

A large commercial aircraft is shown in a hangar, with its wings and fuselage visible. The aircraft is white with blue accents. In the background, there is a yellow scissor lift and a blue-covered equipment cart. The entire image has a blue tint.

# Test equipment for aircraft production and maintenance

**HYCOM**





# HYCOM

## From design, manufacturing and testing to training, maintenance and service

Prominent aircraft manufacturers, airlines and maintenance companies choose HYCOM's testing equipment, varying from mobile test stands to RAT ground test equipment, component test stands, built-in hangar systems and many more.

Since 1974 Hycom has been a reliable partner for a wide variety of customers around the globe. The quality of our products and outstanding after sales service has made us the leading manufacturer of hydraulic and fuel related test systems.

Ground support equipment manufactured by Hycom is approved by aircraft manufacturers like Airbus, Boeing and Comac and listed in their maintenance manuals.

Hycom is part of the Hydac Group, a family owned company located in more than 55 countries worldwide.







## Hydraulic test stands

Hydraulic ground supply for functional and operational testing of aircraft hydraulic systems



## RAT ground test equipment

Designed to drive the ram air turbine during ground tests



## Purifier

Eliminate oil contamination and reduce hydraulic oil waste



## Internal leakage tester

Perform TARAN/ITCAN leakage tests



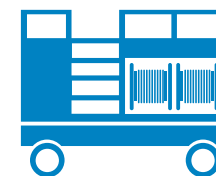
## Component test benches

Testing of rotating and non-rotating aircraft components



## Hangar supply systems

Fixed and mobile hydraulic supply for maintenance hangars and assembly lines



## Fuel test equipment

Testing the aircraft fuel supply system







## Overall features and specifications

### Aircraft platform

Business, regional, commercial, helicopter and military

### Fluid

Mineral or phosphate ester based hydraulic oil

### Power

Electric motor or diesel engine up to Stage V / Tier IV Final

### Flow

Varying from 3 to 70 USgpm

### Pressure

Up to 3000 or 5000 psi

### Additional features

Options and accessories are available upon request.

## Hydraulic test stands

## Designed with fifty years of experience

HYCOM mobile hydraulic test stands are deployed at many aircraft manufacturers, airlines and MRO's around the world. Thanks to the extensive program, the test stands are available for every aircraft platform.

Hydraulic test stands provide hydraulic supply to the aircraft system in order to perform maintenance and overhaul checks as per aircraft maintenance manual (AMM). Together with the HYCOM ram air turbine test equipment, ground tests are easily performed. The test stands are able to reduce the oil contamination class in the aircraft hydraulic system to NAS class 6 or better.

The test stands are easy to operate using a panel with graphical layout or touch screen. As well as being easy to operate, maintenance costs are low, which in turn means lower total cost of ownership. Being a very flexible manufacturer we are able to integrate any customer wishes and make requested modifications when required.

HYCOM is approved by aircraft manufacturers and listed in the aircraft maintenance manuals of amongst others:

### Airbus

A320 family ceo / neo, A330 (MRTT), A340, A350 XWB, A380

### Boeing

717, 737 Classic / NG / MAX, P-8 Poseidon, 747, 757, 767, KC-46 Pegasus, 777(X), 787 Dreamliner

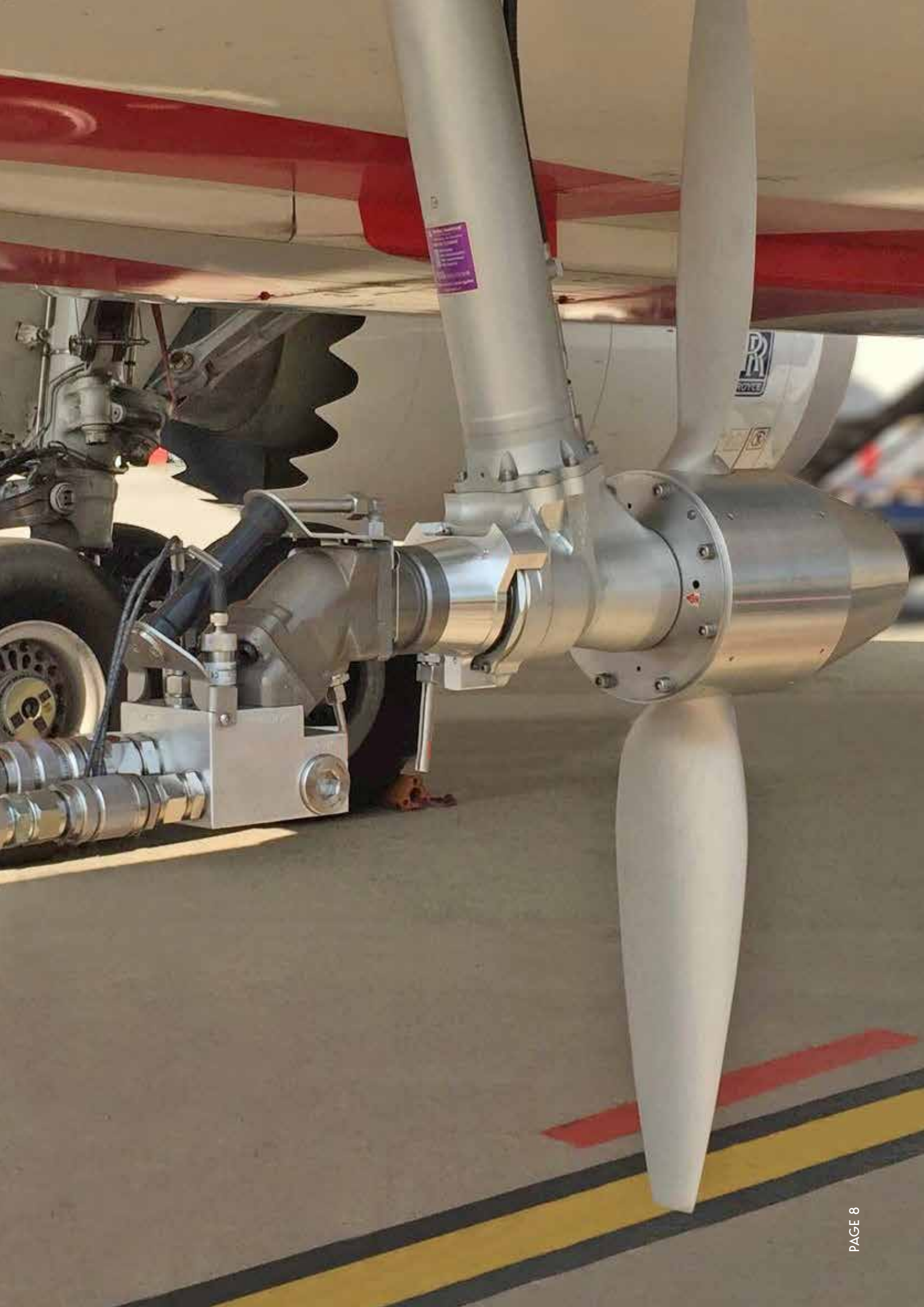
### Comac

ARJ21

### McDonnell Douglas (Boeing)

DC-9, DC-10, MD-11, MD-80, MD-90





# RAT ground test equipment

## Reliable emergency power generation

The Ram Air Turbine (RAT) is an important safety feature of modern aircraft as it provides a backup power source that can keep essential systems operating in the event of an emergency.

Ram Air Turbine ground test equipment simulates the operation of the RAT in order to test its performance and ensure that it will function properly in an emergency situation.

Reliable test equipment is required to perform functional testing of the Ram Air Turbine.

HYCOM manufactures RAT ground test equipment for the following aircraft types amongst others:

### Airbus

A220, A320 family ceo / neo, A330 (MRTT), A340, A350 XWB, A400M

### Boeing

747-8, VC-25, 787 Dreamliner

### Bombardier

C Series

### Comac

ARJ21

### Embraer

ERJ 170-190 (E2), Lineage 1000







# Purifier

## Ensuring clean hydraulic systems

Contamination of hydraulic fluids can come in the forms of particles, water and gasses and can cause substantial damage to the aircraft hydraulic system. Therefore, it is of high importance to remove these types of contamination.

The HYCOM purifier cleans the fluid in the aircraft hydraulic system during regular maintenance tasks and is available for both mineral based and phosphate ester based hydraulic fluids.

The purifier enables to:

- ✓ Reduce water content to less than 100 ppm
- ✓ Remove up to 100% free and 95% dissolved gasses
- ✓ Clean the hydraulic fluid to NAS 1638 class 3 or better

Being a standalone unit it can also be used to purify the internal reservoir, transfer oil from an oil barrel and fill or drain the aircraft reservoir. The integrated particle counter and water sensor allows the operator to monitor the oil quality. The purifier contributes to less downtime, reduction of maintenance costs, extended service intervals and prolonged oil lifetime.

By means of quick disconnect couplings, the purifier easily connects to the aircraft hydraulic system, fixed hydraulic powerpacks and hydraulic test stands.





# Internal leakage tester

## Accurate leakage detection

The HYCOM internal leakage testers measure the internal leakage of aircraft hydraulic systems according to ITCAN or TARAN test procedures.

The testers include a high accuracy flowmeter . The equipment is operated through a touchscreen that provides clear instructions and allow to set the zero point and save several measuring points. The system automatically calculates the gross and nett leakage rates and thus hand calculations are not required.

An automatic bypass protects the flowmeter against high flow which allows the operator to use the leakage tester with any hydraulic power supply.

The leakage testers include the required quick disconnect couplings to easily connect the equipment to the aircraft hydraulic ground service connectors and hydraulic test stand.

HYCOM internal leakage testers are certified by Boeing and listed in the aircraft maintenance manual. Internal leakage testers are available for any aircraft type.







# Component test benches

## Airworthy components

Hydraulic component test benches are used to test and maintain individual hydraulic components such as pumps, motors, valves and actuators that are used in aircraft hydraulic systems.

The test bench provides hydraulic fluid to the component under controlled pressure, flow and temperature for example. At the same time these parameters are measured and the results can be logged.

Hydraulic component test benches enable the user to validate repaired or overhauled hydraulic components before they are installed back into the aircraft. This ensures that the component meets the manufacturer's specifications and is safe to use in flight.

HYCOM test benches reflect the knowledge of the hydraulic system as well as the perfect understanding of the customer's needs of reliability and easy operating, reducing the time required to test a component according to the CMM requirements.

The HYCOM "Advantouch" control system software provides a data acquisition system with an integrated CMM editor for automatic testing. Steps of each CMM can be entered allowing to perform tests in manual, semi-automatic and fully automatic mode.







# Hangar supply systems

## Smooth maintenance operations

HYCOM hangar supply systems provide a centralized and efficient source of hydraulic fluid for aircraft maintenance operations. The systems support the maintenance, repair and overhaul of aircraft hydraulic systems, which are used to control flight surfaces, landing gears, brakes and other hydraulic actuated functions.

Hangar supply systems are the ideal solution to common health and safety problems by decreasing the amount of noise sources, testing equipment maintenance personnel needed on the hangar floor. Due to a more quickly and effectively working method, aircraft downtime is reduced and operational readiness is improved.

Typically, the systems comprise of large reservoirs that store the hydraulic fluid, pumps and distribution systems to supply the fluid to one or more locations within the maintenance hangar. Hydraulic filters are used to ensure clean hydraulic fluid and also other fluid conditioning systems can be installed.

HYCOM has developed own hardware and software to read aircraft signals and regulate the hydraulic supply accordingly. Different aircraft systems can be tested simultaneously







# Fuel test equipment

## Fuel system efficiency and safety

Fuel test equipment can perform different tasks like leakage testing, quantity measuring, pressure testing and testing proper operation of the fuel systems in the aircraft. By detecting any potential problems before they can cause issues, fuel test equipment helps to ensure the safety and efficiency of the aircraft's operation.

HYCOM fuel test systems can be designed to operate with jet fuel, solvents or test fluids. Where applicable the design will meet ATEX explosion proof regulations.

Common systems manufactured by HYCOM:

- ✓ Centralized fuel system
- ✓ Tank leakage trolley
- ✓ Overflow trolley
- ✓ Gauging unit
- ✓ Fuel recycling system
- ✓ Drain reservoirs

HYCOM is well known for being a flexible partner and any variation can be addressed.







# Miscellaneous

## Various tooling and equipment



A wide selection of miscellaneous aircraft maintenance tooling is developed by HYCOM.

These vary from accessories used with aircraft ground support equipment to aircraft servicing equipment and tools:

- ✓ Adapter hoses
- ✓ Aircraft reservoir simulator
- ✓ Hose / Cable trolley
- ✓ Hydraulic flushing device
- ✓ Oil filling tool / unit
- ✓ Reservoir pressurization tool

Furthermore HYCOM has engineering and manufacturing solutions to provide tailored systems.



# Calibration

## Proper and accurate equipment

HYCOM recommends customers to periodically calibrate measuring equipment which are used in ground support equipment for aircraft maintenance.

Calibration ensures that measuring equipment works properly, provides accurate measuring results and operates within the limits provided by the OEM.

The calibration department of HYCOM follows international standards and guidelines to ensure the accuracy and traceability of the calibration process. HYCOM uses specialized equipment and procedures to calibrate and adjust measurement and test equipment to ensure they meet the required specifications.

Short turn around times reduce the downtime of the equipment to a minimum.







## Service

# Optimal performance and reliability

The HYCOM service department can provide various kinds of support at their own facility or on your location to ensure that your hydraulic equipment and systems are running efficiently and effectively. Thereby, downtime is reduced and the productivity of the equipment is maximized.

Some examples of the support services that the Hycom service department can provide:

- ✓ Installation and commissioning to ensure that the equipment is fully operational and meets your specific requirements.
- ✓ Maintenance and repair which includes periodic inspections, servicing and repairs to ensure that the equipment is running at optimal performance and prevent any issues or downtime.
- ✓ Troubleshooting and technical support to identify and resolve any issues.
- ✓ Training and education to ensure that your team has the necessary skills and knowledge to operate and maintain your hydraulic equipment and systems properly.
- ✓ Spare parts and upgrades ensuring that they are up-to-date and running optimally.

After sales service is offered worldwide through a network of representatives, distributors and partners. HYCOM aims to build long-term relationships with their customers by providing excellent customer service and technical expertise.



## Rental

# Immediately available

Renting ground support equipment (GSE) can be interesting for different reasons. Should equipment be needed for a specific project or limited period, renting eliminates the need for an investment and reduced the costs for maintenance and storage.

Customers can test new equipment before committing to a purchase or to cover the time between order and delivery.

Overall, renting equipment can provide MRO organizations with greater flexibility, cost savings and access to specialized equipment, making it a practical solution for many maintenance tasks.

Hydraulic test stands and RAT test equipment are common equipment available in HYCOM's rental fleet.

HYCOM supports both short-term and long-term leasing.





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