

JWN 890 110

General packing guidelines for bought-in parts

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1 Scope

This supplier packaging policy applies to all suppliers of INNIO Jenbacher GmbH & Co OG and is a supplement to the general conditions of purchase.

2 Purpose

The policy should serve as a practical guideline to enable a smooth material flow between the suppliers and INNIO Jenbacher GmbH & Co OG.

3 Additional information

Definition of terms

Single packing unit	Package containing one component.
Packaging Unit	Package containing several components of the same part number (or mixed containers).
Overpack	Package containing several individual packages or multiple packing units.

Relevant documents

JWN 890 115 - INNIO Cleanliness Standard for Engine Components

4 Packing requirements

The choice of suitable packing depends on the product characteristics, protection requirements, transportation mode and conditions on the supplier's site.

Irrespective of the choice of packaging type, it must be ensured that the delivered parts meet the following requirements:

- Delivery of all parts without damage or loss of quality, free from dirt/dust and corrosion
- Smooth handling of the packaging unit/easy removal of the components

- Stackability of the individual packaging, the packaging units, the overpack and possibly also of pallets with packaging (if the size and weight of the parts permit, the height of the stackability is determined partly)
- Compliance with the specified standard dimensions and the permitted/recommended loads (see chapter ⇒ Requirements regarding supplier packaging)
- Minimized recyclable packaging material; using so few different materials as possible; easily separable
- Only undamaged packaging is to be used
- Formation of rational load units
- Proper marking (serial delivery/prototypes)
- One material number per packaging unit
- If mixed containers cannot be avoided, the packaging units must be clearly visibly separated, labelled and organised according to their purpose
- Alternative packaging options (e.g. standard returnable packaging such as Euro pallets, Euro box pallets, etc.) must be taken into account
- Even weight distribution (in one packaging unit/one overpack, on one pallet)
- Cavities are to be filled with filler material (recyclable)
- Wooden packaging (wooden crates, etc.) is to be free of mould and fungus and according to the size and design according to the HPE standard

4.1 Information function

Each individual packaging and packaging unit must be clearly marked with the part number and the number of pieces contained (only for packaging units).

Each overpack containing several individual packs/packages shall be clearly marked with the part numbers and number of individual packs/packages and the total weight. In the case of different part numbers, a "Mixed consignment" marking must also be affixed.

Prototype shipments must be clearly marked as such (stickers clearly visible from the outside).

Each delivery must be accompanied by a delivery note and a consignment note (CMR).

The delivery note must contain at least the following information:

- Delivery note number and date
- Client No.
- Order number/order item
- INNIO part number
- Part description
- Quantity supplied
- Country of origin

The details of the delivery note depend on the type of order: Direct order or Kanban order, see ⇒ Annex 3

In addition, the delivery note number, order number, part number and country of origin must be displayed with an EAN 128 B barcode.

(With the link <http://barcode.tec-it.com/de> a barcode can be created, only numbers, see example ⇒ Annex 3)

The consignment note must contain at least the following information:

- The postal address of the recipient
- The postal address of the sender
- Date
- Number of parcels ("collis") and exact description of the parcel ("colli") type:
 - GIX (box pallet "Gitterbox")
 - EUP (Euro pallet)
 - EWP (one-way pallet)
 - Euro frame
 - Folding frame
- Total weight of the goods
- Carrier and signature
- For customs goods: Customs stamp

4.2 Corrosion protection

Any parts susceptible to corrosion, and all machined and ground surfaces, in particular machined castings and forgings such as connecting rods, cylinder heads, cylinder liners and crankshafts, require special protection and must therefore be provided with preventative corrosion protection.

All components are to be delivered in a ready-to-install state, i.e. cleaning prior to assembly is generally not intended. Nevertheless, if cleaning before assembly of the component is necessary, this is taken into account in the individual case in the context of the release process of the component.

Irrespective of the transport route and duration of transport, the parts must arrive at their destination in perfect condition (free of corrosion) and remain free of corrosion when stored (at least 6 months after delivery), irrespective of the applied corrosion protection directly on the material.

The corrosion protection measures required by INNIO are to be implemented by the supplier, unless otherwise agreed.

Should corrosion occur on the component within six months, then necessary reworking can be at the expense of the supplier.

Suitable packaging with adequate corrosion protection is to be selected accordingly.

4.3 Dangerous goods

The legal regulations for the transport of dangerous goods must be observed.

Dangerous goods must be packed and labelled in accordance with the applicable legal regulations, preferably on at least two opposite sides.

The supplier is liable for all damages resulting from the non-compliance with legal regulations.

The legal ADR 2021 / IATA 2021 / IMDG regulations for the transport of dangerous goods / packaging must be observed.

5 Packaging materials

The following packaging materials shall be used in the supply chain from the supplier to the place of use/ storage location, where the supplier/sender being responsible for the quality of delivery of the packaged goods, unless otherwise agreed.

All packaging materials used must not contain so-called CMR substances.

The responsibility for this lies with the supplier.

Paper/cardboard/ corrugated cardboard	<ul style="list-style-type: none"> Free of paper production harmful substances
Plastics	<ul style="list-style-type: none"> For disposable use: PE, PP Reusable packaging/foam: PE, PP, PS Film: PE (colourless/transparent)
Corrosion protection paper/anti-corrosion film	<ul style="list-style-type: none"> VCI paper (recyclable with paper and cardboard) VCI foil (recyclable with foils) In exceptional cases: Oil papers or waxed papers Desiccant bags Minerals: Activated clay, pearlite, silica gel

Corrosion protection packaging materials may not contain any nitrosamine compounds, secondary amine compounds, heavy metals or nitrite.

Wood	<ul style="list-style-type: none"> Non-impregnated solid wood and plywood, according to ISPM No.15 (marking of all treated materials according to IPPC standard). Wood moisture at the supplier <20 %.
Strapping	<ul style="list-style-type: none"> PP material Alternatively, metal bands
Closure	<ul style="list-style-type: none"> Adhesive tapes and packaging straps as well as adhesive labels and product labels must not restrict the recyclability of the carrier material.

5.1 Environmental characteristic

In principle, all materials used must be critically evaluated with regard to their environmental compatibility and recyclability. INNIO explicitly demands recyclable materials. Deviations from this are to be agreed explicitly.

For disposable and returnable packaging as well as load carriers, INNIO requires the use of recyclable materials (reusable solutions are preferred). In this way, INNIO, together with its suppliers, is pursuing the waste management objective of environmental legislation in accordance with the ecological principle of "avoidance before reduction before recycling", thereby making a consequent contribution to waste prevention.

5.2 Requirements regarding supplier packaging

Where possible, the base area of a packaging/packaging unit should be optimized to the standard pallet size of 1,200 x 800 mm.

For subcontracting components that can not be packaged on a standard pallet, individual packaging solutions are agreed as part of qualification (see GS009 External Qualification Process (FPQ)).

For a general view of all standard packaging see chapter ⇒ Annex 1.

Dimensional restrictions	
	Height [mm]
Small parts warehouse	260
	400
Long-parts warehouse	1 000
Standard pallets	
P0	540
P1	690
P2	1,050
P3	1,400
P4	1,800
Weight restrictions	
Single packing unit	Max. 20 kg
Packaging Unit	
Overpack	
> 20 kg, then mandatory on pallet	
Max. Load weight	1,000 kg

Exceptions require written approval or are to be defined in the packaging data sheet

5.3 Requirements for the packaging of components with cleanliness requirements

Packaging of components with cleanliness requirements in accordance with **JWN 890 115** must be designed in such a way that the required cleanliness class is maintained throughout the entire process (from packing at the supplier to the final place of use).

The same applies to components having defined sub-areas with cleanliness requirements (for example, holes, channels, machined surfaces).



JWN 890 115 – INNIO Cleanliness Standard for Engine Components

5.4 Packaging tests

The incoming goods are randomly checked for compliance with the agreed packaging agreement. In case of deviations, the supplier will be informed. Any costs incurred (repacking/reworking of parts or similar) may be charged to the supplier.

6 Process of packaging predefinition

Packaging is defined in agreement between the supplier and INNIO Jenbacher GmbH & Co OG as part of the FPQ process for new components.

The supplier draws up a packaging proposal in accordance with the requirements of this guideline and sends it to the responsible SQE/packaging engineer.

Packaging prototypes are to be provided upon request. Shipping tests are carried out on a case-by-case basis.

The packaging agreement is to be concluded before the first series delivery.

Deviations from the agreed specification are to be coordinated with INNIO Jenbacher GmbH & Co OG. The responsible SQE is to be informed of any SDRs. A copy of the approved SDR form is to accompany the affected delivery.

If changes to an existing packaging are required, these may be proposed by the supplier or by INNIO Jenbacher GmbH & Co OG. This is also to be coordinated with the responsible SQE.

7 Packaging data sheet

The packaging developed by the supplier and INNIO Jenbacher GmbH & Co OG is to be described in the attached data sheet (⇒ Annex 2) and is to be approved/released by the supplier and INNIO Jenbacher GmbH & Co OG.

The packaging is then regarded as released.

8 Annex 1

General view of standard packaging

Outer packaging / loading unit

- Euro pallet 1,200 x 800 mm 1,000 kg
- One-way pallet 1,200 x 800 mm 1,000 kg
- DB box pallet box 1,200 x 800 mm 1,000 kg
- Wooden box on pallet 1,200 x 800 mm 1,000 kg
- Crate on pallet 1,200 x 800 mm 1,000 kg
- Industrial container 1,200 x 800 mm 1,000 kg
- Reusable container 1,200 x 800 mm 1,000 kg
- Cargo securing aids 1,200 x 800 mm 1,000 kg
- Wooden box for oversized parts
- Crate for oversized parts

Subsidiary packing units

- Schäfer box LF 532/531 500 x 300 mm
- Reusable container 500 x 300 mm
- Corrugated cardboard boxes:
 - Single-wall corrugated cardboard
 - Double-wall corrugated cardboard
 - Triple-wall corrugated board
derived from 1 200 x 800 mm
- Waterproof coated corrugated board for overseas shipments

Internal packaging/single packaging/inserts

- Pouches
- Cardboard boxes
- Corrugated board boxes
- Moulded inserts
- Layer pads
- Dividers

Packaging aids

- Folding top frame 1,200 x 800 mm
- Top frame 1,200 x 800 mm
- Stretch film/shrink film/film hood
- Plastic strapping/metal strapping
- Edge protectors/corner protectors

Cushioning material

- Paper plus system
- Bubble wrap
- Air cushion pad
- Packing paper
- Foam film

Corrosion protection packing

- VCI foil
- VCI paper
- VCI vapour capsule
- Oil paper
- Waxed paper
- Desiccant bags

9 Annex 2**See also**

- Verpackungsdatenblatt_2019_01_25

JWN 890 110 Packaging data sheet

Single packaging: Packaging containing one part.

Packaging unit: Packaging containing several parts of the same part number (or mixed containers).

Overpack: Packaging containing several single packages or multiple packaging units.

Item data

Item No.		designation	
weight / part [kg]		material	

Contact details supplier

supplier number		Picture part
supplier name		
address (street, house number)		
post code / place / country		
contact person		
telephone		
mail		
production site	see above / or adress, when deviant	

Packaging data

please tick [x]		please tick [x]		please tick [x]	
single packaging		paper / corrugated board		strapping	
packaging unit		plastic / foil		stretch film	
overpack		VCI paper / foil / depot		tape / packing tape	
on pallet		oil paper / waxed paper		fillig material/ padding	which?
wooden box / wood crate		desiccant		packaging with INNIO Logo	

outer dimensions single packaging		outer dimensions packaging unit		outer dimensions overpack	
length		length		length	
width		width		width	
height		height		height	
weight [kg]		weight [kg]		weight [kg]	

When delivery on pallet		please tick [x]		free field / particularities / comments	
dimensions (L x W x H)		disposable packaging		Mixed container or similar / no packaging necessary with justification (only after consultation with INNIO) / corrosion protection on the material / sea freight / air freight / edge protection or other special features ...	
quantity per layer		reusable packaging			
quantity layers		if reusable	description		
weight [kg]		blister / partitions			

Picture(s) / description

Photo documentation / text (pic of packaging outside / inside / with part)

for packaging unit: please describe pack sequence

for delievry on pallet: please describe the stacking on the pallet

(afterwards please delete this text)

Release supplier

Name		signature		date	
------	--	-----------	--	------	--

Release JENBACHER

Name		signature		date	
------	--	-----------	--	------	--

10 Annex 3

Example bar codes on delivery note

Delivery note number:



1401051332

Order:



1833540

INNIO part number:



110970

Country of origin (International Code only):



IT

Details on Kanban delivery note:

- On delivery notes separated by stock, an EAN128 B barcode must be included with the following content:
 - Order number and order item
 - Quantity supplied
 - Delivery note number and date
 - Country of origin/Part Number
- The following text information must be clearly visible on all packaging separated by location:
Packing unit:
 - LOG2000
 - Shelf
 - Order number

Parts packaging:
 – Part number

11 Revision code

Revision history

Index	Date	Description / Revision summary	Expert Checked by
3	31.03.2021	Kapitel 4.3 hinzugefügt / Chapter 4.3 added	Roediger C. <i>Brinkmann L.</i>
2	30.09.2019	Grundlegende Überarbeitung / Fundamental revision	Roediger C. <i>Foidl S.</i>
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