

PACKAGING MANUAL

for deliveries to:

**Voith Turbo GmbH & Co. KG
Market division Rail
Electromechanical drives
Plant 1402 atm
Zoeppritzstrasse 79
89522 Heidenheim-Mergelstetten**

as well as

**Kentner-Logistik Park (KLP)
Am Bühlfeld 2-8
89542 Herbrechtingen**

In order to allow effective handling of the large quantities of goods arriving at the above addresses, standardized packaging material must be used largely.

Application of our packaging is integrated in the overall material flow - from packing at your plant, the supplier, via shipping, transport, goods receiving, machining in production, if any, and warehousing until withdrawal for assembly. It is therefore very important that you exactly follow the systems and processes described in this manual, which are the result of integration.

In this manual, we collected the descriptions and instructions that refer to the application of our packaging. They should be of mutual benefit for your deliveries to us.

**Voith Turbo GmbH & Co. KG
Market division Rail Electromechanical drives
Plant 1402 atm
Zoeppritzstrasse 79
89522 Heidenheim-Mergelstetten**

Tel.: 07321 / 37 - 8683

Fax: 07321 / 37 - 13 8683

Internet: <http://www.voithturbo.com>

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1. General

Today, the packaging is an important factor for efficient logistics. In order to take into account this status, we want to build an effective and efficient goods transshipment system with the help of our suppliers.

We hope that you, as a supplier, receive answers to questions arising in connection with the application of Voith packaging on the following pages..

If you have any questions, please do not hesitate to contact us.

Contact Voith Turbo: Mrs. Erika Völkel, atml - Tel.: 07321 / 37 - 8683

Goal of the packaging system:

- more rational handling
- Flexibility
- Lower costs
- Effective protection of goods
- Safety of deliveries

Unit continuity

Unit continuity means that one and the same item number is always packed in the same manner. Therefore, the goods handling system can be schematized.

Prescribed application

This packaging manual controls the application of Voith-released packaging. For deviations from these requirements, a written approval must be obtained **prior** to delivery.

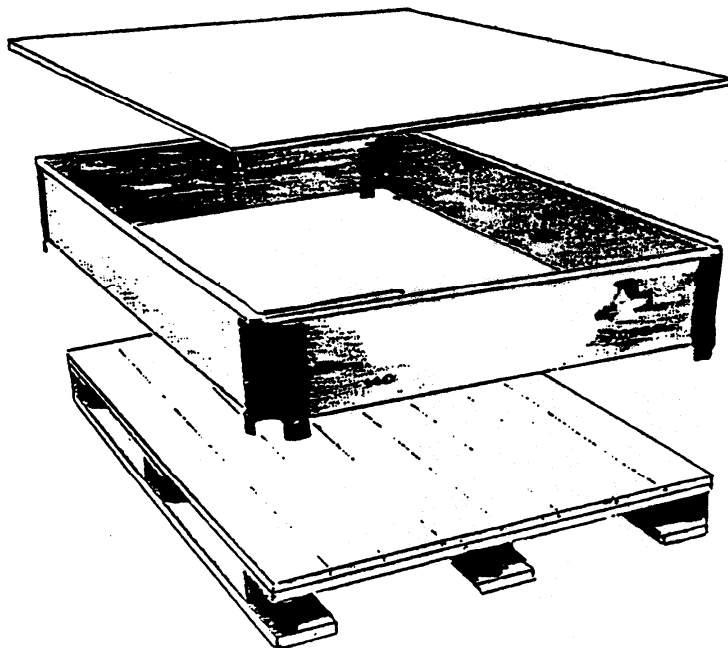
Responsibility

The non-commercial packaging materials described below can be obtained by you free of charge from the service provider company, Kentner, on behalf of Voith Turbo in fully usable condition.

In case of **unexpected damage** which does **not** allow further use, the packing must be **returned** to Messrs. Kentner indicating the reasons/causes etc.

2. Description of packaging released by Voith

Components of a pallet unit:



Intermediate plates

Euro frame (foldable)

Euro pallet

Designation	Type no.	Dim. L x w [mm]	Height [mm]	Weight [kg]
Euro pallet (wood)	H05.920072	1200 x 800	144	20
Euro frame (wood)	H01.088103	1200 x 800	190	8.5
Intermediate plate (plastic), large	190.00056710	1140 x 740	6	5.0
Intermediate plate (plastic), small	190.00056810	350 x 350	6	0.7
Intermediate plate (plastic), small	190.00187810	280 x 280	6	0.5
Hooked comb, long, high	001.00199910	1150	180	1.6
Hooked comb, long, low	001.00199810	1150	55	0.35
Hooked comb, short, high	001.00200110	750	180	1.0
Hooked comb, short, low	001.00200010	750	55	0.25

Please note:	Max. weight per pallet unit (gross)	800 kg
	Max. number of frames per pallet	2 pcs.

3. Requirements for packing material

Packing material must be of such design that safe transportation and safe transshipment is possible using commercial means of conveyance.

Generally, the packaging material released by Voith can be exchanged for corresponding empties directly during delivery.

Frames, covers and hooked comb are provided by us free of charge and are the property of **Voith Turbo GmbH & Co. KG, plant Heidenheim-Mergelstetten.**

Other packaging material and necessary consumables, i.e. plastic band, VCI foil, VCI paper, etc. must be provided by you free of charge **(do not use corrugated board).**

Your contact for the topic VCI packaging is Messrs. Ströbel:

Christian Jeschke
Ströbel GmbH
Wasenmühlweg 10
D-90579 Langenzenn
Phone: 09101/9942-11
e-Mail: jeschke@stroebel.de
Internet: www.stroebel.de

The use of special and internal packaging is described in the part-specific packaging instructions.

For the **requisition** of packaging material, please use our requisition form (requisition of empties packaging material). Please send it completely filled to the address below.

Please request required empties quantities **2 weeks at the latest prior to the packing date by e-mail**

Kentner Logistikpark (KLP)
Am Bühlfeld 2 - 8
89542 Herbrechtingen
Subject:
Voith Turbo empties/packaging material

Contact :

Mail: kentner-logistik@kentner.de
Fax: +49 - 7322 80790 - 48

Notes:

In order to achieve an efficient material flow together, we reserve the right to return at your expense deliveries not in line with appropriate requirements.

Appendix: Form Requisition of empties/packaging material

4. Transport equipment slip (TMS) upon delivery of goods

On the transport equipment slip, you will exactly list for each delivery the individual returnable Voith packaging quantities.

In order to allow management of Voith Turbo empties, we request that as of now you always transmit the transport equipment slip (TMS) **prior to each delivery** to the following fax number:

Fax no. +49 7321 37 7030

Appendix: Transport equipment slip (TMS)

5. Marking of goods and packaging

To ensure the identification and traceability of supplier parts, it is necessary that the pallet units are provided with valid goods labels.

The goods label should have the layout described in VDA recommendation 4902 version 3.

In the forms, the following data **must** always **be entered by you**:

- | | |
|---------------------------------|------------------------------|
| (1) Recipient of goods | (8) Voith item no. |
| (2) Place of unloading, storage | (9) Quantity |
| (3) Delivery note no. | (10) Description of delivery |
| (4) Short address of delivery | (11) Supplier item no. |
| (5) Gross weight | (12) Supplier no. |
| (6) Net weight | (14) Production date |
| (7) Number of packages | (17) Lot no. |

The following are **optional**:

- | | |
|----------------------------|---------------------------------|
| (13) Design revision level | (16) Package no. |
| (15) Hazardous substances | (18) Address of supplier (long) |

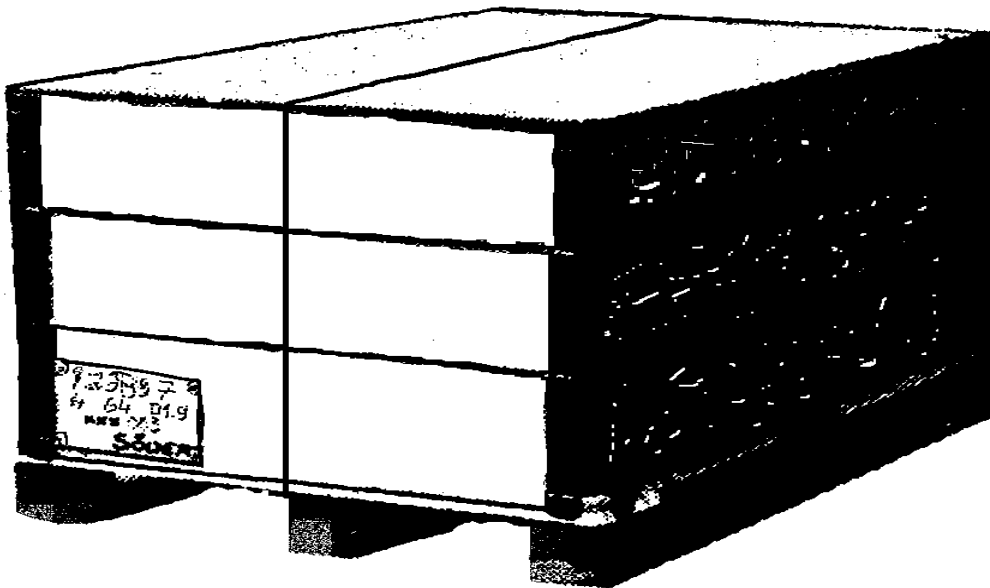
5.1 Attaching the goods labels

Goods labels must be attached to the bottommost frame, so that they are still available after the other frames are removed.

You are responsible for removal by your personnel of old goods labels still attached to the frames.

Each unit must have **two** goods labels attached, namely one each on the left-hand half of the sides that are 800 mm long.

The goods labels are fastened with a wire-clap pocket or tacked on the side that is 800 mm long.



Two goods labels on each pallet unit.

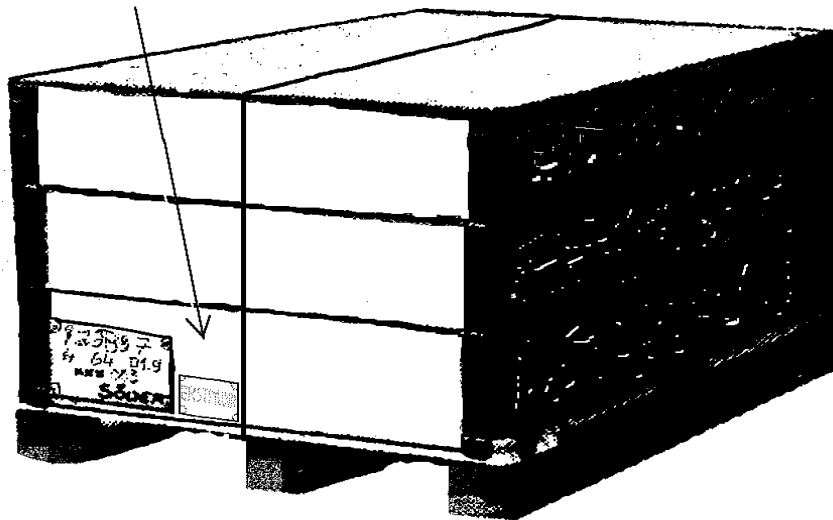
The goods labels must not be attached above or below the bands.

5.2 Goods labels for initial samples

If the Voith purchase order involves delivery of **INITIAL SAMPLES**, the delivery unit, apart from the normal goods label, must additionally be provided with a yellow good label "**INITIAL SAMPLE**".

This goods label must be attached to the delivery unit analog to the normal goods label, namely to the right of it.

Additionally, the relevant goods must be marked as initial samples.



The goods labels must not be attached above or below the bands.

6. Packaging instructions

The goods must generally be secured in such a manner that no damage can occur during transportation.

The goods must be preserved conforming to the order and delivery specifications, so that they cannot corrode.

The packaging design must ensure that the goods are stackable.

The separate requirements of the pertinent order must be taken into account!

The size of packaging should be utilized, i.e. the pallets should be filled with goods completely and evenly (see following example).

In all cases: **Only one item number per pallet**

Packaging example: pinion shafts:



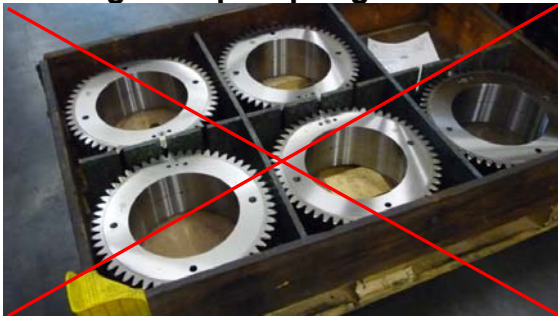
Packed properly:

Euro pallet with frame and intermediate frames.

Standard packaging

Washed, VCI packed, individually or completely.

Packing example spur gears:



Packed properly:

Euro pallet with frame and intermediate frames.

Incorrect:

VCI foil missing

Packing example labyrinth parts:



Packed incorrectly:

no intermediate frames

VCI foil missing

Danger of damage

Please direct packaging questions to: **Tel.: 07321 / 37 - 8683 Mrs. Erika Völkel**

7. Invoicing of packaging

As a supplier, you are responsible for the proper use and handling of the packaging. Damaged or lost Voith packaging material will be charged to your account.

Please note that, as a supplier, you are responsible for the appropriate packaging being available for timely delivery.

Therefore, order the packaging in a timely manner, i.e. at least 2 weeks prior to the delivery date!

The supplier shall bear all additional costs (such as repacking, special transports) attributable to delayed or incorrect packaging orders.

8. Inventory

On request, we ask that you perform at least one physical inventory annually of the Voith packaging material kept by your company.

If required, we may demand unscheduled inventories.

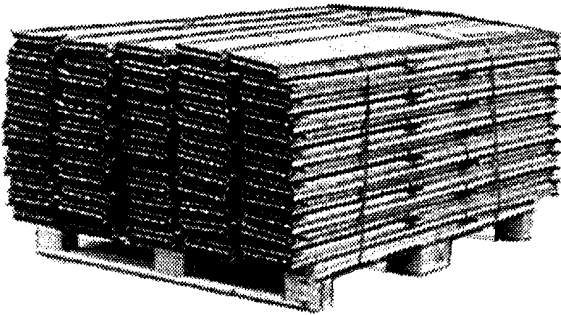
The relevant quantities of Voith packaging material must be noted in the Voith Turbo inventory form.

Missing quantities will be invoiced to you respectively charged to your account.

Please note the timely return of the Voith Turbo inventory form.
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9. Packing units - packaging in detail

The following packing units can be requested by mail from: kentner-logistik@kentner.de:
(euro pallets: exchange via forwarder)



Euro frame (wood)
H05.920072

Packing unit:
1 bundle = 60 pcs.



Hooked comb, low 1150 x 55 x 0.35
001.00199810

Packing unit:
1 frame height euro frame (wood)
= 120 pcs.



Hooked comb, short, low 750 x 55 x 0.25
001.00200010

Packing unit:
1 Frame height euro frame (wood)
= 200 pcs.



Hooked comb, short, high 750 x 180 x 1.0
001.00200110

Packing unit:
1 Frame height euro frame (wood)
= 72 pcs.



Hooked comb, long, high 1150 x 180 x 1.6
001.00199910

Packing unit:

1 Frame height euro frame (wood)
= 48 pcs.



Intermediate plates (plastic), small 280 x 280 x 0.5
190.00187810

Packing unit:

1 Frame height euro frame (wood)
= 240 pcs.



Intermediate plates (plastic), small 350 x 350 x 0.7
190.00056810

Packing unit:

1 Frame height euro frame (wood)
= 180 pcs.



Intermediate plates (plastic), large 1140 x 740 x 6
190.00056710

Packing unit:

1 Frame height euro frame (wood)
= 30 pcs.

9.1 Application examples for hooked combs and intermediate plates



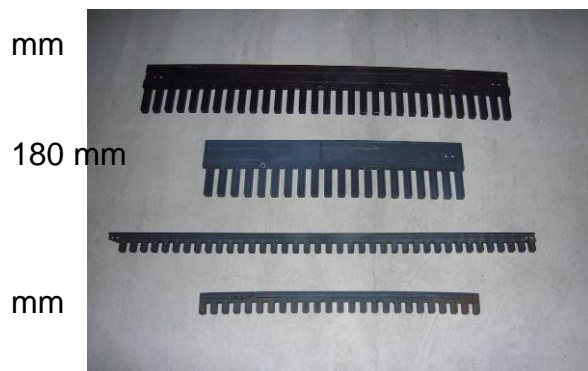
Euro frame wood
H01.088103

Dimensions: 1200 x 800 mm
Useful height: 190 mm
Total height: 190 mm
Empty weight: 8.5 kg



Euro pallet wood
H05.920072

Dimensions: 1200 x 800 x 144 mm
Empty weight: 20 kg
Maximum weight 900 kg



55 mm

Hooked comb long 1150 mm Height: 180

001.00199910

Hooked comb short 750 mm Height:

001.00200110

Hooked comb long 1150 mm Height: 55

001.00199810

Hooked comb short 750 mm Height:

001.00200010



Plastic intermediate plates large
1140 x 740 mm 190.00056710

Plastic intermediate plates small
350 x 350 mm 190.00056810

Plastic intermediate plates small
280 x 280 mm 190.00187810

As a supplier, it is your duty to observe the requirements described in this manual and in the letter form the purchasing department dated 16.02.2010.

We are looking forward to working with you as a partner.

**Voith Turbo GmbH & Co. KG
Market division Rail
Electromechanical drives Plant 1402 atm
Zoeppritzstraße 79
89522 Heidenheim-Mergelstetten**

Prepared on: 2010-03-23

Appendices forms:

- **Transport equipment slip (TMS)**
- **Requisition empties packaging material**

Empties requisition Packaging material

Requisition required empties quantities 2 weeks at the latest prior to the packing date only via mail

<p>Kentner Logistikpark (KLP) Am Bühlfeld 2 - 8 89542 Herbrechtingen Subject: Voith Turbo empties/packaging material</p>	<p><u>Contact:</u></p> <p>Mail: kentner-logistik@kentner.de Fax: +49 - 7322 80790 - 48</p>
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Delivery is effected only in the packaging size and/or units indicated in the Voith Turbo packaging manual.

Please enter relevant items under Quantity:

Item no.	Description	Dimensions L x W [mm]	Height [mm]	Weight [kg]	pcs. per unit	Quantity
H01.088103	Euro frame (wood)	1200 x 800	190	8,5	60	
190.00056710	Intermediate plates (plastic), large	1140 x 740	6	5,0	30	
190.00056810	Intermediate plates (plastic), small	350 x 350	6	0,7	180	
190.00187810	Intermediate plates (plastic), small	280 x 280	6	0,5	240	
001.00199910	Hooked comb, long, high	1150	180	1,6	48	
001.00199810	Hooked comb, long, low	1150	55	0,35	120	
001.00200110	Hooked comb, short, high	750	180	1,0	72	
001.00200010	Hooked comb, short, low	750	55	0,25	200	

*pcs. per unit for 1 frame height euro frame (wood)

Ship the packaging material / empties to this address:

Voith creditor Supplier no.	Company name	Street	ZIP code	Place

For questions, please indicate your name, phone no. and fax no.

Requisitioned

by company: _____

Date: _____

Vorsitzender des Aufsichtsrates der
persönlich haftenden Gesellschafterin
Dr. Hubert Lienhard

Geschäftsführung
Peter Edelmann, Vorsitzender
Dr. Manfred Lerch
Dr. Jürgen Zeschky
Dr. Volker Zimmermann
Matthias Lindemann
Dr. Martin Füllenbach

Persönlich haftende Gesellschafterin
Voith Turbo Beteiligungs GmbH
Reg.-Gericht Ulm, HRB 661216

USt-Id Nr.: DE 145216193
Steuer Nr.: 64004/08610

Bankverbindung
Commerzbank AG, Filiale Aalen
(BLZ 614 400 86) Kto. 1 011 766
SWIFT-Code: COBADEFF614
IBAN DE78 6144 0086 0101 1766 00

Handelsregister
Reg.-Gericht Ulm, HRA 661038

**Deutschland
Land der Ideen**

 Offizieller Partner

Transport equipment slip Plant 1402 atm

Prior to every delivery, send to fax no. +49 7321 37 7030

Delivery addresses:

- Voith Turbo GmbH & Co. KG, Zoeppritzstrasse 79, 89522 Heidenheim-Mergelstetten
- Kentner-Logistik Park, Am Bühlfeld 2-8, 89542 Herbrechtingen

Delivery note no. of the current delivery:

Goods receiving no.

<u>Sender:</u>
..... _____ Date and signature

<u>Addressee:</u>
..... _____ Date and signature

Item no.	Designation	Dimensions L x E [mm]	Height [mm]	Weight [kg]	Quantity
H05.920072	Euro pallet (wood)	1200 x 800	144	20	
H01.088103	Euro frame (wood)	1200 x 800	190	8.5	
190.00056710	Intermediate plates (plastic), large	1140 x 740	6	5.0	
190.00056810	Intermediate plates (plastic), small	350 x 350	6	0.7	
190.00187810	Intermediate plates (plastic), small	280 x 280	6	0.5	
001.00199910	Hooked comb, long, high	1150	180	1.6	
001.00199810	Hooked comb, long, low	1150	55	0.35	
001.00200110	Hooked comb, short, high	750	180	1.0	
001.00200010	Hooked comb, short, low	750	55	0.25	
Other transport equipment Designation					Quantity