



Press Release

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Over Wing Access Stand



When it comes to innovative design in the maintenance, repair and overhaul sector, for many years Semmmco has been leading the way in designing the next generation equipment. Semmmco has gained a reputation for working with its customers to manufacture the highest quality access equipment to solve existing access issues and create designs to overcome new challenges.

On the A380, B747 and B777, the over wing door 3 is where the emergency inflatable slide is housed. Maintenance is required for installation of replacement slide packs and routine external inspection checks.

The slide is packed and held within the door structure inside the slide bustle which protrudes inside the aircraft door and can only be accessed from outside the aircraft, making installation and maintenance a challenge.

Historically, without appropriate equipment, the engineers have used the structure of the wing to gain access to the slide using wing walking suction pads and attachments which requires special training and has the potential to cause damage to the aircraft whilst being a considerable health and safety risk to engineers.

Semmco worked with British Airways to design an over wing access stand that was capable of standing beside the wing but reach the considerable distance over the wing to allow engineers to reach the door safely.

Before manufacture, the proposed concept and design was created in CAD and the important function of mechanical stress analysis conducted to identify

areas of strain and potential deformations so allowing modifications to be made if necessary.

This process was used in the design of the over wing access stand to test strength, stability and load distribution in the key areas. This also enables safe loads to be confirmed for the all important health and safety conformity.

During this process it was established that the best materials to use were steel chassis with high strength aluminium profiles as they are 60% lighter than typically used steel. This meant that the access equipment was relatively lightweight and easy to manoeuvre and capable of prompt deployment by only 3 people.

The resultant platform projection is 9 meters with an additional 500mm height adjustable end platform to allow for differing heights of loaded or unloaded aircraft.

Bolted and plated profiles were used where appropriate rather than welding as this increased the strength and longevity of the equipment. Telescopic jacks are

deployed to add to stability. Aircraft protective padding was positioned to ensure no damage to the aircraft.

The result is another reliable and robust piece of equipment from Semmco which is the first of its kind, made possible by the close working relationship with the British Airways team.

Notes to editors

Photo available:

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About Semmco:

Semmco, established in 1993, is a design, engineering and manufacturing company offering a range of specialist services to the rail, aviation, industrial and military markets for service and maintenance of rolling stock, planes and specialist equipment and plant. The company is known as a UK leader for quality in its field.

Within the Rail market Semmco designs and manufactures a comprehensive range of access solutions - Rail Roof Access, Rail Access Steps, Rail Front Access Steps, Rail Modular Access Steps and Rail Fixed Gantry.

Within the Aviation market, Semmco designs and manufactures a comprehensive range of access solutions - Aircraft Engine Access, Engineer Maintenance steps, Cargo Bay Access and among other access platforms.

Providing engineering design and consultancy for special projects and bespoke customer requirements, the company is committed to quality, safety and reliability through innovative designs, while manufacturing cost effective engineered solutions.

Based in Woking, Surrey, Semmco supplies equipment across the UK and around the world.

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