



Combined Type (Evaporator Unit & Condenser Unit) Refrigeration Unit for Large Truck, TDJ600D

AIR-CONDITIONER & REEFER SALES DEPARTMENT
AIR-CONDITIONING & REFRIGERATION SYSTEMS,
HEADQUARTERS

The refrigerated truck transport industry, part of the cold chain, has grown steadily in pace with the rising demand for the preservation of food freshness and the evolution of dietary habits.

But more and more transport companies must pay ever greater costs to remodel or replace their trucks to ensure compliance with emission regulations and cope with the rising cost of oil. They are now working to improve transport efficiency in order to control costs at an administrative level.

There are two types of a direct driven unit; a separated type (the evaporator unit and condenser unit are separated) and a combined type (the evaporator unit, condenser unit, and insulation wall are assembled in combination). The convenience of the combined-type design – the absence of any parts projecting from the evaporator unit into the cargo room – has led to the widespread adoption of the latter.

Large truck lineup of Mitsubishi Heavy Industries, Ltd (MHI) formerly consisted only of the separated type. The TDJ Series has been highly rated for its compactness. More recently, we have developed the TDJ600D, a top-end model with the evaporator and condenser units combined. The following outlines the TDJ600D.

1. Features

(1) Most compact model in the industry

MHI's compartment volume is 15% smaller than

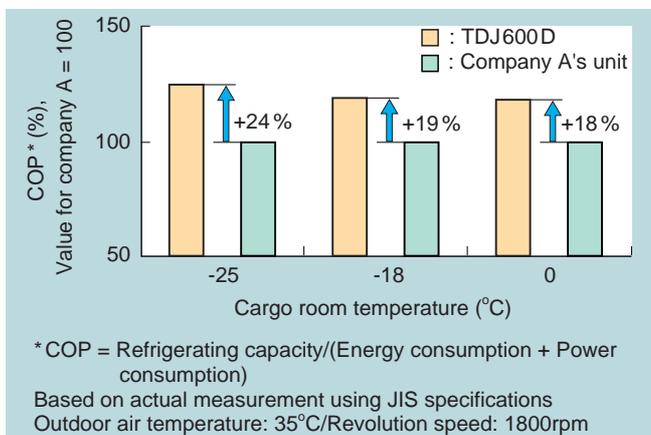


Fig. 1 Comparison of efficiency, TDJ600D vs. Company A's unit

that of company A's unit. This is the result of a highly efficient evaporator design using new shape inside-grooved pipe and a thin condenser assembly consisting of a multi-flow condenser, thin fan, and motor.

The compactness of the model makes it suitable for a midsize ice cream delivery truck, a vehicle requiring a large capacity without large dimensions.

(2) Most efficient in the industry

The adoption of a sub-cool coil and gas-liquid heat exchanger has increased the level of sub-cooling. Thorough reduction of suction pressure loss, etc. has realized a unit with an efficiency 20% higher than that of company A. **Figure 1** compares the efficiency of our unit with that of company A.

2. Unit specification

Table 1 shows the specification of each unit and **Fig.2** shows the appearance of the evaporator unit.

Table 1 Specification

Item	Model	TDJ600D-1L2	TDJ600D-2L2
Refrigerating capacity	Outdoor air temp. (°C)	35	
	Cargo room °C	6 980	6 980 (5 350)
	Cargo room -18°C	3 720	3 720 (3 020)
Compressor		CR 2323 LR (Discharged volume 235 cc)	
Dimension	Ref. unit	(Condenser side) 1 905 (W) x 666 (H) x 499 (D)	
	Motor pack	-	540 (W) x 454 (H) x 414 (D)
Weight	Ref. unit	103	
	Compressor	15	
	Motor pack	-	108
	Accessories	20	60

*Numbers in parentheses are values during operation of motor pack



Fig. 2 Appearance of the evaporator unit