Engineering **Excellence.** Proven **Capability.**



PREFECT
HYDRAULICS

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About Prefect Hydraulics

Prefect Hydraulics is an indigenous precision-engineering company specializing in hydraulic systems, ground support equipment, and marine deck machinery. For over 16 years, we have delivered mission-critical engineering solutions to India's most demanding clients – including the Indian Armed Forces, HAL, and premier defence shipyards.

Our Values

Precision Engineering

Customer First Mindset

Indigenous Innovation

Quality & Compliance

Our Philosophy

Precision in every detail.
Commitment in every partnership.

Our Mission

To design and manufacture high-performance, precision-engineered solutions tailored to our customers' exact needs; delivering quality, reliability, and measurable value.



Product Portfolio Overview

Engineering Products

- Hydraulic Cylinders
- Hydraulic Power Packs
- Test Rigs
- Special Purpose Machines
- Manifold & Customized Solutions
- Oil Contamination Analyzer

Aerospace & Defence

- Hydraulic Service Trolleys
- Oxygen Booster Trolley
- Portable Refuelling Trolley
- Aero-Engine Intake Cleaning System
- Aircraft and Wheeled Helicopter Tow Tug
- Skid Helicopter Tow Tug
- Hydraulic Pressure Generator
- Pocket Manometer
- Digital Pressure Gauge

Marine Products

- A-Frame Boat Davit
- Dual Arm Boat Davit



PREFECT HYDRAULICS

Our Solutions

Delivering Precision Engineering Since 2008

At Prefect Hydraulics, we believe great engineering begins with understanding. By combining technical expertise with a customer-first mindset, we transform complex challenges into dependable, purpose-built solutions.

17+

Years of Engineering Excellence

80+

Products Developed



Aerospace Solutions

Digital automation and control systems implementing Industry 4.0 and IoT solutions with engineered solutions.



Marine Solutions

Deck machinery and (rescue) boat davits up to 12 Ton SWL.



Hydraulic Solutions

Bespoke hydraulic machinery, power packs, test benches and material handling equipment.



Automation Solutions

Ground Support Equipment (GSE) and Ground Handling Equipment (GHE) for various rotary and fixed-wing aircrafts.

PREFECT HYDRAULICS

Aerospace Products



Aerospace Products

Hydraulic Service Trolley 20HP

The Hydraulic service trolley is used to test the hydraulic systems of Helicopters and Aircraft. It supplies calibrated, electrically driven hydraulic power to the aircraft, enabling functional and operational testing without running the helicopter's own engine.

Applications

- Testing of Hydraulic Systems
- Functional & Operational System Checks
- Pre-Flight Checks



Technical Specifications

- Flow rate: 30 LPM
- Pressure: 210 bar
- Power Rating: 20HP
- Operating Voltage: 3ph AC 415V
- Gross Weight: 800kg
- Dual channel
- Continuous operation time at full power: 4 hours

Aerospace Products

Hydraulic Service Trolley 100HP

The Electrically Operated Hydraulic Trolley is used to test the hydraulic systems of Helicopters and Aircraft. It supplies calibrated, electrically driven hydraulic power to the aircraft, enabling functional and operational testing without running the helicopter's own engine.

Applications

- Testing of Hydraulic Systems
- Functional & Operational System Checks
- Pre-Flight Checks



Technical Specifications

- Flow rate: 110 LPM
- Pressure: 280 bar
- Power Rating: 100HP
- Gross Weight: 3000kg
- Dual channel
- Operating Voltage: 3ph AC 415V
- Continuous operation time at full power: 4 hours

Aerospace Products

Oxygen Booster Trolley

The Oxygen Booster Trolley is used to fill the onboard oxygen cylinders of helicopters and aircraft. It boosts supply-line pressure to the levels required for safe, controlled cylinder charging.

Applications

- Oxygen Cylinder Filling
- Functional & Operational System Checks
- Pre-flight Oxygen System Checks

Technical Specifications

- Medium: Oxygen
- Pressure: 120 bar
- Mode of Operation: Pneumatic
- Input air pressure: 6 bar



Aerospace Products

Portable Refuelling Trolley

The portable refulleing trolley is used to fuel helicopters and aircraft from a fuel barrel. It can be powered by either single phase AC or 24V DC from the aircraft / helicoper's battery. The pump delivers a flow of up to 75 LPM and a flow meter is included for monitoring. The pump has an on-off duty cycle of 30 minutes. A fuel nozzle with auto cut off feature, suction and delivery hoses, and a suction pipe for the barrel are all provided with the unit. All components are flame and explosion proof and are certified for aviation fuel. Fuel is also filtered up to 1 µm before delivery.

Applications

- Refuelling of helicopters and aircraft
- Transfer of aviation fuel
- Fuelling in remote areas where AC power is not available

Technical Specifications

- Flow Rate: Up to 75 LPM
- Power: 230 VAC or 24 VDC
- Duty Cycle: 30 mins on, 30 mins off
- Filtration: 1 µm
- Digital battery powered flow meter
- Quick connect couplings on all hoses for easy assembly and disassembly







Aerospace Products

Aero-Engine Intake Cleaning System

The Aero-Engine Intake Cleaning System is used to wash the engine air intake path of helicopters as part of the pre-flight procedures. It delivers a controlled wash-fluid flow to clean intake surfaces.

Applications

- Engine Intake Path Washing
- Line Maintenance Operations
- Pre-Flight Checks



Technical Specifications

- Flow Rate: 7 lpm
- Pressure: 5 bar
- Input supply: 24 – 28 VDC
- Rated power: 300W

Aerospace Products

Aircraft and Wheeled Helicopter Tow Tug

The Aircraft and Wheeled Helicopter Tow Tug is used to tow aircraft and helicopters in the 20 Ton weight class without the use of a towbar. It is fully battery operated, allowing emission-free ground movement of aircraft across the runway and hangar. It is operated with a wired or wireless remote control. The independent drive wheels enable 360° rotation around the clamped wheel allowing parking in tight spaces and easy manoeuvrability.

Applications

- Aircraft and Helicopter Towing
- Ground Handling Operations
- Repositioning on Hangar and Runway



Technical Specifications

- Battery operated with a range of 10km of continuous towing
- Towing speed up to 5 kmph
- Remote operated with both wired and wireless options
- Optional anti-collision sensors for obstacle detection and avoidance
- Optional electric-only system with electric actuators for lower maintenance, weight and noise
- Compatible with wheel diameters from 120 mm to 600 mm with a

Aerospace Products

Skid Helicopter Tow Tug

The Skid Helicopter Tow Tug is used to tow skid helicopters in the 4 Ton weight class without the use of a towbar. It is fully battery operated, allowing emission-free ground movement of helicopters across the runway and hangar. It is operated with a wired or wireless remote control. The dual telescopic cylinders enable lifting from outside and inside the skid, depending on the operator's preference and helicopter design. Optional anti-collision sensors can also be added.

Applications

- - Helicopter Towing
- Ground Handling Operations
- Repositioning on Hangar and Runway



Technical Specifications

- Battery operated with a range of 10km of continuous towing
- Towing speed up to 5 kmph
- Remote operated with both wired and wireless options
- Optional anti-collision sensors for obstacle detection and avoidance
- Supports lifting from inside and outside the skid

Aerospace Products

Hydraulic Pressure Generator

The Hydraulic Pressure Generator is used to generate hydraulic pressure for the calibration of pressure transducers in the helicopter or aircraft. It provides a controlled, repeatable pressure source for accurate sensor calibration on the bench or on the aircraft.

Applications

- Pressure Transducer Calibration
- Helicopter Instrumentation Testing
- Pre-Flight Checks

Technical Specifications

- Pressure Rating: 40 bar
- Mode of Operation: manual
- Resolution: 0.01 bar



Aerospace Products

Pocket Manometer

The Pocket Manometer is used to calibrate the pressure transducers of the helicopter on-line. Its compact, handheld design lets maintenance crews verify transducer accuracy directly on the aircraft, without removing components for bench calibration.

Developed in-house by Prefect Hydraulics, the Pocket Manometer has been delivered to HAL in volume and is in active use for on-line instrumentation calibration.

Applications

- On-line Pressure Transducer Calibration
- Helicopter Instrumentation Testing
- Quality Control & Acceptance Testing
- Line Maintenance Support
- Field Calibration Checks

Technical Specifications

- Compact, handheld on-line calibration
- Eliminates need for component removal during checks
- Calibration-grade accuracy in a portable format
- Supports rapid turnaround maintenance
- Built for HAL calibration operations



Aerospace Products

Digital Pressure Gauge

The Digital Pressure Gauge is used to check the working pressure of the emergency hand pump used for braking the rotor of the helicopter. It provides a precise digital readout for verifying that the emergency braking system is within its required operating pressure.

Applications

- Rotor Brake Emergency Hand Pump Checks
- Pre-flight & Post-maintenance Checks

Technical Specifications

- Rated Pressure: 210 bar
- Resolution: 0.1 bar



Aerospace Products

Pitot Static Air Data Leak Tester

The Pitot Static Air Data Leak Tester (Model 60654C) is used to leak test and calibrate the avionics on helicopters, aircraft, UAVs, drones, jets and lab equipment. With a wide operating envelope of up to 60,000 ft and 650 knots, it is suitable for a huge variety of aircraft. It offers 4-channel control with 2 pitot and 2 static channels, and is RVSM compliant (lab tested).

Applications

- Calibration of Avionics
- Aircraft and Helicopter Leak Testing
- Remote-Area Testing
- Flight-Profile Monitoring



Technical Specifications

- Altitude range of -2,000 ft to +60,000 ft with 1 ft resolution
- Airspeed range of 0 to 650 kts with 0.1 kt resolution
- Vertical speed up to 20,000 fpm and acceleration up to 1,000 kts/min
- Mach range of 0 to 3.0 Mach with 0.001 Mach resolution and accuracy
- 4-channel control with 2 pitot and 2 static channels
- 8" touchscreen HMI with Ethernet and optional Wi-Fi connectivity
- 10 – 12 hours of continuous battery operation, 3 hour charging time (0 – 100%)
- Power supply of 110 – 230 VAC or 170 – 270 VAC (with included charger) and 24 VDC direct,100W consumption
- 40µm panel-mounted vacuum and pressure filters for tool-free replacement
- Direct, real-time data logging to USB drive
- Operating temperature of -30°C to +55°C
- Dimensions of 44.55 x 36.09 x 18.19 cm and weight of 13.2 kg (including HMI and battery)

Marine
Products



Marine Products

A-Frame Boat Davit

The A-Frame Boat Davit is used to launch and recover boats) in the 3.7 ton weight class at up to sea state 5, as per the Marine Equipment Directive (MED). The davit is SOLAS compliant and class approved.

Applications

- Rescue / Patrol boat launching and recovery
- Military & Civilian Vessel Deck Machinery
- SOLAS-compliant Lifesaving Operations

Technical Specifications

- 3.7 Ton SWL
- SOLAS-compliant and class approved
- Anti-pendulation system
- Auto-tensioning system
- Rated up to sea state 5
- Can be delivered along with Fast Rescue Boats



Marine Products

Dual Arm Boat Davit

The Dual Arm Boat Davit is used to launch and recover boats) in the 12 ton weight class at up to sea state 5, as per the Marine Equipment Directive (MED). The davit is SOLAS compliant and class approved.

Applications

- Rescue / Patrol boat launching and recovery
- Military & Civilian Vessel Deck Machinery
- SOLAS-compliant Lifesaving Operations

Technical Specifications

- 12 Ton SWL
- Dual arm with 2 hooks
- SOLAS-compliant and class approved
- Anti-pendulation system



Engineering
Products



Engineering Products

Hydraulic Cylinders

A Hydraulic Cylinder is a mechanical actuator that delivers unidirectional force through a unidirectional stroke. Prefect Hydraulics manufactures cylinders in a wide variety of configurations for use across virtually every industry.

Both tie-rod and welded construction types are offered. Tie-rod cylinders suit light to medium duty applications and are designed to be repaired or re-packed, while welded cylinders offer a more compact and robust design for demanding applications.

Applications

- Machine Tools & Presses
- Material Handling Systems
- Bending, Shear & Deep Drawing Presses
- Mobile & Industrial Machinery
- General Actuation across Industries





Technical Specifications

- Bore sizes from 19 mm dia to 700 mm dia
- Working pressure up to 350 bar
- Tie-rod design or welded construction
- Telescopic cylinder options
- Custom engineered for the application

Engineering Products

Hydraulic Power Pack

The Hydraulic Power Pack is a self-contained hydraulic drive system engineered by Prefect Hydraulics to deliver reliable, calibrated hydraulic power for a wide range of industrial and mobile applications. Each unit is custom built to match the flow, pressure and control requirements of the end application.

We provide power packs with flow ratings up to 1200 LPM and pressure ratings up to 700 bar, with customized control panels operating on relay logic or PLC. Solutions are available on conventional hydraulic systems as well as servo and digital hydraulic platforms.

Applications

- Machine Tools
- Special Purpose Machines
- Material Handling Equipment
- Bending, Shear & Deep Drawing Presses
- Mining Equipment

Technical Specifications

- Flow ratings up to 1200 LPM
- Pressure ratings up to 700 bar
- Customized panels with relay logic or PLC control
- Conventional, servo and digital hydraulic platforms
- Fully custom built to application requirements









Engineering Products

Test Rigs

Prefect Hydraulics provides semi and fully automated test rigs for testing components in R & D and production environments across various industries. Each rig is tailor made and customized to the requirements of the end user, ranging from simple relay-logic setups to complex PLC and data-acquisition systems.

Fully automated test rigs minimise human error and automatically generate unbiased test reports. Rigs can interface with remote data-acquisition systems so users witness tests in real time, with results printed as numerical or graphical data.

Applications

- Pump Testing
- Valve Testing
- Component R & D Testing
- Production Line Testing
- Quality Assurance & Certification









Technical Specifications

- Semi and fully automated operation
- Relay logic or PLC with data acquisition
- Tailor made to end-user requirements
- Unbiased, automatically generated test reports
- Remote real-time monitoring
- Numerical and graphical result printouts

Engineering Products

Special Purpose Machines

Prefect Hydraulics provides complete solutions with special purpose machines used mainly for material handling, production and testing. We supply SS bellows and contact shoes used in electric arc furnaces, manufacturing bellows from 5/16" NB to 12" NB in stainless steel grades.

For localization, we also offer bellow forming machines from 6 mm ID to 3000 mm ID with up to 100 corrugations per bellow. Using a hydro-forming process, these machines produce accurate omega profiles in oil or pure-water forming, and can be supplied with complete transfer lines.

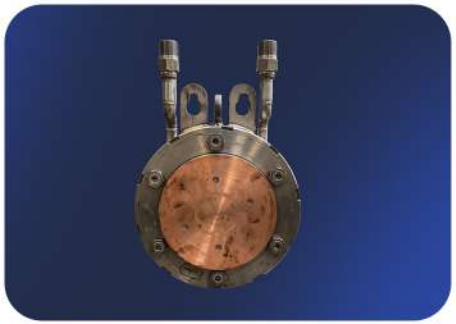
Applications

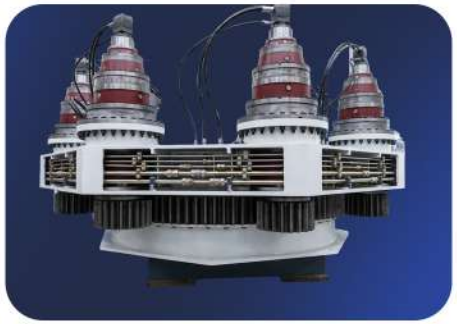
- Material Handling
- Production Machinery
- Component Testing
- Electric Arc Furnace Bellows & Contact Shoes
- Bellow & Hose Manufacturing Lines

Technical Specifications

- SS bellows from 5/16" NB to 12" NB
- Bellow forming from 6 mm ID to 3000 mm ID
- Up to 100 corrugations per bellow
- Hydro-forming with accurate omega profiles
- Oil or pure-water forming options
- Complete transfer lines: tube forming, pitching, braiding & testing









Engineering Products

Manifold & Customized Solutions

Prefect Hydraulics provides design, development and manufacturing support for manifold blocks that are extensively used in hydraulic solutions. Manifolds are supplied for CETOP versions, screw-in or logic cartridge versions, in-line thread versions and more, as per customer requirements.

Our capability spans small intricate blocks for windmill projects, machine tools and mobile machinery, through to large blocks for power projects. We supply bare machined manifold blocks or fully assembled and tested units with components supplied by us or by the customer.

Applications

- Windmill Projects
- Machine Tools
- Mobile Machinery
- Power Projects
- General Hydraulic Systems

Technical Specifications

- CETOP, screw-in / logic cartridge and in-line thread versions
- Small intricate to large-scale manifold blocks
- Design, development & manufacturing support
- Bare machined or fully assembled & tested
- Components supplied by Prefect or by the customer



Engineering Products

Oil Contamination Analyzer

The Oil Contamination Analyzer is used to check the level of contamination in hydraulic Oil. It allows maintenance crews to assess fluid cleanliness in the field and catch contamination issues before they affect system performance.

Applications

- Hydraulic System Contamination Checks (online and offline)
- Scheduled Maintenance Operations
- Field Servicing support



Technical Specifications

- Certification Class: NAS1 to NAS13
- Battery operated



The People Behind Every Precision Solution

Our multidisciplinary team of engineers, designers, and specialists brings together decades of experience in hydraulics, aerospace, marine, and industrial engineering.

Trusted by India's Leading Defence & Industrial Organisations

TIMKEN · TATA POWER · Honeywell · HAL · GSL · walvoil · Gates · TOYOTA TSUSHO · WEIR MINERALS · TITEFLEX AEROSPACE · wipro · TURBOTECH · Dmmi GOLE · MPP Technologies · OLAER · NAYARA ENERGY · MAINI GROUP Value delivered. Always · TAKRAF TENOVA



Prefect Hydraulics Private Limited

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