

ABB

Supplier Packaging Guidelines

**ABB Inc.
Robotics, North America
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1. Introduction

The intent of this document is to specify the packaging and shipping standards for material being shipped to ABB Inc.'s Robotics Operation in the United States (ABB). It is vital that suppliers follow these guidelines to ensure safe movement, optimal part quality, lean implementation, and control of total costs. The responsibility for ensuring quality of material shipped remains with the supplier throughout the material movement process. The supplier must comply with all applicable laws and regulations when shipping to ABB.

The following are basic requirements that a supplier must adhere to in both the development of a packaging plan and the application of the shipping requirements. Upgraded standards may be required for specific applications. Additionally, ABB's receiving facility may have additional packaging requirements for specific shipments. The use of these requirements or other approvals does not relieve the supplier of responsibility for adequate packaging. The supplier should take these requirements into consideration when making price proposals to ABB. It is expected that the supplier will ensure all affected employees are knowledgeable and capable of compliance. The supplier is liable for all costs associated with repacking, inspections, additional freight handling, etc. if it is determined that the supplier did not follow the guidelines set forth in this document.

Requests for clarification should be directed to the appropriate ABB Supply Chain Management (SCM) representative. The appropriate buyer is listed on the purchase order, or alternatively, ah_purchasing@us.abb.com.

This guideline is effective August 1, 2016 and replaces all previously issued documents.

Revision Control & Clarifications

Updates to this document can be found at this ABB site:

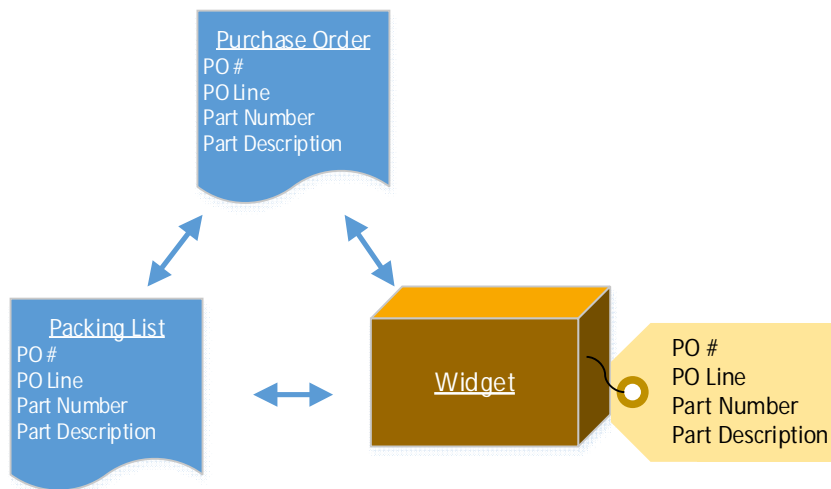
<http://www.abb.com/product/ap/seitp327/07de2c5b78dc83f3852574bb00453ea0.aspx>

2. General Requirements

2.1. Packing List

Every package must include a packing list. If there are multiple packages in the same delivery, each package should have its own packing list. The packing list, ABB purchase order, and material should have a “three-way match”—that is, the material should have information that links each document to each other. Payment delays will result if there is no way to tie the material to the ABB purchase order, goods receipt, and invoice.

For items that have a manufacturer’s part number (or other part number) that does not match the ABB purchase order, it is required that the supplier label the material with the ABB purchase order number, line number, part number, and part description as listed on the ABB purchase order. See below illustration.



2.2. Environment

Packaging systems should be designed and engineered for transportation, handling, and storage conditions within a temperature range of -30°F to +150°F (-34.4°C to +65.6°C) and humidity conditions up to 90%, for a duration of 120 days.

2.3. Material Handling

Manually handled containers must not exceed 35 lbs (16 kg). Mechanically handled loads must not exceed 12,000 pounds (5,443 kg). Palletized loads on wood skids must not exceed 2,000 pounds (907 kg). If these requirements cannot be reasonably met, please contact your appropriate ABB Supply Chain Management (SCM) representative.

All containers and packaging must be designed with consideration given to ease of handling and part removal. Appropriate consideration must be given to height restrictions, weight restrictions, container opening, container disassembly and any other issues, which may affect worker safety. The supplier is responsible to ensure all material is packaged in such a way to ensure safety is maintained throughout the product distribution stream.

2.4. Air Shipment Guidelines

When the supplier is to ship by airfreight, dimensions of cargo (including pallet), must not be larger than 120 x 80 x 60 inches (304.8 x 203.2 x 152.4 cm). If any dimension exceeds these limits, notify the appropriate ABB SCM representative.

2.5. Corrosion Prevention

Parts susceptible to corrosion must be packaged with corrosion inhibiting materials, such as oil, VCI paper, and/or desiccants. Parts designated for export markets are at greater risk for corrosion due to the longer transit times and extreme fluctuations in temperature and humidity.

Recommended preventative measures include: pack only dry and clean parts; wear gloves when handling parts; store parts and packaging in dry location; ensure parts are at ambient temperature prior to packing; and prevent direct contact between parts and wood, paper, or corrugated surfaces whenever possible. Machined parts with exposed bare metal surfaces should be oiled prior to shipment.

2.6. ESD Protection

The supplier must use ESD (electrostatic discharge) protective materials for any sensitive electronic parts.

3. Special Requirements for International Shipments

3.1. Packing List

Export packing lists are considerably more detailed and informative than a typical domestic packing list. United States Customs requires certain data elements on packing lists for goods entering the United States. To satisfy US Customs and ABB requirements, the following requirements apply to all packing lists.

- Standard US letter size (8.5" x 11")
- Must be printed on white paper stock
- Invoice number to be in upper right-hand corner
- Supplier company letterhead
- Ship-From address
- Supplier company representative name
- Supplier company telephone number
- "Packing List" header
- Ship-To address as identified in the ABB purchase order
- Ship Date (date the shipment leaves supplier's facility) - MM/DD/YYYY
- Freight carrier – when required by ABB
- Freight carrier tracking number – when required by ABB
- ABB purchase order number to be human readable
 - ABB part number to be human readable
- Quantity ordered
 - Original purchase order quantity for each line item
- Quantity shipped
 - Quantity shipped on this particular load for each line item
- Part description
- Country of origin must be detailed for each line item
- Unit of measure as requested by ABB for each line item
- Number of cartons
 - Amount of cartons shipped for this specific line

- Bottom-right corner to contain page identifier (“1 of 3”, “2 of 3”, etc.)
- The entire invoice must be in English.

*If shipping goods in more than one ocean shipping container, the packing list MUST breakdown what is in each container. ABB US may request commercial invoices to be divided if needed by US Customs.

3.2. Commercial Invoice (Import)

US Customs requires certain data elements on commercial invoices for goods entering the United States. The Importer of Record is responsible for ensuring that the below information is on the invoice. US Customs uses this information to ensure proper classification, valuation, duty collection, to obtain trade statistics, and to facilitate the release of the goods.

Items Required on a Commercial Invoice:

- Name and address of the seller/shipper
- Name and address of the purchaser/consignee (list the ‘Bill-To Address’, ‘Ship-To/Consignee Address’, and ‘Drop Shipment Address’ (if applicable) as indicated on the ABB purchase order)
- Invoice date
- Terms of sale of the transaction
- Shipment date
- Place of shipment
- Port/airport of destination
- Detailed description of the merchandise, which includes:
 - Common name of the merchandise
 - Grade or quality
 - Marks, numbers, and symbols under which each item is sold and packaged
- Quantity being imported in its appropriate weights or measures
- Unit price of each item
- Total purchase price
- Currency of the transaction
- All relevant charges (freight, insurance, carriage) to bring the merchandise from alongside the carrier at the port/airport of export to alongside the carrier at the first US port/airport of entry
- All relevant discounts
- Country of origin (meaning country of manufacture) of each item
- Harmonized Tariff System classification number of each item
- Goods or services furnished for production of the merchandise not otherwise included in the invoice price (Assists)
- Name of the responsible individual who can readily obtain knowledge of the transaction
- Entire invoice must be in English
- If an invoice is more than one page, each page must be numbered

ABB also requests the following additional items

- Each product must be physically labeled with country of manufacture per US Custom’s requirements (i.e. “Made in xxx”)
- All documents must be printed on white paper stock
- Information to be included in the body of the commercial invoice:
 - ABB bill-to information
 - Include all ABB purchase order numbers
- Additional Notes
 - All shipments need to include a copy of the correct commercial invoice with US ABB PO numbers, packing lists, inland Bill of Lading, House Air Way Bill/Ocean Container Number or Bill of Lading Number, and other certificates, if appropriate.

- A NAFTA Certificate is required for all material manufactured in Canada or Mexico
- A copy of all of the shipping paperwork must be emailed to: usfac.imports@us.abb.com
- Prior to shipment, the supplier must provide in a timely manner, the 10 + 2 data elements that are required for ISF filings by US Customs that are to be transmitted by importers (or their agents) for shipments. More information can be located at the following URL:
http://www.cbp.gov/sites/default/files/documents/import_sf_carry_3.pdf

3.3. Packaging

When utilizing air or ocean transportation, all material must be able to withstand reasonably expected means of handling, weather conditions, and meet all import requirements. Packaging should be designed in such a manner that a forklift can easily load and unload material from a standard general purpose container. If this cannot be accomplished, it must be communicated to ABB (usfac.imports@us.abb.com) prior to booking.

3.4. Export Crating: Wood Packing Material (WPM) Import Requirements

All wooden packaging that accompanies shipments to ABB Inc. must conform to *ISPM 15 – Regulation of wood packaging material in international trade*. The United States Customs & Border Protection requires that all wooden packaging material entering or transiting the United States to be heat-treated or fumigated and be marked with an approved logo certifying that it has been appropriately treated according to ISPM 15. Any fines, penalties, and added costs due to inadequate or improper packaging may be charged back to the supplier.

3.5. Ocean Container Loading

The shipper is responsible for the loading of cargo into shipping containers. Improper loading, blocking, and bracing could lead to cargo shifting or moving in transit. This could not only damage the cargo, but also cause delays at US Customs. Any fines, penalties, and added costs due to inadequate or improper packaging may be charged back to the supplier.


Two key factors should be considered prior to loading a container: weight distribution and space utilization.

1. Weight Distribution – The weight of the cargo should be evenly spread over the entire area of the container's floor. If weight of cargo is densely concentrated, distribute the weight appropriately. When packing containers, the supplier must observe maximum weight requirements (see chart in Section 3.6).
2. Space Utilization – The supplier must take into consideration optimal container space utilization when designing all pallets, racks, and material handling units. The top of fork pockets shall not exceed 60 inches (152.4 cm) from the floor if stacking is being utilized. DO NOT put direct pressure on container doors. Utilize a proper fence or gate if needed.

3.6. Ocean Container Selection

The supplier is to use general purpose containers for shipments to ABB whenever possible. This can be either 40-foot general purpose, 40-foot high cube, or 20-foot general purpose containers. If for any reason the supplier is not able to use any of these types of containers, the supplier must contact the ABB buyer and ABB Logistics for approval prior to loading containers. Reference contact email usfac.imports@us.abb.com.

Please see chart below for reference container dimensions. Please note that shipping lines may have interior dimensions that vary slightly from published dimensions. The supplier is responsible to verify dimensions of specific containers used.

OCEAN CONTAINER DIMENSIONS											
Type	Exterior			Interior			Weight			Door Opening	
	Length	Width	Height	Length	Width	Height	Gross Weight	Tare Weight	Net Weight	Width	Height
20' Steel Dry Cargo Container 	20'-0"	8'-0"	8'-6"	19'-4 13/16"	7'-8 19/32"	7'-9 57/64"	52,910lb	5,140lb	47,770lb	7'-8 1/8"	7'-5 3/4"
							67,200lb	5,290lb	61,910lb		
	6.058m	2.438m	2.591m	5.898m	2.352m	2.385m	24,000kg	2,330kg	21,670kg	2.343m	2.280m
							30,480kg	2,400kg	28,080kg		
40' Steel Dry Cargo Container 	40'-0"	8'-0"	8'-6"	39'-5 45/64"	7'-8 19/32"	7'-9 57/64"	67,200lb	8,820lb	58,380lb	7'-8 1/8"	7'-5 3/4"
	12.192m	2.438m	2.591m	12.032m	2.352m	2.385m	30,480kg	4,000kg	26,480kg	2.343m	2.280m
40' Hi-Cube Steel Dry Cargo Container 	40'-0"	8'-0"	9'-6"	39'-5 45/64"	7'-8 19/32"	8'-9 15/16"	67,200lb	9,260lb	57,940lb	7'-8 1/8"	8'-5 49/64"
	12.192m	2.438m	2.896m	12.032m	2.352m	2.69m	30,480kg	4,200kg	26,280kg	2.343m	2.585m