

# Installation instructions

## Monitor 99VF

with device series

## Door operator

## TSG

## Documentation history

No.	Ver.	Date	Processed by
1	1.0	13.09.10	CSA
2	1.1	09.12.15	JE
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Fordern Sie die Umbauanleitung **auf Deutsch** an,  
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Demandez les instructions d'instruction de  
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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.

## 2 Activity performed

Replacement of the Monitor 99VF door drive with a  **Langer & Laumann Ing. Büro GmbH TSG door drive.**

The purpose of the conversion is to replace the existing monitor drive with a TSG drive. The mechanics including toothed belt remains intact.

## 3 Advantages

- Very economical package.
- Quick and easy replacement with a TSG from  **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  **Langer & Laumann Ing. Büro GmbH** as **warehouse inventory**.

## 4 Tools required

Metal drill bits 6, 9, and 11 mm  
 Fork wrenches sizes 8, 10, 13, 17  
 Allen wrench set  
 Screwdriver  
 Side cutter

## 5 Parts list

Item	Article number	Name	Quantity
1	1.20.31020	TSG pulley for monitor 99VF	1
2	1.20.31010	TSG motor support for monitor 99VF	1
3	8.20.40000	Motor, large left and gearbox 24V/2.8A/1:15	1
4	1.20.61070	Endless belt	1
5		Various screws, washers, nuts	1
6	8.20.00101	TSG electronics in housing	1
7	1.20.31000	Documentation for conversion of TSG to monitor 99VF	1
8	1.20.91000	TSG manual	1

## 6 Conversion instructions



**NOTE:**

The order of assembly listed here is simply a recommendation. There is no claim of completeness.

1. Disassemble the existing drive including belt transmission as a unit (see also Fig. 3: Removed monitor motor with belt transmission / page 8).
2. Undo the outer screws of the belt transmission and unfold the belt transmission (see also Fig. 4: Removal of belt transmission housing / page 8).
3. Remove the drive disk (see also Fig. 5: Removal of drive disk / page 9).
4. Remove the tenon block from the shaft and pull out the shaft together with the pinion (see also Fig. 6: Removed shaft with pinion and tenon block / page 9).
5. Insert the bearing bushing in the new support bracket and screw it together tightly. Then insert the shaft again (see also Fig. 7: Screwing the bearing bushing into the new support and inserting the shaft again / page 10 and Fig. 8: Back: shaft with pinion / page 10).
6. Insert the TSG drive in the support bracket and tighten the endless toothed belt (see also Fig. 9: Inserting the TSG drive with toothed belt in the support / page 11).
7. Tension the toothed belt and tighten the TSG drive (Fig. 10: Clamping the toothed belt and tightening the screws for the TSG drive / page 11).
8. Screw the new belt transmission into the door machine again, set the toothed belt in place and tension it (see also Fig. 11: TSG drive ready mounted in the door machine / page 12).
9. Measure the TSG electronics unit. Make certain there is a fixed stop in both the open and closed positions. For the remainder of commissioning and electrical connection process, please refer to the TSG manual.

## 7 Illustrations



**Fig. 1: Monitor for 99VF door machine, original (here: centrally telescoping)**



**Fig. 2: Monitor for 99VF door machine, back**



**Fig. 3: Removed monitor motor with belt transmission**



**Fig. 4: Removal of belt transmission housing**





**Fig. 5: Removal of drive disk**



**Fig. 6: Removed shaft with pinion and tenon block**



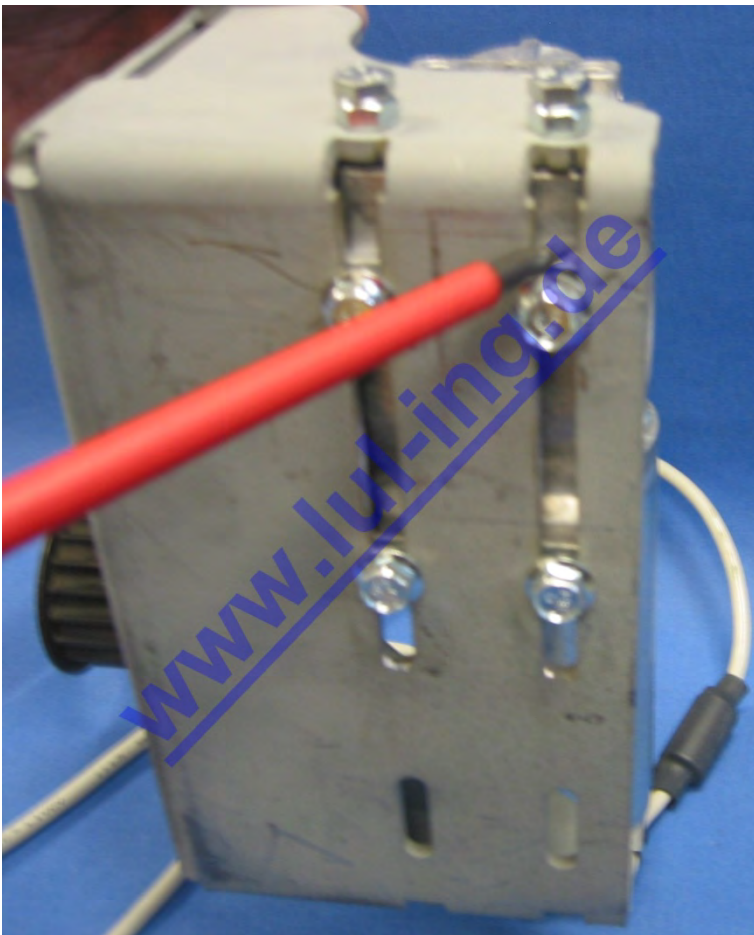
**Fig. 7: Screwing the bearing bushing into the new support and inserting the shaft again**



**Fig. 8: Back: shaft with pinion**



**Fig. 9: Inserting the TSG drive with toothed belt in the support**



**Fig. 10: Clamping the toothed belt and tightening the screws for the TSG drive**





**Fig. 11: TSG drive ready mounted in the door machine**



**Fig. 12: TSG drive ready mounted in the door machine**

## 8 Contact

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

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