Fulfilling our customers’ high expectations is the challenge we take up every day. For the WILO Group this means that every logistics activity is viewed from the perspective of customer satisfaction, both internally and externally. This requires the logistics processes to run smoothly throughout all the stages of the supply chain. Our suppliers play a key role in this chain, from the initial enquiry process through the confirmation and packing processes to the notification process as well as the transportation and delivery processes which extend right into our production processes. WILO’s logistics and production processes are therefore also strongly influenced by the SUPPLIER in terms of the stability of the processes, occupational safety, quality and costs, based on the quality of the associated flows of information and materials.

We therefore expect our SUPPLIERS to fulfil the requirements described in this document in order to guarantee the 7 R’s of logistics - the right materials, ... at the right time, ... in the right quantity, ... of the right (agreed) quality and in the right form (preservation, packaging), ... with the right information ... at the right (agreed) price ... at the right place ... .

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1. Validity, document structure, definition of terms

1.1. Validity

The requirements in these requirements specifications apply to all supplies and flows of information between SUPPLIERS and WILO Group locations and its subsidiaries, hereinafter referred to as the CUSTOMER. They apply to all the different purchasing processes (ordering, delivery scheduling, Kanban, SMI etc.) and locations (production, logistics or sales locations).

1.2. Special processes, deviating regulations, exceptions or transition periods

Framework purchasing agreements, logistics agreements, supplementary agreements, plant-specific delivery guidelines, and packaging or labelling regulations may determine special processes, deviating regulations, exceptions or transition periods in regard to the entire document or individual chapters.

These must be agreed between Purchasing and the logistics department at the receiving location of the CUSTOMER. While doing so, the legal regulations may not be overridden or diminished. In addition, the responsibility of the loading party and distributor of the goods may not be transferred to the recipient. The documents listed above and any country-specific guidelines or specifications relating to a defined supplier, specific goods groups or individual material numbers take precedence over this document.

The author of this document is neither responsible for reaching agreements regarding deviations or exceptions, nor authorised to do so.

Furthermore, all the provisions described in this document must be viewed as being supplementary to the CUSTOMER's purchase contracts and the respective agreed Incoterms.

1.3. List of abbreviations, definitions and definition of terms

1.3.1. List of abbreviations

GLT Large load carrier / container (abbreviation for German "Großladungsträger")
KLT Small load carrier / container (abbreviation for German "Kleinladungsträger")
SMI Supplier Managed Inventory, the supplier assumes full responsibility for the supply of a specified range of articles from a plant and must maintain stock levels between defined minimum and maximum limits. To do this, it is given an insight into the CUSTOMER's supply planning situation. SMI may be agreed in connection with consignment stock processing.

VMI Vendor Managed Inventory is the same process as SMI, but from the point of view of the SUPPLIER.

1.3.2. Definition of terms

Shipment A shipment is the total of all the packages from one sender on one loading day for one receiving location which are to be loaded on one collecting vehicle, provided if it meets the weight-specific or volume-specific requirements. In other words, if the total of all the articles which are to be loaded on one dispatch date for delivery to one delivery location is so large that it does not fit into a single collecting vehicle, it forms two shipments.
1.4. Document structure

This document and the sections in it are structured in line with the following process chain:

<table>
<thead>
<tr>
<th>WILO</th>
<th>(Third Party)</th>
<th>SUPPLIER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. document structure, definition of terms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. requirements spanning different processes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. order, call off or SMI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. confirming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ manufacturing or picking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. packing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. marking, labelling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. transport notification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. making available, loading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. shipment notification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. transporting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. checking/unloading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. posting goods entry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. (&amp; the following) follow-up processes, exception processes and deviations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Requirements spanning different processes

2.1. Duty to provide information

The SUPPLIER is subject to a duty to provide information. A written declaration of consent must be obtained for any changes which may influence the logistics processes, quality or costs of the respective receiving plant.

Furthermore, the SUPPLIER is responsible for informing the CUSTOMER of any incorrect or implausible ordering information sent by the latter.

The basis of successful cooperation between the SUPPLIER and the CUSTOMER is properly functioning communication. Therefore, the SUPPLIER must provide the CUSTOMER with the names of responsible contact persons. The SUPPLIER must notify the CUSTOMER of any change of the contact persons without delay.

In emergencies, particularly if the timely or correct delivery to the CUSTOMER by the SUPPLIER is jeopardised, the SUPPLIER must also ensure that one of the contact persons named by the SUPPLIER can be contacted at all times (i.e. including outside of normal business hours as well as at weekends or on public holidays).
When shipping dangerous goods, the SUPPLIER must nominate a dangerous goods safety adviser as a point of contact for the CUSTOMER prior to making delivery of the first order.

2.2. Contingency plan

The SUPPLIER’s management is obliged to draw up contingency plans in the event of any disruption of operations, e.g., in the case of technical defects, capacity bottlenecks or quality problems, and to initiate and agree with the CUSTOMER corrective and preventive measures which ensure that the problems cannot have any long-lasting effect on the CUSTOMER’s operations. The disruption must previously have been reported without delay to the corresponding CUSTOMER plant by the party which has caused it.

The contingency plan must always contain measures and deadlines for rectifying the problem. The contingency plans that have been developed by the SUPPLIER must be agreed with the CUSTOMER before the first delivery takes place.

Furthermore, the CUSTOMER expects its SUPPLIERS to have measures in place which guarantee supply in the event of the exceptional circumstances referred to above. The SUPPLIER may have to maintain safety stocks for this purpose or demonstrate that it has a flexible production model.

The chosen alternative must be shown to be credible during the quality audit, and it must be disclosed at any time if the CUSTOMER requests this.

If it becomes apparent that the agreed measures are not adequate, the CUSTOMER reserves the right to demand that safety stocks be set up.

The SUPPLIER is obliged to notify the CUSTOMER’s responsible supply scheduler of any supply bottlenecks without delay, as well as any unforeseen events during transportation, and to propose a practicable solution to the supply problem.

If delivery to the CUSTOMER is jeopardised as the result of an event (such as a lorry accident, a loss of production or loss or damage in transit etc.), the SUPPLIER must immediately trigger a delivery from its safety stocks. Following consultation with the CUSTOMER’s responsible supply scheduler, subsequent delivery in smaller transport units may then have to be carried out at the SUPPLIER’s expense if this is the only way to prevent the CUSTOMER’s production operations being interrupted.

If damage to the parts is only detected once they have reached the CUSTOMER, the SUPPLIER must likewise be able to resupply without delay from its safety stocks if the maintaining of the CUSTOMER’s production operations cannot otherwise be guaranteed.

2.3. Dangerous goods

The regulations pertaining to the transport of dangerous goods must be observed. The SUPPLIER, in its capacity as the distributor of dangerous goods, is responsible for the classification, permitted means of transport and transportation permit and must, in its capacity as the consignor and/or shipper, also observe all applicable regulations pertaining to the transport of dangerous goods. If the SUPPLIER assigns loading to a third party, the supplier remains responsible for the loading party’s compliance with all relevant regulations [6].

Any applicable national regulations of transit countries must be observed. Shipment must be made in packaging approved for dangerous goods, UN-certified and approved by the logistics department of the receiving factory. Following receipt of the order, any necessary data sheets, approval notices, etc. must promptly be made available to the CUSTOMER, as well as to the dangerous goods safety adviser of the local logistics unit and the shipper, in due time prior to dispatch. The SUPPLIER is liable for all damages and costs incurred due to a failure to observe the statutory regulations.

Material that is subject to hazardous goods regulations must be packaged and labelled in accordance with the relevant regulations. Corrugated cardboard/boxes used for packaging must be made from waterproof coated materials.

2.3.1. In particular, we refer to compliance with provisions such as [6]

- ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route). English: the European Agreement concerning the International Carriage of Dangerous Goods by Road,
2.3.2. The following information serves only as an example and should not be considered exhaustive [6]

When shipping lithium-ion batteries (UN 3480), regulations such as packing quantity limits, weight limits, packaging and labelling regulations, and documentation requirements for transport papers apply, depending on the mode of transport, battery power and quantity. Various regulations or even transport bans may apply, depending on the battery power and quantity. Additional regulations may apply to lithium-ion batteries contained in equipment or packed with equipment (UN 3481). Likewise, regulations apply to lithium metal batteries (UN 3090) and lithium metal batteries contained in equipment or packed with equipment (UN 3091).

2.4. Paperless communication

2.4.1. Communication channels: EDI, WEB EDI, SNC

The CUSTOMER will provide the SUPPLIER with a communication tool. The aim of this is to minimise communication workload, in particular in relation to processes that are running normally, and consequently to enable more concentrated attention to be paid to exceptions in order to proactively avert their negative consequences for the logistics and production processes.

The selection of the appropriate tool is dependent on the SUPPLIER’s capabilities in relation to special processes.

<table>
<thead>
<tr>
<th>Tool</th>
<th>Meaning</th>
<th>Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WPC</td>
<td>Wilo Purchasing Collaboration portal</td>
<td>Tendering, quotation management.</td>
</tr>
<tr>
<td>WEB EDI</td>
<td>WEB EDI portal or LSP portal made by Seeburger.</td>
<td>Orders and order changes and confirmations as well as delivery schedule processes. For all these: delivery notification</td>
</tr>
<tr>
<td>EDI</td>
<td>Electronic Data Interchange</td>
<td>Orders and order changes and confirmations as well as delivery schedule processes. For all these: delivery notification</td>
</tr>
</tbody>
</table>

EDI processing should be used in preference to the WEB EDI solution by SUPPLIERS that only handle standard processes (orders, order confirmations, delivery schedules and delivery notifications). SUPPLIERS that can only handle some of these standard processes via EDI, or only in one direction, must accept and use the Seeburger WEB EDI solution.

For all standard ordering processes (ordering process and delivery schedule process, changes, confirmations and accompanying delivery notifications), the CUSTOMER provides the SUPPLIER with the Seeburger SSP Portal [6].

If, in addition to the above-mentioned standard processes, the SUPPLIER also carries out SMI processes with the CUSTOMER, the LSP system of Seeburger is used as a WEB EDI platform only for the SMI articles in question and the accompanying delivery notifications (LSP = Logistics Service Professional) [6].

The CUSTOMER and Seeburger evolve the portal for special processes as required. The SUPPLIER shall be notified of any available improvements and must immediately implement them. If additional processes are introduced, they must be implemented as quickly as possible after having correspondingly changed the logistics agreement or following conclusion of a supplement to the agreement.
2.4.2. Information channels via post, fax or e-mail with PDF attachment

These information channels result in a significantly increased workload and are no longer accepted by the CUSTOMER [6]. The rules described in the respective chapters apply to exceptional cases (i.e. delivery delay and breakdowns).

2.4.3. Obligations associated with paperless communication

The SUPPLIER is responsible for the independent and timely processing of the documents sent to it by the CUSTOMER.

In order to guarantee this, the SUPPLIER must ensure that

▪ the CUSTOMER’s target system can be accessed by its employees
▪ the data received is processed further and is not left unused at any of the interfaces
▪ appropriately trained replacement staff are available to cover for illness or holidays
▪ documents received are processed only once in order to avoid, for instance, an amendment to an order being processed as a new order.

2.4.4. Correctness and completeness of data

In order to guarantee an economical, trouble-free and smoothly running incoming goods process for the CUSTOMER, the SUPPLIER is responsible for reliably ensuring the correctness and completeness of its data at all times. This applies to all data, regardless of whether it is printed on paper or is transmitted as electronic processing data.

The CUSTOMER is responsible for the accuracy of the data in the order documents and in the CUSTOMER’s master data.

3. Order process, delivery schedule process and special processes

3.1. Overview of the order processes

<table>
<thead>
<tr>
<th>Conventional processes</th>
<th>Special processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard ordering</td>
<td>Kanban</td>
</tr>
<tr>
<td>Version: subcontracting</td>
<td>SMI (usually with consignment stockholding)</td>
</tr>
<tr>
<td>Version: cost centre ordering</td>
<td>Consignment stockholding</td>
</tr>
<tr>
<td>Delivery schedule</td>
<td></td>
</tr>
</tbody>
</table>

3.2. Delivery dates are arrival deadlines

The delivery dates specified in orders or delivery schedule call-offs are always the date of arrival at the consignee. This applies irrespective of the Incoterm, and consequently irrespective of whether the SUPPLIER or the CUSTOMER is responsible for transportation.

3.3. Duty to provide information if quantities or deadlines cannot be provided/met

The plausibility of orders or call-offs that are received must be checked, in particular with regard to quantities, deadlines and master data (unloading location, load containers etc.).

Furthermore, it is a fundamental requirement that the SUPPLIER checks without delay that the demands received can be met in terms of quantities and deadlines. If any aspects are implausible or if there are requirements bottlenecks, the CUSTOMER’s supply planner must be informed without delay.
3.4. Ordering, normal ordering, order allocations

An order may relate to a framework agreement in the form of an “order call-off”, or it may be a “one-off order” without an associated overarching framework agreement. The requested delivery date for an order call-off generally depends on the delivery periods that are promised in the framework agreement.

3.5. Delivery schedule

A delivery schedule process differs from the normal ordering process because the CUSTOMER sends the SUPPLIER up-to-date rolling call-offs at the agreed intervals (generally weekly) for what is regarded as the “frozen time zone” following the date on which they are produced, as well as a preview or forecast for the subsequent weeks and months. The preview allows the SUPPLIER to plan its procurement of raw materials and its manufacturing operations so that it significantly reduces its delivery period in comparison to the normal ordering process.

This process means that the SUPPLIER is only allowed to supply the so-called JIT call-offs.

3.5.1. JIT planning time fence:

Within the JIT planning time frame, any changes to the JIT allocations in relation to timing or quantity are subject to the SUPPLIER’s agreement.

The SUPPLIER must supply the quantities that have been called off at the specified times. These call-offs are clearly identified within the delivery schedules because they are contained within the planning time fence and are marked with a “D” (for “daily”). If a specific weekday is agreed as the delivery date between the SUPPLIER and CUSTOMER, this is automatically considered in the CUSTOMER’s required deadlines [6].

The call-offs and forecasts / previews remain valid until they have been replaced by the following respective call-off.

Call-offs are deemed to be automatically confirmed if they are not cancelled at the latest on the day after they were sent.

The SUPPLIER guarantees the supplying of all the parts according to the delivery schedule at no extra charge during the planned shutdowns of its business or any other events/disruptions which occur within its business.

3.5.2. Binding requirements preview (forecast 1):

Supplies must not be delivered based on forecasts. They can be identified because within the forecast they are marked with a “W” for week or “M” for month.

Within the binding requirements preview the CUSTOMER is entitled to alter the deadlines and/or quantity. The SUPPLIER is obliged to maintain supply readiness at all times. The CUSTOMER is obliged to take full delivery of the originally forecast requirements for this time window, and the deadline for doing so is specified in the individual contract. The SUPPLIER is responsible for any quantities of
products or raw materials that it keeps available in excess of this. If no binding period is agreed (e.g. for standard products), the purchase obligation ceases.

3.5.3. Non-binding requirements preview:

The non-binding requirements preview (forecast 2) is only used for information purposes and is not in any way binding. The non-binding requirements preview means all the CUSTOMER’s forecast requirements after the end of period of the binding requirements preview (forecast 1).

3.6. Kanban supply process

The basis of the Kanban supply process is a Kanban empty notification in the CUSTOMER’s system. This triggers an automatically generated normal order which the SUPPLIER receives as EDI message. As a rule, Kanban orders do not need to be confirmed, as the delivery time is agreed contractually [6].

3.6.1. No automatic preview (forecast) with Kanban or normal orders

An automatic preview of future or planned requirements, such as is provided with the delivery schedule or SMI process, is not currently available within the Kanban supply process. If this is absolutely necessary for ensuring replenishment from the SUPPLIER, the CUSTOMER’s scheduler and procurement operative are responsible for sending manual forward plans. At present, this can only be done in an EXCEL spreadsheet which is sent by e-mail.

3.6.2. Review and agreement

Certain articles may be subject to seasonal fluctuations, so if necessary, the CUSTOMER and the SUPPLIER will confer with each other again regarding adjustments to the number of Kanban containers and/or their fill quantities.

If the agreed number of containers, the quantities in the containers, or the maximum supply frequency do not seem plausible to the SUPPLIER, it must send appropriate proposals for adjustments to the CUSTOMER. Under no circumstances may the SUPPLIER make such adjustments unless the CUSTOMER has first given its approval and made the corresponding change in its IT programs.

The SUPPLIER is responsible for independently monitoring the re-order and safety stock levels and the replenishment situation in its warehouses and IT systems so that it can make deliveries on time in accordance with the promised response times and delivery periods.

The SUPPLIER shall be obliged to regularly check his confirmed reaction and delivery times and verify these to the CUSTOMER.

3.7. SMI supply process

SMI stands for "Supplier Managed Inventory". In this process, the SUPPLIER independently manages the needs-based supplying of defined articles on the basis of transparent information about the CUSTOMER’s inventory and requirements and in line with agreed minimum and maximum stock levels. This process is also widely known as "VMI" – Vendor Managed Inventory.

SMI delivery processes shall be agreed upon in individual contracts. If any application of consignments has been agreed, ownership shall not be transferred to the CUSTOMER upon arrival of the supply delivery but only upon access to the agreed minimum partial quantities from the corresponding consignment stocks to production stocks.

The basis for the obligatory production of SUPPLIER delivery notifications regarding SMI deliveries to the CUSTOMER is a delivery schedule. Unlike in the standard delivery schedule process, no individual call-offs (so-called releases) are generated by the CUSTOMER. The delivery schedule is required in order to link the delivery notification with a corresponding purchasing document and the subsequent invoice.

3.8. Consignment stock processing

Consignment stock processing does not necessarily have to be carried out as an SMI process. Instead, consignment stock processing may be agreed in the form of a CMI (Customer Managed Inventory) process, regardless of how the purchasing document is produced. In this case, the CUSTOMER retains
the authority to plan the quantities that are to be delivered and the timing of the deliveries. However, the supplier delivers the weekly, fortnightly or monthly order quantities or delivery schedule updates into the consignment stock. This means that the SUPPLIER initially retains ownership. The individual daily call-offs, and consequently the take-off of stock from the consignment warehouse, occur on a “just in time” basis in the form of daily requirements.

4. Order confirmation

The SUPPLIER must confirm CUSTOMER orders punctually. This applies, in particular, to standard orders, but not to delivery schedule call-offs, Kanban order updates, or consignment stock deliveries.

4.1. Which orders have to be confirmed?

<table>
<thead>
<tr>
<th>Conventional processes</th>
<th>Confirmation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard ordering</td>
<td>Obligatory</td>
</tr>
<tr>
<td>Kanban (basis is standard order)</td>
<td>NO</td>
</tr>
<tr>
<td>Version: subcontracting</td>
<td>Obligatory</td>
</tr>
<tr>
<td>Version: cost centre ordering</td>
<td>Currently: Optional *</td>
</tr>
<tr>
<td>Delivery schedule</td>
<td>NO</td>
</tr>
<tr>
<td>SMI delivery (basis is delivery schedule)</td>
<td>NO</td>
</tr>
</tbody>
</table>

* Orders for services do not require an order confirmation or notification of delivery.
  Orders on the Seeburger SSP Portal for transported goods must always be confirmed.
  If physical transportation takes place, a delivery notification must be sent.

4.2. Timely confirmation of the order

An order confirmation is deemed to be provided on time if is sent off no later than on the second working day after the order item is received by the SUPPLIER. Earlier confirmation is possible, and explicitly desired. Shorter or longer confirmation deadlines can be agreed in the individual contract [6]. The relevant step in this regard is not its production, but the sending of it (so-called release). If this step is forgotten, the delivery date set by the CUSTOMER is deemed to be confirmed. Point 3.3. Duty to provide information if quantities or deadlines cannot be provided/met is not affected by this.

4.3. Form of order confirmation

Order confirmations are only accepted if they are transmitted via the CUSTOMER's WEB EDI system or via EDI to the IP address specified by the CUSTOMER.

Order confirmations via post, fax or e-mail result in a significantly increased workload and are no longer accepted by the CUSTOMER [6].

4.4. Confirmation of differing delivery quantities and dates

4.4.1. Differing quantities

Order confirmations may only be confirmed for differing quantities subject to under- and over-supply limits which are agreed in a framework agreement. The respective operational purchaser at the CUSTOMER must promptly be notified in the event of a partial or full-scope supply bottleneck and independently from the EDI / WEB-EDI confirmation. He is the only person who is able – with the aid of his scheduled production deadlines – to decide on appropriate measures for supplying the requirements of his manufacturing orders from other sources.

If one of the SUPPLIER’s packaging units is changed, this must be communicated to and agreed by the CUSTOMER’s procurement operative.
4.4.2. Differing delivery dates

If in a specific case confirmation cannot be given for the requested delivery day, the SUPPLIER's scheduler must notify this within the order confirmation. The Supplier's responsible scheduler must, independently of the EDI / WEB-EDI order confirmation, promptly notify any delay to the CUSTOMER’s operative purchaser, as the CUSTOMER’s production schedule may be affected.

4.4.3. Significance of differing order confirmations for the evaluation of suppliers

The suggested delivery date is derived from the CUSTOMER's IT system, as a rule based on the SUPPLIER's delivery undertakings in the framework agreement. In this case, the desired delivery dates already take account of the agreed delivery period. The CUSTOMER will therefore also evaluate the SUPPLIER's reliability in relation to order confirmations on the basis of the contractually agreed delivery periods. This means that a delivery based on an order confirmation for a later delivery date is not classed as being on time if the previously requested delivery date is based on a promised delivery period.

4.4.4. Confirmation of differing prices

If orders contain incorrect prices, these errors must be notified together with the name of the CUSTOMER's respective supply planner prior to confirmation. The CUSTOMER's supply planner must then make any necessary corrections to the order, so that the SUPPLIER only processes order confirmations which are valid in pricing terms.

This also avoids the CUSTOMER subsequently having to undertake extra work in relation to the checking of invoices.

4.5. Deviations within delivery schedule

The delivery time has a greater contractual significance and binding character for the delivery schedule process, similar to a call-off for blanket orders. For this reason, the SUPPLIER must always, within contractual limits, be ready to deliver, meaning the confirmation requirement does not apply. If, in exceptional cases, the SUPPLIER is not ready to make delivery, it must inform the operational purchaser at the CUSTOMER by email and telephone without undue delay.

This also applies for Kanban orders and SMI deliveries.

5. Packaging

If the agreed quantities permit, shipment packaging and load containers should make efficient use of transport capacity. They should be cost-effective and environmentally friendly, but still guarantee appropriate transportation of the goods which safeguards their quality.

5.1. Structural Components Specification and rules derived from it

For overall optimisation, the CUSTOMER's objective is to synchronise the internal logistical data, such as the container type and fill quantity along the entire supply chain. The container type to be used and the associated container fill quantity is geared to optimal production supply according to the LINE-BACK principle, and it is then synchronised as well as it can be with the procurement lot size ( = fill quantity of one or more containers / bins).

The results flow into packaging instructions that are mutually agreed upon by the CUSTOMER and the SUPPLIER on a binding basis. As a rule, these relate to a single article in each case. If a SUPPLIER supplies several plants, various packaging instructions may apply.

The goods to be delivered to the CUSTOMER must always be packaged in the reusable or single-use containers agreed with the CUSTOMER, using corresponding inserts where applicable. The prescribed/agreed fill quantity that is specified per material number must be adhered to.
5.2. Packaging requirements if there are no packaging instructions

In accordance with the guidelines described below, if a packaging agreement has not been agreed between the SUPPLIER and the CUSTOMER the SUPPLIER is solely responsible for ensuring that packaging, preservation, strapping and other internal load securing measures are suitable for transport and handling so as to guarantee damage-free delivery to the place of use, and it also bears sole responsibility for ensuring that full account is taken of all logistical considerations within the production process and series production.

Irrespective of the choice of packaging, it must be ensured that the delivery meets the following requirements:

- The load container and transport packaging should guarantee safe and resource-efficient handling during loading, shipment of the goods and unloading, and during transportation and extraction of sub-quantities at the CUSTOMER's premises.

- Reusable containers should be preferred in view of the economic efficiency of transportation and the exchange process compared with single-use containers.

- DB flat euro pallets (UIC 435-2) and DB Euro mesh box pallets (UIC 435-3) must be exchanged with the responsible carrier in the container exchange countries.

- Reusable containers must be clean, safe and exchangeable based on current standards. In the case of pool/DB mesh box pallets as per DIN 15155, the CUSTOMER is obliged to return exchangeable crates to its legitimate suppliers. The exchanging of mesh box pallets which cannot be exchanged according to the same standards leads to significant losses and an unacceptable disadvantaging of the CUSTOMER, and it will therefore be refused. The collection and return of non-exchangeable mesh box pallets is not possible.

- ESD packaging must be used for electronic components if protection against discharges of static electricity is required by drawings, orders or packaging instructions.

- Old labels/markings must be removed before the container is used. The SUPPLIER must ensure that appropriate new markings are applied.

- Double stacking must be possible as a minimum, and adequate securing mechanisms must be able to be used. This also applies to single-use containers. If the following average pallet weight for a supplier is exceeded, the stackability requirement can be waived:
  - Road/rail freight: > 750 kg
  - International container freight, general cargo (small consignments of up to 5 pallets): 1,000 kg

- If necessary, an empty KLT or empty box can be used to provide stackability.

- If, in exceptional cases, a non-stackable packaging has been agreed, a suitable stacking prevention (top-loading protection) must be fitted (see example in illustration on the right). A simple notice is not sufficient.

- Recyclable materials should be used where possible. Use of environmentally friendly packaging materials is intended to support avoidance of packaging waste, reusability of packaging, simple recycling, and minimised use of packaging materials. Where possible, the use of composite materials and loose filling material, such as packing chips, is to be avoided.

- Strapping: Even light transport units must be strapped. Cling wrap or shrink wrap films are not adequate, even if the film is used to fix the pallet in place.

- Furthermore, PET plastic straps must always be used. Use of steel straps is not generally permitted for occupational safety reasons. Exceptions are explicitly specified in packaging instructions issued by the receiving plant’s logistics department.

- Edge reinforcements must be used to prevent strapping bands cutting into cardboard packaging and containers. It is forbidden to over-tighten bands to the extent that they deform the outer packaging.

- For lighter transport units up to a total weight of 300 kg, 2 bandings, either lengthwise or across, positioned as close as possible to the pallet blocks, may be used.

- Bands must be vertical. Non-vertical bands are not permitted.
▪ Heavy transport units of 300 kg and more must be secured using 4 bandings, 2 lengthwise and 2 crosswise, positioned as close as possible to the pallet blocks (see image on the right). If necessary, to ensure they are stackable, these transport units must be further stabilised by vertical reinforcingers made from wood or compressed cardboard.

▪ Such transport units must be stabilised by tensioning planks or framed covers if their structure includes folding stacking frames. These reduce lateral forces which deform the packaging, and they concentrate the clamping forces along the vertical axis of the pallet (see the following illustration).

▪ The SUPPLIER must ensure that its Euro- or one-way pallets and its frames or pallet boxes have the required load-bearing capacity, and if required it must prove this to the CUSTOMER. In addition to providing stackability, the required load-bearing capacity must cater for typical loadings and centrifugal forces for the respective type of cargo (see illustration to the right and on page 15 for ocean freight).

▪ The ground clearance of pallets and other transport aids must be at least 100 mm according to DIN 15145 and the free entry width must be at least 600 mm. Other loading aids are only to be used with the approval of the local logistic management of the recipient.
• Tilting safety must be ensured. If necessary, the freight forwarder must be instructed to use additional load securing devices. The width of the pallet must be two times one-half of the package height.

• In the case of transport units with an uneven distribution of weight, the centre of gravity must be marked by the prescribed standard symbol (see right side).

• The palletising must not waste load space, and if necessary a half pallet or special pallet must be used which matches the box that is used (see illustration to the right). Minor pallet overhangs past the goods will be tolerated, as far as it serves the protection of the transported goods or ensuring tilt stability.

• Goods are not permitted to protrude over the edges of the transport pallet. If the external dimensions of the transported article necessitate this, a correspondingly larger pallet should be used after obtaining the agreement of the receiving plant's logistics department. The maximum dimensions (length x width of the transport unit) of 1200 x 800 mm apply to all land transports and all goods that can be transported on standard Euro pallets.

5.2.1. Packaging appropriate to loads
All packaging must be appropriately dimensioned for the applicable loads. One-way pallets must be inspected in accordance with DIN EN ISO 8611-1 "Pallets for materials handling – Flat pallets". The SUPPLIER must also provide an inspection certificate from the pallet manufacturer via the respective logistics department, on request [6]. In the event of transport damage, we shall, regardless of Incoterms and the responsibility for booking transport, assume that the packaging had not been dimensioned appropriately for the loads. In the event of transport damage or third-party liability damage (damage to third-party property), the supplier as the sender must verify that the correspondingly used packaging was able to withstand the load applicable as part of the net weight, stacking ability, centrifugal and deceleration forces that can be expected for the transport type as well as the corresponding lashing forces as specified in EN 12915 and VDI 2700 (securing cargo, lashing).

5.2.2. Requirements for consignments of parcels
• Small consignments (consignments of parcels up to a maximum of 31 kg) must not be palletised.

• They must remain not-palletised so as to allow collection by a parcel service company.

• If a parcel within the outer packaging contains individual separated batches which are separated by means of cardboard boxes, trays, small load containers or bags, each individual batch must not weigh more than 10 kg, and the parcel must not weigh more than 30 kg. If batched packaging is not used, the parcel may only weigh up to 10 kg.

5.2.3. Additional requirements for shipments from non-EU countries
• Irrespective of this guideline, the packaging of transports crossing an external EU border must comply with the legal requirements of the destination country and all transit countries crossed.

• Timber from illegal felling (illegal logging) must not be used for product or packaging components. If applicable, the SUPPLIER (as the entity bringing products into circulation) shall observe all statutory obligations to produce supporting documents and regulations on the duty of care as per FELGT (Forest Law Enforcement Government and Trade) agreement.

• Pallets, timber frames, timber beams, timber wedges or other packaging components made from solid timber crossing an external EU border must comply with the respectively currently applicable IPPC standard, which currently is ISPM 15. They must accordingly bear the IPPC stamp (see illustration to the right). In countries where HT (Heat Treatment) is available, the SUPPLIER is forbidden from using wood with MB (gassing using methyl bromide).

• For plywood or chipboard materials that do not require ISPS approval, the notice "PACKAGING CONSISTS OF NON-SOLID-WOOD" must be included on the commercial invoice [6].
5.2.4. Additional requirements for sea freight shipments

▪ Suppliers which supply via sea freight must always use the 1,140 x 760 mm export pallet unless otherwise specified in the packaging instructions for specific articles. Correspondingly suitable outer packaging (e.g. pallet boxes with reinforced corners) must be used. For smaller containers a half or quarter pallet must be used as appropriate.

▪ In addition to permitting double stacking, the packaging must also be adequately and correctly designed for the typical loadings which arise during marine transportation. In this respect it should be borne in mind that forces which are directed upwards reduce internal friction between the packages. Forces, which are directed downwards, add to the actual gravitational force “G” (see illustration to the right).

▪ Cardboard packaging for sea freight must be designed for a 7.5-fold upset pressure, analogous to a properly dimensioned box for land transport.

5.3. Requirements relating to the packaging process

▪ The parts must be delivered with their quality unimpaired, free of contaminants, and in clean load containers that have no technical impairment of their load-bearing capacity.

▪ Sensitive parts must be padded properly and appropriately.

▪ If the CUSTOMER has not specified separate means of preservation, the goods must be preserved in a manner which is appropriate for the transportation distance, the climate zones crossed, and the season. The SUPPLIER must ensure that its goods can be used by the CUSTOMER without the latter incurring additional costs for removing rust or for repacking processes.

▪ As a matter of principle, horizontal forces must always be avoided in transport packaging. This also applies to mesh box pallets. In the case of goods where damage or hazards may arise due to vibrations, toppling, shifting or rolling, or due to the shape of the articles themselves, measures must be taken to absorb or prevent lateral forces. Such measures include the use of separator inserts, layer pads, internal strapping, stringers, wedges or filling material – see the following illustrations.

![NOT OK: Goods can topple over within the packaging](image1)

![OK: internal strapping prevents toppling, vibrations and shifting](image2)
- Pallet-size PVC sacks must be used for smaller parts which are packed as “bulk goods” in mesh box pallets, stacking frames or cardboard packaging. The plastic sack prevents them being lost through the pallet base or the weakest points in the external packaging.

- Goods must always be delivered sorted by item, i.e. one article per package. If mixed pallets cannot be avoided and have been approved by the purchasing department in question, the load containers for the individual articles must be clearly separated and organised appropriately so that each individual article can be removed until they run out (see following illustration).

5.4. Determining the load weight

The SUPPLIER must ascertain the exact gross weights and consignment volumes for the subsequent steps, i.e. delivery notification, and transportation notification if applicable. This means that the weight in kg, the length, width and height measurements in cm and the volume in m³ must be determined for each load unit. For international parcel deliveries or air freight cm³ should normally be quoted instead of m³, so in these cases the volume in cm³ must be determined. For deliveries in containers, the gross weight of the packed container must also be ascertained and notified.
5.4.1. Maximum weight and dimensions

Unless agreed otherwise in the packaging instructions or specifications, and if the weight and dimensions of the material to be delivered permit it, the maximum weight including packaging material and transport aids per transport unit for each receiving plant is as follows:

<table>
<thead>
<tr>
<th>Country / Location</th>
<th>Maximum weight for each delivery location</th>
<th>Exception</th>
<th>Maximum standard height</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EUROPE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DE Dortmund</td>
<td>950 kg</td>
<td></td>
<td>970 mm</td>
</tr>
<tr>
<td>DE Unna</td>
<td>950 kg</td>
<td></td>
<td>970 mm</td>
</tr>
<tr>
<td>DE Oschersleben</td>
<td>1000 kg</td>
<td></td>
<td>1000 mm</td>
</tr>
<tr>
<td>DE Hof</td>
<td>1000 kg</td>
<td></td>
<td>970 mm</td>
</tr>
<tr>
<td>FR Aubigny</td>
<td>1000 kg</td>
<td></td>
<td>1100 mm</td>
</tr>
<tr>
<td>FR Laval or Louverné</td>
<td>750 kg</td>
<td></td>
<td>890 mm</td>
</tr>
<tr>
<td>SE Växjö</td>
<td>750 kg</td>
<td></td>
<td>1200 mm</td>
</tr>
<tr>
<td>UK Burton Upon Trent</td>
<td>1000 kg</td>
<td></td>
<td>500 mm</td>
</tr>
<tr>
<td><strong>CN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CN Beijing</td>
<td>750 kg</td>
<td></td>
<td>1100 mm</td>
</tr>
<tr>
<td>CN Qinhuangdao</td>
<td>1000 kg</td>
<td>750 kg wire mesh box 800 kg half pallet</td>
<td>1100 mm</td>
</tr>
<tr>
<td><strong>IN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IN Pune</td>
<td>No limit</td>
<td></td>
<td>1000 mm</td>
</tr>
<tr>
<td>IN Kolhapur</td>
<td>No limit</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KR Busan</td>
<td>800 kg</td>
<td></td>
<td>900 mm</td>
</tr>
<tr>
<td><strong>RU</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RU Noginsk</td>
<td>800 kg</td>
<td></td>
<td>1100 mm</td>
</tr>
<tr>
<td><strong>TR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR Istanbul</td>
<td>800 kg</td>
<td></td>
<td>1400 mm</td>
</tr>
</tbody>
</table>

(1) 1200 x 800 mm EURO pallet or one-way pallet, 1140 x 760 mm export pallet or mesh box pallet.
(2) If agreed, 1000 x 1000 mm pallets and larger sizes shall be used.

5.4.2. Additional packaging process requirements for sea freight shipments

- In the case of loading in containers, the supplier must use air bags if individual packages could topple over or shift because the spaces between them are too large (see illustration to the right).

  In the case of the loading of general cargo by carriers, the supplier must give the carriers written instructions to this effect.

- For articles prone to corrosion, the goods must initially be packed in a VCI pouch.

- All remnants of adhesive tapes must be removed from the doors of shipping containers prior to loading.

5.5. Alterations to / changes of packaging

The SUPPLIER is entitled to propose new packaging standards to the CUSTOMER at any time. Furthermore, should this be necessary it is obliged to assist with the reassessment of the packaging if requested to do so by the CUSTOMER. In doing so, the potential effect of the cost change, stackability or the static and dynamic load-bearing capacity must be communicated to the CUSTOMER according to "open book" principles, and in the case of reusable containers also the ease of folding and dimensions when folded.

Before such approval is provided, they cannot however be used for supplying series production operations. The new rule applies to the supplying of series production only after a new system has been created and jointly approved.

Packaging tests must be coordinated in advance with the logistics department of the CUSTOMER's recipient factory in a way that warrants its tracing and evaluation.
6. Marking and package labelling

6.1. Marking of the articles themselves

When they are delivered, both the (re)packaging and the products themselves must be marked according to the agreements entered into with the CUSTOMER and the other applicable packaging instructions.

6.2. Marking by the CUSTOMER

Large load carrier transport units must be labelled with two transport labels on two consecutive sides, in accordance with VDA 4902 GLT VERSION 4.0. For package deliveries, one label on each side is sufficient (see also the image in 6.3.). VDA labels are automatically generated and issued via the WEB EDI portal of the CUSTOMER at the same time as the delivery notification. The same applies for mixed pallet labels. For notifications via EDI, the system of the SUPPLIER must generate the notifications [6].

The labelling must always be applied on the bottom quarter of pallets to make sure that it remains intact if the tops of half-used pallet boxes are cut off or stacking frames are removed (see illustration on the right).

Only with DIN mesh box pallets is the labelling to be applied to the label panel on the top right of the front flap. The labelling on the short side must also be applied at the top right.

Markings must be securely affixed so that they do not fall off. The basic rule is that paper labels may only be stuck onto single-use packaging. It is not permitted to stick labels onto reusable packaging. On GLTs or KLTs, markings must be inserted into label holders provided for this purpose. In the case of mesh box pallets and reusable containers without label holders, a self-adhesive dot which can be removed without leaving any residue may be used if necessary. This equally applies to package labels and document pouches.

Empty KLTs or cardboard boxes which are used solely to provide stackability should be marked as such.

Either VDA label 4902 GLT or 4902 KLT may be used for the delivery of small load containers (KLTs) or cardboard boxes, or for the marking of small load container batches. It must be affixed on the short side (end) of the container. If the cardboard box or KLT is not tall enough for an unfolded GLT (large load container) label to be used on it, the KLT (small load container) label must be used.

If a SUPPLIER-specific label based on another standard is accepted for a transitional period in accordance with the packaging agreement, additional labels must be added for any missing information according to the VDA 4902 standard (e.g. address labels).

The following minimum information (without VDA 4902 stickers) is required: Delivery note number, CUSTOMER article number, quantity, package number, CUSTOMER order number and order position, each in plain writing and additionally as barcode (code 128 or code 39). The gross weight has to be noted in plain writing, for this, no bar code is needed. For the stick-on address label, the following information: sender, goods recipient.

Shipments which consist of several packages for one delivery note must be numbered consecutively (e.g.: “Pallet 1 of 3”). This does not apply if the VDA 4902 label is used.

If the CUSTOMER demands the batch number, this must be shown on the label enclosed with the delivery in the field provided for this purpose. The same applies in respect of the version number / revision status of the drawing.

6.2.1. Note regarding mixed pallets

The use of mixed pallets should be avoided whenever possible. However, if mixed pallets are sent, this must be made clear by using a master label (VDA-4902) incl. barcodes. The master label must be affixed to two adjoining sides of the pallet.
6.2.2. Alternative field assignment [6]

Provided that the SUPPLIER has generated the transport labels via the WEB EDI portals of the CUSTOMER, the portals will deliver the correct transport labels. If the SUPPLIER sends delivery notifications via EDI, the SUPPLIER should configure the necessary assignment in the system. Alternative assignments can be agreed on an individual basis.

The label VDA-4902 permits the following alternative field assignments:

<table>
<thead>
<tr>
<th>Field</th>
<th>Required assignment (VDA identification)</th>
<th>Alternative assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2)</td>
<td>Unloading point and storage location of the CUSTOMER (2.1 and 2.2)</td>
<td>Place of use (2.3), usage key (2.4), goods recipient long text (2.5)</td>
</tr>
<tr>
<td>(11)</td>
<td>CUSTOMER item number for packaging materials (11.2)</td>
<td>SUPPLIER item number for the article (11.1)</td>
</tr>
<tr>
<td>(13)</td>
<td>Shipping date (13.2)</td>
<td>Production date (13.1) or expiry date (13.3)</td>
</tr>
</tbody>
</table>

6.3. Transport labels

Labels for transport purposes (for example DHL shipment labels) are to be applied according to the transport service provider's specifications. In the case of parcel service providers, the label for automatic scanning is usually to be applied on the side of the parcel at the top. In this case, the SUPPLIER must always use the long side (see the following illustration). The short side is for the CUSTOMER's label. Here too, the customer's label is to be applied on the bottom quarter. CUSTOMER labels must not be covered up by the transport service provider's labels.

7. Notification of the transport

7.1. General information about transport notifications

For all Incoterms which make the CUSTOMER responsible for the partial or full acceptance of transport costs and risks (e.g. EXW, FCA, FOB...), the SUPPLIER must send a notification of shipment which is independent of the delivery notification. This must be sent to the regional contract carrier specified by the CUSTOMER for the SUPPLIER location and the respective shipment size.

<table>
<thead>
<tr>
<th>SUPPLIER is solely responsible for the shipment</th>
<th>SUPPLIER and CUSTOMER share responsibility</th>
<th>CUSTOMER solely responsible for the shipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>No notification of shipment required</td>
<td>Notification of shipment required (see exception)</td>
<td></td>
</tr>
</tbody>
</table>

This depends on the individual shipment, not the general Incoterm agreement. If the shipment takes place as set out under the heading "Compensation of extra costs for non-standard shipment", the SUPPLIER is solely responsible for the shipment even if the generally agreed Incoterms state otherwise.

Exception

With the explicit approval of the CUSTOMER's Group Logistics department, the SUPPLIER can use its internal transportation network or its own shipping partner. In this case, the CUSTOMER or its regional contract carrier does not require a notification of shipment. In this case, the transport must be invoiced via an invoice or an item on the SUPPLIER invoice for the goods. Third-party invoices are not accepted.
7.1.1. Interaction of VDA notifications and delivery process documents

7.2. Transport notification if the SUPPLIER has not yet received access to the logistics portal of the CUSTOMER or the activation date has not yet been reached [6]

The SUPPLIER must book consignments in good time by the means described in the last routing order, either on the online portal of the local forwarder, or via an e-mail to the local forwarder of the CUSTOMER.

The commissioning of transport service providers other than the one specified in the routing order is only accepted following release by the CUSTOMER's respective plant logistics department. If the SUPPLIER independently commissions another transport service provider, this will always be at its own expense.

7.2.1. The notification of transport to the carrier must contain the following data:
- Collection date and time
- Collection location including precise loading point
- Receiving plant including precise unloading point
- Number, stackability and type of load containers/packaging
- Overall weight of the shipment and loading metres or cubic metres of the shipment
- Dangerous goods classification, if applicable
- Delivery date (target date for arrival at the corresponding receiving plant)
- If an exchange of empties is needed, this must be requested in the comment field of the form [6]

7.2.2. Per handling unit or transport unit, the following must be entered:
- the type of individual transport unit or transport packaging,
- the contents of the individual transport unit which comprises one or more article numbers and the corresponding quantities and order numbers / item numbers,
- the size, gross weight and net weight of the individual transport units: the width and length are generally already determined and predefined by the type of pallet that is used. If the dimensions are different, they must be overwritten accordingly with the actual dimensions.
7.2.3. Factually correct and timely notification

A notification of shipment is factually correct if the shipment data and packaging information are correct and the right carrier has been selected.

In order to provide notification on time, in addition to the planning lead time stated in the routing order and the transit time the SUPPLIER must in particular also take account of the transport services provider's respective registration deadline. Refer to the individual routing order for the transit times, lead times and deadlines to be taken into account or query them from the Logistics department of the receiving plant.

For receiving plants in Germany, these have been specified in the "Wilo_Inbound_transit_time_tables_to_German_locations" document.

For instance, the following applies to national goods shipments within Germany:

<table>
<thead>
<tr>
<th>Booking lead time</th>
<th>Transit time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day -2</td>
<td>Day 0</td>
</tr>
<tr>
<td>Notification (booking)</td>
<td>Collection by WILO’s area-forwarder</td>
</tr>
<tr>
<td>E.g. max. 11:00 a.m.</td>
<td></td>
</tr>
<tr>
<td>Planning lead time</td>
<td></td>
</tr>
</tbody>
</table>

If a fixed delivery frequency or date has been agreed between the CUSTOMER and the SUPPLIER, it must be adhered to. The systems for planning material requirements and determining delivery dates take account of these target dates for the receipt of goods through automatic scheduling. The SUPPLIER is only responsible for booking the consignment on time. The local forwarder of the CUSTOMER is responsible for collection and delivery.[6]

The SUPPLIER must take into account the closing times of the CUSTOMER (provided the SUPPLIER has been informed of them), the closing times of the SUPPLIER [6], Sundays and public holidays as well as country-specific, holiday-related and/or regional driving restrictions on LGVs, including transit regions within the planned transport time, on the planned date of collection or arrival by issuing an earlier transport notification. If information is required, contact the carrier in question directly for details of the transit options/times.

If necessary, the SUPPLIER must keep a record of its regular meeting of deadlines. If early or late registration results in the early or late receipt of goods, this is factored into the SUPPLIER’s supplier rating.

The following applies to surface shipments, both to the planning period (registration with carrier until collection of shipment) and the transit period: Transportation days are Monday to Friday only. Only during the main leg of marine transits can Saturdays and Sunday be counted as transportation days. However, unloading or customs clearance cannot generally be carried out on Saturdays and Sundays. If necessary, corresponding exceptions must be agreed with the relevant regional contract carrier and the CUSTOMER's incoming goods department.

7.2.4. Routing order or notification of shipment

The specifying of the regional contract carrier, the Internet or e-mail addresses required for shipment notification, and the framework conditions is generally done in an e-mailed set of instructions. This so-called routing order also describes the registration process for new shipments, and it specifies any links to and login name and initial password for carrier portals that have to be used. Depending on the receiving plant of the CUSTOMER, different notifications of shipment may be applicable.

7.2.5. Booking of shipments consisting only of packages [6]

A consignment of parcels (within Germany) must consist of a maximum of 4 parcels of 31 kg, and it must NOT be palletised. The limit for international shipments is one 31 kg parcel. Larger shipments must be palletised and reported to the regional contract carrier specified in the routing order.

SUPPLIERS who exclusively ship packages must indicate this as an exception to the CUSTOMER’s Logistics department.
For deliveries consisting only of packages, the SUPPLIER books the shipment as agreed with the CUSTOMER’s Logistics department,

- on the DHL supplier portal, or on the UPS portal of the CUSTOMER.
- If expressly approved by the CUSTOMER’s Logistics department, the shipment can also be booked via the SUPPLIER's DHL / UPS portal, or via the parcel service provider’s own EDI interface with the option “at the expense of third party”, with the provision of the WILO customer number.

7.3. Transport notifications via the WILO logistics portal [6]

SUPPLIERS who have access to the logistics portal of the CUSTOMER and have reached the activation date can issue transport notifications for general cargo and partial loads to the CUSTOMER on the Wilo logistics portal www.logistics.wilo.com.

The WILO Control Tower serves as a central point of contact for all queries and exceptions for consultants and logistics employees of the SUPPLIER, the CUSTOMER and the local forwarders of the CUSTOMER. This is operated by the company 4flow, as a 4PL service provider of the CUSTOMER. 4flow is not a transport company. The enquirer must be able to specify the freight order (FO) in question using at least the freight unit (FU-ID).

Contact: wilo-controltower@4flow-service.com

Issuing the notification via the logistics portal of the CUSTOMER has several advantages for the SUPPLIER:

- If the CUSTOMER changes the forwarder for the specific lane, nothing changes for the SUPPLIER.
- Closing times of the CUSTOMER and public holidays are automatically considered in the transit time.
- The system saves SUPPLIERS from manually backdating the registration and collection date.
- Delays in collection and delivery caused by the local forwarder of the CUSTOMER are recorded and not falsely attributed to the SUPPLIER.

7.3.1. Transport notification process via the WILO logistics portal

- “Freight units” are displayed on the logistics portal. All orders and delivery schedules from the same SUPPLIER, with the same collection day and receiving location, are combined into one freight unit. These data are calculated in the system of the CUSTOMER, based on the order details. Familiar packaging specifications for each product reduce the amount of corrections for the SUPPLIER. A freight unit automatically considers public holidays in the country of collection and the destination country. For each freight unit, the SUPPLIER is shown the latest approval date, target collection date and target delivery date. The order references of the CUSTOMER are also displayed. The running time is automatically assigned, based on the longest implemented route.

- The SUPPLIER must review the freight unit on package level via the logistics portal, and correct and approve the package information (type, number, dimensions, stackability and weight). If the collection date cannot be met when the freight unit is approved, the SUPPLIER must indicate so immediately by e-mail to the WILO Control Tower.

- If a freight unit (FU) of less than 31 kg is approved, the SUPPLIER receives a notification from 4flow, instructing the SUPPLIER to create a package shipment.

- Exchanges of empties should be requested in the comment field of the FU, if required.

- After approval and review of the FU by the Wilo Control Tower, the SUPPLIER creates the freight order. When doing so, compliance with the delivery deadline takes the highest priority. In any case, the freight order is returned to the transport management system of the CUSTOMER.

- The CUSTOMER’s transport management system sends the freight order to the CUSTOMER’s local forwarder for the respective route and informs the SUPPLIER via an automated e-mail. This e-mail contains the name of the forwarder and all the important information, e.g. collection and delivery date, references and contact details.

- 4flow will track the shipment and ensure punctual collection and delivery.

The Control Tower must be informed by sending an e-mail containing the FU ID number to wilo-controltower@4flow-service.com, if:
7.3.2. **Uploading the delivery note on the collection date [6]**

On the collection date, the SUPPLIER must add the delivery note number to the freight unit and upload the delivery note to the Wilo logistics portal at [www.logistics.wilo.com](http://www.logistics.wilo.com).

If the SUPPLIER is sending a shipment from outside the EU, the SUPPLIER must also upload the commercial invoice, and all other documents required for the proper processing of import customs.

7.3.3. **E-mail alerts as a reminder [6]**

- Freight units that are not approved by 8:00 am on the latest possible confirmation date are reported to the SUPPLIER by an automated e-mail alert. The SUPPLIER is then obligated to review the scope of the orders in question, and confirm them by 11:00 am to prevent delays in the delivery.
- Freight units that are not approved by 11:00 am on the latest possible confirmation date are reported to the SUPPLIER by another automated e-mail alert. This alert is also sent to the responsible consultant of the CUSTOMER to indicate a potential delay. These freight units expire.
- For expired orders of this kind, the SUPPLIER must update the order confirmation via the EDI/WEB-EDI. For delivery schedules, the SUPPLIER must inform the CUSTOMER’s demand consultant, so that they can amend the planning availability of the request in the system. This postpones the transport request to a future time and creates a new FU.
- If the contents of the expired FU have already been shipped in an earlier shipment, the Wilo Control Tower must be informed.

Expired FUs often result in delays and affect the SUPPLIER’s perceived reliability (see chapter "Follow-up processes", DOT, Delivery On Time).

7.3.4. **Booking of shipments consisting only of packages by suppliers in the 4flow process [6]**

If an FU consisting of a single package, which weighs less than 31 kg, is approved, 4flow instructs the SUPPLIER to create a package shipment. If a freight unit weighs more than 31 kg, it proceeds as a general cargo shipment with as small a pallet as possible (80 x 60 cm or 60 x 40 cm), according to the standard process.

If, in exceptional cases, the SUPPLIER has to send multiple packages instead of a general cargo shipment (domestically max. 4 packages of 31 kg, and NOT on pallets), 4flow must be informed of this before the latest possible approval date. The limit for international shipments is one 31 kg parcel.

8. **Making available, loading, documents**

The delivery notification and shipment notification which may have to be sent by EDI or WEB EDI is supplementary and it does not invalidate the following points.
8.1. Documents for intra-community deliveries

For all deliveries, the documents must be enclosed with the goods, appropriately affixed in a self-adhesive document envelope (see illustration to the right) so that they can be seen from the outside. Positioning must always be on the long side of transport unit. If the shipment is to be carried out by a carrier, the accompanying documents must always include a bill of lading. An EDI waybill according to VDA 4912 is required in every case. For freight orders that the SUPPLIER has approved via the WILO logistics portal, there is no need to enclose the freight order or the EDI consignment note [6].

If documents are lost in transit, the SUPPLIER shall provide copies by email at short notice upon request.

8.1.1. Delivery note

The delivery note can be a print-out of the EDI VDA 4912 waybill. Otherwise, it must contain at least the following information:

- Delivery note no.
- Supplier no. *
- Shipment number
- Sender details
- Recipient details

* = Please refer to the order for this information.

<table>
<thead>
<tr>
<th>General information</th>
<th>Data for each delivered item</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CUSTOMER order no. *</td>
</tr>
<tr>
<td></td>
<td>CUSTOMER order item *</td>
</tr>
<tr>
<td></td>
<td>CUSTOMER material number *</td>
</tr>
<tr>
<td></td>
<td>Number of parts delivered</td>
</tr>
<tr>
<td></td>
<td>Number of containers/packages</td>
</tr>
<tr>
<td></td>
<td>Container type/packaging</td>
</tr>
</tbody>
</table>

8.1.2. Packing list

This must be supplied with the delivery and inserted in the same delivery schedule envelope if the delivery note does not match the print-out of the EDI VDA 4912 waybill, and if the shipment is made up of more than one material number and more than one transport unit (handling unit).

It must contain at least the following information:

- Sender
- Goods recipient
- Delivery note number
- Package number
- Number of items
- CUSTOMER's material number

8.2. Deliveries which cross an EU external border

Additionally, the respective separate standard operation procedure (SOP) applies to all SUPPLIERS in CHINA; INDIA; KOREA and TURKEY who process their exports via the CUSTOMER’s regional freight forwarder. The SOP specifies the delivery process, responsibilities and runtime tables. It also specifies the points of contact and hub addresses of the CUSTOMER’s local freight forwarders for overseas transports.

Otherwise, the SUPPLIER must always take special care to comply with the documentation obligations for the exporting country and the importing country so that neither the export nor the import is affected by delays or additional costs due to a refusal to grant customs clearance owing to inadequate documentation.

The SUPPLIER of the goods must enclose a copy of the delivery note, packing list and commercial invoice in a self-adhesive document envelope in accordance with 8.1. If applicable, the NON-SOLID-WOOD declaration should be noted in the detail section of the commercial invoice with a corresponding notice, e.g. "PACKAGING CONSISTS OF NON-SOLID-WOOD". A separate document will be accepted in exceptional cases, but must be enclosed without fail [6].

The supplier/exporter must provide all the documents required for customs/import processing without delay, in particular commercial invoices, packing lists, freight documents (bill of lading / AWB), certificates of origin, and preference documents.
In countries where the import process requires originals to be submitted, the SUPPLIER must ensure that they are sent separately via an express document delivery service to the respective import department of the CUSTOMER’s receiving plant.

Import levies imposed due to missing customs documents (in particular certificates of origin and preference documents) can be passed on to the supplier by the CUSTOMER.

8.3. Allocation of a shipment to several delivery notes according to Point 6.2.

SUPPLIERS which transact special processes with the CUSTOMER as well as conventional order processes (standard orders and delivery schedules), may have to allocate their shipments between more than one delivery notification. A shipment is the total of all the articles to be loaded on the same lorry in any one day which are addressed to the same receiving location. Because the delivery notification number = delivery note number, the following currently applies:

<table>
<thead>
<tr>
<th>Deliveries relating to “conventional” order processes</th>
<th>SMI delivery</th>
<th>Kanban delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order updates and delivery schedule updates, different article numbers and different order numbers... can be shown together in one delivery note</td>
<td>(several articles are allowed on one delivery note)</td>
<td>(several articles are allowed on one delivery note)</td>
</tr>
</tbody>
</table>

If the planned shipment is larger than the available loading space of the collecting vehicle, then it should be split up into multiple shipments. In this case, one shipment = one transport = at least one delivery note (multiple delivery notes are possible).

8.4. Making available and loading

The shipment must be available in good time for loading.

The SUPPLIER must always carry out the loading, irrespective of the Incoterms. The goods must be properly loaded using appropriate equipment so that they will not be damaged during transportation, and the goods and their packaging must be loaded with care in a way which preserves their quality. The following basic loading timings apply if the CUSTOMER pays the freight charges:

- General cargo max. 30 min
- Partial loads max. 60 min
- Full loads max. 120 min

As the loading party, the SUPPLIER shall carry joint responsibility for correctly securing cargo in accordance with EN 12915 and VDI 2700 as per valid European and German legislation. We expect that all statutory stipulations specifying the roadworthy loading of cargo are complied with for all countries the shipment passes through and we shall not take any responsibility in the event of any infringements.

Upon delivery to locations with loading ramps, pallets must always be placed lengthwise in the delivering vehicles and industrial trucks must be able to drive underneath them so that time is not lost unloading them during ramp unloading. Unloading must be possible without damaging the pallets and without additional turning of the pallets with the help of pallet trucks. In the event of partial loading, complete loading and container loading, the loading party shall already be responsible for this upon loading vehicles or containers. Please refer to the section entitled "Unloading at ramps" for an overview of locations and their unloading situations.

9. Notification of delivery (ASN, Advanced Shipping Notification)

Irrespective of the Incoterm, the SUPPLIER must notify all shipments to the CUSTOMER in good time. On-time / punctual notification includes: directly at the time of loading, but no later than 15 minutes
after the loading of the collecting lorry. The shipment notification must conform to VDA delivery note VDA 4913 (“DESADV”).

### 9.1. For which types of orders do deliveries have to be notified?

<table>
<thead>
<tr>
<th>Conventional processes</th>
<th>Confirmation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard ordering</td>
<td>Obligatory</td>
</tr>
<tr>
<td>Kanban (basis is currently a standard order)</td>
<td>Obligatory</td>
</tr>
<tr>
<td>Version: subcontracting</td>
<td>Obligatory</td>
</tr>
<tr>
<td>Version: cost centre ordering = no material number</td>
<td>Optional</td>
</tr>
<tr>
<td>For services = no shipment</td>
<td></td>
</tr>
<tr>
<td>For goods = physical shipment</td>
<td>Obligatory</td>
</tr>
<tr>
<td>Delivery schedule</td>
<td>Obligatory</td>
</tr>
<tr>
<td>SMI delivery (basis is delivery schedule)</td>
<td>Obligatory</td>
</tr>
</tbody>
</table>

### 9.2. More than one delivery notification for one shipment

**Currently in the CUSTOMER system: delivery notification number = delivery note number**

- The main number of the delivery is the delivery note number, however only 10 digits can be input. As a result, if the SUPPLIER delivery note number has more than 10 digits, the last 10 digits should be entered.
- **A 10-digit delivery notification can be entered on the WEB-EDI (SSP Portal, Seeburer Supplier Portal). Multiple orders can be combined [6].**
- On the LSP Portal (only for SMI-Articles) a delivery notification can currently merely feature a 6-digit delivery note number per delivered order.
- At present it is not always possible to combine several delivery notifications into one so-called “shipment” in the CUSTOMER’s system. Delivery notifications – and consequently also delivery notes – relating to order documents should be drawn up separately from those relating to delivery schedules, and those relating to SMI deliveries separately from those for Kanban deliveries.

In other words, a separate delivery notification and consequently a separate delivery note, for:

<table>
<thead>
<tr>
<th>WEB-EDI (SSP-Portal)</th>
<th>LSP-Portal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliveries relating to &quot;conventional&quot; order processes (1)</td>
<td>Kanban delivery</td>
</tr>
<tr>
<td>(several articles are allowed on one delivery note)</td>
<td>SMI delivery</td>
</tr>
<tr>
<td>Order updates and delivery schedule updates, different article numbers and different order numbers... can be shown together in one delivery note</td>
<td>One item per delivery notification.</td>
</tr>
</tbody>
</table>

- Sites that do not use WEB-EDI yet may have specified deviating regulations in their framework purchasing agreement, logistics contracts and local delivery guidelines.

### 9.3. Data to be input per delivery notification

The delivery notification must conform to VDA 4913 (notification type "DESADV").

The following applies to the delivery notification, as it does the order confirmation: the relevant step in this regard is not its production, but the sending of it (so-called release).

The packaging structure as packed must be provided for up to 3 levels. Samples are provided in the appendix under the heading "Sample packaging structures to be specified in a delivery advice".

The total gross weight of the shipment shall be plausibly indicated at document header level and, if necessary, the value must be overwritten with the actual value.
9.4. Action to be taken if incorrect delivery notifications are sent

If the SUPPLIER notices that it has sent an incorrect delivery notification despite having exercised all due care, it must notify this without delay to the incoming goods department of the receiving plant concerned in order to prevent an incorrect incoming goods booking being made.

The delivery notification must then be cancelled and created again with correct data.

10. Transportation

10.1. Transportation by one of the CUSTOMER's contracted area forwarder

If a shipment is carried out by a local forwarder of the CUSTOMER, the local forwarder is responsible for the shipment from the time of collection until the shipment is delivered to the destination, including operation of any time slot management systems of the CUSTOMER and the punctuality of collection and delivery. This does not release the SUPPLIER from being responsible for the punctuality of the transport notification or booking, or the provision of proper packaging and load securing. [6]

In case of any changes to the shipment volume or weight, or any potential delays due to a delayed transport notification or collection, the SUPPLIER must immediately communicate this directly to the Wilo Control Tower, provided the SUPPLIER's access has been activated [6]. Otherwise, the SUPPLIER must communicate directly with the local forwarder and, in the case of a potential delay, include the demand consultant/purchaser of the CUSTOMER in communications [6].

10.2. Shipment carried out by the SUPPLIER or its carrier

If a shipment is undertaken by a transport service provider of the SUPPLIER, the SUPPLIER is responsible for the transportation and all the associated aspects of it. This applies explicitly to:

- the communication between SUPPLIER and the contact partners of its transport service provider,
- the provision of information in the event of a potential delay or transport damage,
- compliance with all legal regulations related to the shipment [6]
- compliance with warning notices on the transport units throughout the course of the shipment,
- compliance with time slot management provisions at the receiving location.

This applies without restriction, even if Incoterms are used which make the CUSTOMER responsible for the partial or full acceptance of transport costs and risks (e.g. EXW, FCA, FOB...), but which are not notified to the CUSTOMER's area-forwarder.

10.3. Air freight/express shipments

By definition, air freight and express shipments are non-standard. They must always be agreed and coordinated by the SUPPLIER and the operative purchasing department, assisted if necessary by the CUSTOMER's strategic purchasing department.

As part of this coordination process, agreement must also be reached on the payment of costs.

If the SUPPLIER is responsible for the need to use air freight or express shipments due to delayed delivery, it must bear the costs for this in full, as outlined under the heading "Compensation of extra costs for non-standard shipment". In this case, the SUPPLIER may opt to commission its own carrier. Similarly, the CUSTOMER shall accept responsibility for its own omissions or mistakes.

10.4. Return of empty containers/packaging

For POOL exchangeable packaging (only DIN mesh box pallet and DIN EURO pallet), the empty packaging management rules apply within the POOL exchange region.

Otherwise, the following rules apply to SUPPLIER- or CUSTOMER-specific packaging if nothing to the contrary is specified in the individual contract:
If the CUSTOMER is responsible for transporting the cargo, the return shipments of the empty packaging are commissioned and paid for by the CUSTOMER.
If the SUPPLIER is responsible for transporting (the goods), the supplier must organise and pay for the return shipments.

11. Acceptance of goods, unloading and receipt of goods

11.1. Time slot management

The CUSTOMER uses a time slot management system for managing goods outward and goods inward operations at the following production plants or subsidiaries:

<table>
<thead>
<tr>
<th>Location</th>
<th>System used</th>
</tr>
</thead>
<tbody>
<tr>
<td>WILO Dortmund Van Eupen external warehouse in Unna</td>
<td>Transporeon</td>
</tr>
</tbody>
</table>

The time slot management system is used for both deliveries and collections.
This affects suppliers which make deliveries themselves, or the carriers commissioned by them. The arrangement applies regardless of the Incoterm. SUPPLIERS which commission their own carriers must inform and instruct them accordingly.

Please refer to the local delivery guidelines or the following document for details:
WILO_Instructions_for_Time_Slot_Management_System_Unna.pdf (WIPS-1-4504)
If necessary, download online (Purchasing department) or request from the local Logistics department of the receiving plant.

11.1.1. Not included within time slot management

Not affected are suppliers which are integrated into the CUSTOMER's transport network and which notify their shipments to one of the CUSTOMER's contracted area-forwarder. In this case, the CUSTOMER's area-forwarder assumes responsibility for, and undertakes, the processing.

We therefore explicitly recommend using the CUSTOMER's procurement logistics ("Inbound Logistics") transport network, because the dispatch employees then only have to notify the shipments that are required to the CUSTOMER's area-forwarders. The latter then make the time window booking as well as carrying out the transportation.

In order to do this, the SUPPLIER can contact its partners in the CUSTOMER's purchasing department and provide them with corresponding quotations based on FCA terms ex the supplier handover location.

However, if the SUPPLIER already uses its own carrier to make FCA or EXW deliveries, the SUPPLIER can contact the CUSTOMER's Inbound Logistics department at Antonio.Rodrigues@wilo.com in order to check if it is possible to switch to one of the CUSTOMER's area-forwarders.
11.2. Unloading at a platform

UNLOADING AT A PLATFORM is generally carried out at the CUSTOMER’s premises.

<table>
<thead>
<tr>
<th>Country / Receiving location</th>
<th>Unloading situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE Werk Dortmund, Nortkirchenstrasse</td>
<td>Unloading at a ramp/platform with dock leveller</td>
</tr>
<tr>
<td>DE External Warehouse, VanEupen, Unna</td>
<td>Unloading at a ramp/platform with dock leveller</td>
</tr>
<tr>
<td>DE External Warehouse, VanEupen, Dortmund-Derne</td>
<td>Unloading at a ramp/platform with dock leveller</td>
</tr>
<tr>
<td>DE Werk Dortmund, Elektronikfertigung, Strümpenbusch</td>
<td>Unloading at a ramp/platform with dock leveller</td>
</tr>
<tr>
<td>DE Werk Dortmund, Service, Felicitasstrasse</td>
<td>Unloading at a ramp/platform with dock leveller</td>
</tr>
<tr>
<td>DE Werk Oschersleben</td>
<td>Unloading at a ramp/platform, forklift truck unloading for bulky parts and long goods</td>
</tr>
<tr>
<td>DE Externes Lager, Krage &amp; Gerloff Schwanebeck</td>
<td>Unloading at a ramp/platform with dock leveller</td>
</tr>
<tr>
<td>DE Werk Hof</td>
<td>Predominantly floor level unloading (forklift unloading), platform only for parcel deliveries</td>
</tr>
<tr>
<td>DE Externes Lager, Dachser, Oberkotzau</td>
<td>Unloading at a ramp/platform with dock leveller</td>
</tr>
<tr>
<td>FR Laval oder Louverné</td>
<td>Unloading at a ramp/platform with dock leveller</td>
</tr>
<tr>
<td>FR Aubigny</td>
<td>Unloading at a ramp/platform with dock leveller</td>
</tr>
<tr>
<td>SE Växjö</td>
<td>Unloading at a ramp/platform with dock leveller</td>
</tr>
<tr>
<td>UK Burton Upon Trent</td>
<td>Unloading at ground level (forklift truck)</td>
</tr>
<tr>
<td>CN Beijing, Qinhuangdao</td>
<td>Unloading at a ramp/platform and unloading at ground level (forklift truck) shall be equally possible</td>
</tr>
<tr>
<td>IN Pune, Kolhapur</td>
<td>Unloading at a ramp/platform and unloading at ground level (forklift truck) shall be equally possible. Unloading by crane for very bulky or heavy components</td>
</tr>
<tr>
<td>KR Busan</td>
<td>Unloading at a ramp/platform and unloading at ground level (forklift truck) shall be equally possible</td>
</tr>
<tr>
<td>RU Noginsk</td>
<td>Unloading at a ramp/platform and unloading at ground level (forklift truck) shall be equally possible</td>
</tr>
<tr>
<td>TR Istanbul</td>
<td>Unloading at a ramp/platform and unloading at ground level (forklift truck) shall be equally possible</td>
</tr>
</tbody>
</table>

At sites with loading ramps, it must be possible to unload europallets, one-way pallets and europallet-sized large load carriers lengthwise of the vehicle, without having to spend any additional time on relocating pallets, so that the vehicle does not have to drive over any pallet runners when unloading. Likewise, half-pallets (“Düsseldorfer pallets”) and half-pallet-sized large load carriers must be unloaded transversely to the vehicle length, so that the vehicle does not have to drive over any pallet runners when unloading [6].

11.3. Unloading of third-party goods is prohibited

The CUSTOMER's employees and the employees of the logistics services providers used by the CUSTOMER must not unload third party goods due to insurance reasons. This also applies to temporary unloading if the third-party pallets are stacked on the CUSTOMER's pallets. Acceptance is refused in this case. Suppliers who make deliveries themselves must bear this in mind when loading, or point it out to their carriers.

11.4. Booking the receipt of the goods at the CUSTOMER

Goods inwards processing by the CUSTOMER is date-specific. If incoming goods cannot be booked on the same day owing to very late delivery, delivery recording is back-dated so that the SUPPLIER is not disadvantaged in terms of the measurement of punctuality. If incoming goods cannot be booked in due to missing delivery document or deficiencies in the information provided in the delivery documents, the SUPPLIER must in its own interest handle the relevant queries as quickly as possible. For technical reasons, backdating to the previous month after the turn of a month is not possible.
12. Follow-up processes, exception processes, dealing with differences/anomalies

12.1. Supplier evaluation in regard to incoming goods posting

The DOT = Delivery on Time is determined as follows:

<table>
<thead>
<tr>
<th>Deviation in Calendar Days</th>
<th>Above 7 days before date</th>
<th>7 to 3 days before</th>
<th>2 - 0 days before</th>
<th>1 day behind</th>
<th>2 to 5 days behind</th>
<th>More than 5 days behind</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continental</td>
<td>To be improved</td>
<td>On target</td>
<td>To be improved</td>
<td>insufficient</td>
<td>unacceptable</td>
<td></td>
</tr>
<tr>
<td>Overseas + Kanban</td>
<td>To be improved</td>
<td>On target</td>
<td>To be improved</td>
<td>insufficient</td>
<td>unacceptable</td>
<td></td>
</tr>
</tbody>
</table>

The number of order positions delivered on time is juxtaposed to the total number of order positions. The statistical delivery date will be considered in exceptional cases. The internal process to change the statistic delivery date is as follows:

<table>
<thead>
<tr>
<th>Situation</th>
<th>Statistic delivery date</th>
</tr>
</thead>
<tbody>
<tr>
<td>The CUSTOMER reschedules the delivery date and the supplier confirms the change.</td>
<td>Yes *</td>
</tr>
<tr>
<td>The SUPPLIER postpones the delivery date, but the original date corresponded to the contractually agreed delivery time or later.</td>
<td>No **</td>
</tr>
<tr>
<td>The SUPPLIER reschedules the delivery date by the difference to the contractually agreed delivery time because the original preferred delivery date was earlier than the contractually agreed date.</td>
<td>Yes * provided the supplier notifies the purchaser accordingly!</td>
</tr>
</tbody>
</table>

* The expected delivery date must always be changed to the expected date of arrival. The statistic delivery date will change automatically, unless it has previously been rescheduled manually to a different date.

** The operational purchaser must change the statistic delivery date back to the original delivery date.

12.2. Supplier rating / supplier evaluation

The CUSTOMER will measure the timeliness and reliability of the SUPPLIER's data input into the CUSTOMER's IT systems, and it will incorporate the results into the supplier rating.

If the SUPPLIER fails to comply with the provisions of a logistics contract, these delivery guidelines, packaging instructions, or a packaging agreement, the SUPPLIER will receive a logistics complaint calling on it to take corrective measures. All complaints flow into the CUSTOMER's evaluation of the SUPPLIER.

12.3. Lump sum penalties for deviations

In addition to negligent infringements of obligations described in the logistics agreement leading to a rejection of acceptance or the obligatory assumption of damage compensation (added costs) for urgent and special transports, sorting costs, costs for new purchases and scrapping costs in the event of transport damage, fixed-rate penalty charges may apply in the event that the delivery guideline is not complied with. From 2019, these shall initially be applied in Dortmund.
### Version history

<table>
<thead>
<tr>
<th>Rev.</th>
<th>Creation/amendment</th>
<th>by (name)</th>
<th>Date (dd/mm/yyyy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.</td>
<td>Creation</td>
<td>Antonio Rodrigues</td>
<td>20/11/2015</td>
</tr>
<tr>
<td>1.</td>
<td>KEP (Parcels) and EDI waybill</td>
<td>Antonio Rodrigues</td>
<td>05/01/2016</td>
</tr>
<tr>
<td>2.</td>
<td>VDA-4902 Labelling</td>
<td>Antonio Rodrigues</td>
<td>28/01/2016</td>
</tr>
<tr>
<td>4.</td>
<td>Modifications</td>
<td>Antonio Rodrigues</td>
<td>31.08.2017</td>
</tr>
<tr>
<td>5.</td>
<td>Modifications, new Plant info.</td>
<td>Antonio Rodrigues</td>
<td>11.01.2019</td>
</tr>
</tbody>
</table>
### 13. Appendix

#### 13.1. Example of VDA GLT label (Original is 210x150mm)

<table>
<thead>
<tr>
<th>(1) Ship-to-party</th>
<th>(2) Unloading point – storage location – usage key</th>
</tr>
</thead>
<tbody>
<tr>
<td>WILO SE, Werk Dortmund</td>
<td>Dock 2 – Roko</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(3) Delivery note number (N)</th>
<th>(4) Supplier address (name, plant, zip code, city)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2581752</td>
<td>EXAMPLESUPPLIER SPA IT-28010 FONTANETO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(5) Net weight</th>
<th>(6) Gross weight</th>
<th>(7) Number of packages</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>872</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(8) Customer reference number (P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>765-HGD89-1234567</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(9) Max. sp. (Q)</th>
<th>(10) Description of delivery, service</th>
</tr>
</thead>
<tbody>
<tr>
<td>140</td>
<td>ELECTRICAL CONTROLLER</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(11) Supplier number (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456789</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(12) Package no. (M)</th>
<th>(13) Shipping date</th>
<th>(14) Engineering change status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2581752 01</td>
<td>D 08.04.2016</td>
<td>VERSION 5.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(15) Description of deliver, service</th>
<th>(16) Batch number (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST</td>
<td>C12345678</td>
</tr>
</tbody>
</table>

---

#### 13.2. Example of VDA KLT label (Original is 210x75mm)

<table>
<thead>
<tr>
<th>(1) Ship-to-party</th>
<th>(2) Unloading point – storage location – usage key</th>
<th>(3) Delivery note number (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WILO SE, Werk Dortmund</td>
<td>Halle 1 Tor 2 - Roko</td>
<td>2581752</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(4) Coachhead reference number (P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>765-HGD89-1234567</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(5) Max. sp. (Q)</th>
<th>(6) Description of deliver, service</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST</td>
<td>ELEKTR. STEUERGERAET</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(7) Supplier number (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456789</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(8) Package no. (M)</th>
<th>(9) Shipping date</th>
<th>(10) Engineering change status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2581752 01</td>
<td>160407</td>
<td>VERSION 5.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(11) Description of deliver, service</th>
<th>(12) Batch number (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST</td>
<td>C12345678</td>
</tr>
</tbody>
</table>
### 13.3. Example of VDA-Master-Label for mixed pallets

*(Original is 210x150mm)*

<table>
<thead>
<tr>
<th>Shift property</th>
<th>Unloading point — storage location — usage key</th>
</tr>
</thead>
<tbody>
<tr>
<td>WILO SE, Werk Dortmund</td>
<td></td>
</tr>
<tr>
<td>DE-44263 DORTMUND</td>
<td></td>
</tr>
<tr>
<td>Dock 2 — Riko</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Delivery note number (H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2581752</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer reference number (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIX</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supplier number (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12345679</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Package no. (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HU00002117</td>
</tr>
</tbody>
</table>

### 13.4. Example of EDI VDA 4912 waybill

**EDI - WAYBILL**

<table>
<thead>
<tr>
<th>SHIPMENT NO.:</th>
<th>1234567</th>
<th>11/11/2015-08:00</th>
</tr>
</thead>
</table>

**SUPPLIER**

- PLANT: 0401
- NUMBER: 330091

Sample company GmbH

**RECIPIENT**

- PLANT: 15
- NUMBER: 543215

Wilo SE

**UNLOADING SITE:** BLDG20
**STORAGE LOCATION:** WE02
**PLACE OF USE:** LORRY
**CARRIER:**
**NUMBER:** 665512
**GR. SHIPMENT WEIGHT:** 13

<table>
<thead>
<tr>
<th>DN NO.</th>
<th>CUSTOMER REF. NO.</th>
<th>SUPPLIER REF. NO.</th>
<th>QUANTITY</th>
<th>UNIT</th>
<th>REV. STATUS</th>
<th>VIG DESIGNATION OF THE DELIVERY</th>
<th>ADDITIONAL SUPPLIER INFO</th>
<th>ORDER NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>00020002</td>
<td>000200001</td>
<td>012000011</td>
<td>00020002</td>
<td>001</td>
<td>CUST. TYPE NO.</td>
<td>012000011</td>
<td>KD PKMNR</td>
<td>200</td>
</tr>
<tr>
<td>00020002</td>
<td>000200001</td>
<td>012000011</td>
<td>00020002</td>
<td>002</td>
<td>CUST. TYPE NO.</td>
<td>012000050</td>
<td>KD PKMNR</td>
<td>200</td>
</tr>
<tr>
<td>00020003</td>
<td>000200001</td>
<td>112000000</td>
<td>00020003</td>
<td>001</td>
<td>CUST. TYPE NO.</td>
<td>112000000</td>
<td>KD PKMNR</td>
<td>100</td>
</tr>
</tbody>
</table>

******** END ********
13.5. Sample packaging structures specified in the delivery advice

13.5.1. One single level, 2 pallets, one article on each pallet:

- **ASN 1**
  - Header data
  - HU 1 / Packaging e.g. pallet / Order 1 / Article 1 / Quantity ...
  - HU 2 / Packaging e.g. pallet / Order 2 / Article 2 / Quantity ...

13.5.2. Two levels, Mixed-pallet, multiple articles on the pallet w/o own packaging:

- **ASN 2**
  - Header data
  - HU 1 / Packaging e.g. pallet / MIXED PALLET
  - Order 1 / Article 1 / Quantity ...
  - Order 2 / Article 2 / Quantity
  - HU 2 ...

13.5.3. Two levels, Mixed pallet, multiple articles on the pallet with own packaging:

- **ASN 3**
  - Header Data
  - HU 1 / Packaging e.g. pallet / MIXED PALLET
    - HU 2 / Packaging e.g. BOX / Order 1 / Article 1 / Quantity ...
    - HU 3 / Packaging e.g. BOX / Order 1 / Article 1 / Quantity ...
  - HU 4 ...
13.5.4. Three levels, Mixed pallet, Mixed boxes on it, each box 2 items with own packaging in a smaller box (2 small boxes in each bigger box):

This example is simplified in the way that only one pallet is shown with details. It is shown 1 pallet which is carrying 2 bigger boxes. Each of them are carrying again 2 smaller boxes which finally contain the parts without own packaging.