



INTERNAL TECHNICAL STANDARD

4.80 Lifting Equipment

Updated on: 2018-01-04

Elaborated by	Guaranteed by	Approved by	No. of pages	Annexes
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The technical conditions for the outfit and execution of lifting equipment (LE) applies to both the newly acquired and the reconstructed and repaired LE in ŠKODA AUTO.

Affected equipment: a) the hoists and mobile lifting devices (hoists, crane trolleys, etc.)
 (b) cranes
 (c) movable working platforms
 (d) rack stackers
 (e) crane tracks
 (g) vehicle jacks
 (f) lifts

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Change number:	Date:	Note:
1.	2008-07-07	The addition of suppliers
2.	2010-12-21	Completely revised
3.	2012-02-20	Change in Paragraphs 3.2, 4.4
4.	2018-01-04	Completely revised



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1 General Requirements

1.1 We require supplies of lifting equipment bearing the CE marking, together with EC Declaration of Conformity according to Act 22/1997 Coll., as amended by the Act 90/2016 Coll.

1.2 We require compliance with the Government Regulation No. 176/2008 Coll. as amended, laying down the technical requirements for machinery equipment.

1.3 We require compliance with the Government Regulations No.117/2016 and No.118/2016 Coll. as amended, laying down the technical requirements for electrical equipment and the requirements with respect to electromagnetic compatibility.

1.4 The supplier of the listed Lifting Equipment (LE) must comply with the Decree No.19/1979 Coll. as amended, laying down the requirements for the tests and verification of LE.

1.5 We require the compliance with Government Regulation No.122/2016 Coll. as amended, about the conformity assessment of lifts and their safety components.

2 Performance Requirements on the Lifting Equipment

2.1. In the case of deliveries of lifting equipment, the latest state of the art, regulations, applicable standards, IEC standards, and the applicable ITS must be taken into account.

2.2 The Contractor must indicate a registration number on the LE and on the main switch; the registration number shall be allocated by PSZ.

3 The crane tracks

3.1 We require a flexible seating of the crane tracks.

3.2 Rectification and levelling of the crane tracks acc. CSN 735130, CSN EN 1090-1+A1.

3.3 Colour design of crane tracks must be in accordance with ITS 1.08.



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4 Technical documentation.

4.1 Technical documentation shall be supplied in accordance with ITS 1.01-General Technical Requirements, including translation of the text in drawings (e.g. by notes in the drawings), in the scope of 3 paper copies and 1 file on a data carrier.

4.2 SKODA AUTO reserves the right to approve the drawing documentation before starting the production.

4.3 A complete technical dossier is considered as a comprehensive form of documents that clarifies fully the operation and maintenance issues, and which contains the appropriate certificates and revisions.

4.4. The documentation must involve the following documents:

- Proof of the results of the crane track measurement in accordance with standards ČSN 73 5130 and ČSN EN 1090-1+A1
- The report and the implementation of the initial electro-revision of LE, and where appropriate, the revision of grounding of the crane track
- Protocol for the measuring of geometry of the crane bridge
- Drawing of the basement or anchoring, calculations, etc.
- A protocol on the control of steel structures according to ČSN EN 1090-1+A1, ČSN 73 2604
- Safety data sheet for the oils used
- The documentation for the implementation of the shaft, including the suspension equipment, and a drawing with calculation of the mounting support beam in the engine room of the lift

4.5 The supplier of LE is obliged to indicate in the technical documentation all possible risks associated with the use of LE, including the residual risks, the group classification, the classification of mechanisms acc. ČSN ISO 4301, and the criteria for specific assessments acc. ČSN ISO 12482-1.

5 Commissioning

5.1. Before putting the LE into operation, the supplier shall carry out tests according to Decree No. 19/1979 Coll. as amended by Decree No. 552/1990 Coll., 352/2000 Coll., NV 122/2016 Coll., NV 73/2010 Coll., ČSN 27 0142, ČSN EN 15011+A1, ČSN 27 4002, ČSN 27 4007, ČSN EN 1493, ČSN 27 0808, and ČSN EN 280+A1.

5.2 During the assembly, the supplier of LE must also comply with the regulations in force, ITS, and the organizational guidelines of SKODA AUTO a.s.

5.3 The Contractor must provably train the operators and the maintenance staff of the LE. For the lifts, a training of firefighters SKODA AUTO is necessary for freeing persons from the cabin.

5.4 Acceptance of the machinery shall be governed by the applicable ITS 1.01, and it is intended to verify the performance of the technical parameters and to check the machine completeness and compliance to ITS, to the contract and its technical specifications. All types of lifts are accepted according to ITS 1.01.



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6 Release list of elements

If it is necessary for technical reasons to choose a manufacturer that has not been released, a written consent of PSZ Dpt. is required. The below listed released components are generally specified and recommended for all supplies of LE.

6.2 Lifting mechanisms of cranes, lifting equipment and mobile lifting devices

Manufacturer: Demag
Stahl
Giga
NOPO
Brano
Yale
SEW
Siemens

6.2

Manufacturer: Demag
Stahl
Giga
SEW
Nord
Siemens

6.3 Frequency converters for cranes, lifting equipment and the mobile lifts

The provisions of ITS 1.11 - Electrics - Release of Suppliers do not apply to LE.
Their use must be approved in advance with PSZ Dpt.

Manufacturer: Demag
Schneider Electric
SEW
Lenze
Danfos
Siemens

6.4 Power supply elements

Manufacturer: Demag
Vahle
Wampfler
Schneider Electric

6.5 Mounting the rails for crane tracks

Manufacturer: Gantry
Gantrail
Ortec

6.6 Remote control of cranes and hoists

The use has to be approved in advance with ŠKODA AUTO a.s.

Manufacturer: HBC
Hetronic
Theimeg



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6.7 Movable working platforms

Suppliers of platforms: Statech
Rothlehner
Cramo
Terex

6.8 Vehicle jacks

Manufacturer: AMI
MAHA
SLIFT
NUSSBAUM
OMCN

7 Lifts

Type of lift: Passenger lifts
For transport of loads accompanied by persons

Execution: Solely with the machinery space - located above the shaft
Located next to the shaft

Technology of the lift: Traction - with a gear, without gear
Hydraulic

The lift shaft: Install a shaft with dimensions 150x250x250mm in the lift pit, intended for submersible pump, for the event of flooding of the lift by water. The whole floor must be with a slope towards the shaft. The pit shall be insulated against the ground water and an oil-resistant paint provided up to a height of 1 m.

Engine room of the lift: Each engine room must have connected a data cable terminated with a socket

Each elevator must have installed an equipment for remote monitoring with data transfer to the ŠKODA network

8 Releasing list of components for lifts

If it is necessary for technical reasons to choose a manufacturer that has not been released, a written consent of PSZ Dpt. is required. The listed components are generally specified and recommended for all deliveries of the lifts.

Control system

System designation: EKM
RVA-2
E348
Bannel
Otis
Thyssen LS3
Schneider Electric
MP EcoGo

Lifting equipment and hydraulic aggregates

Manufacturer: Alberto Sassi



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ThyssenKrupp
Otis - ReGen
Elektropohony Frenštát
GMV Martini
ITG
EM Brno
Ziehl-Abegg
MP

Landing doors and passenger door

Manufacturer: Wittur
Fermátor
Selcom
Strojon
BV Brumovice

Buttons and displays

Manufacturer: Schaefer
Vega
EL-VY

Frequency converters

Manufacturer: Yaskawa
Vakon
Thyssen
Otis
MP

The implementation, the colour of the lift cabin interior and the doors

Passenger elevator: The walls of the white tempered glass RAL 9003, a mirror on the back or side wall

Suspended ceiling with diffused light
Floor - tiles corresponding with the interior of the adjacent communication, sheet metal plate from stainless steel, grinding 400
Cabin door from stainless steel, grinding 400
Landing doors RAL 9003, from stainless steel, grinding 400 or according to the interior design
Panel recessed - white tempered glass
The control buttons square, backlit - white
Display TFT

Freight elevators: Wall, ceiling RAL 9010
Lighting, recessed with LED
Floor - profiled (droplets) sheet metal plate, stainless steel or RAL 9010
Cabin door RAL 9010
Landing doors RAL 9010, 7040, or according to interior design
Panel recessed - stainless steel, with hinges
The control buttons square, backlit - white
Display TFT



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Presentation of the design of the cabins can be requested from the department PSZ/14.

Other technical requirements for the lifts

Manufacturers and suppliers of lifts according to this ITS are obliged to make a lift offer only with the engine room above or beside the shaft. If it would not be technically possible to install this type of lifts, and a variant of lift without engine room would be necessary, the constructor must in this case present a permit of the exemption from ITS according 1.03. The exemption will be authorised by the future user and by PSZ/1 Dpt. Should a different design of cabin be required, the constructor shall submit authorisation of the exemption from ITS according 1.03. The exemption will be authorised by the future user, by PSZ/1 Dpt. , and by FIS.