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**DENSO**

## Production Control Supplier Manual

### POLICIES AND GUIDELINES

LEVEL/SECTION

## PACKAGING

TITLE

## DENSO SUPPLIER PACKAGING SPECIFICATIONS

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### PURPOSE

To define responsibilities in the packaging specification process and how to accurately complete the form.

### IMPORTANCE

The packaging specification is a controlled document within DENSO Mfg. Accuracy is critical. The supplier should not estimate information for the spec. Physical checks are required to ensure accuracy of the key items such as lot size and weight.

It is the suppliers' responsibility to propose the best package for their product. Box dimensions are to be utilized efficiently, while protecting the product during shipping, storage and handling. The supplier, is ultimately responsible for the quality of the product, NOT DMMI.

### RESPONSIBILITIES

Supplier

- Accurately complete the packaging specification per instructions on packaging specification form (FRM-007).
- Submit packaging specifications **six months** prior to mass production.
  - If not received by five months = D-rank RPCR issued
  - four months = C-rank RPCR issued
  - three months = B-rank RPCR issued &  
Supplier hand deliver to DMMI
  - mass production = A-rank RPCR issued &  
Supplier hand deliver to DMMI

Submit new specs for parts that have design changes, lot size changes or any packaging changes.

\*Lot size standards for component parts:

- A. Process for selecting component lot size (A-parts excluded).
  1. Go to the smallest container that will fit 12 pieces (radiator/condenser lines) or 8 pieces (HVAC, Blower, & Heater lines)
  2. If you are evaluating the smallest container you may double or triple the quantity in the attempt to eliminate dead space. Please eliminate as much dead space as possible.
    - a. Radiator and Condenser lot sizes: 1, 2, 3, 6, 12, and increasing in multiples of 12.  
Maximum would be 3 hours DENSO production run time.
    - b. HVAC, Blower, and Heater lot sizes: 1, 2, 4, 8, and increasing in multiples of 8.  
Maximum would be 3 hours DENSO production run time.
- B. Packaging specifications must be developed incorporating totes that minimize the empty space and do not exceed three hours of DENSO production build time.

C. DMMI may request the supplier to provide a lot size of 8 (for HVAC) or 12 (for condenser and radiator) for specific part numbers.

D. Requests for lot size exceptions, greater than 8 & 12, will be heard by Production Control Engineering but the reasons for the deviation must be detailed. Examples of exceptions are screws, nuts, and washers, but lot sizes must not exceed 3 hours of DENSO build time.

DMMI

- Review specifications submitted by the supplier and approve or reject specifications as necessary. **NOTE:** DMMI approves workability of tote (size, weight, etc.) not part/package quality.
- Buy and maintain the packaging system based on the below variables

## System Days for Supplier Packaging

		DELIVERIES						
		1x per WEEK	2x per WEEK	3x per WEEK	4x per WEEK	1x per DAY	2x per DAY	4x per DAY
DMMI	Inv.	2	2	2	2	1.5	1.5	1.25
	Full Inbound	5	3	2	2	1	0.5	0.25
Supplier	Inv.	3	3	3	3	2.5	2.5	2.25
	Empty Inbound	5	3	2	2	1	0.5	0.25
<b>Total System Day</b>		15	11	9	9	6	5	4

### PACKAGING IMPROVEMENTS

DMMI encourages the supplier to look for packaging improvements. Examples include:

- A Lot size change for Efficient Factory \*(8 pieces per tote for HVAC components)
- Box dimension changes
- Part orientation within box

To submit an improvement idea:

- Complete a packaging specification and briefly describe the change in "Notes" section of spec.
- Send spec via e-mail detailing the changes to DMMI PCE Group.
- PCE will implement/reject improvement ideas as necessary.