Surface Protection 2011

for Wöhr Car Parking Systems

1 General Remarks

1.1 Standards

Wöhr Car Parking Systems are machines as defined by the machine directive 2006/42/EC, Appendix 1 and the EN 14010.

The surface protection – hereafter described in detail – is based on functional and technical assessments of the individual parts in order to take into account necessary, commonly encountered corrosive individual loading in accordance with DIN EN ISO 12944-1. The corrosion protection is therefore defined in various ways.

The classification of the park systems in accordance with DIN EN ISO 12944-2 states:

Corrosive category C3 moderate (inside: production rooms with high degree of damp and some air pollution or outside: urban and industrial atmosphere, moderate pollution by sulphur dioxide. Coastal areas with lowsalt content).

Caution:

As the manufacturer of these products we have no power over the respective place of use and the ambient situation. We are therefore unable to judge whether other corrosive categories or specific situations need to be observed regarding corrosion protection on account of the location where assembly takes place (cf. DIN EN IS0 12944-2 Appendix A).

If necessary the architect/investor and/or client must have a decision taken, should the corrosion category C 3 be inappropriate.

If no request is made in this regard we always supply the surface protection described below in accordance with the above-cited models.

1.2 Length of protection/repair

The length of protection in compliance with DIN EN ISO 12944-1 is medium (M) 5 – 15 years. The length of protection does not constitute a "warranty period". The length of protection is a technical term designed to help the client stipulate a repair programme. The warranty period is generally shorter than the length of protection. A repair may well be required earlier than foreseen by the cited length of protection due to fading, pollution, wear, abrasion or other reasons (cf. DIN EN IS0 12944-5, Itm. 5.5). This also does not constitute a defect covered by the warranty.

1.3 Coatings systems

Coatings with powder-based paints have been tested as medium on the basis of DIN EN ISO 12944-6 C 3.
The requirements were fulfilled and verified in batteries of tests.

Coatings with zinc in comliance with DIN EN 10326 and DIN EN ISO 1461.

1.4 Rust level

In compliance with DIN EN ISO 4628-3 and if the product is properly looked after and maintained we guarantee a rusting level of Ri 3 until the end of the agreed warranty period on coated surfaces of side supports and central plates.

Partial damage of the coating can be possibly caused by mechanical, climatic and chemical influences. The function and safety of the parking system is not impaired by this, so that coating damage does not constitute grounds for complaint or a defect covered by the warranty, provided that the rust degree Ri 3 is not crossed within the guarantee term at the driving area of the parking systems.

1.5 Cleaning and care

Please observe the info sheet "Cleaning and maintenance of platform surfaces". As part of our service our agent also offers for a separate fee cleaning and care services for Wöhr Car Parking Systems.

1.6 Lessening damage

Damage to the coating of the Car Parking Systems is prevented, among other things, by the following:

- limiting the contact with damp (e.g. clearing snow and the remains of ice from the car wheel boxes in winter before driving into the parking place)
- sufficient ventilation (avoidance of high humidity, in particular in winter)
- regular cleaning of the platform surfaces and the boxes (cf. 1.5)
- removal of box water or avoidance of box dampness
- regular attention to visible surface changes

1.7 Wear

Utilisation, abrasion and use causes the platform surface to suffer from normal wear; this does not constitutes any defect covered by the warranty.

1.8 Warranty periods

Warranty periods conforming to the offer.

1.9 Please note

We reserve the right to make design changes. Changes to model details occasioned by technical progress and environmental directives are reserved and also come into force as model change without notice.

Otto Wöhr GmbH
Auto-Parksysteme
P. O. Box 1151
71288 Friolzheim
Fon +49 [0] 7044 46-0
Fax +49 [0] 7044 46-149
www.woehr.de
info@woehr.de

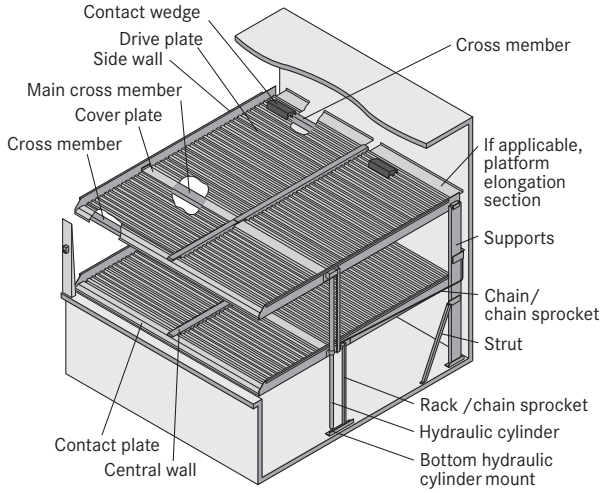
2 Corrosion protection Parklift

2.1 Platform corrosion protection

For systems: Parklift 310, 313, 340, 402, 440, 430, 401, 411, 403, 413, 461, 462, 463, 600, 635

- **Drive plates, contact plates, cover plates and, if applicable platform elongation section**
  Hot-dipped galvanised, approx. 45 µm zinc layer (according to DIN EN ISO 1461).
- **Side walls**
  Hot-dipped galvanised as per DIN EN ISO 1461 with approx. 55 µm zinc layer.
- **Central walls**
  Hot-dipped galvanised as per DIN EN 10326 with 275 g/sqm, approx. 20 µm zinc layer **and additionally top with approx. 60 – 80 µm powder coated, stone grey (RAL 7030).**
- **Cross member**
  Single units: partially hot-dipped galvanised as per DIN EN 10326 with 275 g/sqm, approx. 20 µm zinc layer, partially hot-dipped galvanised as per DIN EN ISO 1461 with approx. 55 µm zinc layer.
  Double units: hot-dipped galvanised as per DIN EN ISO 1461 with approx. 55 µm zinc layer.
- **Screws, washers, nuts of the drive plate mounting**
  Plate mounting for the side and central walls of self-channelling screws, 3 x dacromatised, approx. 8 – 12 µm layer thickness or equal alternative.

2.2 System-relevant corrosion protection



	310	313	340	402	440	430	401	411	421	403 413	461-463	600	635
Support	■	□	■	●	□	□	■	■	■	■	■	■	■
Strut support		□	△	■	□	■	△	△	■	■	■		
Hydraulic cylinder	◒	◒	◒	◒	◒	◒	◒	◒	◒	◒	◒	◒	◒
Torsion bar/synchro shaft	■	■	■	●	●	●	●	●	●	●	●	■	■
Chain sprocket/pinion				△	△	△	△	△	△	△	△		
Chain/rack				▲	▲	▲	▲	▲	▲	▲	■		
Dowelling for unit mount	△	△	△	△	△	△	△	△	△	△	△	△	△
Screws, nuts, washers	△	△	△	△	△	△	△	△	△	△	△	△	△
Hydraulic tube, hydraulic screw connections, bolts	△	△	△	△	△	△	△	△	△	△	△	△	△
Lower hydraulic cylinder mount	■	■	■	●	●	■	■	■	■	■	■	■	■
Mounts support/side wall	■	●	■	●	●	●	●	■	■	■	■	■	●
Mounts torsion bar/side wall	●	●	●	●	●	●	●	■	■	■	■	■	●
Mounts hydraulic cylinder/ side wall	●	●	■	●	●	Alu	●	■	■	■	■	■	●
Railing struts	■	■	■	■	■	■				■		■	■
Railing posts	□	□	□	□	□	□				□		□	□
Solenoid valves	Alu	Alu	Alu	Alu	Alu	Alu	Alu	Alu	Alu	Alu	Alu	Alu	Alu
Hydraulic unit	●	●	●	●	●	●	●	●	●	●	●	●	●

2.3 Symbol legend

△ galvanised as per DIN 50961, zinc layer approx. 5 – 8 µm

□ hot-dipped galvanised as per EN 10327, approx. 20 µm zinc layer (continuously galvanised)

■ hot-dipped galvanised as per DIN EN ISO 1461, approx. 55 µm zinc layer (localised layer thickness as minimum value)

▲ black, greased

○ Sand blasted (purity grade SA 2,5), primer coat approx. 40 µm, covering coat approx. 80 µm

◒ Painted with one-coat paint, thickness of layer approx. 80 µm, colour gravel grey (RAL 7032)

● Stained, greased plate, bath-cleaned phosphated, powder-coated on epoxy resin basis, Layer thickness approx. 60 – 80 µm, colour gravel grey (RAL 7032)

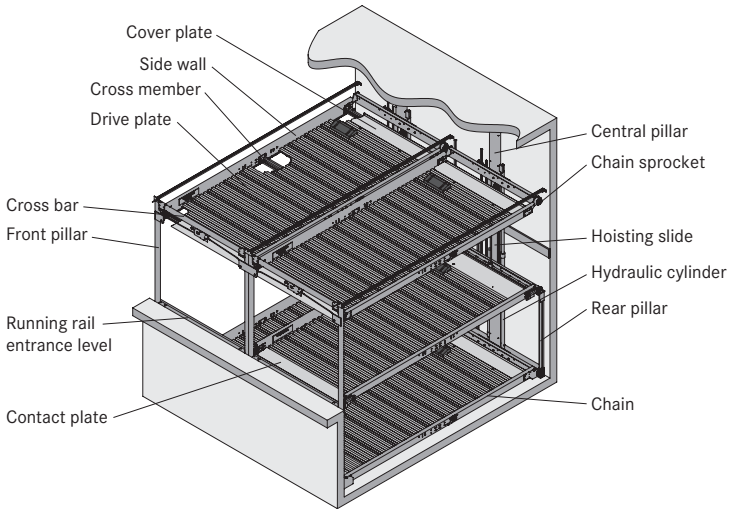
3 Corrosion protection Combilift

3.1 Platform corrosion protection

For systems: Combilift 551, 552, 553, 542, 543, 544

- **Drive plates, contact plates, cover plates**
  Hot-dipped galvanised, approx. 45 µm zinc layer (according to DIN EN ISO 1461).
- **Side walls**
  Hot-dipped galvanised as per DIN EN ISO 1461 with approx. 55 µm zinc layer.
- **Cross member**
  Partially hot-dipped galvanised as per DIN EN 10326 with 275 g/sqm, approx. 20 µm zinc layer,
  partially hot-dipped galvanised as per DIN EN ISO 1461 with approx. 55 µm zinc layer.
- **Screws, washers, nuts of the drive plate mounting**
  Plate mounting for the side and central walls of self-channelling screws, 3 x dacromatised, approx. 8 – 12 µm layer thickness or equal alternative.

3.2 System-relevant corrosion protection



	551	552	553	542 543	544
Pillar	●	f: ● r: ■	■	●	■
Central pillar	●	●	■	●	
Hydraulic cylinder	◪	◪	◪	◪	◪
Torsion bar/synchro shaft		●	●		●
Plates	●	●	●	●	●
Cross bar	△	△	△	■	■
Chain/chain sprocket	△	△	△	△	△
Rack	▲	▲		▲	△
Chain/wire rope	▲	▲	▲	▲	▲
Dowelling for unit mount	△	△	△	△	△
Screws, nuts, washers	△	△	△	△	△
Hydraulic tube, hydraulic screw connections, bolts	△	△	△	△	△
Lower hydraulic cylinder mount	■	■	■	■	■
Mounts support/side wall	●	●	●	●	●
Running rail entrance level	■	■	■	■	■
Mounts hydraulic cylinder hoisting slide	■	■	■	■	■
Solenoid valves	Alu	Alu	Alu	Alu	Alu
Hydraulic unit	●	●	●	●	●

3.3 Symbol legend

△ galvanised as per DIN 50961, zinc layer approx. 5 – 8 µm

□ hot-dipped galvanised as per EN 10327, approx. 20 µm zinc layer (continuously galvanised)

■ hot-dipped galvanised as per DIN EN ISO 1461, approx. 55 µm zinc layer (localised layer thickness as minimum value)

▲ black, greased

○ Sand blasted (purity grade SA 2,5), primer coat approx. 40 µm, covering coat approx. 80 µm

◪ Painted with one-coat paint, thickness of layer approx. 80 µm, colour gravel grey (RAL 7032)

● Stained, greased plate, bath-cleaned phosphated, powder-coated on epoxy resin basis, Layer thickness approx. 60 – 80 µm, colour gravel grey (RAL 7032)

4 Corrosion protection Parking Platform/Turntable

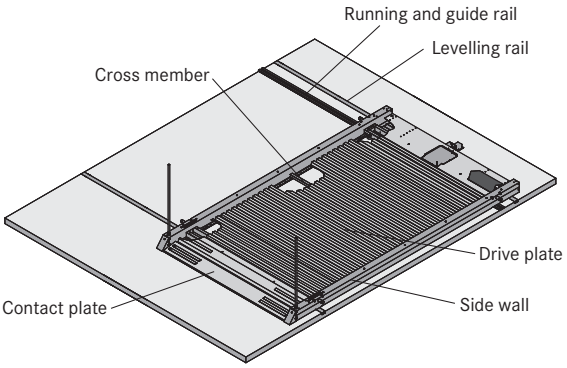
4.1 Platform corrosion protection

For systems: Parking Platform 501, 503; Turntable 505

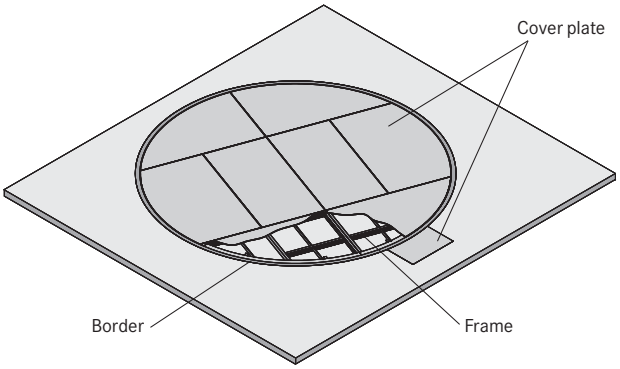
- **Drive plates (Parking Platform 501, 503) and cover plates (Turntable 505)**
  Hot-dipped galvanised, approx. 45 µm zinc layer (according to DIN EN ISO 1461).
- **Side walls (Parking Platform 501)**
  Hot-dipped galvanised as per DIN EN ISO 1461 with approx. 55 µm zinc layer.
- **Frame (Parking Platform 503)**
  Hot-dipped galvanised as per DIN EN 10326 with 275 g/sqm
- **Cross member**
  Partially hot-dipped galvanised as per DIN EN 10326 with 275 g/sqm, approx. 20 µm zinc layer,
  partially hot-dipped galvanised as per DIN EN ISO 1461 with approx. 55 µm zinc layer.
- **Screws, washers, nuts of the drive plate mounting**
  Plate mounting for the side and central walls of self-channelling screws, 3 x dacromatised, approx. 8 – 12 µm layer thickness or equal alternative.

4.2 System-relevant corrosion protection

Example: Parking Platform 501



Turntable 505



	501	503	505
Contact plate	■	□	
Running and guide rail	■	■	
Levelling rail	■	■	
Chain sprocket/pinion	△	△	
Chain/rack	▲	▲	
Dowelling for unit mount	△	△	△
Frame			■
Border			■

4.3 Symbol legend

△ galvanised as per DIN 50961, zinc layer approx. 5 – 8 µm

□ hot-dipped galvanised as per EN 10327, approx. 20 µm zinc layer (continuously galvanised)

■ hot-dipped galvanised as per DIN EN ISO 1461, approx. 55 µm zinc layer (localised layer thickness as minimum value)

▲ black, greased

○ Sand blasted (purity grade SA 2,5), primer coat approx. 40 µm, covering coat approx. 80 µm

◪ Painted with one-coat paint, thickness of layer approx. 80 µm, colour gravel grey (RAL 7032)

● Stained, greased plate, bath-cleaned phosphated, powder-coated on epoxy resin basis, Layer thickness approx. 60 – 80 µm, colour gravel grey (RAL 7032)