

**REFERENCES**

**AIRCRAFT DOCKING SYSTEMS**

**- A330/A340/B767 Heavy Maintenance Docking System / Air Canada Montreal -**

System includes nose docks, fuselage docks, wing docks, engine docks and tail docks.



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#### Scope of project:

All docks are grounded, except the vertical stabiliser docks, which are hanged to a bridge crane during aircraft movement and then laid down on the horizontal stabiliser docks when the aircraft is in place. This enables the free use of the bridge crane during maintenance period.

The floors are in aluminium and the supporting structures are in painted steel, except the vertical stabiliser docks that are in welded aluminium for maximum lightness (2.5 tons each side due to limited roof load capacity).

The aircrafts are tail-in and the horizontal stabiliser docks are linked by a variable slope (max slope 10%) platform to the mezzanine where all the equipment inside the aircrafts have to be transferred by means of trolleys.

The docks are able to serve B676-200 & -300, A330, A340-300 and -600 both on wheels and on jacks, thanks to a hydraulic lifting system.

The aircrafts are reconciled by the wing, thus the wing docks are fixed and the tail and nose docks move along aircraft axis to adapt to aircraft length.

The fuselage docks have 1 floor, for windows maintenance, and the various modules can be adapted in length by means of sliding panels.

Access to the fuselage crown is obtained by an ultra-light (150 daN) aluminium dock rolling on top of the fuselage and supporting 2 operators.

Above the wing, the fuselage docks are laid down on the adjacent fuselage docks by a bridge crane.

The tail docks are also moved fwd and aft on tracks. When in place, they enable rudder movement and deposit inside the docks.

The wing docks are divided in 2 large outboard wing docks and 5 small inboard wing docks, the 2 large staying in place, and the 5 small being manually put in place after aircraft movement.

The engine docks are made of 3 modules per engine, fitted with 5 scissor lifts to reach simultaneously at appropriate height the fan zone, the core zone and under the core zone. The docks are fitted with compressed air, electric plugs distribution and lighting.

All electric equipment in the wing and APU zones is explosion-proof to allow safe conditions in zones where can be fuel vapours.

The docks are compliant to European safety regulations EN ISO 14122 (Access to industrial machines), and ATEX (Explosive atmosphere environment).