

WALK ROUND NITROGEN CHARGE KITS

(Low Pressure & High Pressure)

**The Challenge**

To ensure the efficient opening and closing of the aircraft doors, engineers must top up the door assist bottles with Nitrogen during the relatively short turnaround time available between flights.

Engineers were previously negotiating stairs and aisles which permitted only restricted access for the bulky hoses carrying the liquid Nitrogen. This unwieldy equipment was potentially dirty and required two engineers to undertake the process.

This was an inefficient process due to the lack of control over the amount of Nitrogen dispensed on the ground and problems communicating the required amount from the aircraft.

The new equipment needed to be light and compact enough to be handled by one engineer, while being strong enough to withstand its use and protected from dirt. It was vital that a charge adaptor was incorporated to ensure correct charging methods and furthermore the cylinder gauges had to be easily readable.

Solution

At 5.56kg the resulting equipment is light enough to be carried over the shoulder of one engineer with a length of 650mm and width of 220mm. A content gauge, regulator and fill pressure gauge was added to the nitrogen cylinder enabling the safe and efficient topping up of Nitrogen by one engineer.

A robust, damage resistant, close foam protective lining is incorporated into the shower proof carry bag for protection of the equipment and user. A double zip allows easy access to the equipment for constant readings. Visibility of the cylinder contents is obtained by the cylinder content gauge, which constantly reads and measures the contents so giving total control to the engineer.

Charging is operated through a quick release connector and flexible hose for different threads on the cylinder body using a designated charging adaptor to prevent cross contamination and inappropriate charging methods.

Walk Round Nitrogen Charge Kits - Semmco Case Study

Finger tight connections were incorporated to reduce the chance of grease contamination. There is also an optional excess flow valve.

The Benefits

The Semmco Walk Round Nitrogen Charge Kit provides a safe, transportable and convenient way of refilling emergency door release bottles in situations where speed is required and bulky solutions such as a nitrogen trolley is not efficient.

An unforeseen benefit is that this equipment can also be used for additional tasks such as topping up pressurised air-conditioning components on aircraft.

The reduced manpower required and the time savings provide cost savings and make for a more efficient operation.

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