

AVIATION



Our Other Business Divisions



AVIATION



ENERGY



MARINE



MINERAL PROCESSNG



STEEL

FRIGATE TEKNOLOGIES PRIVATE LIMITED



Works : Plot No. E-7 & E-52, UPSIDC Industrial Area, Kosi Kotwan – 281 403, Distt–Mathura, Uttar Pradesh, **India**

H.O. : A-1550, 2nd Floor, Main Road, Green Field, Faridabad – 121 010; Haryana; **India**

T. + 91 – 129 – 2511662

F. + 91 – 11 – 66173981

E. marketing@frigate.in
operations@frigate.in

W. www.frigate.in

FRIGATE has to its credit the building of India's first Maintenance Docking System for MAS-GMR Aerospace Engineering Company Ltd.; (Now GMR Aero Technic Ltd.) at their MRO facility at Hyderabad airport.

We have supplied Docking systems for Boeing 737 family, Airbus A 320 family, Bombardier Q-400. Our major clients include GMR Aero Technic Ltd. (Formerly MAS-GMR Aerospace Engineering Company Limited), Spice Jet Limited, etc.

AIRCRAFT MAINTENANCE DOCKING SYSTEMS

At FRIGATE we can design, manufacture & supply custom built docking systems as per a client's specific requirements for Aviation MRO (Maintenance, Repair & Overhaul).

Our aircraft docking and maintenance platforms are affordable, user friendly, robust & can be re-configured. Our systems are client specific to maximize productivity to meet challenging deadlines in MRO industry.

We design docking & maintenance platforms in such a way that it can be configured for various aircrafts.

Types of Docks:

| [Wing Dock](#) | [Nose Dock](#) | [Fuselage Dock](#) | [Tail Dock](#) | [Engine Docks](#) |

Our Designers have designed docking systems for various types of aircrafts, like

AIRBUS AIRCRAFTS	:	A300, A319, A320, A321, A330, A380
BOEING AIRCRAFTS	:	B727, B737, B747, B757, B767, B777, B787
BOMBARDIER	:	DASH 8 Q200, Q400
ATR AIRCRAFTS	:	ATR-72, ATR-42
DC AIRCRAFTS	:	DC-9, DC-10

An aircraft docking system comprise of different dock modules; which when configured together surrounds the aircraft from Nose to Tail.

Wing Dock, Fuselage Dock, Nose Dock & Tail Dock can be utilized individually. However when put together these docks provide seamless access to the aircraft.

Individual docks can be shifted by pushing & by towing truck up to a maximum speed of 5 Km/Hr.

ALL FRIGATE DOCKS are equipped with explosion outlets, electrically operated variable elevation, pneumatic supply complete with regulator, filters, lubricators and quick couplers.

Generally, the docking system provide access to the following areas:-

- Around the nose of the aircraft.
- The Radome.
- Mid and Upper level of fuselage surfaces including crown area.
- Around the wing mounted, components, accessories and pylons.
- Upper and lower surface the aircraft wings including inboard wings.

- Upper and lower surface of horizontal stabilizers.
- To the APU and tail cone.
- Around vertical stabilizer.
- APU removal through lowered platform in the horizontal stabilizer level for access to the APU (area) and removal at the rear side by opening the sliding railing.
- Access openings into fuselage. For eg, horz stabilizer access door.
- Access to wing to body fairings

Wing Docks (L/R)

- Wing docks comprised of more than one mobile section to provide flexibility.
- The structure of the wing dock provides generous clearance beneath the platform for movement.
- The dock platforms are mounted on heavy duty, anti skydrol 250 mm minimum diameter (swivel castors with directional lock) caster wheels with stabilizing screw jacks.
- The design is in modular units and lightweight construction for quick and easy docking in/out operation.
- It have provisions to allow clearance for aircraft movement; aircraft engine change, and wheel and brake change. The wing dock modules (1x main wing dock and 1x rear wing dock) are placed on scissor lifting system (hydraulic) to accommodate aircraft on wheels and aircraft on jacks characteristics.
- It has access for winglet and on top of wing.
- For tail in concept, the aircraft is able to be docked in without having to perform de-docking/docking operation on the wing dock.





Nose Dock

- The dock is in single piece with 250mm minimum diameter solid wheels. All dock modules including nose dock have swivel castors and a tow-bar for towing purposes.
- The dock design is able to cater for nose radome in open position, inspection and replacement of radome, radar and windscreen.
- It is able to be positioned when all dockings are in docked or de docked condition.





Fuselage Docks (L/R)

- Fuselage docks comprise of more than one mobile section to provide flexibility.
- Cabin items such as seats and galleys to be removed from the aircraft to ground level via the Nose dock and Tail dock (horizontal stabilizer level).
- The dock platforms are mounted on heavy duty, anti skydrol 250mm minimum diameter (swivel castors with directional lock) caster wheels with stabilizing screw jacks.
- The design is in modular units and lightweight construction for quick and easy docking in/out operation.
- The docks have sliding panels to close gaps to the aircraft. Access to the crown area is provided with provision for safety harness attachments.



Tail Dock - Horizontal / Vertical Stabilizer Docks (L/R)

- The docks are on solid wheels, swivel castors with directional lock and tow-bars, and tail dock has longitudinal motorized self-propel unit, and steering gear with manual override for tractor towing and pushing.
- APU removal by lowered platform in the horizontal stabilizer level for access to the APU (area) and removal at the rear side of the tail dock by opening the sliding railing, and it also has access stair to fuselage and vertical stabilizer docks.

- It is able to be positioned when all dockings are in assembled or disassembled position.
- It has access to dorsal fin areas; it has access to the tail compartment area; it also has access for tail jack movement.
- The dock design is able to cater for inspection, functional test and removal of rudder assembly and its components including PCUs, antennas and aircraft lightings.
- Able to access from vertical stabilizer lowest level to the fuselage.





Bombardier Q-400

FRIGATE has designed, manufactured, supplied & installed Tail Dock for Bombardier Q-400 at GMR Aerotech, Hyderabad.





A-1550, 2nd FLOOR, GREEN FIELD,
MAIN ROAD, FARIDABAD - 121 003,
HARYANA

Tel : +91-9871888647 / 9910353133
Fax : +91-11-66173981

Email : marketing@frigate.in / operations@frigate.in
Web : www.frigate.in



Subject to Alteration

© Frigate Teknologies Private Limited

V2.2018

Printed in India

A few critical technologies are offered in collaboration with European OEMs.