# **Assembly Instructions**

for

# Haushahn TS54 Door Operator

# Conversion to TSG

#### **Documentation history**

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## 1 Essential information

### 1.1 Value of assembly instructions

The product assembly instructions are provided by the manufacturer or supplier to provide the information required by the customer or fitter to ensure proper, safe and reliable assembly. These brief assembly instructions serve to clarify the basic steps of mechanical assembly. The electrical connection, commissioning and settings of the TSG are explicitly not part of these instructions.

### 1.2 Copyright protection

We reserve all rights for this technical documentation. It may not be duplicated, made accessible to third parties or otherwise used in an unauthorised manner without our prior consent. Any changes require our explicit and prior written consent.

### 1.3 Instructions in the assembly manual

All instructions in the assembly manual must be followed without exception.

### 1.4 Informal activities performed by the fitter

The system fitter is personally responsible for participating in a training course. He or she must inform the manufacturer/supplier without delay of any missing or defective parts in the delivery.

### 1.5 Requirements for assembly personnel

Persons responsible for installation and maintenance must be instructed regarding generally applicable safety and labour health requirements. They must be familiar with Langer&Laumann products. Installation tools must be fully functional and measuring instruments must be subject to continuous monitoring.

### 1.6 Explanation of symbols



#### WARNING:

This symbol directs your attention to a possible hazard that could lead to severe bodily injuries or death.



#### CAUTION:

This symbol directs your attention to a possible hazard that could lead to minor bodily injuries. The same symbol is also used to warn of potential damage to property.



#### NOTE:

Your attention is drawn to applications and other useful information.

## 2 Activity performed

Replacement of the Haushahn TS54 drive with a K Langer & Laumann Ing. Büro GmbH TSG door operator

## 3 Advantages

- Very economical package.
- A faulty control device and motor can be quickly and easily replaced with a TSG from K Langer & Laumann Ing. Büro GmbH.
- Just a few mechanical attachments are required.
- All necessary parts are included with delivery.
- Conversion can be performed *very quickly* and *easily*.
- The electrical wiring can also be performed by *less experienced fitters*.
- **No hand-held** terminal is required for setting parameters. All parameters can easily be adjusted on the device.
- Measurements can be performed very easily.
- The conversion kit is available from K Langer & Laumann Ing. Büro GmbH as warehouse inventory.

### 4 Tools required

Angle grinder Drilling machine Metal drill bits, 9 and 11 mm Fork wrenches size 10, 13, 17 Screwdriver Bit AW20 (similar to Torx T20) Side cutter Spirit level

### **5** Conversion instructions

- 1. Please remove all packaging and check against the parts list for completeness.
- 2. Remove the old door drive. Leave the 2:1 transition from the fast door panel to the slow one in place (wire cable or scissors-type mechanism).
- 3. Screw the angle plate (Fig. 5: Angle plate) onto the bracket of the fast door panel (Fig. 4: Haushahn door drive TS54 after conversion with TSG).
- 4. Fasten the TSG drive together with accompanying motor support (combination bracket) onto door operator.
- 5. Mount the counter roller with clamping station at the end of the door operator (the pinions of the TSG drive and counter roller must line up!).
- 6. Shims (Fig. 6: Shim) are included with delivery and can be used to compensate for unequal spacing.
- 7. Fasten the door panel carrier onto the fast door panel. Make certain as you do so that the door panel carrier does not strike the pinion with the toothed belt lock while the door is moving!
- 8. Fit and tension the toothed belt.
- 9. Fasten the stop on the combination bracket and counter roller, thereby limiting the door motion.
- 10. For information regarding electrical commissioning, please refer to the enclosed TSG operating instructions.

# 6 Scope of delivery

#### Table 1: Scope of delivery

ltem	Article number	Name	Quantity
1		Mechanical parts for HH TS54 conversion kit	1
2		TSG door fittings	
3		Small parts (screws, washers, spring rings, etc.)	
4		TSG electronics in enclosed housing	1
5		Motor, large left and gearbox 24V/4.6A/1:15	1
6	1.20.30820	Assembly instructions for HH TS54 conversion to L&L	1
7	1.20.91000	TSG operating instructions	1

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## 7 Illustrations



Fig. 1: Haushahn door drive TS54 before conversion



Fig. 2: Haushahn door drive TS54 before conversion

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Fig. 3: Haushahn door drive TS54 after conversion with TSG



Fig. 4: Haushahn door drive TS54 after conversion with TSG



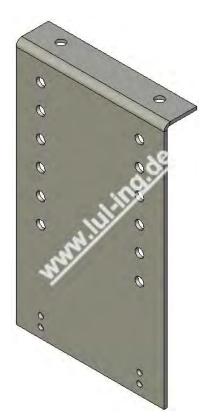


Fig. 5: Angle plate



Fig. 6: Shim

# 8 Contact

If you have questions or are not certain about something, we can be reached at the following address:

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