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CONTROL SHEET

PROCEDURE ISSUE:

Issuing
department: Team Packaging Improvement Project
nt:

MODIFICATIONS CONTROL:

<u>Edition</u>	<u>Date</u>	<u>Modified clause</u>	<u>Modification description</u>
0	03/09	-	-Procedure initial draft
1	02/14	4	-Develop responsibilities
		5	-Develop section
		5.1 and 5.11	-Change criteria
		5.1.2	-New section for EUROPALET
2	02/ 17	5.2.2	- Change information that must contain the kits label and its placement in the components of the kits.
		All	- General modification according to learning project and improvement of packaging.
		Registers	- Revised RPA07-07-01 (packaging proposal), new edition of RPA07-07-01: Packaging validation sheet
		Annexes	- Annexes from previous edition are eliminated. New annexes have been included Annex 1: process of validation Annex II: List of shipping rules

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1.- OBJECT

The purpose of this manual is to describe the requirements of Patentes Talgo S.L.U. For the packaging of materials provided by suppliers.

These requirements cover aspects related to:

- Optimization of packaging design in accordance with general regulations and requirements of Patentes Talgo S.L.U.
- Standardization of packaging formats.
- Safety of materials and people.

It is intended to ensure a rational and optimized exchange of material between suppliers and Patentes Talgo S.L.U.

2.- SCOPE.

The present process is applicable to all materials requested by Patentes Talgo S.L.U


3.- REFERENCES.

- Sheet of the process "Purchases" ref. PR-07

Patentes Talgo Quality Manual,

4.- DEFINITIONS.

- **Shipment norms**: They are the specific definition of the types of packaging that will be described in them. Likewise, in the cases that are required, they will be completed with the packing validation sheet. ([See Annex II, List of Shipping Rules](#)). Shipping Rules are specific sub-procedures that complement the general guidelines of it. Each material will have associated a shipping standard that will be proposed by Talgo to the supplier who can accept or propose a new one through the packaging validation sheet.

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- **Packaging validation sheet:** Record linked to this process for the use of the packaging proposal by the supplier to Talgo. Complete certain shipping regulations, which require the specification of packaging characteristics to be validated. The packaging validation sheet is a record of Talgo that collects the supplier proposal and will initiate an internal validation process, which will require the approval of the warehouse, engineering and procurement departments. [\(See Register RPA07-07-01\)](#)

-**Focal point validation packaging:** New figure in the manufacturing centers, whose main function will be to follow the validations of packaging, claiming the parties involved. The Focal point of packaging figure will be whoever internally claims to supplier the package sheets. In addition, he will be the one who distributes the packing cards and collects the validation signatures and / or comments of the validation team to send to the purchases department.

The Focal Point of each center will be a member of the procurement department.

5.- RESPONSIBILITIES.

[\(See table Annex.I- Packaging validation process\)](#)


Planning: plan each material with its corresponding packaging, updating the system.

Purchases: claim the fulfillment of the packaging proposed by Talgo to the supplier or counterproposal of it. Activate and close the validation process with the provider. Update the agreement information in the system.

Supplier: at the proposal stage, accept or propose. In case of acceptance, comply with the agreed upon packaging.

Warehouse, procurement and engineering: check the packaging proposals of the suppliers and activate validation process, meeting deadlines. The Focal Point will activate PR-16, if necessary, by completing the RPR-16-A Production Equipment Request.

Documentation: if the packaging required plan creation, Manufacturing Engineering will release the same.

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6.- DEVELOPMENT.

6.1.- BASIC REQUIREMENTS AND GENERAL RECOMMENDATIONS

In general, the design of the packaging should be oriented so that the manipulation of the components at the point of use is as efficient as possible (reducing double handling). For example, it should be treated, to the extent possible, that the components that must first be used in an assembly are placed so that they are the first to be extracted from the packaging.

Whenever possible, one should try to opt for modularity, that is, that each subset of the packaging is an independent module stable and stackable by itself.

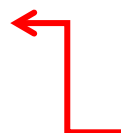
Painted pallets of any color shall never be used. And the tools and metallic elements, must be treated with a process of galvanization

The packaging should always facilitate the visual management and the counting of the pieces for the identification of missing ones.

At the time of definition of the tool, the names that must appear in the tooling shall be defined. For example, "Las Matas II" or "Rivabellosa" to identify the place of belonging of the tools.

The materials must not project, under any circumstances, from the surface of the base of the packaging or pallet.

In no case, unless otherwise specified in Patentes Talgo S.L.U., the contents of the packaging must exceed the maximum height of the packaging containing it.




Impermissible packaging example: material protrudes from the base of the pallet.

Example of inadmissible packaging: the height of the contents is greater than that



In no case may the contents of a package exceed the stipulated dynamic resistance of the packaging / pallet used.

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As far as possible, and once proved that this it does not compromise safety of the materials transported, the packaging must contain as few layers / plastic elements as possible. Thus, in many cases:

- The use and unnecessary handling of plastic envelopes, foams and other packaging components as well as the generation and management of waste are minimized.
- The need to use cutter or other cutting tools is minimized, minimizing the risk of damage to materials and operators handling them.

For the same component in the same Standard of Shipment, it should always be sought that, unless otherwise specified by Patentes Talgo S.L.U., the quantities of parts per package and their arrangement within the packages are always the same.

When components are to be placed in tools at different heights, heavier components will be treated in the most ergonomic positions.

On the other hand, if the supplier could not deliver the material or kit complete, as the delivery date and / or assembly expires, and was mountable to Talgo. The supplier will send to the department of supplies of Talgo a transitory derogation to request shipment with missing items, through the RPA-07-02 "Authorization of shipment with missing items". This document does not exempt the supplier from completing the assemblies, either via additional delivery and / or assembly at the Talgo facilities.

Once the RPA-07-02 has been signed, it will be sent by supply to the supplier. This will identify the packages that complete the shipment with this record and will also accompany a second copy to the delivery notes of the shipment.


When the supplier has the missing items in his possession, he must complete the registration RPA-07-03 "Registration to complete set or incomplete kit" and perform the same process as with the RPA-07-02. In addition to the above, if the situation requires it, the supplier must move its personnel to the corresponding facility to complete the mentioned assembly.

No groupings of missing material can be carried out, they must indicate in which material they were missing, and the registration number RPA-07-02, with which the incomplete kit / material was authorized.

6.1.1 SAFETY

During the preparation and handling of the packaging, all the safety measures that apply to the type of product to be packed and the characteristics of the packaging must be observed.

In general; in all cases, basic personal protective equipment, such as safety footwear, work clothes, gloves and any other PPE required at the place where the packaging operations are to be carried out, shall be used.

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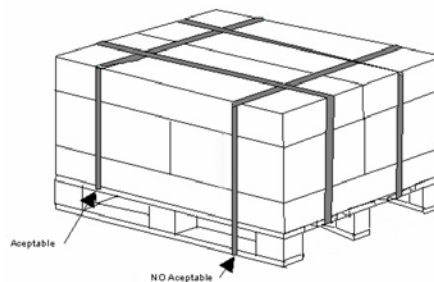
In case of concurrence of rules applicable to a particular topic, the most restrictive criterion will always prevail.


Should an unforeseen event arise or a vacuum is detected in the preventive matter during the operation, the work will be stopped, the problem will be transmitted immediately following the hierarchical order and the maneuver will not be continued until an effective solution is obtained. Never improvise.

It is the responsibility of each one to comply with the legal and regulatory measures of Occupational Hazard Prevention, to use properly the equipment of work and to watch at all times for its own security and that of all the present personnel.

6.1.2 STRAPPING MATERIALS

The packaging must be strapped in each of the cases in which it is specified. In particular, if the packaging consists of several cartons placed on a pallet (see figure), the whole set must be strapped with a plastic strap in accordance with UNE EN 13891: 2003 (or any follow-up standard in force). The use of metallic straps or metal staples shall be avoided, except indication in contrary by Patentes Talgo.



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6.1.3 INTERNATIONAL TRANSPORTATION

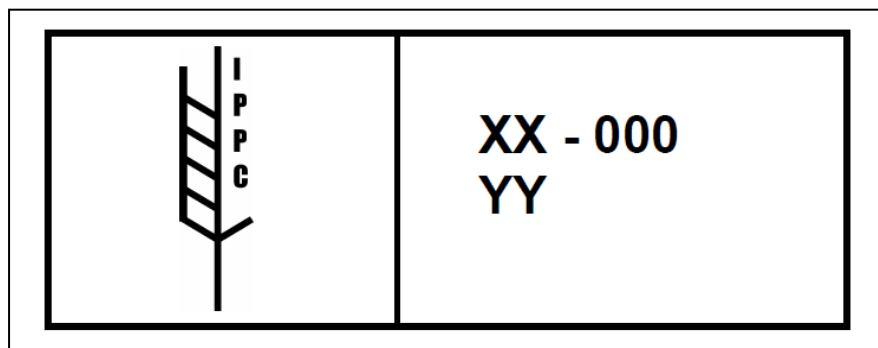
Wood packaging intended for the international transport of goods must comply with *the Guidelines for the Regulation of International Wood Packaging* used by the FAO.

The full description of these guidelines is available at the following link:

[NORMAS INTERNACIONALES PARA MEDIDAS FITOSANITARIAS – Directrices para reglamentar el embalaje de madera utilizado en el comercio internacional.](#)


URL: (<http://www.fao.org/docrep/007/y4838s/y4838s00.htm>)

In particular, it is important to note that once the relevant phytosanitary measures have been carried out, packaging must be marked according to the regulations by means of the following mark.



· The mark must include, at least:

- the symbol
- The two-letter ISO country code, followed by the special number assigned by the NPPO to the wood packaging producer. The NPPO is responsible for ensuring that the appropriate wood is used and marked correctly.
- The abbreviation of the IPPC that identifies the approved measure that has been used (eg HT, MB)
- At the discretion of NPPOs, producers or suppliers may assign control numbers or other information identifying specific lots. When debarking is necessary, the letters DB should be added to the abbreviation of the approved measure. Other information may be included as long as it is not misleading, confusing or false.

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· The marks must:

- conform to the model shown above
- be legible
- be permanent and non-transferable
- be placed in a visible place, preferably at least on the two opposite sides of the certified article.
- Colors red and orange should be avoided as they are used for the identification of dangerous goods.


The wooden packaging, recycled, re-manufactured or repaired must be certified and marked again. All components of the packaging must be subjected to treatment.

Exporters should be encouraged to use properly marked wood for stowage.

6.1.4 ENVIRONMENTAL ASPECTS TO TAKE INTO ACCOUNT.

This section shall be a reminder of the environmental criteria to be taken into account. However, they are collected throughout this procedure.

- Only use materials following materials:
 - o Plastics of PE or PP
 - o Oil or wax paper may only be used with PTSLU approval
 - o Adhesive tapes and paper stickers with water-soluble adhesive.
- Cardboard boxes without metal staples
- No carton box should be inserted into the pallets.
- In case of being dangerous goods they must bear the corresponding labeling
- In case of being dangerous goods, they must be approved packages
- Packaging must be provided that it can be returned and reusable, and be identified as such with symbols recognized as recyclable
- Do not use painted pallets or bleached cartons
- Wood packaging must comply with current phytosanitary standards
- Prioritize the use of easily removable or collapsible packaging
- Size the containers and packaging (volume and thickness) according to the material to be transported
- Avoid overpackaging when not needed, as long as it does not oppose the Talگو standard.

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6.1.5 PACKING INTEGRITY

The packaging elements must retain their physical integrity and should never be reused if:


- For closed wooden and carton boxes: surface is damaged so that the contents can be seen through holes in sides or cover.
- For packaging or material wrapped in plastic film, anticorrosion protection plastic, antistatic plastic or bubble paper: the plastic is torn or free so that the materials are exposed to the outside environment.
- For pallets: one or several boards are missing, some table is divided in a transverse direction, some table is broken at the end so that the core of the screws / nails is missing, a block is missing or damaged so that it is visible the soul of the nails.
- For metallic tools: one or several parts are oxidized in a way that compromises the integrity of the tool or of the materials that may come into contact with it, missing any moving or threaded parts necessary for assembly, disassembly or lifting of the tool.

In case of receiving a shipment that does not comply with these minimum conditions of integrity of the packaging, Patentes Talgo S.L.U. reserves the right not to unload the packaging or to charge the costs derived from such manipulation to the supplier by making the corresponding reservation in the CMR or delivery note.

Whenever possible, one should try to opt for modularity, that is, that each subset of the packaging is an independent module stable and stackable by itself.

6.1.6 LOAD AND UNLOAD OF THE TRUCK.

The packages will be prepared in the transport to be unloaded by the side of the truck with a cart, as no loading docks are available in its discharge.

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6.2. LABELING AND IDENTIFICATION OF MATERIAL

· PACKAGING LABEL

Definition: Outer packing label

Necessary information: Name of Supplier - Code Talgo - Description - revision - Amount - Dimensions (L x H x D) - Stacking levels - Returnable - Consignee - Delivery note number - Net weight (Kg) - Number of packages - IMA level - Reference number of the supplier (optional) - Date of shipment - Serial number of the label (optional) - Batch number (optional) - Shipping standard Talgo.


The packaging labels will come in a self-adhesive envelope attached to the packaging wall. It will be placed in a visible area of the packaging., one on the long side and the other on the short side. Specific Area according to Talgo standard .

- Macro Label:

Definition: Grouping tag of elements of the same reference:

Useful information: Name of Supplier - Talgo Code - Description - Amount

FECHA ALBARAN	ALBARAN	PATENTES TALGO, S.L.U	
	21912	C/1.ª CORUÑA, KM.23 - PASEO DEL TREN TALGO, 2	
Proyecto:		28290	LAS ROZAS
		MADRID	
		ESPAÑA	
CANTIDAD	DESCRIPCION	REFERENCIA	
2,00	CARENADO DE COLA INTERMEDIA ACABADA	SL21A-5143056B	
2,00	CARENADO DE COLA INTERMEDIA ACABADA	SL21A-5143056A	
2,00	CARENADO DE COLA SUPERIOR ACABADA	SL21A-5143057B	
2,00	CARENADO DE COLA SUPERIOR ACABADA	SL21-A5143057A	

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- Micro Kit Label:

Definition: Micro Kit Label:

Necessary information: Name of Supplier - Talgo kit code - Kit description - Kit revision - Kit composition (Code - Description - Revision - Amount per kit)

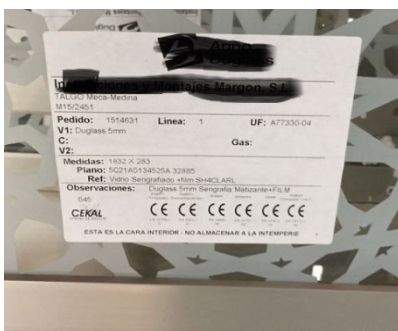


- Micro Label:

Definition: Unit part label, whether or not it is part of a kit.

Necessary information: Name of Supplier - Talgo Code - Description - Revision - Serial number - kit to which it belongs if necessary - expiration date if any.


The sticker must be placed in a visible place, (NOT SEEN FACE) and must be able to detach without leaving residue.



6.3 TYPES OF PACKAGING

6.3.1 RETURNABLE PACKAGING

Fixed identification: ID

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The tools or returnable packaging must have a visible sheet identifying the tooling which shows its characteristics. The necessary information shall be placed on an aluminum plate at least 200 x 150 mm.


At least, the following information must be shown:

Number of the Field	Name of the Field
1	Reference number (Drawing in SAP)
2	Serial number
3	Mark CE (y/n)
4	Dimensions (L x H x D)
5	Tooling weight (kg)
6	Stackability levels
7	Elevability (y/n)
8	Returnable (y/n) *
9	Factory *
10	Bar code

In all cases where the shipping standard requires packaging validation form, and that it is defined that the packaging is returnable; A corrective maintenance agreement will have to be defined. Reflecting it the mentioned form as a commentary.

The casuistry is so broad that it is subject to each supplier proposal and valuation for its impact on the following characteristics:

- Property, use / enjoyment (supplier / Talگو),
- rotation index,
- economic impact of the ongoing project,
- potential future reuse of packaging, in which case a preventive maintenance plan will have to be defined

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6.3.2. CARDBOARD BOXES AND SEPARATORS

The weight of the boxes must be selected according to the weight of the components, so they can be stacked on top of each other without prejudice to their content. The weight of a unit handling box must never exceed 12 kg.




For applications, whether separating or supporting vertical loads, which have more severe requirements of load capacity, corrugated cardboard or cell board shall be used.



For the determination of the compressive strength, both for corrugated cardboard and carton packs, the guidelines of UNE 1370001 shall be followed.


For the boxes' sealing, adhesive tapes with water-soluble adhesive will be used. In no case will metal staples be used to seal the boxes.

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When using carton boxes, the specifications of UNE 49 452 will be observed. The main specifications are summarized in the table below:

Max. Gross Weight of the Box	Max. Interior Dimensions (length + width + height)	Min. Resistance to Burst	Min. Carton Thickness	Min. Carton Weight
kg	M	Kgf/cm ²	mm	g/m ²
10	1.00	10.0	1.0	780
15	1.25	12.0	1.3	975
20	1.50	14	1.5	1170
30	1.70	16	2.0	1400
40	1.80	18	2.3	1700
50	1.90	20	2.5	1850
60	2.00	22	2.8	2000

The calculation of the compressive strength of the cartons and corrugated board elements must be carried out in accordance with the UNE 137001 standard

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6.3.3. WOODEN BOXES.

When wooden boxes are used, it will be ensured that the structure guarantees stacking and is robust enough to avoid cracks and angular variations in the corners of the boxes when they are subjected to transport and stacking loads.




In particular it will be observed that the materials used meet the specifications of wooden packaging.

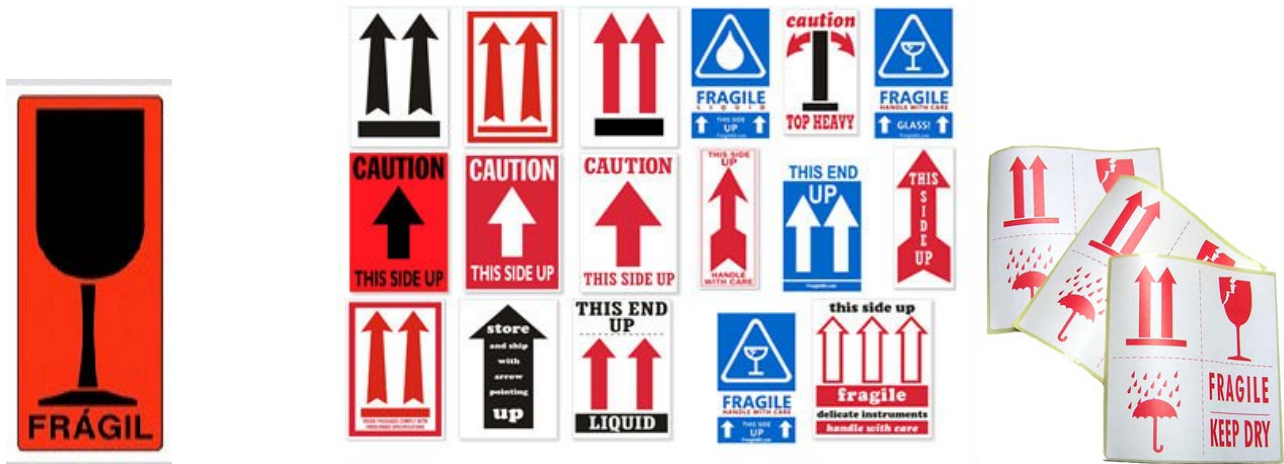
As a general rule, the boxes will have an easy-opening lid, to allow counting of the components from the outside of the packaging. If the dimensions of the packaging warrant it, windows (which will remain closed during transportation) will be enabled for counting or verification without opening.

In wooden packaging to be used in international transport and for which a pre-delivery inspection (customs) is required, account must be taken of the need to provide access either to a detachable lid at the top (for Smaller packaging) or, in large packagings, an access door. In both cases the opening shall make it easy to be disassembled and reassembled so that, after inspection, both the integrity and the tightness of the packaging are maintained.

Note in the box that the content is fragile:

It is essential to point the word "Fragile" in a visible way on the outside of the corresponding boxes. Other clarifications will also be made, such as the direction in which it should be placed (which part should go up), if precaution should be taken to place other packages on top, etc.

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Examples of information and notice stickers on the packaging

6.3.4 PACKING AND TOOLS WITH WHEELS

Any usefulness of dimension L (larger dimension of the base) greater than 1600 mm must be provided with flat housing 5118459A for the placement of standard wheels according to drawing 5121346A and anchor bolt 5118460A.



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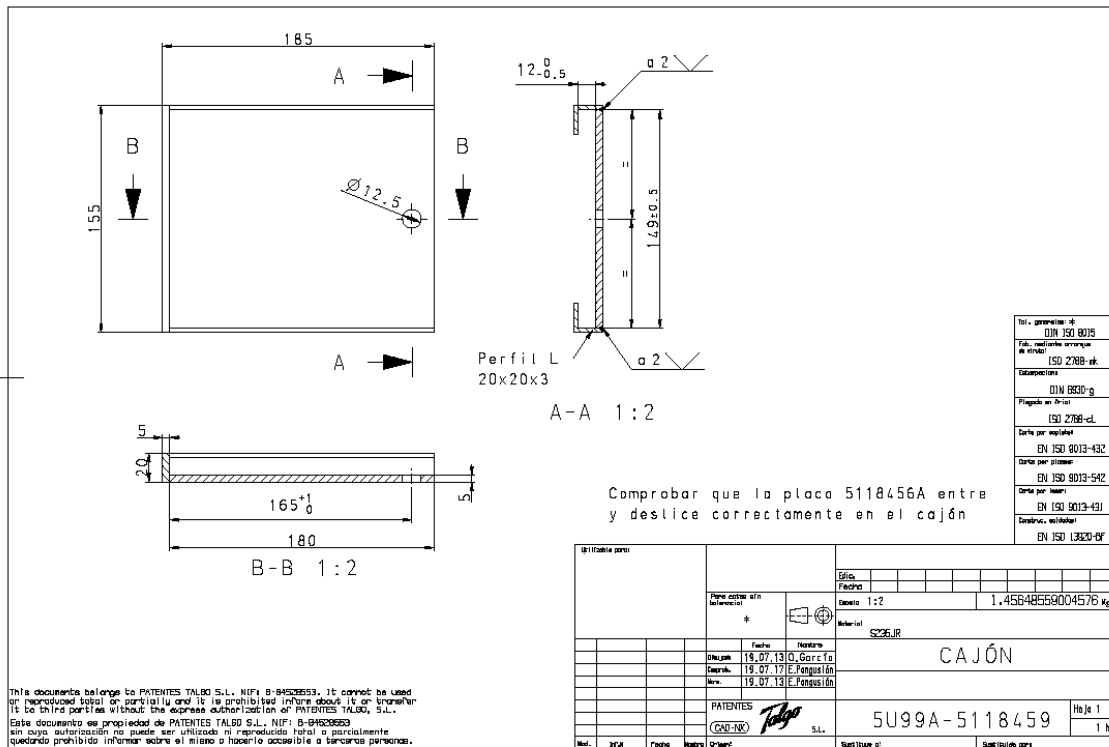
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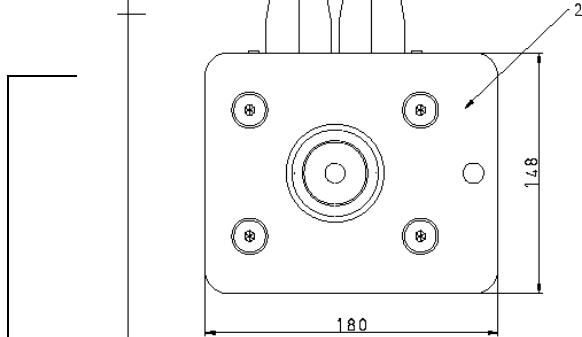
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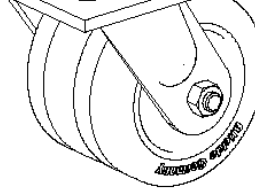
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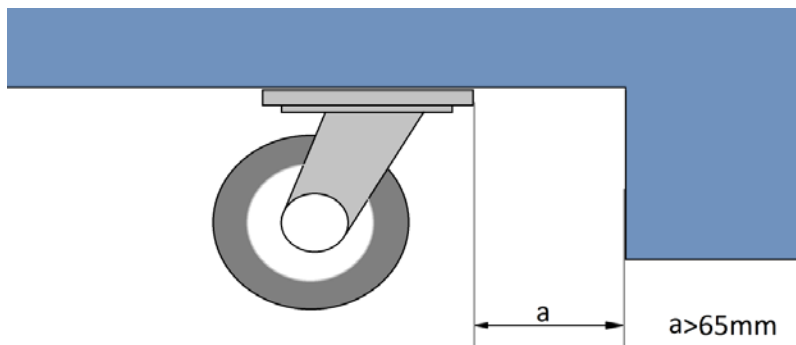


Estándar	DIN 6850-g
Pliegue en frío	ISO 2768-cL
Corte por espesor	EN ISO 9013-432
Corte por plasma	EN ISO 9013-542
Corte por láser	EN ISO 9013-431
Carburado, endurecido	EN ISO 13320-DF

Utilizable para:		Edic.:		Fecha:		
Papel como sin balancear		Escala: 1:2		Kg:		
#		Material:				
		Fecha:		Material:		
		Origen:		CONJUNTO RUEDA-PLACA		
		Dibujado:		02.07.13 O. García		
		Revisado:		02.07.13 E. Ponguistín		
		Aprobado:		02.07.13 E. Ponguistín		
		PATENTES		5U99A-5121346		
		CAD-TRC		Hoja 1		
		S.L.		1 h.		
Mod.	YJA	Fecha	Revisó	Origen	Substituye a:	Substituido por:

In addition to the incorporation of wheel housings according to the aforementioned plans, the supplier must ensure that, for all wheels, it is verified that the incorporation of the housings is sufficiently far from the supports (of the tool not to interfere with them during their rotation.

Specifically, a minimum distance of 65 mm must be kept between the end of the upper edge of the housing and the support of the nearest tool.



Explanation: The distance between the closest support and the edge of the wheel housing should exceed 65 mm in order to avoid wheel and support interference during rotation.


6.3.5 LIFTABLE PACKINGS AND TOOLS

The basic requirements to be met by the packaging and lifting equipment supplied to Patentes Talgo S.L.U. will be specified in the Shipping Standard. These elements shall be considered Lifting Accessories (Directive 2006/42 / EC), the supplier of the tool must comply with all the regulations that apply to this tool. It must be certified with CE marking if necessary.

6.4 PROTECTIONS AGAINST EXTERNAL AGENTS

In determining the protections to be used for the supplied packaging, account must be taken of:


- The specific characteristics and sensitivity of the material
- The conditions to which it may be potentially exposed during transport (geographical location, climatic characteristics of the place of dispatch and reception, distance, road transport, maritime transport ...)

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- The anticipated characteristics of the handling of the packaging in workshop (elevation, manipulation of the components ...)

The main risks to which the goods may be subjected and the main means of protection to be used are listed below in a table.

RISKS	PROTECTIONS TO BE USED
<p>IMPACTS</p> 	<p><u>Exterior part:</u></p> <ul style="list-style-type: none"> • The packages must be provided with an external envelope (box, cage, fence, metallic tool ...) that protects the materials of direct impacts during their manipulation and protects the environment of the same from the impact against them. <p><u>Interior part:</u></p> <ul style="list-style-type: none"> • The materials that require it will be protected from impacts on the interior by absorbent deformable elements such as foam, cardboard, bubble wrap ... If not to the detriment of the integrity of the materials, they will always be chosen because of their condition of recyclables, being preferable to the non-recyclables, when the rest of conditions are the same (protection requirements, cost,

RISKS	PROTECTIONS TO BE USED
	<ul style="list-style-type: none"> • reduction of the number of elements / layers ...) the use of cardboard protections (corrugated cardboard, carton in cells ...) for its greater recyclability. Fixed part protections, such as foam protections, must be fixed to the tooling in such a way that they do not detach when removing parts from the packaging. <p style="text-align: center;"><u>Materials' immobilization:</u></p>



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- Whenever the movement of the materials inside the packaging poses a risk to their integrity or that of the packaging itself, they shall be fixed by means of containment elements (separators, mattresses ...) or tie-down / fastening elements (flanges, elastic occlusion, ...)

Protection against abrasion:

- The elements subject to the use of combs / jaws or supported on the floor of containers will be protected against friction and abrasion damages either by protecting the element itself (eg with foam film) or by protecting the surfaces of the packaging (for example with foam or felt).

WATER

Impermeability

- Regardless of the type of transport used, any material susceptible to get damage in case of getting wet must be contained in a packaging that guarantees its tightness or protected by plastic film or other elements of completely impermeable form. (Particular care must be taken in the case of electrical and electronic elements, always ensuring that they are not exposed at any time to possible inclement weather conditions in case of damage to the outer envelope of the packaging).

HUMIDITY AND CORROSION




Drying elements:




- In packagings where, due to the nature of the transport and the sensitivity of the materials, it is required to use drying elements (silica gel or similar) bagged and attached to the inside of the packaging but not in direct contact with the materials.


Anti-corrosive plastic:

- Where applicable, the elements in corrosion-resistant plastic shall be wrapped for their protection or (for smaller items) non-corrosive plastic shall be used.





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	<p style="text-align: center;"><u>Ventilation:</u></p> <ul style="list-style-type: none"> For large containers and long conveyances susceptible to accumulation of moisture by condensation, ventilation holes will be provided to allow the circulation of air to mitigate the differences in temperature and composition of the indoor air that favor condensation.
 <p>TEMPERATURE</p>	<ul style="list-style-type: none"> Materials sensitive to temperatures above / below certain thresholds or those susceptible to damage due to sudden changes in temperature shall be protected by thermal insulation. Likewise, materials whose exposure to sunlight may cause them damage shall be protected from it.
 <p>PRESSURE</p>	<ul style="list-style-type: none"> Any equipment sensitive to pressure change shall be contained in a suitably sealed constant pressure atmosphere. Particular caution shall be taken in any packaging of these characteristics which is to be carried by aircraft due to the strong variations in barometric pressure occurring in this type of transport.
<p>INSECTS, RODENTS AND FUNGI</p> 	<ul style="list-style-type: none"> The protection against fungi and micro-organisms depends to a great extent on adequately protecting components and packaging from moisture and moisture accumulation by condensation, particularly in international transport (see Moisture and Corrosion in this table). In case of risk of infestation by insects in any international transportation, the wooden packaging will be treated according to the phytosanitary standards for export specified by FAO. In addition to this, specific treatments can be performed against a particular infestation. The use of outer shells in packaging that, due to

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	<p>their storage and transport conditions, is vulnerable to attack by rodents or other animals will be avoided.</p>
ELECTROMAGNETIC PHENOMENA 	<p style="text-align: center;"><u>Static electricity:</u></p> <ul style="list-style-type: none"> The electronic components are particularly sensitive to the electrostatic discharges that occur, mainly in plastic packaging elements by tribological (frictional) phenomena. Antistatic plastics will be used to avoid damages in electronic elements due to this phenomenon. Antistatic plastics are manufactured in numerous formats, such as single layer or bubble sheeting. <p style="text-align: center;"><u>Other electromagnetic phenomena:</u></p> <ul style="list-style-type: none"> In elements susceptible to possible damage by other electromagnetic effects (solar radiation, radar, X-rays), the necessary means to protect the product (usually Faraday cage structures) will be available.
VIBRATIONS 	<ul style="list-style-type: none"> For vibration-sensitive elements, mechanical shock absorbers such as those described in the section on impact protection shall be used. If a particularly sensitive equipment is to be transported, anti-vibration bases will be used which will cushion the vibrations of the packaging and isolate it from the contents.
PROTECTION OF PIPES AND HOSES 	<ul style="list-style-type: none"> Protective caps will be used to avoid dirt or other elements to enter the conductions of all pipe or hose type elements transported.

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<p>PROTECTION OF THE VISIBLE OR FINISHED ELEMENTS</p> 	<ul style="list-style-type: none"> • For all transported items which are painted beforehand in their final finish and are susceptible of being damaged during the transportation and storage of the pieces, the packages must be protected with felt elements.
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6.5. REQUERIMENTS OF THE USED MATERIALS

The materials to be used must always meet the criteria and specifications for stacking, tightness and resistance to mechanical stresses (compression load for bases and pallets, compression and tensile loads for lifting packages, stackability and reassembly ...). Furthermore, for all packaging materials used and in particular for non-returnable materials, the relevant environmental criteria shall be taken into account, whenever possible the use of easily recyclable materials and minimum generation of waste shall be considered.

Whenever there is a specific regulation to be met (for example the standard UNE-EN 13698-2: 2010 in the case of europallets) it will be ensured that the qualities and specifications of the materials conform to it. On the other hand, to ensure the adequacy of wooden packaging (boxes, outer structures ...) used in international transport, a number of considerations are given regarding the thickness of the boards and slats of wood to be used depending on the cargo transported:

TRANSPORTED CARGO (Kg)	THICKNESS OF THE WALLS / TABLES (mm)		
	FLOOR	SIDES / BOTTOM	COVER
100 – 200	24	18	18
500 - 1000	24	18	24
1000 - 2000	30	24	24
2000 - 4000	30	30	≥ 24
4000 - 9000	40	30	≥ 24
9000 - 18000	50	40	≥ 24

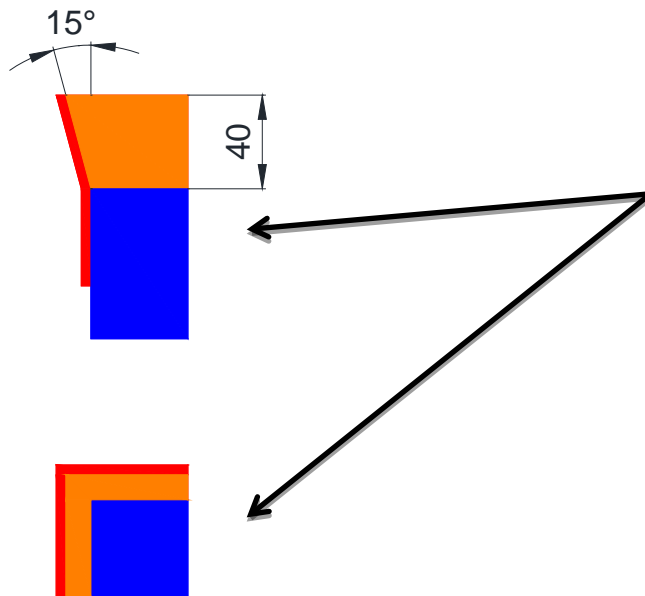
Unless expressly stated by Patentes Talگو, the indications described in the above table shall be met and the use of MDF boards (MD, medium density fiberboards) in any packaging material intended for multimodal transport shall be avoided.

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6.6 STACKABLE AND REMOUNTABLE PACKAGING

Unless specified on contrary by Talgo Patents, or in case of existence of components subject to special transportation characteristics, the packaging must be able of being stacked up to a total of 5 meters in height.

When remountable metal tools or other stackable packages are constructed, the stacking supports (vessels) shall always be constructed in such a way that their base is on the outside of the tool supports and in such a way that the walls of the supports are Inclined at an angle of 15° to the vertical. This is due to the need to stack tools of different typology that have the same base dimensions.



Stacking supports must always be welded in a way that does not interfere with the standard measures of the tool (for example, if it has a base of 1200x800 it can always be stacked on it, and a standard europallet inside the vessels).


In addition, they will always be vertical side to ensure that tools other than the same base can be stacked together.

Explanatory sketch: plan and side view of a vessel to stack

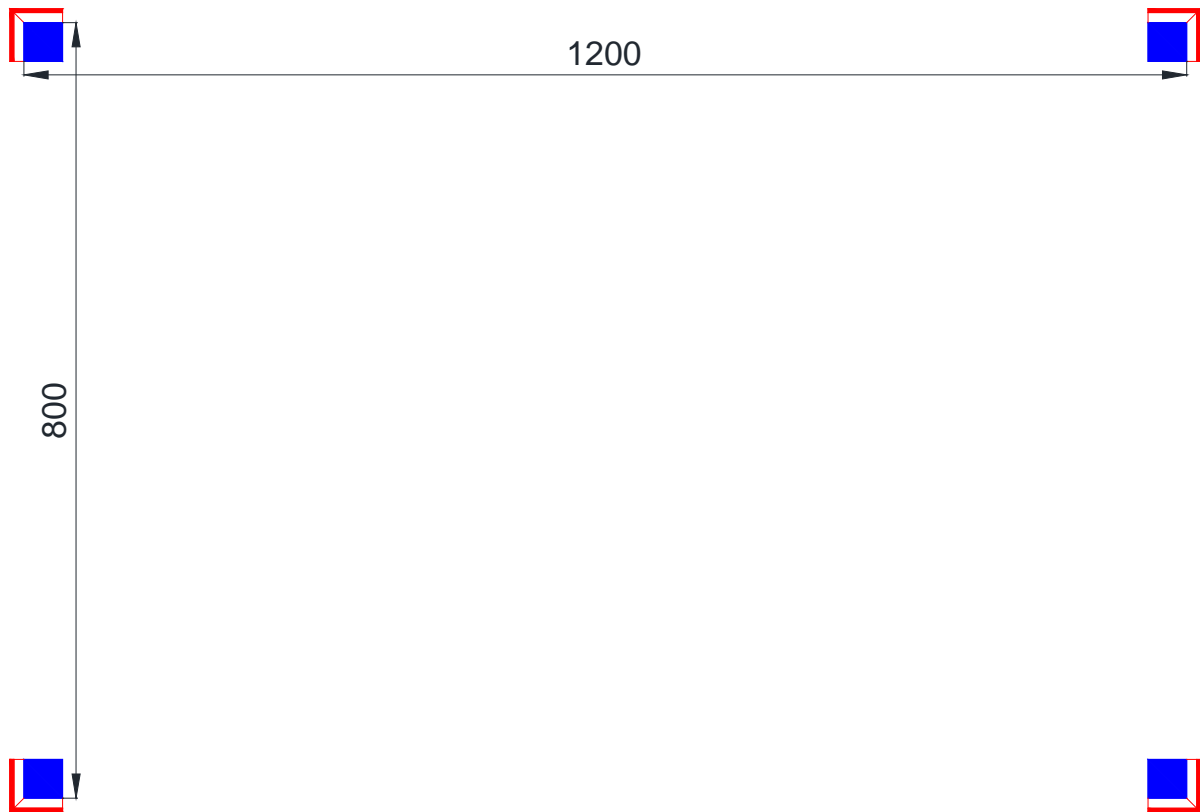
The measures of the tools that have a vessel will always be taken from the internal dimension of the vessel, so that any tools of the same dimensions enter into these vessels.

The external measures must be the indicated in the attached list:


- 1200 x 800
- 1600 x 1200
- 2400 x 1200

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Tools of the different sizes, stated above, must be agreed with Patentes Talgo and proposed in the corresponding packing sheet.



- Example of Dimensions of a tooling of 1200 x 800 mm -

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6.7 PACKAGING VALIDATION

See Annex I: Validation process

In Annex II, Listing of Shipping Rules, a column that indicates the possible need of generation of a packing Validation sheet is included.

The validation of packaging, in the cases defined as necessary, shall be carried out following the sequence indicated in Annex I (packaging validation process), and using the format RPA07-07-01.

As a general standard, the supplier will have 3 working days to make the packaging proposals and a reply from Talgo will be expected, through the purchasing department, in about 4 business days.


6.8 MAINTENANCE OF PACKAGING.

It is required that the deliveries of material come accompanied by a packaging in perfect condition.

That is why, in all cases in which the shipping standard requires a packaging validation form, and that it is defined that the packaging is returnable; A corrective maintenance agreement will have to be defined. Reflecting it the mentioned form as a commentary.

The casuistry is so broad that it is subject to each supplier proposal and valuation for its impact on the following characteristics:

- Property, use / enjoyment (supplier / Talgo),
- rotation index,
- economic impact of the ongoing project,
- potential future reuse of packaging, in which case a preventive maintenance plan will have to be defined

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7.- RECORDS

RPA07-07-01: Packaging Validation Form (previously this format was "packaging proposal")

RPA07-07-02: Delivery authorization with missing

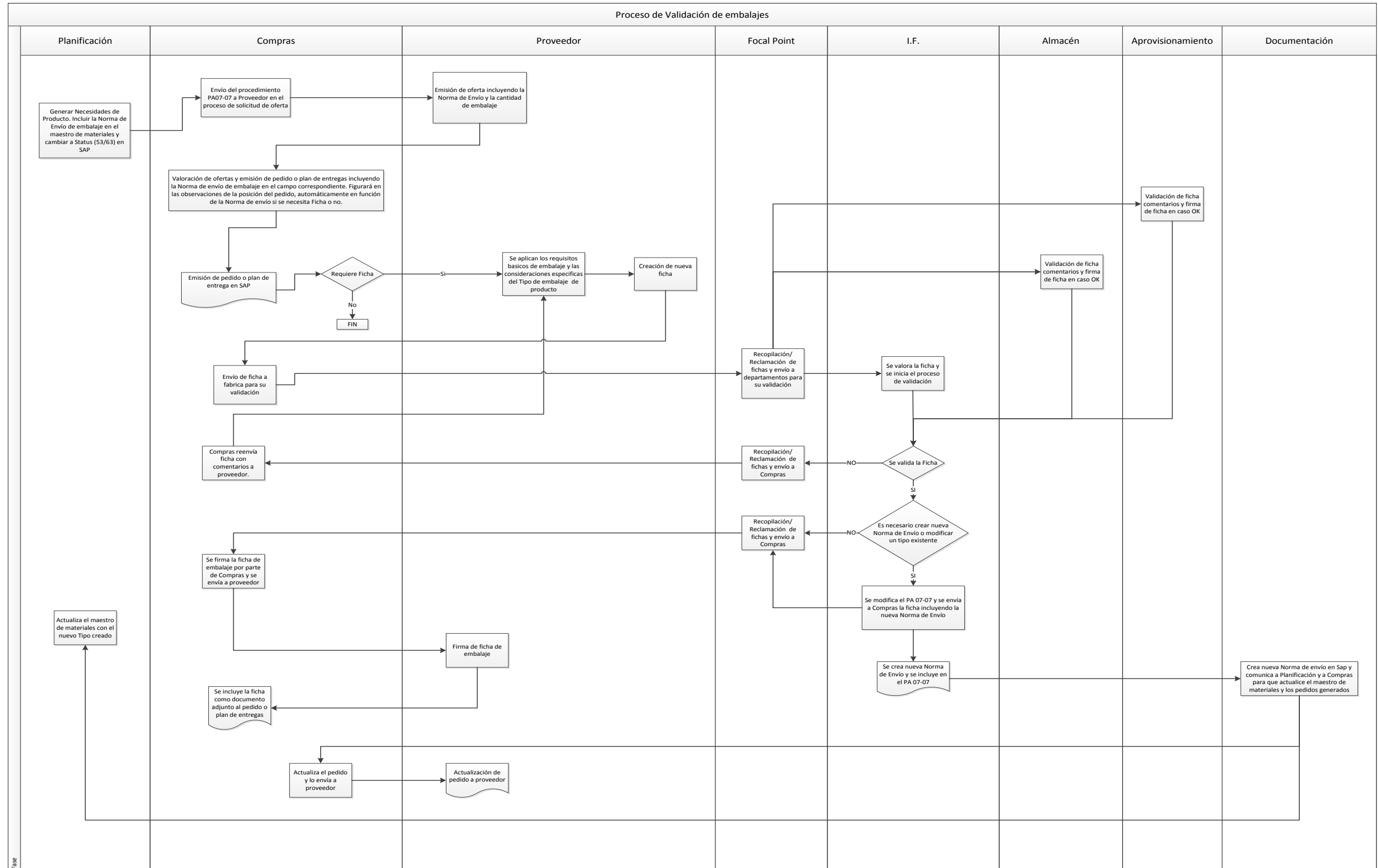
RPA07-07-03: Registration to complete incomplete submissions


8.- ANNEXES

Annex 1: Packaging validation process

Annex 2: List of shipping rules

ANEXO I: Validation process



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Annex II, List of Shipping Rules:

SHIPPING STANDARD	Description	Stackable	FILE
PA-07-07-00	Generic	Yes	Yes
PA-07-07-01	Special equipment of large dimensions, wood or commercial contour	NO	Yes
PA-07-07-02	Special equipment large dimensions (metal tool)	Yes	Yes
PA-07-07-03	Glass and mirrors	Yes	Yes
PA-07-07-04	Raw materials	Yes	Yes
PA-07-07-05	Liftable tools	Yes	Yes
PA-07-07-06	Chemicals		NO
PA-07-07-10	Pallet with fences and wooden lid	Yes	NO
PA-07-07-11	Pallet with carton box	Yes	NO
PA-07-07-12	Pallet with specific wooden tool	Yes	Yes
PA-07-07-13	Wooden pallet with metallic contour. High equipment with special protection elements	NO	Yes
PA-07-07-14	Standard metal cage	Yes	Yes
PA-07-07-15	Wiring Coils	Yes	NO
PA-07-07-16	Pallet with specific dimensions, contour and lid.	Yes	Yes
PA-07-07-17	Wooden Pallet for High Shrink-wrapping Equipment	NO	YES
PA-07-07-20	Double pallet with fences and wooden lid	Yes	NO
PA-07-07-21	Double pallet with carton box	Yes	NO
PA-07-07-22	Tanks and similar	Yes	Yes
PA-07-07-30	Triple pallet with fences and wooden lid	Yes	NO
PA-07-07-31	Triple pallet with carton box	Yes	NO
PA-07-07-32	Special Comb Type Tools	Yes	Yes

Responsibilities for the preparation, revision and approval of the Shipping Standards:

- **Drafted: Author**
- **Checking: Manufacturing / Warehouse / Supply Engineering**
- **Approval: Purchasing**