is available with the interfaces Hiperface and DRIVE-CLiQ. It can therefore be connected directly to Siemens drive controllers and covers common interfaces of most controller manufacturers.

Statement Weiss

Low weight

Response SCHUNK

The SCHUNK ERT is on average 20% lighter than the products of the Weiss company!!!

5. Response SCHUNK to sales argumentation Weiss

Statement Weiss

Extremely high repeatability

Response SCHUNK

The products of the Weiss company have a higher repeatability than the ERT. The data from Weiss are 1:1 the values from the data sheets of the encoder manufacturers. They are theoretical values which can not be achieved in practice.

SCHUNK always gives realistic values, but for most applications such a high repeatability is not necessary and over dimensioned.

In most cases, a repeatability of $\pm 0.01\text{mm}$ as with the ERT is sufficient.

Statement Weiss

Total supplier (Rotary drive, linear axis and Pick and Place)

Response SCHUNK

SCHUNK offers a significantly wider range of products.

5. Response SCHUNK to sales argumentation Weiss

Statement Weiss

High torque

Response SCHUNK

The torque of the compared products from Weiss are like those of the ERT.
Weiss also offers rotary tables with significantly higher nominal torques than SCHUNK.

In laboratory tests a strong influence of the installed holding brake could be determined. With a thermally decoupled design (heat is not transported away via the mechanical design), the Weiss ST units lose approx. 70% of the nominal torque in the form of heat losses (with an activated brake installed). This means that the nominal torque according to the manufacturer's specifications can not be achieved in the thermally decoupled state under the influence of the electrical holding brake!

The ERT reaches the nominal torque according to the manufacturer's specification even in the thermally decoupled state.

5. Response SCHUNK to sales argumentation Weiss

Statement Weiss

Matching control packages from Weiss

Response SCHUNK

Weiss offers its own control packages with its own controller (labeled B&R controller) for its products. The SCHUNK ERT offers a wide range of control options for simple integration into existing control concepts using different external third-party controllers (e.g. Bosch Rexroth IndraDrive or Siemens SINAMICS). These can also be offered and sold directly by SCHUNK. The supplied motor parameters allow the customer to easily and quickly commission the ERT with his own controller. Other drive controllers (e.g. Schneider Electric, B&R etc.) are available on request.

5. Response SCHUNK to sales argumentation Weiss

Statement Weiss

Optional electrical holding brake (only for Weiss ST)

Response SCHUNK

An electric holding brake is also available as an option for all sizes of the ERT. Weiss only offers an optional electric holding brake for the ST series. Here, the overall height is increased significantly by the electrical holding brake! With the ERT, the overall height remains the same even with the electrical holding brake. In addition, an internal test of the Weiss ST 140-1 showed strong heating when the holding brake was activated.

6. Comparison of available options

	Electrical holding brake	Protection class IP 54	Hiperface Interface	DRIVE-CLiQ Interface	EnDat 2.1 Interface
SCHUNK					
ERT 12	✓	✓	✓	✓	✗
ERT 50	✓	✓	✓	✓	✗
ERT 300	✓	✓	✓	✓	✗
Weiss					
ST-075-3	✓	✗	✓	✗	✓
ST-140-1	✓	✗	✓	✗	✓
TO 150C	✗	✗	✓	✗	✓
TO 220 C-1	✗	✗	✓	✗	✓

7. Current price situation (19.02.2021)

SCHUNK	Base module	Option eletrical holding brake
ERT 12	2.890 €	817 €
ERT 50	3.290 €	980 €
ERT 300	5.190 €	1.176 €

Weiss	Base module	Option eletrical holding brake
ST-075-3	2.500 €	No information
ST-140-1	3.000 €	1.052 €
TO 150C	No information	Not available
TO 220 C-1	6.050 €	Not available

The SCHUNK ERT is slightly more expensive than the ST product series. However, the price is justified by better performance data.

The price of the electric holding brake option is lower with SCHUNK even though the overall height has enormous advantages.

The SCHUNK ERT is competitively priced with the products of the Weiss company

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