

# Packaging Requirement Specification

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protection requirements applicable to all parts produced per Varel Energy Solutions engineering drawings during transportation to Varel facilities.	Reference Documents:
Definitions/Abbreviations:	
N/A	
Applicable/Associated Documents:	
N/A	

### 1. PRODUCT DEFINITION

1.1. This specification covers packaging of parts produced per Varel Engineering drawings by external supplier(s). This packaging specification may be over-written by specific Varel material specifications.

### 2. METHODS OF PROTECTION

- 2.1. Parts protection methods listed below shall be used to provide the minimum protection for parts during handling and transportation. Each method has specific uses and applies to certain parts. Some methods have multiple uses and may be used as applicable.
- 2.2. The methods described herein are:
  - Stretch Wrap
  - Pallets
  - Special Tote Boxes
  - End Caps
  - Thread and Edge Protection
  - Steel or Poly Banding
  - Wooden crates
  - Walled storage

### 3. REQUIREMENTS

- 3.1. Always store or transport in a manner that will protect parts from rain and other corrosive environments. Coat materials when applicable.
- 3.2. Machined parts shall be packaged to prevent parts hitting each other during transit or rough handling.
- 3.3. API Threads and service threads must be protected with API approved thread protectors or end caps to avoid damage to threads. Walled containment is required for API upper sections.
- 3.4. Machined parts inside boxes or crates shall be marked with "Handle with Care Machined Components" on the outside of package.

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- 3.5. Parts on pallets shall be secured with stretch wrap and banding.
- 3.6. All packages, boxes or external stretch wrapped pallets shall be marked with the part number and purchase order number on the outside of the package or have this information securely attached to the package. Multiple Tote boxes or pallets of the same part number shall have the quantity of containers marked; for example: 1 of 3 etc.
- 3.7. Shipping containers shall have walled containment to provide structure for collision prevention during shipping for finished machined parts, IE Upper Sections, PDC Cutters, Carbide nozzles/sleeves, etc.
- 3.8. PDC and Roller Cone finished, semi-finished, or used goods shall be shipped in proper containment via weight, size, and function. Goods shall not be free to move within shipping containment.

### 4. SAFETY

4.1. All material shall be secured and packaged properly to allow safe handling by individual forklift trucks.

#### 5. ORDER

- 5.1. The purchase order shall specify:
- 5.2. Reference to this specification (example: US2102 Rev XX and packaged in accordance with SD XX at the current revision number)

## 6. CONDITION AND DELIVERY

- 6.1. The loading/unloading shall be done at Varel Energy Solutions according to each shipping locations facilities. Loading dock may or may not be present.
- 6.2. Ground packages weighting greater than 80 lb. may require a crate or small pallet.

### 7. DOCUMENTATION

- 7.1. The Packing slip and Certification of Conformance shall be delivered with the products and include the following information:
- Varel PO Number
- Varel Part N°
- Quantity
- Heat number (If applicable)
- Material description
- Drawing No and Revision Level
- Material Specification and Revision Level