LOGISTICS MANUAL - GLOBAL

iwis engine systems with all plants

Version 1.0
# Index

1. **General information** 3  
   1.1 Introduction 3  
   1.2 General logistics requirements 4  
   1.3 General logistics guideline 5  
   1.4 Term explanations 6  
   1.5 Co-applicable norms, regulations and guidelines 8  
   1.6 General instructions for the packaging design 9  

2. **ALLOWED PACKAGING MATERIALS AND PACKAGING AIDS FOR IWIS COMPONENTS** 10  

3. **VALIDATION OF THE PACKAGING MEASURES** 10  

4. **GENERAL INFORMATION ON THE EXECUTION OF PACKAGING AND CONSERVATION MEASURES** 11  

5. **INFORMATION ON THE DISPATCH OF PACKAGED COMPONENTS IN CONTAINERS** 12  

6. **INFORMATION ON THE LOAD SECURING OF PACKAGING PIECES** 13  

7. **LABELLING / SHIPPING DOCUMENTS** 13  
   7.1 General labelling 13  
   7.2 Standardised labels 15  
   7.3 Identification of goods and shipping documents 16  

8. **DUTY / FOREIGN TRADE** 17  
   8.1 General customs requirements 17  
   8.2 Documents for import shipment 17  
   8.3 Shipments in the scope of most favoured nation agreement 18  
   8.4 Origin of goods 18  

9. **ANNEXES TO THE REGULATIONS** 18
1. GENERAL INFORMATION

1.1 Introduction

This manual regulates the worldwide logistic handling of iwis and it serves as easy to understand and practice-oriented handbook. It also provides information to suppliers on the existing guidelines and regulations in the field of logistics. The standards provided by iwis motorsysteme are summarised and described in detail.

The following manual describes the generally valid and required packaging measures.

The generally applicable specifications refer to the HPE¹ and GDV² packaging guidelines, the VDI³ 2700 and the CTU packing guideline⁴.

The mentioned values and load assumptions are obtained from normal loads in the transport chain; as they occur during transport by sea and ashore for the correct handling, storage and load securing. That applies to mechanical and climatic loads during the storage and transport.

A description of the components and special component-specific characteristics and requirements are enclosed in the packaging requirements (annex sheet 3). These are, in particular, the sensitivity of the components to mechanical and climatic loads, as well as details on the required packaging measures and applications.

¹ HPE Verpackungsrichtlinie (Holz, Paletten, Exportverpackungen e. V.)
HPE packaging guideline (German Association of wood, pallets and export packaging)

² GDV Verpackungshandbuch (Gesamtverband der Deutschen Versicherer)
GDV packaging manual (German Insurance Association)

³ VDI (Verein Deutscher Ingenieure)
VDI (Association of German Engineers)

⁴ CTU (Richtlinie für das Packen von Ladung in oder auf Beförderungseinheiten (CTU’s) mit allen Verkehrsträgern zu Wasser und zu Lande)
CTU (guideline for the packing of loads in or on transport units (CTU) with all means of transport on water and on land)
1.2 General logistics requirements

The following requirements must be met for the worldwide export goods traffic. It should be noted that the delivery of the parts can take place in Europe, Asia, North America or South America.

- The parts must be packed undamaged, clean, corrosion-free and preserved. The protection against corrosion must be effective for at least 6 months after the goods receipt at iwis, if not otherwise agreed

- Warranty of a non-damaged delivery of the parts (in case of damages that must be verified by the supplier by means of a packaging test according to standard ISTA 2 A/B, and a climate test according to standard DIN EN 60068-2-30)

- Prevention of dirt and compliance with the latest iwis residual dirt standard N380001.

- No direct contact of the parts with uncoated corrugated or solid board, as well as with hygroscopic filling material

- Optimum and economic capacity utilisation of the receptacles and assembly of loading units suitable for the handling

- Labelling of all the individual containers and loading units with control cards and VDA labels, see annex, sheet 4

- Warranty of trouble-free handling of the goods by means of floor conveyors and motor vehicles

- Stack ability of at least 3 pallets superposed

- Compliance with the standard dimensions specified by iwis

- Optimum parts removal from the individual and additional packaging

- Recyclable and abrasion-resistant packaging materials

- Compliance with the environmental regulations of the particular recipient country

- Wood packaging treated and labelled according to IPPC¹ standard

¹IPPC (International Plant Protection Convention)
- Adequate insurance coverage by the consignor
- Dry and air-conditioned storage
- Coverage against worldwide environmental influences during the trucking, sea and air transport

1.3 General logistics guidelines

- The design of the packaging (also see annex, sheet 2: packaging material) is agreed in detail between the suppliers and the packaging planning department of iwis motorsysteme. The costs for the design must already be included in the offer.

- Attempts of packaging must be performed within the scope of the initial sample supplies and they must be documented with photograph and description, even if the supplier has not requested it. The documentation and photographs must be sent to the iwis packaging planning for approval.

- The determination of the final packaging is an element of our AQP (Advanced Quality Planning), that you obtain with each initial sample order.

- It must be ensured that all the necessary staff have received an adequate training concerning transport safety and cargo disposition.

- iwis checks the condition of the loading units and the compliance with the packaging instructions when goods are received. Deviant packaging is only admissible after written approval by our purchase department and packaging planning department! This must then be registered in the delivery order. Pallets and loading units must only be delivered correctly sorted.

- The approval of a packaging does not release the suppliers from their responsibility for a non-damaging und dirt-free goods delivery!

- In case of a non-authorised deviation from the regulations, iwis motorsysteme reserves the right to charge its suppliers with the occurring costs of handling and repacking, or to return the goods to the suppliers freight forward.

Deviation catalogue, see annex, sheet 1
1.4 Term explanations

Load:
Recapitulation of the external mechanical, climatic and biotic loads on the packaging and/or the packaged good.

Stress:
Results of the effect of loads on the packaging and/or packaged good.

Stress-resistant packaging:
A stress-resistant packaging is a packaging which assures a safe dispatch of the packaged good considering the dispatch route, delivery time, means of transport, country of destination, location and reloading, as well as a storage according to the specifications, before, during and after the dispatch; that is, a packaging is stress-resistant for the expected transport, handling and storage loads.

Container packaging:
The container packaging is a general term for packaging designs which enable the storage of a packing piece in the container.

Disposable packaging:
Packaging which can only be sent once.

Export packaging:
See stress-resistant packaging.

Dangerous goods packaging:
Packaging for dangerous goods according to the applicable dangerous goods regulations. The design and construction methods of dangerous goods packaging are not part of this guideline.
Conservation:

Anti-corrosion measures against the effect of rainwater or seawater, high air humidity and variations in temperature, as well as anti-corrosion measures for packaged goods in the scope of the packaging against external chemical and physical influences.

Conservation period:

Period during which the conservation of a packaging is effective.

Reusable packaging:

Packaging suitable for multiple use, possibly demountable or foldable so it can be re-used.

Loading carrier:

Product made of packaging material which is intended for enclosing or holding together the packaged good, so that it becomes transportable and suitable for storage.

Loading unit:

A physical transport unit. Consists mostly of loading equipment e.g. pallet, container, lids, pallet cage, etc., packaged goods and securing means for loading unit.

Packaged good:

Good which can be transported, handled and stored after being packaged.

Packaging material:

Raw material which is used to produce the packaging mean and packaging aid.

Packing piece:

Packaging which is ready for dispatch.

Heavy cargo:

Packaged good which requires a special packaging due to its weight and/or its construction and dimensions.
Seaworthy packaging:
See stress-resistant packaging.

Delivery time:
Period from the delivery of the packaging piece to the transport company to its receipt at the consignee.

Packaging:
General term for the totality of the packaging means and packaging aids.

Shipping packaging:
Individual packaging piece or composed packaging pieces to form a shipping unit.

Dispatch route:
Route which a packaging piece covers from the dispatcher to the receiver.

This is not a complete compilation, but only a selection of the most common terms.

1.5 Co-applicable standards, regulations and guidelines

- DIN EN ISO 780 1999-04  Packaging – graphic symbols for the handling of goods
- DIN 55402-2 1982-06  T 2 Labelling for the dispatch of packaging pieces; guideline for export packaging
- DIN 55473 2008-10  Packaging; drying agent bag; technical delivery conditions
- TL 8135-0003  Packaging materials; aluminium-laminated film
- TL 8135-0019  Films for packaging purposes; low density polyethylene (PE-LD)
- CTU packaging guideline:  Guideline for packing the load (except for bulk good) in or on the transport units (CTU) for transport with all means of transport, on water and on land
The technical expense and use of packaging and packaging systems must be examined in terms of its profitability and it must be arranged with iwis motorsysteme.

Packaging means and packaging materials must be made of environmentally friendly, recyclable materials which are suitable for recycling all over the country.

If using timber, an ISPM 15 processing, which corresponds to the current requirements, must be verified.

Anti-corrosion measures must be laid out by iwis for a transport and storage time of 6 months from the goods receipt. The VCI method is favoured. The effectiveness of the used method must be verified by iwis via an adequate validation.

The boundary conditions provided by iwis concerning dimensions, for example in case of folded boxes and loading units, must be observed (annex sheet 2).

The gross weight of a packaging unit for the export (loading unit) must not exceed 1000 kg.

A bottom clearance of 100 mm below loading units must be ensured for floor conveyors. The retract ability of floor conveyors must be possible from all sides.

The interconnection load carrier / load, as well as the dimensional stability of the loading units must be lined on the basis of transport and handling loads.
2 Allowed packaging materials and packaging aids for IWIS components

The packaging, packaging materials and packaging aids specified in the chart in the annex, sheet 2 describe the packaging products applied for the IWIS components.

3 Validation of the packaging measures

A validation of the packaging measures is verified by the warranty of a non-damaged partial delivery (in case of damages that must be verified by the supplier by means of a packaging test according to standard ISTA 2 A/B, and a climate test according to standard DIN EN 60068-2-30).

The packaging measures must be reviewed and adapted continuously in terms of their adequacy and effectiveness by means of a Risk-Engineering System. The corresponding modifications must then be registered in coordination with iwis in the data sheets.
4 General information on the execution of packaging and conservation measures

A pre-treatment of the components, as well as of the packaging means and packaging aid which have been used can be required due to the condition of the components and the stresses caused by the transport, handling and storage loads.

- All the packaging means and packaging aids must be stored in a dry condition; that particularly applies to hygroscopic packaging materials.

- Anti-corrosive agents must be applied and stockpiled according to the specifications of the manufacturer. Industrial safety regulations must be observed.

- All the non-protected surfaces must be cleaned and dried before the conservation.

- Drying agents must not be in direct contact with the metal surfaces.

- A partial disassembly of the packaged good can be required:
  - in order to facilitate the handling of the packaged goods
  - in order to reduce the volume to be packed
  - in order to secure overhanging or fragile components
  - in order to prevent damage to the packaging measure by the packaged good

- Padding of parts, corners, edges
  - to protect the film wraps
  - to protect them against impacts, shocks, vibrations
5 Information on the dispatch of packaged components in containers

The 20’ISO standard containers which have been used are self-contained, non-ventilated transport systems. They do not replace any packaging. They reduce the mechanical transport, handling and storage loads for the individual packaging pieces. The exterior climatic loads are reduced to temperature loads in the interior.

The humidity loads in closed system containers result from the material humidity of the hygroscopic packaging means and packaging aids of the packaging pieces which are transported in the container. Therefore, a preliminary storage of these materials or also of packaging pieces must be effected under dry conditions.

A corrosion protection must be used for the components inside the individual packaging pieces in the container.

The container must have a valid approval of prototype according to CSC Safety Approval and ACEP (Approved Continuous Examination Programme).

Load values for ISO standard containers, loading and pile-up information

<table>
<thead>
<tr>
<th>Load capacity of container</th>
<th>Loading / load capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Floor loading / distributed load</strong></td>
<td>Payload Container interior length [t/m]</td>
</tr>
<tr>
<td><strong>Side wall</strong></td>
<td>0.6 x Payload largest possible force distribution</td>
</tr>
<tr>
<td><strong>Door / end wall</strong></td>
<td>0.4 x Payload largest possible force distribution</td>
</tr>
<tr>
<td><strong>Lashing rings</strong></td>
<td>800 to 1000 daN</td>
</tr>
<tr>
<td><strong>Mass centre</strong></td>
<td>In the intersection of the diagonal sides, lateral displacement underneath, if possible. Mass centre 20’ container ± 0.6 m</td>
</tr>
</tbody>
</table>
6 Information on load securing of packaging pieces

The load securing of the packaging pieces in the container must always be performed form-closed combined with force-fit measures.

For the load securing during road and maritime transport, arithmetical verifications must be carried out and then documented.

Impact indicators can be applied.

A photographic documentation of the executed load securing measures is necessary.

The people dealing with the shipment and load securing must prove that they have received corresponding instructions.

The responsibility of the loader for the load securing must be clarified.

7 Labelling / shipping documents

7.1 General labelling

Labelling is a significant element of shipping packages. It consists of:

- Marking
- Labels
Labelling is specified by Nordex. If this is not the case, labelling can be effected according to DIN 55402 T2. Labels for packaged goods must correspond to DIN EN ISO 780 in order to be generally understandable.

The writing should run parallel to the bottom edge of the packaging piece. It must be legible in the normal transport position. All the inscriptions should be written in Arabic ciphers and in capital letters of the alphabet. The letter size to be selected complies with the available space. Labels must be preferably designed in black colour, RAL 9005. The colour must be light resistant and saltwater-proof; it must not blur.

If special storage labelling is required, this must be agreed between iwis and the packer.

In case of goods which are dispatched unpacked or partially packaged, the marking must be placed directly on the good. In doing so, it must be ensured that the colour of the packaged goods and the labelling are different.

Further labelling requirements must be only applied upon request of iwis. They can consist of:

- Handling instructions
- Content indications
- Colour marking for components and so forth
- Packing lists/documents in sheet bags
- Seal of quality
- Manufacturer indications for packaging
- Identification of drying agents or VCI packaging
- Indications for wood protection treatment (e.g. for packaging made of wood)
### 7.2 Standardised labels

<table>
<thead>
<tr>
<th>No.</th>
<th>Meaning</th>
<th>Symbol</th>
<th>Function</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>fragile</td>
<td><img src="image1.png" alt="Symbol" /></td>
<td>The content of the packaging piece is fragile; therefore, it must be handled with care.</td>
<td>ISO 7000, no. 0621 example of use</td>
</tr>
<tr>
<td>3</td>
<td>top</td>
<td><img src="image2.png" alt="Symbol" /></td>
<td>It indicates the correct upright position of the packaging piece.</td>
<td>ISO 7000, no. 0623 example of use</td>
</tr>
<tr>
<td>6</td>
<td>protect from humidity</td>
<td><img src="image3.png" alt="Symbol" /></td>
<td>The packaging piece must be kept in a dry environment.</td>
<td>ISO 7000, no. 0626</td>
</tr>
<tr>
<td>7</td>
<td>balance point</td>
<td><img src="image4.png" alt="Symbol" /></td>
<td>Indicates the balance point of the packaging piece which is handled as an individual unit.</td>
<td>ISO 7000, no. 0627 example of use</td>
</tr>
</tbody>
</table>
7.3 Identification of goods and shipping documents

The shipping documentation consists of delivery order, shipping order and, if required, all the relevant documents specific to customs (also see point 8.2: Documents for import shipment).

The product must be accompanied with the shipping documents which are to be provided to iwis in the goods receipt.

For deliveries by sub-suppliers to iwis, a completely filled control card must be attached to each packaging piece (see annex, sheet 5: control card). Loading units must be provided with a master label according to VDA guideline.

In exceptional cases, a completely filled VDA label can be attached to each packaging piece (see annex, sheet 4: VDA labels). This must be agreed separately!

For deliveries by iwis to the customers, an additional label is placed on each packaging piece according to customer specifications.

During the loading, it must be ensured that the bills and receipts are not damaged or removed. Each label at the loading unit must be readable from outside.

Loading quantity, identification of goods and shipping documents must coincide with the content. Handwritten changes are not permitted.

Furthermore, the following guidelines must be observed:

- VDA goods tags with barcode according to VDA 4902
- ASN/EDI accompanying document according to VDA 4912
- Delivery order according to DIN 4991
- Shipping order according to VDA 4922
8 Duty / foreign trade

8.1 General customs requirements

The supplier is responsible for a preparation according to the rules of the customs documents corresponding to the current legislation, and of a customs planning according to the rules for the import of goods. The supplier is also responsible for the punctual registration of the goods in advance at the customs of the recipient country, before the goods are sent or before the external border has been reached.

iwis reserves the right to charge the supplier the full extent of all the consequential costs which have originated by customs documents which have been rendered incorrectly or which contain errors.

In case of shipments to affiliated companies of iwis (based in third countries), the supplier is responsible for the export (issuing of all documents required for the export). The regulations for the preferential trade (EUR. 1, EUR-MED, form A) must also be observed in order to assure a trouble-free crossing of the customs clearance in the recipient country.

8.2 Documents for import shipment

Depending on the country of delivery and the mode of dispatch, the correspondent shipping documents of the consignment of goods must be attached. The documents can be the following:

- Delivery order
- Waybills (CMR/CIM)
- Invoices
- Preference certificate (EUR. 1, EUR-MED, A.TR., certificate of origin form A (APS), declaration of origin on the invoice)
- Certificate of origin
- Dispatch note T1
8.3 Shipments in the scope of most favoured nation agreement

Provided that a supplier is based in a country or that deliveries of goods are effected from a country which has concluded a corresponding most favoured nation agreement with the EU / EFTA and so forth, we expect deliveries of preferential goods.

8.4 Origin of goods

If the production plant and/or business location of the supplier is within the European Union, the supplier is bound to issue a supplier declaration according to VO (EC) 1207/2001 and to the respectively applicable EC regulations. As a rule, we expect a long-term supplier declaration, in this case. At the beginning of the year, the supplier receives a letter with a corresponding form (long-term supplier declaration). The supplier is bound to send us back the supplier declaration to be signed within 4 weeks after the receipt. In case of deliveries of products which start in the course of the year, we expect an unrequested long-term supplier declaration for the current year.

9 Annexes to the regulation

Sheet 1: Deviations / complaint report
Sheet 2: Disposable and Reusable packaging
Sheet 3: Packaging regulations for vendor parts
Sheet 4: VDA labels
Sheet 5: Control card
Sheet 6: Packaging data sheets
Catalogue of deviations

The suppliers can receive complaints about the following deviations by means of a complaint report.

<table>
<thead>
<tr>
<th>Type of deviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging</td>
<td>- Default in series packaging or agreed alternative packaging according to packing instructions</td>
</tr>
<tr>
<td></td>
<td>- Erroneous or missing identification of packaging pieces</td>
</tr>
<tr>
<td></td>
<td>- Supply in damaged or soiled containers</td>
</tr>
<tr>
<td></td>
<td>- Supply in incorrectly sorted loading units</td>
</tr>
<tr>
<td>Quantity or schedule variances</td>
<td>- Short and excess deliveries</td>
</tr>
<tr>
<td></td>
<td>- Delayed delivery</td>
</tr>
<tr>
<td></td>
<td>- Wrong delivery</td>
</tr>
<tr>
<td></td>
<td>- Under-delivery and over-delivery</td>
</tr>
<tr>
<td></td>
<td>- Early delivery</td>
</tr>
<tr>
<td>Shipping documents</td>
<td>- Required shipping documents are missing</td>
</tr>
<tr>
<td></td>
<td>- The shipping documents are erroneous (order number, delivery schedule number, part number, trading unit data…)</td>
</tr>
<tr>
<td>Other complaints</td>
<td>- Additional expenses manufacture / logistics (standstills, cleaning of trading units, inventory…)</td>
</tr>
<tr>
<td></td>
<td>- Standstill of manufacture / assembly</td>
</tr>
<tr>
<td></td>
<td>- Improperly effected empty packaging inventory</td>
</tr>
<tr>
<td></td>
<td>- Empty packaging inventory deviations</td>
</tr>
</tbody>
</table>
## Annex sheet 2
Disposable packaging, worldwide

<table>
<thead>
<tr>
<th>Identification</th>
<th>Dimensions</th>
<th>Material</th>
<th>Remark</th>
<th>Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>iwis standard wooden box</strong></td>
<td>L 1216 mm W 816 mm H 814 mm</td>
<td>Pallet: wood Outer frame: plywood Cover: plywood</td>
<td>Gross weight max. 1000 KG</td>
<td><img src="image1.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>iwis standard wooden box ½ low</strong></td>
<td>L 600 mm W 800 mm H 610 mm</td>
<td>Pallet: wood Outer frame: plywood Cover: plywood</td>
<td>Gross weight max. 400 KG</td>
<td><img src="image2.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>iwis standard wooden box ⅓ high</strong></td>
<td>L 600 mm W 800 mm H 860 mm</td>
<td>Pallet: wood Outer frame: plywood Cover: plywood</td>
<td>Gross weight max. 400 KG</td>
<td><img src="image3.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>iwis standard carton no. 50</strong></td>
<td>L 375 mm W 260 mm H 148 mm</td>
<td>2.70 BC</td>
<td>Gross weight max. 15 KG</td>
<td><img src="image4.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>iwis standard carton no. 70</strong></td>
<td>L 325 mm W 255 mm H 128 mm</td>
<td>2.70 BC</td>
<td>Gross weight max. 15 KG</td>
<td><img src="image5.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>iwis standard carton no. 80</strong></td>
<td>L 325 mm W 255 mm H 128 mm</td>
<td>2.70 BC</td>
<td>Gross weight max. 15 KG</td>
<td><img src="image6.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>iwis standard VCI bag</strong></td>
<td>L 430 mm W 320 mm H 500 mm</td>
<td>HDPE min. 50 μ</td>
<td></td>
<td><img src="image7.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>iwis standard HDPE bag</strong></td>
<td>L 430 mm W 320 mm H 700 mm</td>
<td>HDPE min. 50 μ</td>
<td></td>
<td><img src="image8.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>iwis standard PE pre-cut film</strong></td>
<td>L 1300 mm W 900 mm H 0.02 mm</td>
<td>LDPE</td>
<td></td>
<td><img src="image9.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>iwis standard HDPE gusset bags</strong></td>
<td>L 1300 mm W 950 mm H 1850 mm</td>
<td>HDPE</td>
<td></td>
<td><img src="image10.jpg" alt="Image" /></td>
</tr>
</tbody>
</table>

Valid from: 01.04.2013  
Creator: M-MWL ©  
Page 20
### Reusable packaging, EU

<table>
<thead>
<tr>
<th>Identification</th>
<th>Dimensions</th>
<th>Material</th>
<th>Remark</th>
<th>Photo</th>
</tr>
</thead>
</table>
| iwis standard KLT 4328 (max. dimensions) | L. 400 mm W. 300 mm H. 280 mm  
 L. 334 mm W. 247 mm H. 235 mm | PP       | Gross weight max. 15 KG |       |
| iwis standard KLT 4314 (max. dimensions) | L. 400 mm W. 300 mm H. 147.5 mm  
 L. 334 mm W. 247 mm H. 105 mm | PP       | Gross weight max. 15 KG |       |
| iwis standard KLT RL 4147 blue (max. dimensions) | L. 396 mm W. 297 mm H. 147.5 mm  
 L. 345 mm W. 265 mm H. 130 mm | PP       | Gross weight max. 15 KG |       |
| iwis standard KLT RL 4280 blue (max. dimensions) | L. 396 mm W. 297 mm H. 280 mm  
 L. 345 mm W. 261 mm H. 262 mm | PP       | Gross weight max. 15 KG |       |
| iwis standard Cover 1208 (max. dimensions) | L. 1204 mm W. 808 mm H. 94 mm | PP       |                    |       |
| iwis standard Euro pallets (max. dimensions) | L. 1200 mm W. 800 mm H. 150 mm | wood     |                    |       |
## Reusable packaging, China

<table>
<thead>
<tr>
<th>Identification</th>
<th>Dimensions</th>
<th>Material</th>
<th>Remark</th>
<th>Photo</th>
</tr>
</thead>
<tbody>
<tr>
<td>iwis-Standard Box C3214 grau</td>
<td>L 300 mm</td>
<td>PP</td>
<td>Gross weight max. 15 KG</td>
<td></td>
</tr>
<tr>
<td>(max. dimensions)</td>
<td>B 200 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H 148 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>L 250 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B 150 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H 128 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iwis-Standard Box C4314 grau</td>
<td>L 400 mm</td>
<td>PP</td>
<td>Gross weight max. 15 KG</td>
<td></td>
</tr>
<tr>
<td>(max. dimensions)</td>
<td>B 300 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H 148 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>L 345 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B 250 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H 128 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iwis-Standard Box C4328 grau</td>
<td>L 400 mm</td>
<td>PP</td>
<td>Gross weight max. 15 KG</td>
<td></td>
</tr>
<tr>
<td>(max. dimensions)</td>
<td>B 300 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H 280 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>L 345 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B 250 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H 260 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex sheet 3

Packaging regulations for vendor parts

The following packaging processes for vendor parts must be contained in the unit price:

<table>
<thead>
<tr>
<th>Designation</th>
<th>Manufacturing process/description</th>
<th>Packaging process</th>
<th>Bag</th>
<th>Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>Cast / aluminium</td>
<td>aligned layering</td>
<td>PE</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td></td>
<td>Intermediate layers of PE-coated small load carriers/box</td>
<td></td>
<td></td>
<td>KLT/Carton</td>
</tr>
<tr>
<td></td>
<td>turned / „non-rusting*”</td>
<td>in PE-coated compartments</td>
<td>PE</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td></td>
<td>turned / „rusting*”</td>
<td>in PE-coated compartments</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td></td>
<td>die-cast / plastic</td>
<td>In bulk</td>
<td>PE</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Piston</td>
<td>all</td>
<td>standing with bore upwards</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Rail linings</td>
<td>all</td>
<td>In bulk</td>
<td>PE</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Tensioner rail</td>
<td>all / “non-rusting*”</td>
<td>aligned layering</td>
<td>PE</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td></td>
<td>all / “rusting*”</td>
<td>aligned layering</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Guide rail</td>
<td>all / “non-rusting*”</td>
<td>aligned layering</td>
<td>PE</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td></td>
<td>all / “rusting*”</td>
<td>aligned layering</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Filling elements</td>
<td>all / “non-rusting*”</td>
<td>aligned layering</td>
<td>PE</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td></td>
<td>all / “rusting*”</td>
<td>in bulk</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Chains</td>
<td>all</td>
<td>in bulk</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Flange tensioner</td>
<td>all</td>
<td>aligned layering</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td></td>
<td>intermediate layer of PE coated small load carriers/box</td>
<td></td>
<td></td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Screw-in tensioner</td>
<td>all</td>
<td>In PE-coated compartments</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Springs</td>
<td>all</td>
<td>in bulk</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Sprockets</td>
<td>all</td>
<td>in plastic blisters or PE-coated compartment unit</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Bearing pin</td>
<td>all</td>
<td>in bulk</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Check valve</td>
<td>all</td>
<td>in bulk</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td>Transport lock</td>
<td>all / “non-rusting*”</td>
<td>in bulk</td>
<td>PE</td>
<td>KLT/Carton</td>
</tr>
<tr>
<td></td>
<td>all / “rusting*”</td>
<td>in bulk</td>
<td>VCI</td>
<td>KLT/Carton</td>
</tr>
</tbody>
</table>

For all parts which are not mentioned here, the packaging process must be checked in advance with the packaging planning of iwis.
### Control card

<table>
<thead>
<tr>
<th>Date:</th>
<th>01/01/2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested:</td>
<td></td>
</tr>
<tr>
<td>iwis part number:</td>
<td>xxxxxxxx</td>
</tr>
<tr>
<td>Batch, tool, form:</td>
<td>x</td>
</tr>
<tr>
<td>Number of units:</td>
<td>xxxx</td>
</tr>
<tr>
<td>Customer part number:</td>
<td>x</td>
</tr>
<tr>
<td>Miscellaneous:</td>
<td>x</td>
</tr>
</tbody>
</table>
### Packaging data sheets

#### Annex sheet 6

| GLD | Article No. | Description | Material | Colour | Available | Net weight SP | Net weight LU | Gross weight SP | Gross weight LU | Tare weight SP | Tare weight LU | Measurements SP (LxWxH) | Measurements LU (LxWxH) | Number of pieces per SP | Number of pieces per LU | Supplier No. | Supplier | Customer No. | IWIS No. | Measurements SP (LxWxH) | Measurements LU (LxWxH) | Number of pieces per LU | Number of pieces per LU |
|-----|-------------|-------------|----------|--------|-----------|---------------|--------------|---------------|-----------------|-----------------|---------------|---------------|--------------------------|--------------------------|------------------------|------------------------|--------------|---------|------------|----------|--------------------------|--------------------------|-----------------------|-----------------------|
|     |             | Chains in a VCI-bag in a carton box. | Supplier | VCI bag | 0         | 0.00 kg       | 0.00 kg      | 0.00 kg       | 0.00 kg         | 0.00 kg        | 0.00 kg        | 0.00 kg        | 0.00 kg                  | 0.00 kg                  | 0                      | 0                      |             |          |            |          |                          |                          |                       |                       |
|     |             | 5 layers every with 10 boxes in a Grandy box | Supplier | VCI bag | 0         | 0.00 kg       | 0.00 kg      | 0.00 kg       | 0.00 kg         | 0.00 kg        | 0.00 kg        | 0.00 kg        | 0.00 kg                  | 0.00 kg                  | 0                      | 0                      |             |          |            |          |                          |                          |                       |                       |

---

**Chains in a VCI-bag in a carton box.**

**Arrangement of parts in single packing**

**Contents:**

- 5 layers every with 10 boxes in a Grandy box.