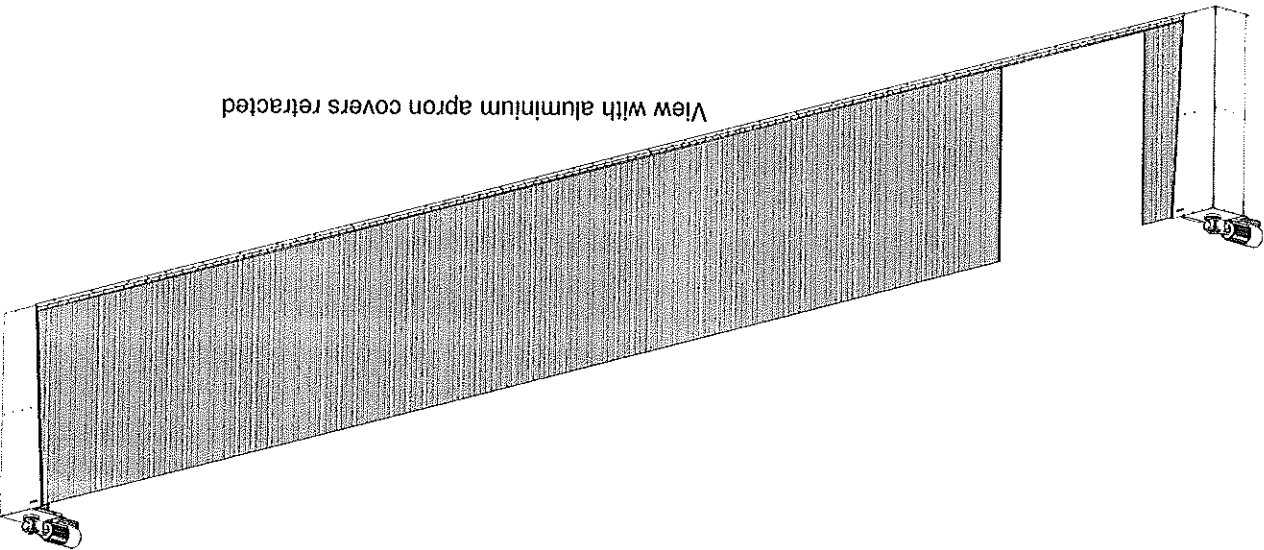




Contents

1	General.....	1
2	Safety information.....	1
3	Transport and interim storage.....	3
4	Product description.....	3
5	Installation.....	5
6	Start-up.....	6
7	Service / maintenance.....	6
8	Causes of malfunction.....	8
9	List of replacement parts.....	9
6	and remedial measures.....	6

1. General

These operating instructions relate to EITEC shutter systems, which are designed in line with customer-specific requirements for use in a wide variety of systems. They contain fundamental information to be taken into account when installing, operating and maintaining these systems. It must be ensured that those entrusted with storage, transport, installation, operation and maintenance are familiar with the contents of the operating instructions. In addition, these operating instructions must always be available at the system.

2. Safety information

The word
CAUTION

appears in the context of safety information in the text failure to comply with which can result in danger to personnel, machinery and mechanical function.

	Operating Instructions for Shutter Systems 2 / 7 Page
Document 1546078	Shutter system Eitec Art. No. 1546078-00-00-900 Weingärtner Art. No.31-0173-5043

Notices attached to the shutter system must always be observed and must be maintained in a fully legible state.

The staff responsible for handling the shutter system must be appropriately qualified for this work. If staff does not have the requisite expertise, then training should be provided. The operator of the shutter system should also ensure that staff is familiar with the contents of these instructions and has understood them in full.

Failure to comply with the safety instructions can result in danger to both personnel and machinery, as well as possibly leading to the loss of all compensation entitlements.

The existing national regulations for accident prevention should also be obeyed.

Components that prevent contact with moving elements of the shutter system may not be removed during operation and the shutter system may not be operated with safety components removed.

Shutter systems that do not contain safety equipment to prevent danger arising from their function because of the agreed design as approved by the customer, may only be installed and operated in appropriate systems. In these cases, the user is responsible for ensuring that all risks are reliably prevented by safety equipment provided in the higher system.

Potential energy in the shutter system (due to elastic pre-stress or the dead weight of components) represents a source of danger when performing installation and maintenance work. For this reason, this work should only be carried out when components have been secured appropriately.

Maintenance work may only be performed if the shutter system cannot be moved by drive mechanisms of the higher system.

If unusual noises are heard during operation or other damage is noticed on the shutter system or its guides, the cause should be determined and remedied immediately and the shutter system should be made fully functional. Failure to do this can lead to consequent damage to the shutter system or to the overall system. If a shutter system is not fully functional, the protection from the other parts of the system may not be adequate, so that the system should no longer be used.

The procedure described in section 6 should be followed before starting up the system and after all service activities.

Alterations or modifications to the shutter system are only permitted in consultation with EITEC and require written approval. Original spare parts are a guarantee of safety. Using non-original parts can render liability for resulting damage void.

The operating safety of the shutter system is only assured if the system is used correctly in accordance with section 4 of these operating instructions (Product description). Under no circumstances may the limiting values specified here and in the engineering drawing be exceeded.

CAUTION The geared motors are connected and controlled by the purchaser of the shutter system. EITEC offers no data in this respect and accepts no responsibility for this. The motor manufacturer's safety information, enclosed with the geared motors, should be observed.

	Operating Instructions for Shutter Systems	
Document 1546078	Shutter system Eitec Art. No. 1546078-00-00-900 Weingärtner Art. No.31-0173-5043	
Page 3 / 7		

3. Transport and interim storage

EITEC shutter systems are to be protected from damage during transport. In particular, foreign bodies should be prevented from entering the system and the aluminium apron covers should not be moved unintentionally.

The systems must be stored in their original packing in dry, secure rooms.

The correct blocks and lifting machinery with the appropriate load-bearing capacity should be used for transport purposes. Transport cables should not cross over sharp edges.

Pre-assembled subassemblies of the shutter system may not be dismantled for transport purposes.

The relevant accident prevention regulations should be met (e.g. use of lifting machinery and forklifts and stack heights in warehouses)

4. Product description

The shutter system, article number 1546078, contains geared motors that hold the aluminium apron covers under tension. The shutter system is intended for installation in a higher system.

It is designed for the following operating data:

- Paint finish: RAL 9004, minimum structured finish
- Cover mat.: Alutec GL
- Bandwidth: 2690 mm
- Stroke: 7765 mm
- Max. speed: 24 m/min
- Max. acceleration: 2 m/s²
- Installation position: frontal
- Drive mechanism: 2x bevel gear motor

	Operating Instructions for Shutter Systems Page 4 / 7
Document	Shutter system Eitec Art. No. 1546078-00-00-900 Weingärtner Art. No.31-0173-5043

Technical data for gear motors:

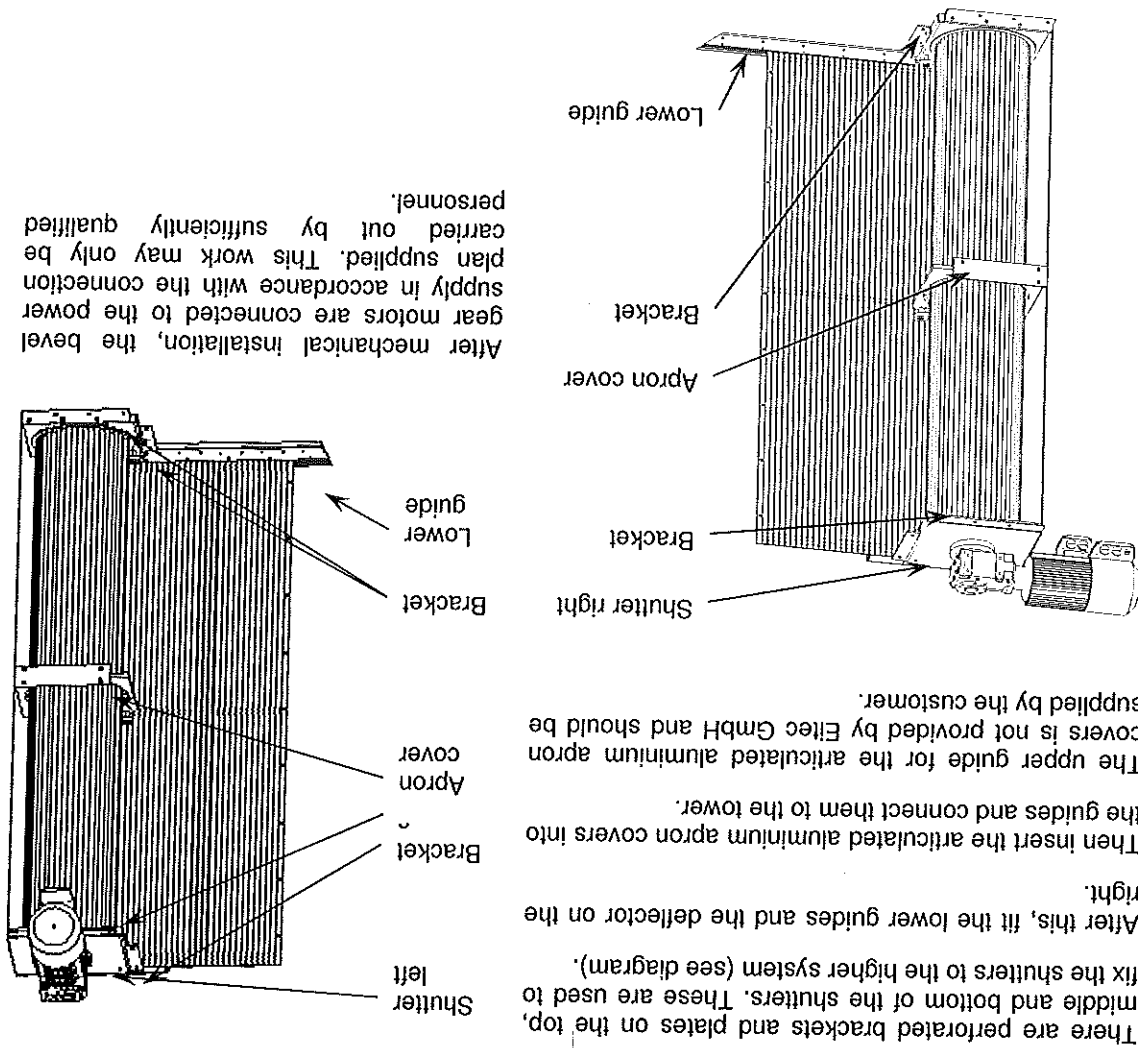
Bevel gear motor:	SEW KAF37MV100L8/TF/VS
Rotational speed:	900 / 86 r.p.m.
Total transmission ratio:	10,49
Type:	M1A
Hollow shaft:	30 mm
Model:	Flange with hollow shaft
Flange:	160 mm
Lubricant:	CLP 220 mineral oil
Amount of lubricant:	0,5
Components list:	382520795
Motor frequency:	60 Hz
Motor torque:	6,90 Nm
On-time S1, S3-S10 in %:	S1
Motor voltage / type of connection:	480 V / triangular
Rated current:	1,89 A
cos Phi:	0,68
Circuit diagram / no. :	DT13 / 08798376
Heat rating:	F
Motor protection:	IP 54
Lage-Klk, DEG / cable entry:	0 (R) / normal
Additional external fan:	VS = extraneous ventilation for connection see circuit diagram no. 097580585
External fan voltage:	230 V AC
External fan frequency:	60 Hz
External fan protection:	IP 54
Additional motor protection:	TF = temperature sensor
Components list:	085370300 / 08498298
Ls. Language / Design / Material:	German
Power rating plate 1, part number:	01860267.11
Operating instructions language-number	D
Operating instructions no.:	11226803 / 11291605
Components list language / number:	German / 1
Commodity code:	85015190
Net weight kg. :	approx. 24/pc. 24/pos.

5. Installation

After it has been delivered, check that the shutter system is complete and that there has been no damage during transport. If there are any complaints, please contact our shipping manager. Take photos of any transport damage and notify the shipping company immediately.

Our shutter system should be installed indoors in a normal, heated workshop. Please protect the shutter system from dirt, moisture and shock during installation.

The basis for installation is provided by the general drawing of the shutter system.



After mechanical installation, the bevel gear motors are connected to the power supply in accordance with the connection plan supplied. This work may only be carried out by sufficiently qualified personnel.

	Operating Instructions for Shutter Systems	
Document 1546078	Shutter system Eitec Art. No. 1546078-00-00-900 Weingärtner Art. No.31-0173-5043	
Page 6 / 7		

6. Start-up

The articulated aluminium apron covers are permanently under tension after the motors are switched on. The shutter system is now moved back and forth slowly several times through the tower. A check should be made that the articulated aluminium apron covers run smoothly. After this, the speed can be increased gradually until normal operating conditions are reached.

If unusual noises are heard, discontinue the test and eliminate the cause.

We recommend that the commissioning of the shutter system should be documented in a machine log.

7. Service and maintenance

EITEC shutter systems are designed in accordance with the operating conditions specified by the customer, and are therefore maintenance-free. Particular attention was paid to fatigue resistance in the design of the bearings and shafts. The ball bearings used by EITEC are permanently lubricated. Nonetheless, the shutter systems, like any other mechanical moving components, are subject to wear-and-tear.

We therefore recommend that the length of time for which the shutter systems are used should be recorded in the machine log and that a regular visual inspection should be performed at least once every year in order to detect any damage.

Replacement parts should be ordered in accordance with the EITEC list of replacement parts. The information on the ID plate (article number and order number) is required for this purpose.

8. Causes of malfunction and remedial measures

The aluminium articulated apron cover is pressed against the deviating shaft:

Adjust the sliding elements, check the motor torque and increase if necessary

The aluminium articulated apron cover move sluggishly:

Check that the lower guides are accurately installed (there should be no breaks between the rails). Check the motor torque and decrease if necessary

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Order-Nr.		Komm.-Nr.		Draw.-Nr.	

9. List of replacement parts

	Document 1546078
Operating Instructions for Shutter Systems 7 / 7	Shutter system Etec Art. No. 1546078-00-00-900 Weingärtner Art. No. 31-0173-5043