WITTUR

Code	GM.2.003044.EN
Version	0
Code	1800.32.0200
Version	C
Date	29.01.2014

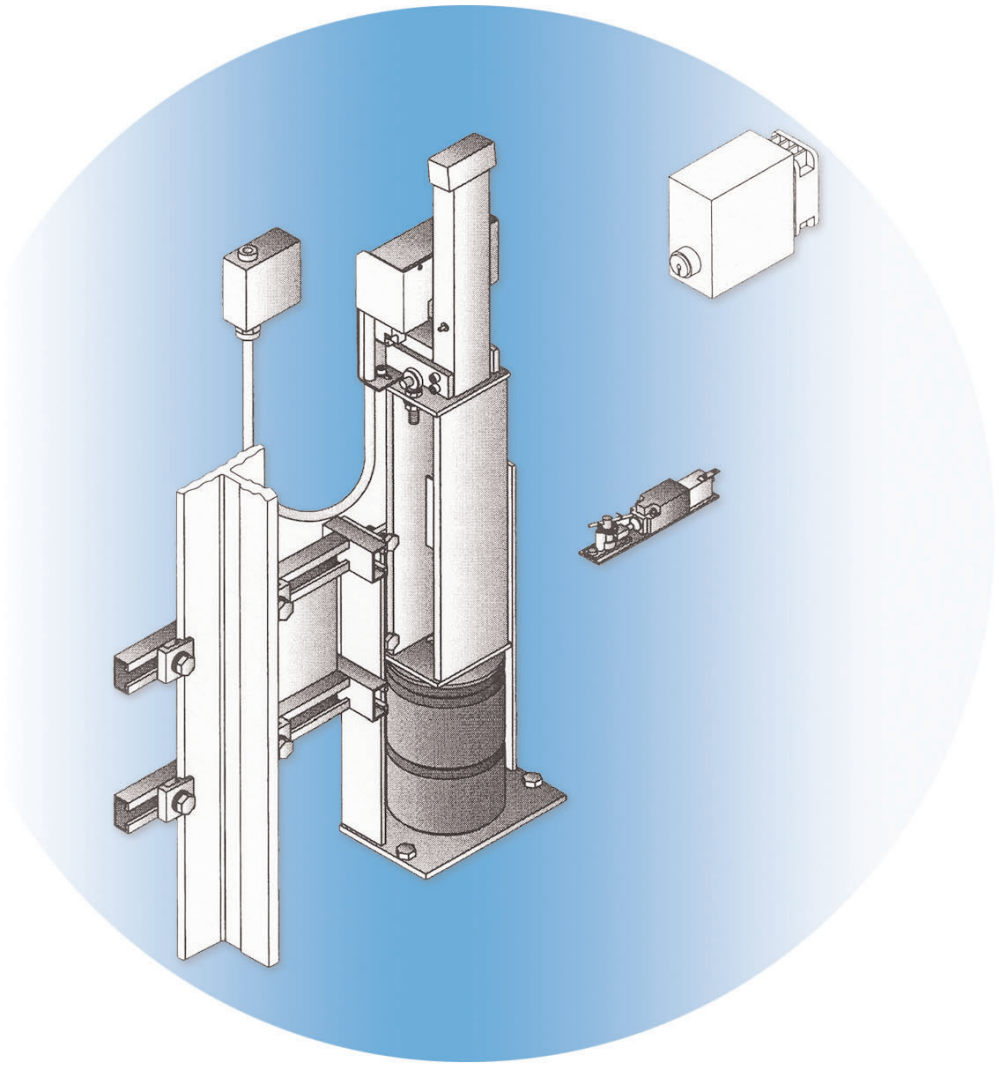
SYSTEM FOR TEMPORARY SAFETY ROOM TYPE HSG/HSK

with hinged buffers

HSG = Well pit, all drive systems

HSK = Head room, rope drive; hinged buffer at the counterweight

HSK - HYD = Well head room, hydraulic equipment; hinged buffer suspended in the well head room



URL: http://www.wittur.com
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Subject to change without notice!

SELCOM®
a WITTUR brand

SAFETY CLEARANCE SYSTEM

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MOD.	DESIGNATION	DATE
C	General up-dating	29/01/14
B	Up-dated document's Lay-out and the following points: 9.1; 9.2; 9.3	03/06/08
A	Rectified speed par. 8.2	12/05/04

SAFETY CLEARANCE SYSTEM

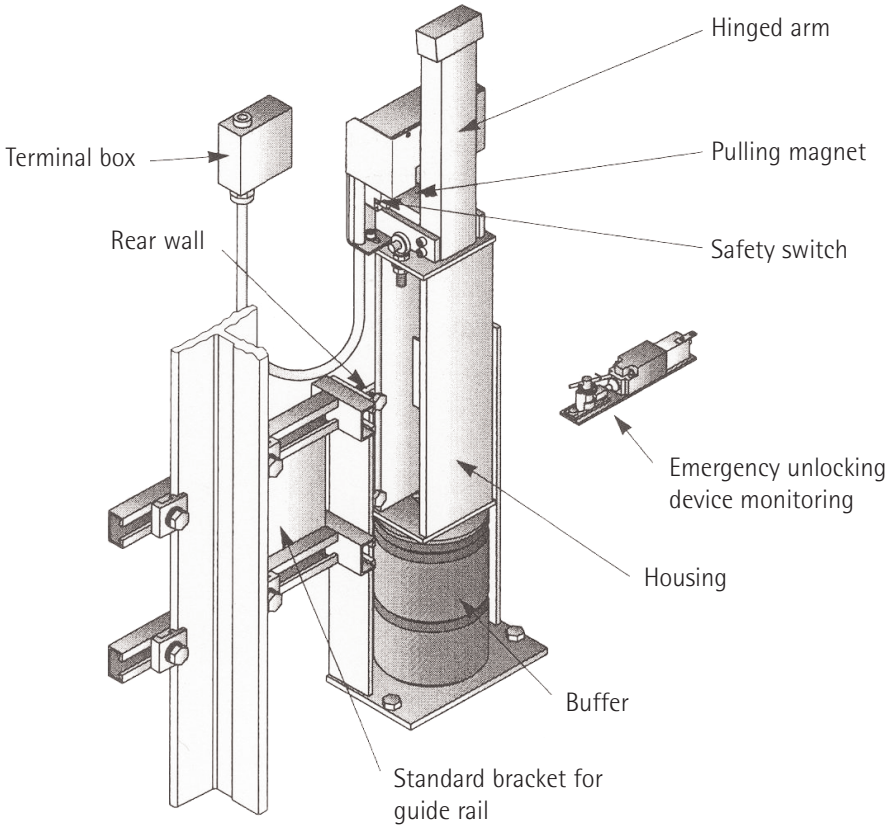
INDEX

SAFETY CLEARANCE SYSTEM

1. BEFORE INSTALLATION

1.1 DESCRIPTION AND FUNCTION

The installation of the System for temporary safety room HSG (= automatic temporary safety room - pit) and HSK (= automatic temporary safety room – in well head room) provides temporary safety rooms complying with applicable standards wherever limitations of a structure prevent sufficient temporary safety rooms.
This safety device (see figure) consists of a system of at least two hinged buffers, the supply and control unit connected to the control, and one or several special emergency unlocking device monitors for the landing door.
The System for temporary safety room type HSG / HSK is attached at least to the bottom-most lift car or counterweight guiding rail.
When the drive is switched off and the pulling magnets are not energized, the hinged arms remain in extended position (active position). When the lift car starts moving, the hinged arms are retracted by the pulling live magnet (passive position) and maintained in that position as long as the car moves.
When the lift car is flush, the pulling magnet is deenergized and the hinged arms move into active position. This provides an additional constant function test.



1.2 LIABILITY AND WARRANTY

This instruction manual has been written for persons who are familiar with the installation and maintenance of lifts.
Sufficient knowledge of lift construction is assumed.
We are not responsible for damage that impairs the properties of the product if the damage is due to unprofessional or otherwise improper activities and not in compliance with the instructions in this manual.
The warranty obligation of the firm FiA can be voided if a part is used other than described in this instruction manual.

For safety reasons, it is generally not permitted:
- To use two or more hinged supports of different design,
- To install this safety device wrongly or other than described in this instruction manual,
- To make changes of any kind to this safety device.

1.3 SAFETY PRECAUTIONS

Basically, a mechanic or repairer of machines is responsible for the safety of the work he performs.

Observation and compliance with all applicable safety instructions and statutory requirements is a precondition of preventing accident and damage to the product during installation, maintenance or repair.

Instructions requiring particular attention to ensure safety are emphasized typographically as follows:


General hazard sign


High risk of injury (e.g., pinchpoints, etc.)


Possible damage to parts (e.g., due to wrong installation, etc.)


Important information

This instruction manual is part of the machine and should be kept at a protected place to which access is possible at any time (e.g., the machine room).

The professional assembly and installation of the System for temporary safety room type HSG / HSK requires sufficiently trained personnel. The training should be provided by the installation contractor.

1.4 PREPARATION OF WORK

It is in the owner¡¦s interest that all questions regarding the suitability of the building and the space for the machine are answered before the installation starts. It should also be clear where (workshop or on site) and when what assembly work can or must be performed.

Therefore, it is recommended - considering all circumstances - to be clear about the work procedures involved and only then start actual work.


Observe all safety requirements for work on lifts.

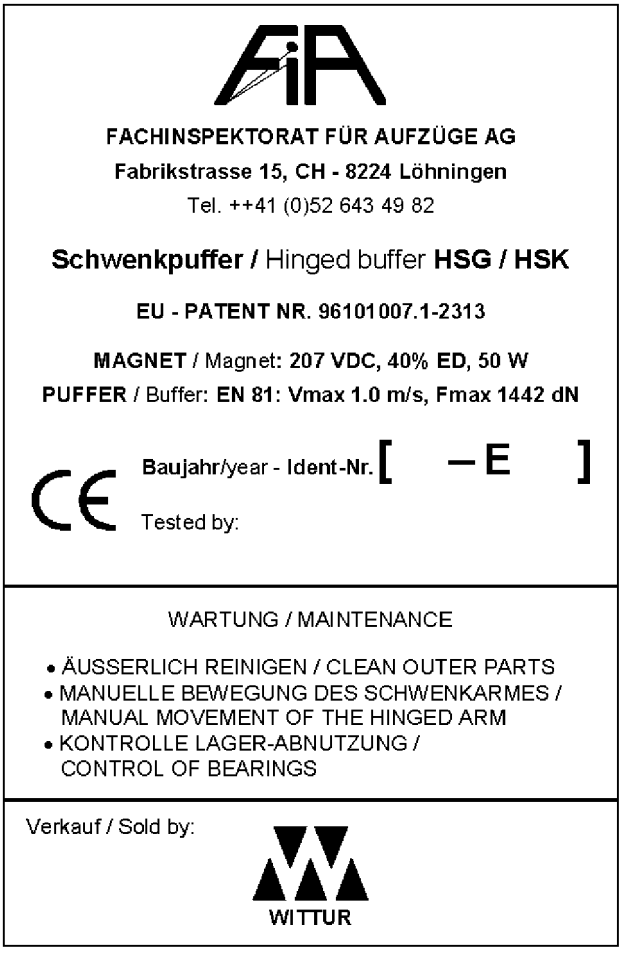
A check for completeness and correctness of all parts should be made when the equipment is delivered to the site.

Compare the article numbers and the type designations with the order details.

1.5 NAMEPLATE

The type designation is printed on the face of the hinged buffer.

Compare the information on the nameplate with the order data.

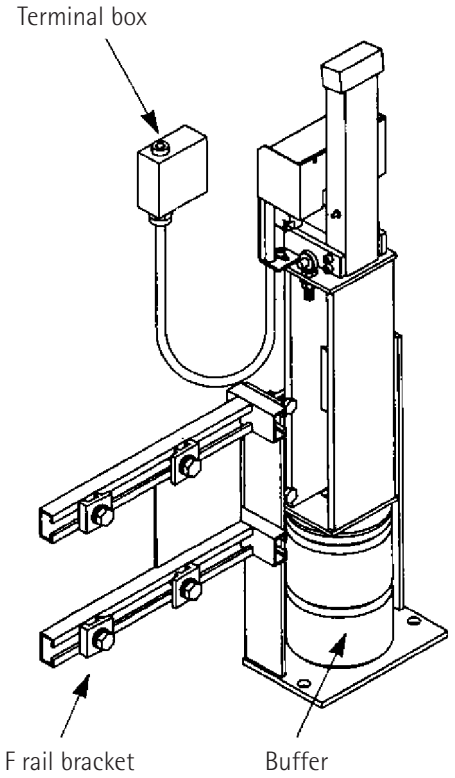


1.6 CONTENT OF DELIVERY

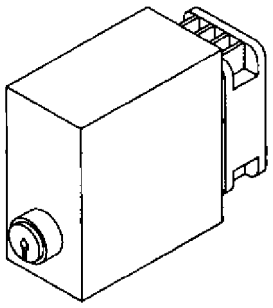
When the equipment is delivered to the site, check the consignment note and the order to make sure that the shipment is complete and correct. In particular, compare the article numbers, quantities and type designation.

The following components are part of the delivery of the System for temporary safety room type HSG / HSK:

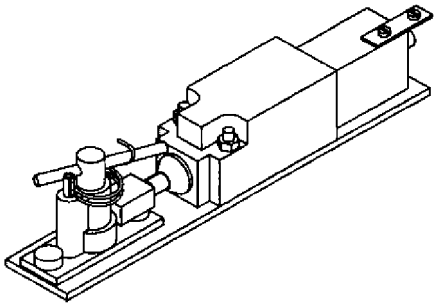
- 1 consignment note
- 2 hinged buffers
- 1 guide rail (F rail) bracket
- 1 set of labels or plates for HSG or HSK
- 1 instruction manual



- 1 supply and control unit with RESET switch



- Special landing door emergency unlocking device (as ordered)



If the consignment is intended for doors of another manufacturer, an installation note is enclosed.

2. INSTALLATION

2.1 HINGED BUFFER

The hinged buffers should be installed before the lift car / counterweight is installed.

If this procedure is reversed, no protected space may be available during installation.

Installation work requires utmost attention to all safety precautions.

The lift must be stopped and unauthorized use prevented for the duration of the installation. The car must be protected against lowering.

The well pit bottom must be able to support sufficient load.

2.1.1 Position the hinged buffers

Check to make sure that the underside of the car or counterweight frame has a suitable stop (see Figure).

WITTUR car frames have standardized stops. If other stops are fitted, observe the specified spacing's or if you are not sure contact your supplier.

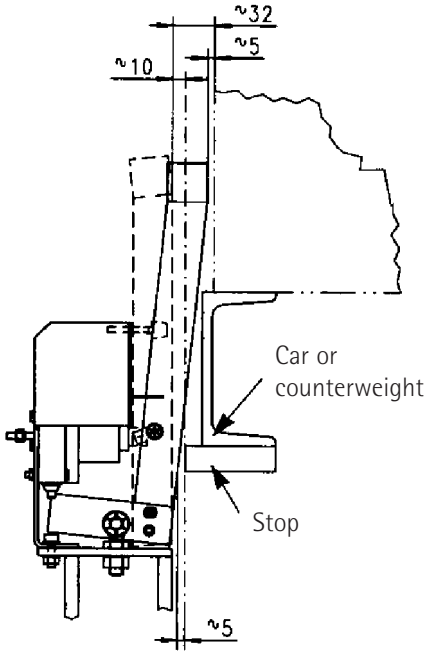
When positioning the hinged buffers, make very sure that they can move freely (See chapter "Settings"). To ensure movability, defined minimum distances to the lift car / counterweight frame and the stop must be maintained when the car stops at the highest or lowest stops (see figure).

Also observe the instructions on positioning in chapter 4.

Make sure that the pit bottom is level (remove plaster or other debris).

The hinged buffers can be fastened:
- Next to the car or counterweight guiding rails (standard fastening)
- At a 90 degree angle to the car or counterweight guiding rails (1 x 90° angle bracket)
- Directly at the wall (2 x 90° angle brackets, possibly on a footing) (See figure on page 8).

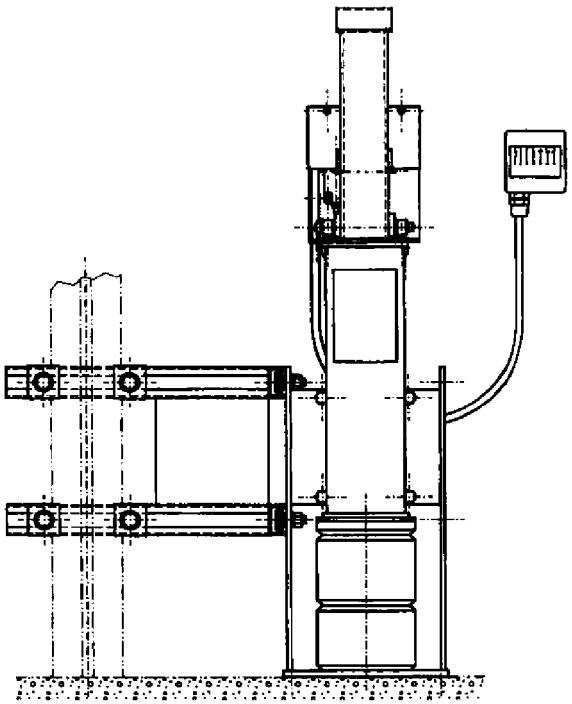
All common types of guiding rails can be used.



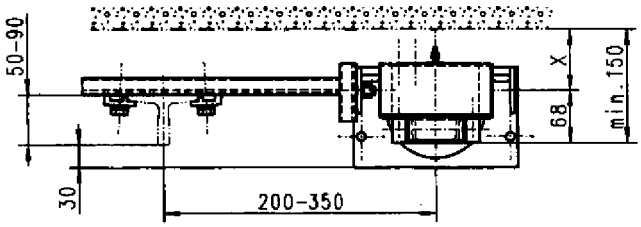
2.1.2 Attach the hinged buffers

Exactly position the type of System for temporary safety room and fasten it.

Anchoring in the floor is not absolutely necessary.
Do not damage floor with oil-resistant coating.

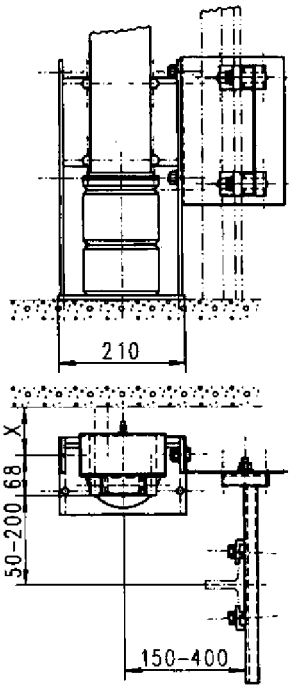


X = variabel

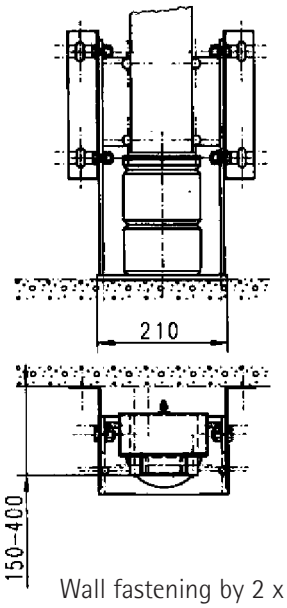


Anchor rail fastening by standard bracket

X = variabel



F rail fastening by standard and
1 x 90° angle bracket



Wall fastening by 2 x
90°angle brackets

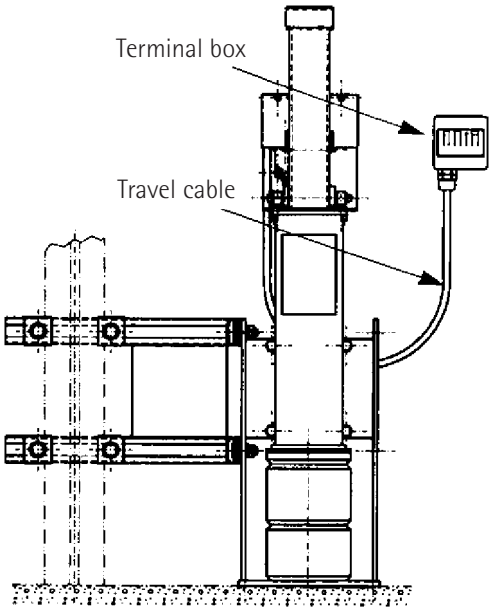
2.1.3 Installing the terminal box

The terminal box is installed at the well wall directly beside the hinged support.

- Mark the place at which the terminal box will be installed at the well wall.

Fasten the terminal box in such a way that the suspended cable is not ripped when the buffer stroke is longest (see chapter "Areas of use").

- Fasten the terminal box.



2.2 SUPPLY AND CONTROL UNIT WITH RESET SWITCH

The supply and control unit (safety device) feeds electric power to the magnets of the hinged buffers and the emergency unlocking devices. It is installed in the control cabinet of the system.

- Make the connections at the supply and control unit in the control cabinet as shown in the electric circuit plan and in the chapter "Electrical installation".

2.3 LANDING DOOR EMERGENCY UNLOCKING DEVICE

The emergency unlocking devices with monitoring device are installed at WITTUR and Sematic doors instead of the normal emergency unlocking devices.

All emergency unlocking devices are wired ready for connection. Make sure of correct polarity.

An installation note is provided for other door types.

System for temporary safety room type HSG

- Replace the emergency unlocking device of the lowest landing door against the emergency unlocking device with electrical monitoring.

- Connect the supply and control unit to the terminals.

System for temporary safety room type HSK

Unlike the well pit guard type HSG, all landing doors from which access to the car roof is possible must be equipped with emergency unlocking devices with electrical monitoring.

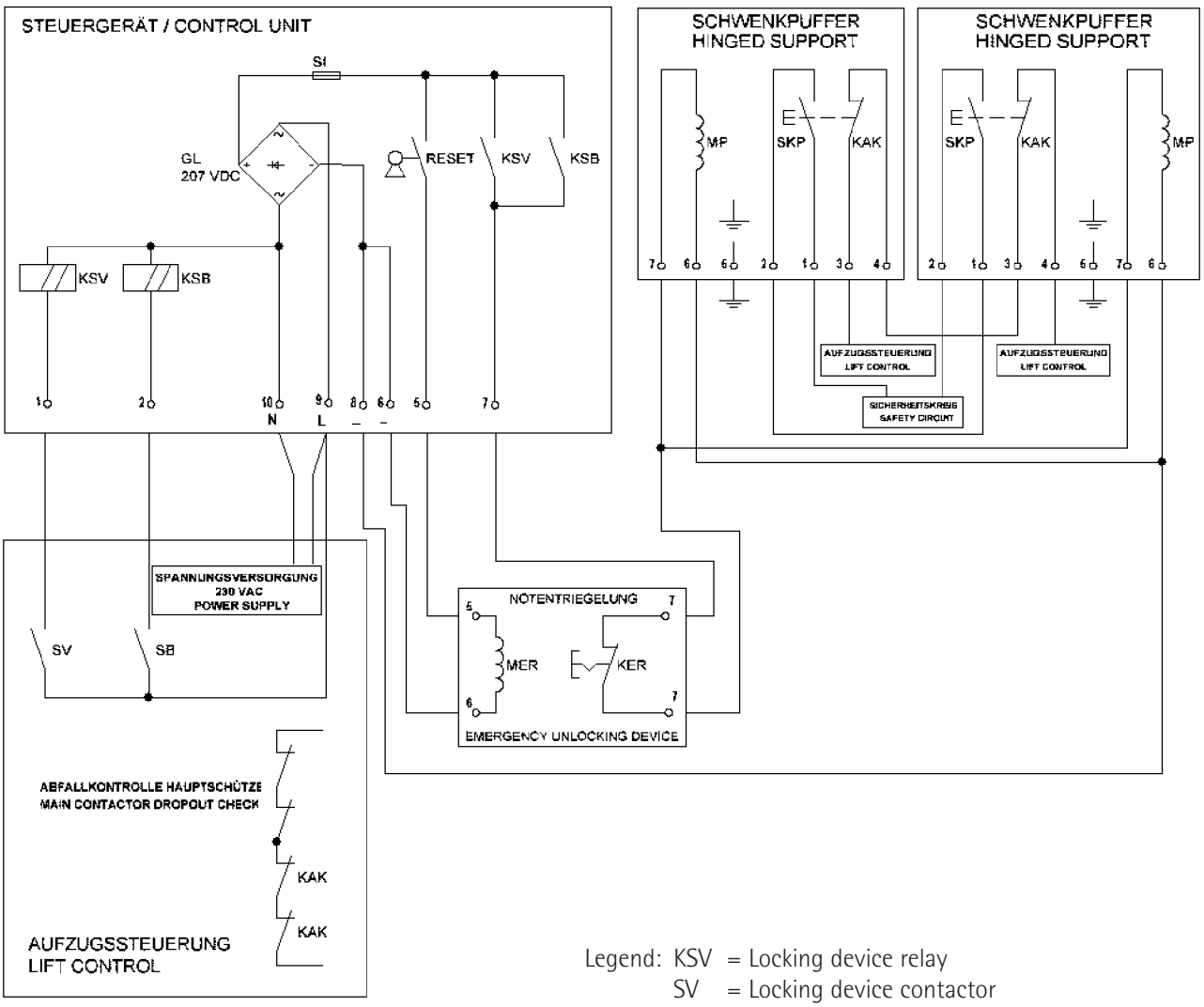
- Replace all required emergency unlocking devices against emergency unlocking devices with electrical monitoring.

2.4 ELECTRICAL INSTALLATION HSG / HSK

☞ Work on electrical equipment must only be carried out by a skilled electrician or by trained personnel.

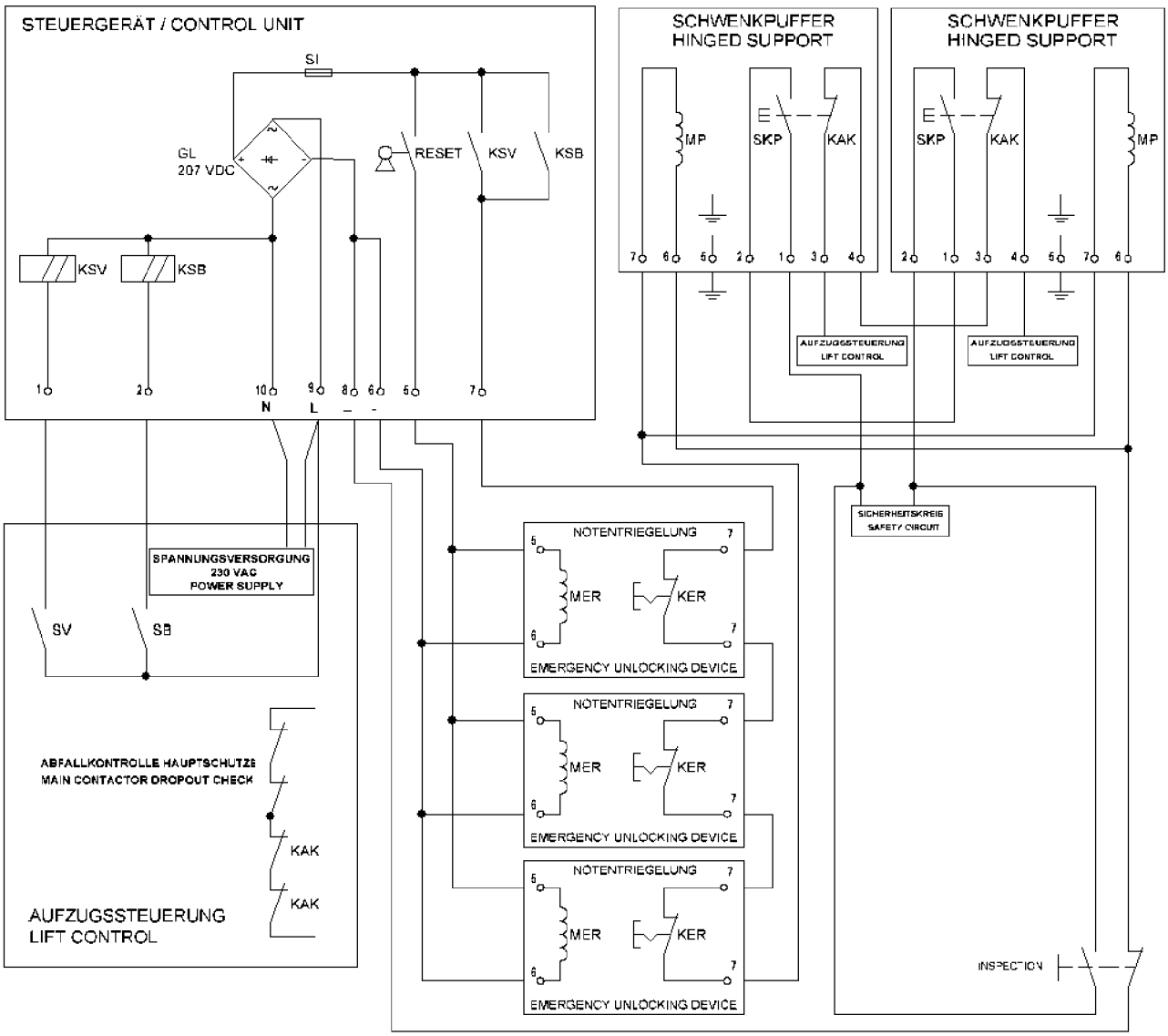
☞ Electrically isolate all parts (voltage - free) of the installation before starting work.

2.4.1 Electric circuit diagram HSG (well pit with 2 hinged buffers, any drive concept)



Legend:
- KSV = Locking device relay
- SV = Locking device contactor
- KSB = Brake relay
- SB = Brake contactor
- KER = Emergency unlocking device contact
- MER = Emergency unlocking device magnet
- MP = Buffer magnet
- SKP = Buffer safety circuit
- KAK = Dropout check contact

2.4.2 Electric circuit diagram HSK (well pit with 2 hinged buffers, any drive concept)



Inspection control ON = SKP path section jumpered
(1st additional level on rotary switch)
Inspection control ON = MP path section interrupted
(2nd additional level on rotary switch)

Legend:
- KSV = Locking device relay
- SV = Locking device contactor
- KSB = Brake relay
- SB = Brake contactor
- KER = Emergency unlocking device contact
- MER = Emergency unlocking device magnet
- MP = Buffer magnet
- SKP = Buffer safety circuit
- KAK = Dropout check contact

3. SETTINGS

3.1 HINGED BUFFERS

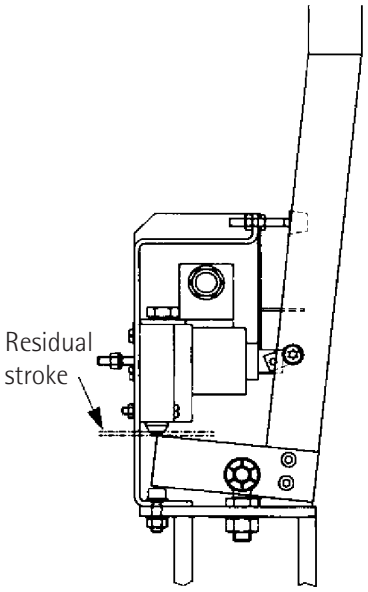
Die hinged buffer settings are ready for operation as delivered.

Hinged arm safety switch

- Make a manual check of the switch function.

When the support is extended, the contact pin of the safety switch should not be fully retracted. There should be a residual stroke of 2 - 3 mm (see Figure).

- Check the residual stroke of the safety switch.
  The switch position can be changed after slackening the fastening screws (see figure).

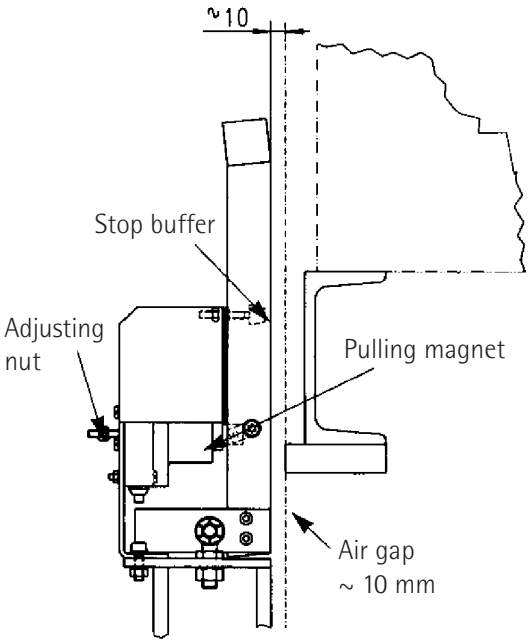


Air gap

- Check the width of the air gap.

The air gap between the vertically disposed hinged arm and the stop should be 10 mm (see Figure).

- The stop buffer acts as path limiter for the vertical position of the hinged arm.
- The adjusting nut limits the distance the hinged arm can move between the bottom end of the hinged arm and the horizontal surface of the housing. There should be no metal-to-metal contact when the arm moves out (noise).
- The working stroke of the pulling magnet is 8 mm. The stroke setting can be adjusted after moving the rear wall horizontally. When picked-up, the tick part of the anchor should project 2mm beyond the guide.
- The duty factor of the magnet is 40%.
  The magnet must only switch on the moment the car starts moving and it must be switched off when the drive switches off.



3.2 SUPPLY AND CONTROL UNIT

No intervention at the supply and control unit is permitted. As described in the chapter "Installation", the unit is only connected.

3.3 LANDING DOOR EMERGENCY UNLOCKING DEVICE

Landing door emergency unlocking devices are completely wired for connection. Make sure of correct polarity. Changes to the devices are not permitted.

Manual resetting the switch is strictly prohibited. The effect can be the same as when the safety circuit is jumpered.

4. FUNCTION TEST

Assuming that the equipment installation is made professionally and all instructions are observed, it can be assumed that the safety system is working properly.

The quality and function of all components are subject to strict controls and are tested and ready for installation when they are delivered from the factory.

Final inspection:

1. Correct position of the hinged buffer.

⚠ Before the lift is switched on, make another manual check of the size of the air gap to the stop at the car with a cord or a levelling staff and the overlap of the hinged arm, which should be 15 mm.

Do not obstruct the movement of the hinged arm. This produces noise and you need a lot more time to restore all settings (magnet stroke, switch, stop, etc.). The factory setting is in excess of 25 mm.

In no case must this check be made when the electric operation has started and you lock yourself inside the well. **Mortal Danger!**

2. Electrical operation

Before starting operation, make another check of the correct installation by reference to the circuit diagrams.

2.1 HSG system

The correct function of the hinged arms can be checked most easily by an inspection trip on the car roof in upward ⇑ direction.

2.2 HSK system

The correct function of the hinged arms can be checked most easily by in inspection trip on the car roof or with the return control in **downward** ⇓ direction.
After that, the lift can be used normally. During this, the correct installation of the stops and the clearance for dropping out are performed automatically. If something is wrong, either a fault occurs (no making of the drop-out control) or a sound is produced when the hinged arm wants to move to end position.

3. Inspect the emergency unlocking device monitoring

☞ Check all installed electrically monitored emergency unlocking devices at the end of the test runs.

Unlock the landing door with a triangle emergency door opener. After this, no run command should be accepted and the hinged buffers should remain at passive position.

Normal operation of the lift is not possible unless the RESET button is pressed.

Press the RESET button. Give a run command.
The command must be accepted.

4. Checking the duty factor

When the car stops at any stop, the magnets of the hinged buffers must be deenergized. They must remain deenergized until the dropout control before the next start of the drive.
In no case must they be actuated in any other way, e.g., after closing the doors without a run command because the duty factor of the magnets is only 40%.

The actual safety distances must never be defined by rendering limit switches ineffective. Definition without risk is made by measurement and calculation.

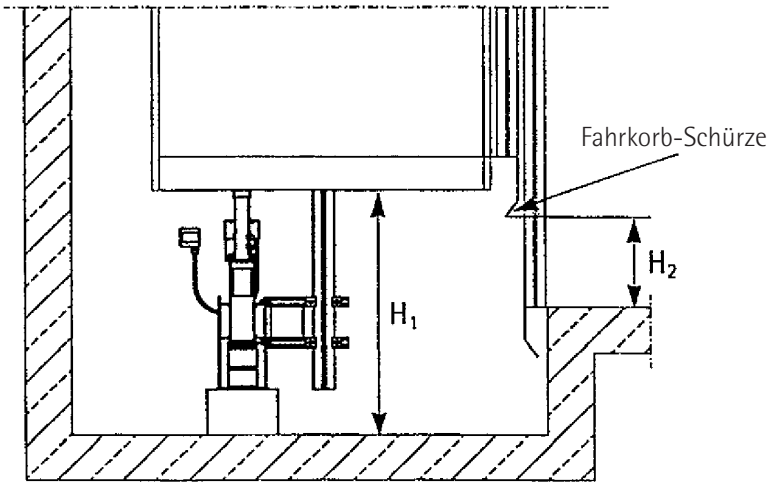
Check to make sure that the distances between the stops and the two hinged supports are exactly the same, i.e., both buffers is loaded equally.

4.1 TEMPORARY SAFETY ROOM HEIGHT

Due to the installed height of the hinged supports, the minimum non-conforming safety distances are maintained, also in compressed state with the usual position of the stops at the car frame or counterweight.

If, as shown in the figure below, an entry gap is to be secured, this can be achieved by additional footing of suitable height.

The buffer stroke is:
With **PU buffers** max. 90 mm
with **oil buffers** max. 175 mm



Car apron
H_1 = Temporary safety room height
H_2 = Entry gap height

5. MAINTENANCE, INSPECTION AND REPAIR

5.1 MAINTENANCE AND INSPECTION

The System for temporary safety room type HSG / HSK requires little maintenance.

For safe operation of the system, function tests must be made at regular intervals but at least twice every year.

Any change, damage or other irregularity should be reported and repaired if repair is permitted. Frequent maintenance and inspections not only improve the safety of operation but extend the period between failures and extends the service life of the equipment.

Inspection and maintenance is recommended especially before function tests required by law (e.g., before TÜV - inspections).

Maintenance and inspection plan

General:

- The hinged buffers require no maintenance for several years.
- Check the bearings and pulling magnet for free movement.
  Function check all switches and the tappet for wear, replace if necessary.
- Inspect the buffers.

Supply and control unit

- Inspect all cable connections and contacts.
- Check dropout.

Landing door emergency unlocking device

- Function test the landing door emergency unlocking device.

⚠ If damage or any irregularity is found which is likely to impair safety, the lift operation must be discontinued immediately.

☞ If you cannot find a solution or you have questions, contact the supplier.

☞ All maintenance must be performed professionally and with greatest care to ensure high safety of operation.

5.2 PERFORMANCE OF REPAIRS

Generally, damage or deformations at the protected space guard must not be repaired or straightened (e.g., by heating and bending). Defective parts must be replaced. Use only original parts.

All repairs must be performed professionally and with greatest care to ensure high safety of operation.

There is no protected space in the well pit during repairs.

All repairs require particular attention to safety precautions.
The lift must be taken out of operation and secured from unauthorized starting for the time of the repair.
Prevent lowering of the car.

Permitted repair:

- Replacement of switches.
- Replacement of the magnet.
- Replacement of bearings.
- Replacement of the stop buffers.
- Replacement of the buffers.

Any damage that cannot be repaired by observing the instructions in this manual or whose cause is not clear should be reported immediately to your nearest representative of the company WITTUR (within the EU) or to FiA - Fachinspektorat für Aufzüge AG (for Switzerland).

6. LIFT MAINTENANCE WORKS

☞ The following working steps must be performed when maintenance requires entry in the well pit or climbing on the car roof:

In the well pit (HSG)

⚠ Remove the RESET key and take it along before starting maintenance work.

- Move the car up until entry in the well pit is possible.
- Open the lowest landing door with a triangle emergency door opener and open the door.

⚠ The safety circuit of the lift is interrupted (indirectly) when the emergency unlocking device of the landing door is actuated. The lift cannot operate normally unless the RESET button is pressed. The hinged supports are extended (direct interruption). This establishes the required temporary safety room.

At the end of maintenance work:

⚠ Remove all objects from the well pit and check to make sure that all persons have left the pit.

- Close the landing door and inspect the lock.
  No run command is accepted at this stage.
- Press the RESET button at the supply and control unit.
- Check to see that the lift starts moving on a run command.

- Protect the landing door from closing.
- Set the well pit switch OFF.
- Perform maintenance in the well pit.

In the well / well head room (HSK)

⚠ Remove the RESET key and take it along before starting maintenance work.

- Move the car onto a lower floor.
- Open the landing door with a triangle emergency door opener and open the door.

⚠ The safety circuit of the lift is interrupted (indirectly) when the emergency unlocking device of the landing door is actuated. The lift cannot operate normally unless the RESET button is pressed. The hinged supports are extended (direct interruption).
This establishes the required temporary safety room.

At the end of maintenance work:

⚠ Remove all objects from the well pit and check to make sure that all persons have left the car roof. Then RESET the inspection trip switch.

- Close the landing door and inspect the lock.
  No run command is accepted at this stage.
- Press the RESET button at the supply and control unit.
- Check to see that the lift starts moving on a run command.

- Step on the car roof.
- Switch on the inspection trip control.
- Perform maintenance in the well / well head room.

The upward movement is limited by the extracted hinged supports, in addition to the inspection trip limit switch.

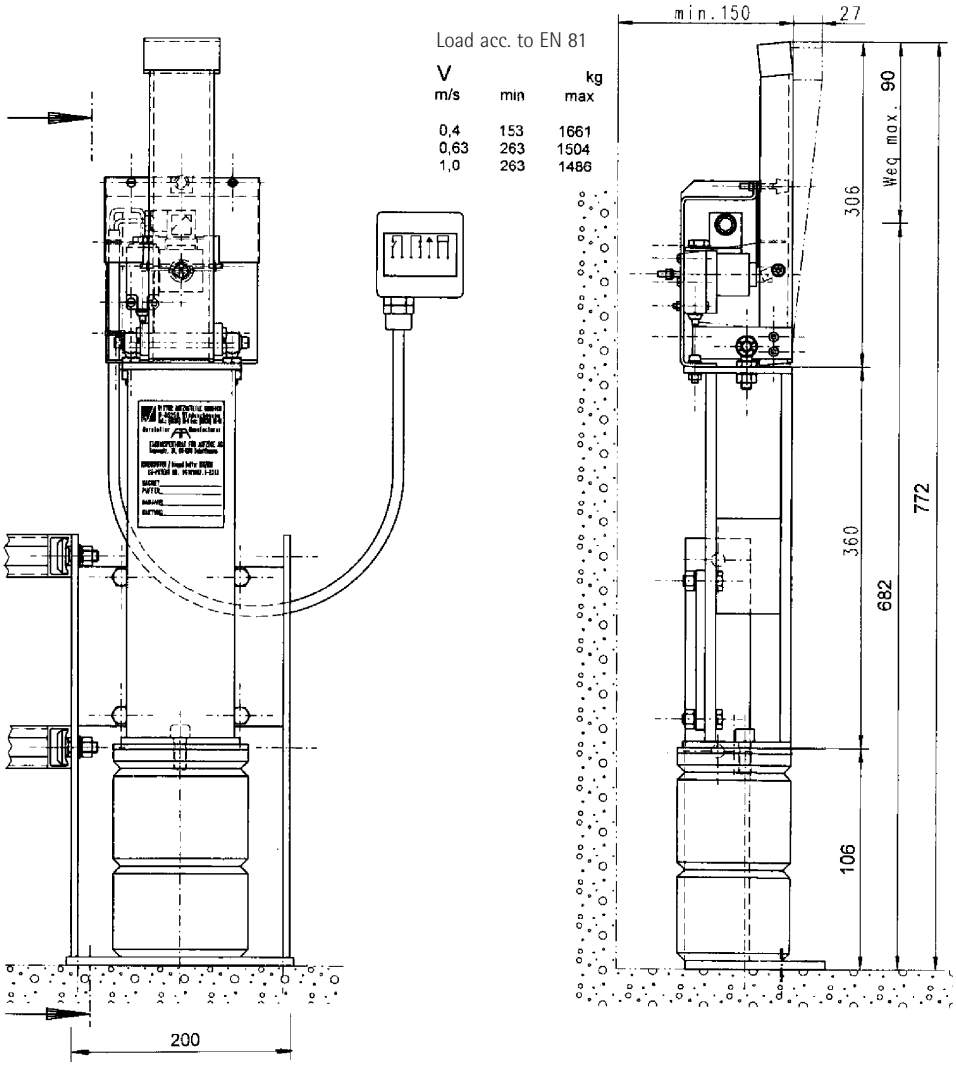
7. HINGED BUFFER SPECIFICATIONS

Standard hinged buffers are delivered with the following buffers:

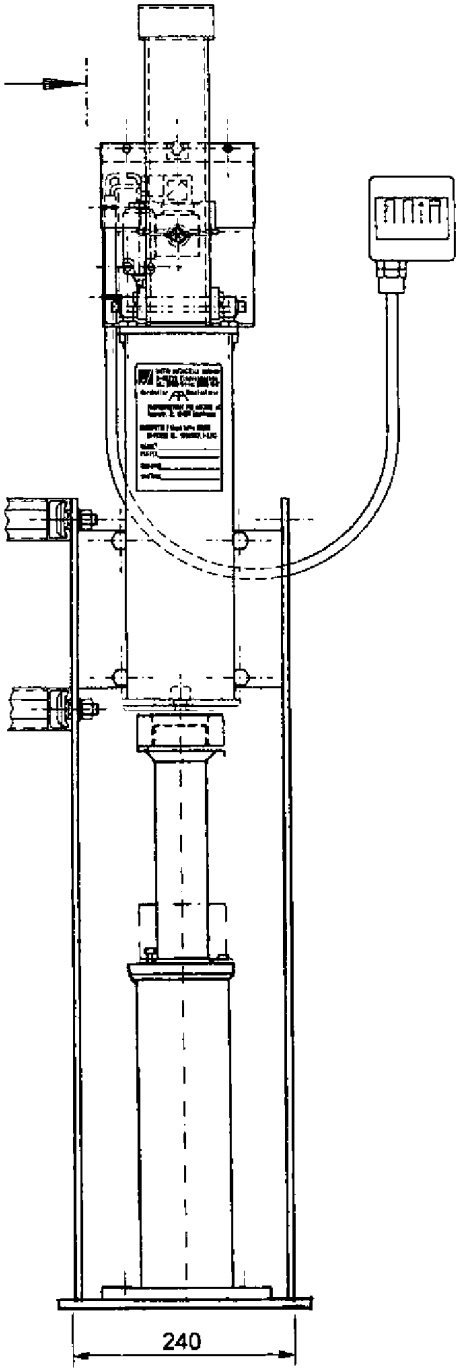
- PU buffers V max 1.0 m/s product of P + S; type E2
- Oil buffers V max 1.6 m/s product of Henning; type LP 40

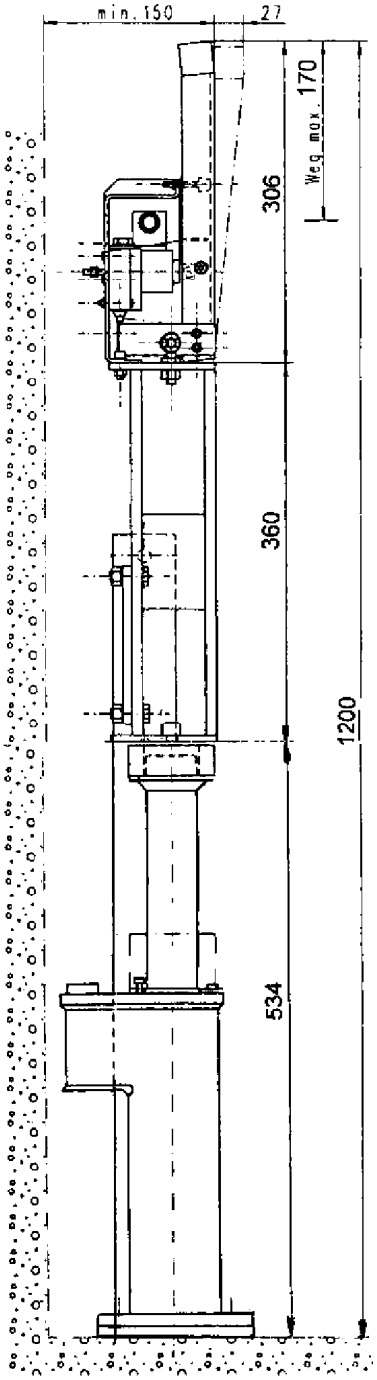
7.1 SYSTEM FOR TEMPORARY SAFETY ROOM WITH PU BUFFERS

Height refers to the standard buffer E-2 (Ø 125 x 100)



7.2 TEMPORARY SAFETY ROOM GUARDS WITH OIL BUFFERS





8. ANNEX

8.1 DECLARATION OF CONFORMITY (EG TYPE TEST)

TÜV Hannover/Sachsen-Anhalt e. V. • Mitglied der TÜV CERT

TÜV CERT

Konformitätsaussage
im Sinne einer EG - Baumusterprüfung

Bescheinigungs-Nr.:	**08/208/A-BT03**
Benannte Stelle:	**TÜV CERT-Zertifizierungsstelle des TÜV Hannover/Sachsen-Anhalt e. V. Kenn-Nr. 0032**
Bescheinigungsinhaber:	**Fachinspektorat für Aufzüge AG Sonnenberg 30 CH - 308207 Schaffhausen**
Antragsdatum:	**19.10.2000**
Hersteller:	**s. Bescheinigungsinhaber**
Produkt, Typ:	**Schutzraumabsicherung Typ HSG/HSK bzw. HSK - Hydraulik zur Erzeugung temporärer Schutzräume im Schachtkopf bzw. in der Schachtgrube**
Datum und Nummer des Prüfberichtes:	**01/YMA 128465a vom 02.08.2001**
Aufstellungsort des Aufzuges:	
EG-Richtlinie:	**Aufzugsrichtlinie 95/16/EG**
Prüfergebnis:	**Für den im Anhang zu dieser Konformitätsaussage angegebenen Anwendungsbereich erfüllt die Schutzraumabsicherung Typ HSG/HSK bzw. HSK-Hydraulik für den Schutzraum im Schachtkopf bzw. in der Schachtgrube des Aufzuges die grundlegenden Sicherheits- und Gesundheitsanforderungen der Richtlinie**
Ausstellungsdatum:	**02.08.2001**

TÜV CERT-Zertifizierungsstelle
für Maschinen, Aufzugs- und Fördertechnik
des TÜV Hannover/Sachsen-Anhalt e.V.

Der Fachzertifizierer

Rosin

TÜV NORD

DAR-Reg.-Nr.: ZLS-ZE-136/97
Kenn-Nr. der benannten Stelle: 0032

AP/CERTNORD 10.98

Anhang zur Konformitätsaussage Nr. 08/208/A-BT03

TÜV Hannover/Sachsen-Anhalt e.V. • A Member of TÜV CERT

Attestation of Conformity
with Respect to an EC typeexamination certificate

Certificate No.:	**08/208/A-BT03**
Named office:	**TÜV CERT Certification Office of TÜV Hannover/Sachsen-Anhalt e.V. Identification number 0032**
Certificate Holder:	**Fachinspektorat für Aufzüge AG Sonnenberg 30 CH - 308207 Schaffhausen**
Data of application:	**19/10/2000**
Manufacturer:	**see Certificate Holder**
Product, Type:	**Type HSG/HSK and HSK Hydraulic protection space safeguards for creating temporary protection spaces in a shaft pit or shaft head**
Date and number of the test report:	**01/YMA 128465a, dated 02/08/2001**
Installed location of the lift:	
EC Directive:	**Lift Directive 95/16/EC**
Test result:	**For the application area stated in the Attachment to this Attestation of Conformity, the Type HSG/HSK and HSK Hydraulic protection space safeguards for providing protection space in a lift shaft pit or shaft head meet the basic safety and health requirements of the Directive.**
Date issued:	**02/08/2001**

TÜV CERT-Certification Office
for Machine, Elevator and Conveyor Technology
of the TÜV Hannover/Sachsen-Anhalt e. V.

The expert certifier

Rosin

DAR-Reg. No.: ZLS-ZE-136/97
ID No. of the named office: 0032

Attachment to Attestation of Conformity No. 08/208/A-BT03

ID 10.98

8.2 ANNEX TO THE DECLARATION OF CONFORMITY

Anhang zur Konformitätsaussage Nr. 08/208/A-BT 03

TÜV NORD

1. **Anwendungsbereich:**
Durch den Einbau der Schutzraumabsicherung Typ HSG/HSK zur Erzeugung temporäre Schutzräume im Schachtkopf bzw. in der Schachtgrube kann bei Aufzügen mit Schachtschiebetüren, bei denen der Schutzraum nach EN 81-1/ 2 nicht vorhanden ist, für die Zeit des Aufenthalts von Personen im Gefahrenbereich normativgerechter Schutzraum geschaffen werden. Entsprechend den unterschiedlichen Anforderungen gibt es folgende unterschiedliche Ausführungsformen der Schutzraumabsicherung:
HSG= selbsttätig wirkende Schutzraumabsicherung in der Schachtgrube
HSK= selbsttätig wirkende Schutzraumabsicherung im Schachtkopf
HSK HYDRAULIK= selbsttätig wirkende Schutzraumabsicherung im Schachtkopf bei Hydraulikaufzügen

2. **Einsatzgrenzen für HSG/HSK:**

Nenngeschwindigkeit m/s	Puffer	max. Belastung je Schwenkpuffer kg
bis 0,40	PU- Puffer, Typ E 2	1661
bis 0,63	PU- Puffer, Typ E 2	1504
bis 1,00	PU- Puffer, Typ E 2	1486
bis 1,60	Ölpuffer WHB 40 x 175	3000

Die Ausführung erfolgt entsprechend dem Systembeschrieb 07.02.01 Index:- Stand: Mai 2001.

Für den Einbau der Schutzraumabsicherung Typ HSG/HSK in einen Aufzug sind die Anforderungen des jeweiligen Mitgliedstaates zu beachten (siehe Ziffer 2.2 des Anhanges I der Richtlinie 95/16/EG)

Durch diese Konformitätsaussage wird der Einsatz in explosionsgefährdeter Umgebung nicht abgedeckt.

3. **Bedingungen**

Zum Inverkehrbringen eines Aufzuges mit der Schutzraumabsicherung Typ HSG/HSK sind folgende Unterlagen mit den aktuellen Daten zu erstellen und - falls erforderlich - bei Überprüfungen vorzulegen:

- Betriebsanleitung 96.07.02; Blatt 1 - 20 Stand Mai 2001 Index: a Schutzraumabsicherung HSG/HSK
- Betriebsanleitung 01.02.27; Blatt 1 - 11 Stand Mai 2001 Index: - Schutzraumabsicherung HSK Hydraulik

Die Konformitätsaussage gilt nur für die vorgestellten Muster. Bei Änderungen sind diese der Prüfstelle mitzuteilen. Die Prüfstelle prüft die Änderungen und teilt dem Hersteller mit, ob die Konformitätsaussage weiterhin gilt.

Die Konformitätsaussage darf nur zusammen mit dem dazugehörigen Anhang verwendet werden

BA 02 04.00

Attachment to Attestation of Conformity No. 08/208/A-BT03

TÜV NORD

1. **Application area:**
In the case of a lift with sliding shaft doors that does not have protection space compliant with EN 81-1/2, fitting a Type HSG/HSK protection space safeguard can create a protection space for persons in the hazard zone for the duration of their presence in that zone. In accordance with the various requirements, there are three different versions of the protection space safeguard:
HSG: self-actuating protection space safeguard for use in the shaft pit
HSK: self-actuating protection space safeguard for use at the shaft head
HSK Hydraulic: self-actuating protection space safeguard for use at the shaft head with a hydraulically driven lift.

2. **Application area:**

Rated speed (m/s)	Buffer	Maximum load per swivelling buffer (kg)
up to 0.40	PU buffer, type E 2	1661
up to 0.63	PU buffer, type E 2	1504
up to 1.00	PU buffer, type E 2	1486
up to 1.60	Oil buffer WHB 40 x 175	3000

The construction is in accordance with the System Description document 07.02.01, Index: –, Rev.: May 2001.

For the installation of a Type HSG/HSK protection space safeguard in a lift, the requirements of the member state in question are to be observed (see Item 2.2 of Annexe I of Directive 95/16/EC).

This Declaration of Conformity does not cover use in environments subject to explosion hazard.

3. **Conditions**

For the putting a lift with Type HSG/HSK protection space safeguard into circulation, the following documents are to be generated with current data, and to be made available for inspections or tests as necessary:

- Operating Manual 96.07.02; pp. 1–20, Rev. May 2001, Index: a
  Type HSG/HSK Protection Space Safeguard
- Operating Manual 01.02.27; pp. 1–11, Rev. May 2001, Index: –
  Type HSK Hydraulic Protection Space Safeguard

The Declaration of Conformity is only valid for the provided sample. All modifications are to be reported to the Testing Body, which will examine the modifications and advise the manufacturer whether the Declaration of Conformity remains valid.

The Declaration of Conformity may only be used in combination with the associated Addendum.

BA 02.03.02

8.3 CONFORMITY TEST CERTIFICATE (EN 81-21)

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD Industrie Service

Bescheinigung über eine Konformitätsprüfung

Bescheinigungs-Nr.:	KP 196
Zertifizierungsstelle:	TÜV SÜD Industrie Service GmbH Zertifizierungsstelle für Produkte der Fördertechnik Westendstraße 199 80686 München - Deutschland
Antragsteller/ Bescheinigungsinhaber:	FiA-Fachinspektorat für Aufzüge AG Fabrikstrasse 15 8224 Löhningen - Schweiz
Antragsdatum:	02.08.2011
Hersteller:	FiA-Fachinspektorat für Aufzüge AG Fabrikstrasse 15 8224 Löhningen - Schweiz
Produkt:	Einrichtung zur Sicherstellung der Schutzräume im Schachtkopf und/oder in der Schachtgrube
Typ:	HSG / HSK
Prüflaboratorium:	TÜV SÜD Industrie Service GmbH Prüflaboratorium für Produkte der Fördertechnik Prüfbereich Aufzüge und Sicherheitsbauteile Gottlieb-Daimler-Straße 7 70794 Filderstadt – Deutschland
Datum und Nummer des Prüfberichtes:	18.04.2012 KP 196
Prüfgrundlagen:	- Richtlinie 95/16/EG (Juni 1995), Anhang I - EN 81-21:2009 (D); Ziffer 5.5 und 5.7
Ergebnis:	Der Prüfgegenstand erfüllt bei bestimmungsgemäßer Verwendung, für den im Anhang (Seite 1 - 3) zu dieser Bescheinigung über eine Konformitätsprüfung angegebenen Anwendungsbereich, unter Einhaltung der genannten Bedingungen, die Anforderungen der Prüfgrundlagen.
Gültigkeit:	18.04.2017
Ausstellungsdatum:	18.04.2012

Zertifizierungsstelle für Produkte der Fördertechnik

Chadi Noureddine

TÜV SÜD Industrie Service GmbH

TÜV®

Certificate of a Conformity Test

Certificate number:	KP 196
Notified body:	TÜV SÜD Industrie Service GmbH Certification Office for Conveyor Technology Products Westendstrasse 199 80686 Munich – Germany
Applicant / certificate holder:	FiA-Fachinspektorat für Aufzüge AG Fabrikstrasse 15 8224 Löhningen – Switzerland
Application date:	2 August 2011
Manufacturer:	FiA-Fachinspektorat für Aufzüge AG Fabrikstrasse 15 8224 Löhningen – Switzerland
Product:	Facility for providing protected spaces in the shaft head and/or shaft pit
Type:	HSG/HSK
Testing laboratory:	TÜV SÜD Industrie Service GmbH Testing Laboratory for Conveyor Technology Products – Department for Lifts and Safety Components Gottlieb Daimler Strasse 7 70794 Filderstadt - Germany
Date and number of the test report:	18 April 2012 / KP 196
Basis for testing:	- Directive 95/16 EC (June 1995), Annex I - EN 81-21:2009 (D), cls. 5.5 and 5.7
Result:	When used as intended, the test object complies with the requirements of the basis for this test for the application referred to in the Annex (pages 1 – 3) of this Certificate of a Conformity Test provided the specified conditions are observed.
Valid until:	18 April 2017
Date of issue:	18 April 2012
	Certification Office for Conveyor Technology Products
	Sd./ Chad Noureddine Print: Chad Noureddine
	Stamp: TÜV SÜD Industrie Service GmbH TÜV SÜD

8.4 ANNEX TO THE CONFORMITY TEST CERTIFICATE

TÜV SÜD Industrie Service

Anhang zur Bescheinigung über eine Konformitätsprüfung
Nr. KP 196 vom 18.04.2012

1 Anwendungsbereich

1.1 Einrichtung zur Sicherstellung der Schutzräume im Schachtkopf (HSK) und in der Schachtgrube (HSG).

Die Einrichtung besteht aus einem System von mindestens zwei Schwenkpuffern (pro sicherzustellendem Schutzraum), einem Versorgungs- und Sicherheitssystem (Steuergerät) sowie einen oder mehreren Sicherheitskontakten zur Überwachung der Notentriegelung an den Zugangsstellen.

Bei Aktivierung des Systems ragen je zwei Schwenkpuffer (außer in der untersten bzw. obersten Haltestelle) unter das Gegengewicht oder den Fahrkorb und stellen somit den erforderlichen Schutzraum im Schachtkopf und/oder der Schachtgrube sicher.

Das System wird bei jedem Stillstand des Fahrkorbes aktiviert und durch das Sicherheitssystem überwacht. Vor Fahrtbeginn werden die Schwenkpuffer elektromagnetisch eingeklappt. Eine Normalfahrt ist nur bei eingeklappten Schwenkpuffern möglich.

Der Zugang zur Schachtgrube bzw. zum Fahrkorbdach wird über bistabile Sicherheitsschalter an den Notentriegelungen der Schachttüren detektiert. Die Rückstellung der bistabilen Sicherheitsschalter geschieht über eine im Schaltschrank der Aufzugssteuerung befindliche abschließbare Rückstelleinrichtung.

2 Bedingungen

2.1 Der Aufzugsanlage mit der Einrichtung zur Sicherstellung der Schutzräume, Typ HSK / HSG sind die folgenden Unterlagen beizufügen

- die Konformitätsaussage Nr. 08/208/A-BT 03
  Die dort genannten Einsatzgrenzen für HSG und HSK sind einzuhalten

und

- die Betriebsanweisung Nr. 96.07.02, Index: e, Stand 2011

2.2 Bei Aufzügen mit handbetätigten Schachttüren muss ein zweiter Sicherheitsschalter nach EN 81-1/2:1998+A3:2009 (D), 14.1.2 jede Bewegung des Fahrkorbes verhindern, wenn eine Tür offen ist die einen Zugang zum Fahrkorbdach (bzw. zur Schachtgrube) ermöglicht. Dieser Schalter darf ohne Verwendung eines Werkzeuges nicht zugänglich sein.

2.3 Die Rückstellung des Sicherheitssystems und die Rückkehr in den Normalbetrieb des Aufzuges darf nur durch die Betätigung einer elektrischen Rückstelleinrichtung erfolgen.

2.4 Falls das Sicherheitssystem aktiviert wurde, darf der Betrieb mittels Inspektionssteuerung nur möglich sein wenn sich die beweglichen Anschläge in der aktivierten Stellung befinden.

2.5 Bedingungen für den Einsatz als Einrichtung zur Sicherstellung der Schutzraumes im Schachtkopf (HSK)

2.5.1 Ein zusätzlicher Notendschalter nach EN 81-1/2:1998+A3:2009 (D), 14.1.2 muss beim Betrieb mittels der Inspektionssteuerung die Bewegung des Fahrkorbes in Aufwärtsrichtung unterbrechen, bevor dämpfende Teile der beweglichen Anschläge erreicht werden.

Dieser Schalter darf die Bewegung des Fahrkorbes nur in Abwärtsrichtung ermöglichen.

In der Stellung in der der Fahrkorb angehalten wurde, müssen die Prüfung und Wartung aller im Schachtkopf befindlichen Bauteile sicher vom Fahrkorbdach oder von außerhalb des Schachtes ausgeführt werden können.

2.5.2 Falls das Sicherheitssystem aktiviert wurde und sich die beweglichen Anschläge nicht in der aktiven Stellung befinden darf ein Fahren mit der elektrischen Rückholsteuerung nur in Abwärtsrichtung möglich sein.

2.5.3 Es muss sichergestellt sein, dass der Zugang zum Fahrkorbdach nur bei vollständiger Aktivierung der beweglichen Anschläge möglich ist.

2.6 Bedingungen für den Einsatz als Einrichtung zur Sicherstellung der Schutzraumes in der Schachtgrube (HSG)

2.6.1 Ein zusätzlicher Notendschalter nach EN 81-1/2:1998+A3:2009 (D), 14.1.2 muss beim Betrieb mittels der Inspektionssteuerung die Bewegung des Fahrkorbes in Abwärtsrichtung unterbrechen, bevor dämpfende Teile der beweglichen Anschläge erreicht werden.

Dieser Schalter darf die Bewegung des Fahrkorbes nur in Aufwärtsrichtung ermöglichen.

In der Stellung in der der Fahrkorb angehalten wurde, müssen die Prüfung und Wartung aller im unteren Bereich des Fahrkorbes befindlichen Bauteile sicher von der Schachtgrube oder von außerhalb des Schachtes ausgeführt werden können.

2.6.2 Falls das Sicherheitssystem aktiviert wurde und sich die beweglichen Anschläge nicht in der aktiven Stellung befinden darf ein Fahren mit der elektrischen Rückholsteuerung nur in Aufwärtsrichtung möglich sein.

2.6.3 Es muss sichergestellt sein, dass der Zugang zur Schachtgrube nur bei vollständiger Aktivierung der beweglichen Anschläge möglich ist.

3 Hinweise

3.1 Zur Identifizierung und Information über die prinzipielle Bauweise der Einrichtung zur Sicherstellung der Schutzräume im Schachtkopf (HSK) und in der Schachtgrube (HSG) sind dieser Bescheinigung die Unterlagen

- Die Konformitätsaussage Nr. 08/208/A-BT 03
- Betriebsanweisung Nr. 96.07.02, Index: e, Stand 2011

beizufügen.

3.2 Die Einhaltung der geforderten Abstände (z.B. Abmessungen der Schutzräume) nach EN 81-21:2009 (D), Ziffer 5.5.2.3 und Ziffer 5.7.2.3 ist nicht Teil dieser Konformitätsprüfung.

3.3 Die Einhaltung der Anforderungen an Abtrennungen zwischen den Aufzugsanlagen bei mehreren Aufzugsanlagen in einem Schacht nach EN 81-21:2009 (D), Ziffer 5.5.5 und Ziffer 5.7.5 ist nicht Teil dieser Konformitätsprüfung.

3.4 Die Manipulationssicherheit der Schalter zur Überwachung der Notentriegelung (z.B. einfaches Zurücksetzen von Hand) ist Abhängig von der jeweiligen Aufzugsanlage und der verwendeten Schachttüren und ist nicht Teil dieser Konformitätsprüfung.

3.5 Je nach Aufzugssystem können zusätzliche Maßnahmen nötig sein.

3.6 Das Produkt muss deutlich mit einem Hinweis auf den Hersteller und der Typenbezeichnung gekennzeichnet sein, um die Übereinstimmung des geprüften Produktes mit der Serienfertigung überprüfen zu können.

3.7 Die Bescheinigung über eine Konformitätsprüfung darf nur zusammen mit dem dazugehörigen Anhang und der Liste der autorisierten Hersteller (gemäß Anlage) verwendet werden. Diese Anlage wird ggf. nach den Angaben des Bescheinigungsinhabers aktualisiert und mit neuem Stand herausgegeben.

3.8 Diese Bescheinigung beruht auf dem Stand der Technik, der durch die zurzeit gültigen harmonisierten Normen dokumentiert wird. Bei Änderungen bzw. Ergänzungen dieser Normen bzw. bei Weiterentwicklung des Standes der Technik kann eine Überarbeitung notwendig werden.

Industrie Service

3.9 In der Liste der Sicherheitsbauteile (Anhang IV der Richtlinie 95/16/EG) sind bewegliche Anschläge zur Sicherstellung des Schutzraumes nicht enthalten. Daher kann dafür keine EG-Baumusterprüfbescheinigung gemäß Anhang V Abschnitt A (EG-Baumusterprüfung für Sicherheitsbauteile) der Richtlinie 95/16/EG ausgestellt werden.

3.10 Sollten sich neue Erkenntnisse ergeben, so behält sich die Prüfstelle vor, zusätzliche Bedingungen für den Einsatz der beweglichen Anschläge zu stellen, bzw. bestehende Bedingungen zu modifizieren.

3.11 Die Bescheinigung über eine Konformitätsprüfung Nr. KP 196 kann den erforderlichen Anzeigeunterlagen als Entscheidungshilfe für die Benannte Stelle beigefügt werden.

Annex to the Certificate of a Conformity Test
No. KP 196 of 18 April 2012

1. Field of application

1.1 Facility for providing protected space in the shaft head (HSK) and shaft pit (HSG).

The facility consists of a system of at least two hinged buffers (for each protected space to be provided), the supply and safety system (control unit), and one or several safety contacts for monitoring the emergency unlocking device at the access points.

When the system is activated, two hinged buffers each extend below the counterweight or the car (except at the bottom-most and top-most stopping points) thereby providing the required protected space in the shaft head and/or the shaft pit.

The system is monitored by the safety system and activated every time the car stops. Before the elevator starts moving again, the hinged buffers are retracted electromagnetically. Normal movement of the elevator is only possible with retracted hinged buffers.

Access to the shaft pit or the car roof is detected by bistable safety switches at the emergency unlocking devices of the shaft doors. The bistable safety switches are reset by a lockable reset device in the control cabinet of the elevator control.

2. Conditions

2.1 The elevator system with the facility for providing protected space, type HSK / HSG shall be delivered with the following documents:
- the conformity statement no. 08/208/A-BT/03,
  The application limits for HSK / HSG defined there shall be observed;

and
- the operating instructions no. 96.07.02, index: e, version: 2011

2.2 In elevators with manually operated shaft doors, a second safety switch according to EN 81-1/2:1996+A3:2009 (D), 14.1.2 shall prevent the movement of the car when one door is open that permits access to the car roof (or the shaft pit). This switch shall not be accessible without a tool.

2.3 Resetting of the safety system and restoration of normal operation of the elevator shall only be possible by actuating the electrical resetting device.

2.4 When the safety system is activated, operation by means of the inspection control shall only be possible when the movable stops are at their activated position.

2.5 Conditions for use as facility for providing protected space in the shaft head (HSK)

2.5.1 An additional emergency limit switch according to EN 81-1/2:1998+A3:2009 (D), 14.1.2 shall interrupt the upward travel of the car when operated by the inspection control before attenuating parts of the movable stops are contacted.

That switch shall only permit downward travel of the car.

Inspection and maintenance of all components in the shaft head shall safely be possible from the car roof or from outside the shaft at the position at which the car was stopped.

2.5.2 If the safety system is activated and the movable stops are not at their active position, travel under control of the electrical return control shall only be possible in downward direction.

2.5.3 It must be ensured that access to the car roof is only possible when the movable stops are activated fully.

2.6 Conditions for use as facility for providing protected space in the shaft pit (HSG)

2.6.1 An additional emergency limit switch according to EN 81-1/2:1998+A3:2009 (D), 14.1.2 shall interrupt the downward travel of the car when operated by the inspection control before attenuating parts of the movable stops are contacted.

That switch shall only permit upward travel of the car.

Inspection and maintenance of all components in the shaft head shall safely be possible from the shaft pit or from outside the shaft at the position at which the car was stopped.

2.6.2 If the safety system is activated and the movable stops are not at their active position, travel under control of the electrical return control shall only be possible in upward direction.

2.6.3 It must be ensured that access to the shaft pit is only possible hen the movable stops are activated fully.

3. Notes

3.1 For identification and information on the general construction of the facility for providing protected space in the shaft head (HSK) or the shaft pit (HSG) the following documents shall be attached to this Certificate:

- the Conformity Statement no. 08/208/A-BT/03,
- the operating instructions no. 96.07.02, index: e, version: 2011.

3.2 Compliance with the required distances (e.g., dimensions of the protected spaces) according to EN 81-21:2009 (D), 5.5.2.3 and 5.7.2.3 is not part of this conformity test.

3.3 Compliance with the requirements on separations between the elevator plants where several elevators are installed side by side in a common shaft according to EN 81-21:2009 (D), 5.5.5 and 5.7.5 is not part of this conformity test.

3.4 The tamperproof design of the switch monitoring the emergency unlocking device (e.g., simple resetting by hand) depends on the elevator plant in question and the shaft doors installed are not part of this conformity test.

3.5 Depending on the elevator system, additional measures may be required.

3.6 The product shall clearly be identified by the name of the manufacturer and the type designation so that it can be made sure that the tested product complies with the series manufacture.

3.7 The certificate on a conformity test can only be used together with the associated annex and the list of authorized manufacturers (as per appendix). This appendix can be updated as and when required on the basis of information provided by the certificate holder and a revised version issued.

3.8 This Certificate is based on the state of the art documented in the harmonized norms currently valid. When these norms change or when they are amended or the state of the art improves, a revision may be required.

3.9 The list of safety components (Annex IV of Directive 95/16/EC) does not contain movable parts for ensuring the protected space. In view of this, no EC type test certificate in accordance with Annex V section A (EC type test of safety components) of Directive 95/16/EC can be issued.

3.10 If new knowledge is developed, the testing office may define additional or modify the existing requirements for the use of movable stops.

3.11 The Certificate on a Conformity Test No. KP 196 can be added to the required notification documentation to assist the decision by the notified body.