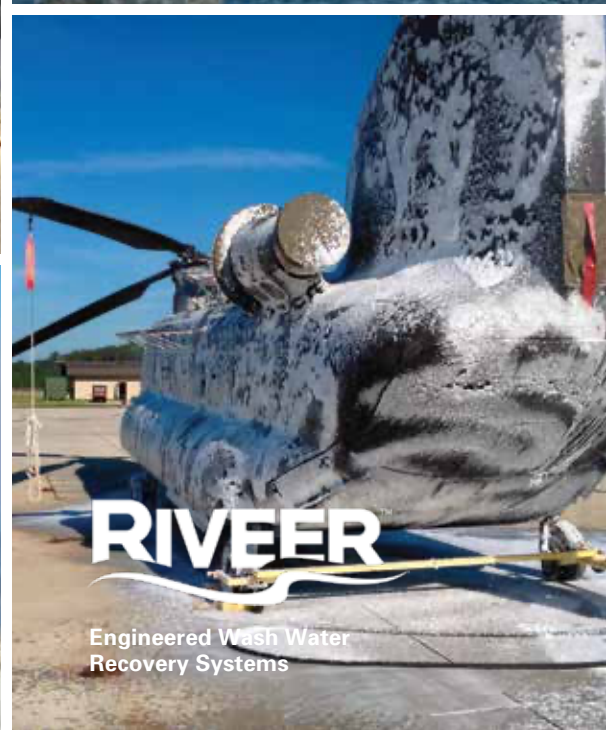


# CORROSION MITIGATION WASHDOWN SYSTEMS

WASH AND RINSE TECHNOLOGIES FOR ROTARY AND FIXED WING AIRCRAFT



**RIVEER**

Engineered Wash Water  
Recovery Systems

# BIRDBATH

## CLEAR WATER RINSE SYSTEM



### POST FLIGHT AUTOMATIC RINSE

Fight corrosion before it happens. Riveer™ BirdBath is an automatic Clear Water Rinse System (CWRS) that helps prevent aircraft corrosion quickly and effectively by rinsing the aircraft as it taxis back to the flight line or gate. The low-pressure, high-flow process takes 30 seconds to 2 minutes and can be pre-programmed to change spray patterns depending on the size and type of aircraft. BirdBath can be manually or automatically adjusted to environmental and weather conditions to ensure a thorough rinse.

The spray nozzles that make up the undercarriage rinse were Riveer Engineered specifically for aircraft wash applications to be virtually FOD-proof (Foreign Object Damage). Called APAFNTM or Adjustable Pattern Adjustable Flow Nozzles, these unique tools are machined from stainless steel and are infinitely adjustable.

What's more, the Riveer BirdBath reclaims, filters and recycles up to 80% of the fresh water used for rinsing aircraft. BirdBath CWRS can be installed in-ground or above-ground, which requires less infrastructure modification and associated on-site engineering/environmental considerations than a typical in-ground rinse facility installation (can be procured as equipment rather than an infrastructure project).

Every airfield has different needs and budgets so Riveer offers a wide variety of customization options. Add any number of awesome efficiency-improving features or stick to the basics; either way, your corrosion control operations are sure to improve.

# TAWS<sup>®</sup> TOTAL AIRCRAFT WASHING SYSTEM



## HOT WATER WASH & RINSE

A full power hot water wash and rinse system, Riveer's Total Aircraft Washing. System produces a high flow rate that cuts cleaning time dramatically by effectively washing large surface areas. The built-in air powered high-pressure foamer will cover the side of a CH47 in less than a minute (750 sq. feet per minute). This efficiency is further supplemented by dual guns for two users and 200' of total reach. Simultaneous use the dual guns does not negatively impact flow rates. In addition, the spray can easily reach 20' for cleaning large aircraft and tail sections. All hoses are on reels, and all guns have storage brackets and toolboxes for consumables, spares and turbine engine probes.

The system sprays 5 gallons of 140-degree water per minute out of each spray gun, applying a safe-for-aircraft 175 PSI. These specifications meet the stringent TM requirements for aircraft wash, rinse and decontamination procedures.

## ADDITIONAL FEATURES

- 10-gallon soap concentrate capacity and 525 gallon water tank
- 10-gallon gas path solution tank
- Run dry protection
- Hot water to 140° F
- Auto fill for unattended fill-up
- Full enclosure for engine and pumps
- NEMA 4 electrical construction
- AGSE parking brake and DOT trailer



# ARC AIRCRAFT RINSE CART



## AIRCRAFT SAFE WATER PRESSURE

Designed in conjunction with U.S. Navy for aircraft rinsing, the Riveer Aircraft Rinse Cart (ARC™) meets with flying colors the criteria for dependable performance in brutal environments and remote airfield operations. The ARC's rugged design includes a pressure washer rated to perform aircraft rinses and meet the rinsing and pressure guidelines in TM 1-1500-344-23-2.

The system sprays 10 gallons of water per minute out of each wash wand, applying a safe-for-aircraft 175 PSI. This helps meet the stringent TM requirements for aircraft rinse and decontamination procedures. The ARC is low-pressure to avoid equipment damage while providing an effective stream for rinsing joints, hinges and other areas of entrapment.

ARC's high flow rate cuts rinsing time dramatically by efficiently rinsing large areas. This efficiency is further supplemented by the presence of dual guns for two users and 200' of total reach. Simultaneous use of the dual guns will not negatively impact flow rates. In addition, the spray can easily extend 40' for rinsing tail sections and larger aircraft.

## ADDITIONAL FEATURES

- Run dry protection
- Auto fill for unattended fill-up
- Low RPM CARB tier 3 generator
- AGE retracting grounding cable
- AGSE parking brake and DOT trailer
- Min. 12-hour operation with on-board fuel
- On-board storage for components, spares, support equipment
- NEMA 4 electrical construction
- Water-cooled low RPM diesel generator



# ACDS AIRCRAFT CLEANING AND DECONTAMINATION SYSTEM



## STEERABLE, SELF-POWERED UNIT

The Riveer ACDS is a hydraulic powered aircraft wash cart with upgraded capabilities allowing fixed wash rack assets in a mobile solution. Two hot water (no more than 140 degree F) rinse wands provide 8 gallons per minute (GPM) each at an aircraft safe 30, 80, or 175psi. The onboard air compressor and foam system delivers a dirt busting 50+ gallons of foam per minute, matching or exceeding hard mounted foam systems. The new and improved turbine flush system allows for delivery of gas path cleaner or rinse water at 2.5gpm, 5gpm, or 10gpm – allowing the ACDS to do a turbine flush system on a variety of power plants or multi-engine aircraft. The onboard compressor can provide up to 24 cfm at 120psi for bleed band closure and other requirements. An onboard generator includes a convenience outlet with a standard 120v outlet for additional power needs. The compact design allows internal air transport in the Chinook and larger aircraft plus the unit can be forklifted onto a trailer, train-car, shipping container, or loading dock.



# WINGMAN HANGAR AIRCRAFT WASH SYSTEM



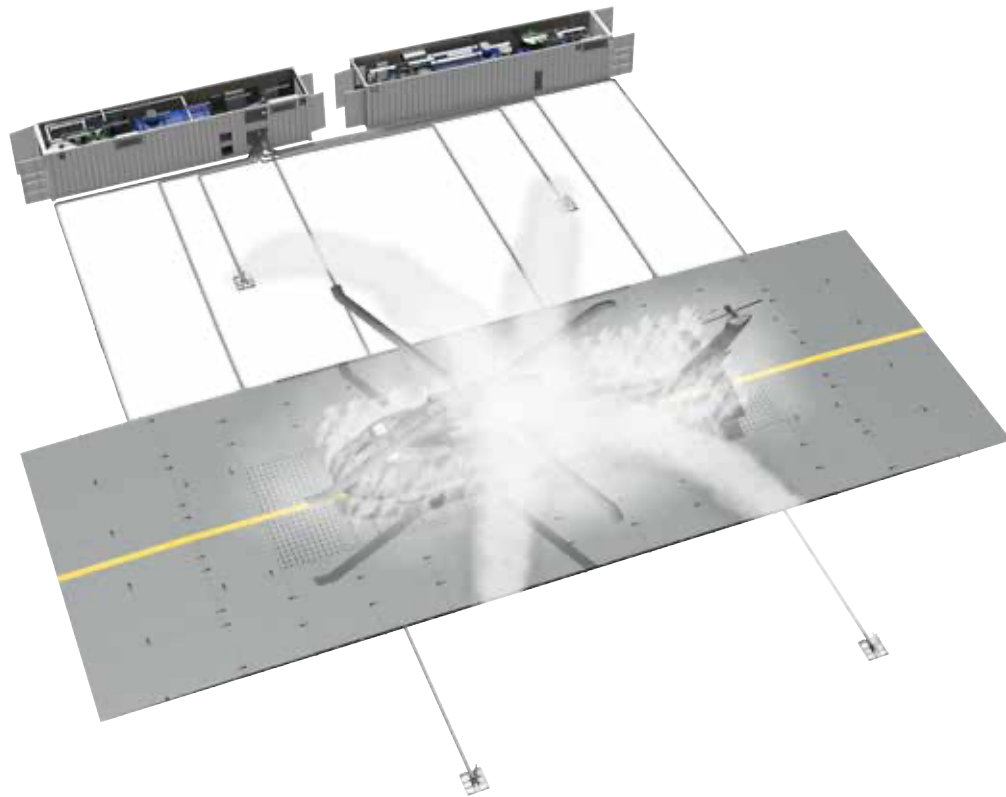
## SAFER, ELECTRIC SYSTEM

Towing diesel-powered wash systems into the hangar is not a safe long-term solution. Wingman is a total electric system enabling plug and play capability utilizing MIL Spec connections for water and electricity commonly found in hangars. While most hangars are equipped with drains for washing indoors, very few are equipped with a wash system that complies with TM 1-1500-344-23-2, TO 1-1-691, NAVAIR 01-1A-509-1 guidelines for aircraft safe washing.

In addition, technical manuals are very specific relative to the damage caused by washing with a standard, high pressure system that can drive water into mechanical struts, avionics panels and air frame seams resulting in long-term, irreversible damage. The aircraft-safe water pressure Wingman provides the optimal solution.



# TRS TACTICAL RINSE SYSTEM



## MODULAR ABOVE GROUND SYSTEM

The Riveer Tactical Rinse System (TRS) is an automatic clear water rinse system for aircraft of virtually every configuration and complexity. Fully deployable, the TRS is installed above ground, eliminating the time and expense of infrastructure modification and associated site engineering/environmental considerations. The modular configuration consists of steel pad sections forming the wash rack and complete rinse/wash and filtration system housed in special ISO containers. All that is required is electrical power.

- Sprays 800 to 1,000 GPM at a safe-for-aircraft pressures.
- Automatic operation, no ground crew required, adjusts to type of aircraft and weather conditions.
- Utilizes multiple corner-mounted, automatic, oscillating, high-flow monitors with patented spray and flow trajectories and multiple lower deck nozzles ensure a thorough and efficient rinse of all surfaces.
- Standard footprint for rotary wing or F/A aircraft is 50'L x 80'W x 7'H, with larger pads available.
- Patented FOD-proof (Foreign Object Debris) nozzles offer pattern and flow adjustment capabilities.



# INLET WATER FILTRATION SYSTEM



## REDUCE TOTAL DISSOLVED SOLIDS

Effectively removing corrosion-causing potential from aircraft requires compliance with aircraft OEM and NAVAIR 01-1A-509 water quality standards for aircraft cleaning. In order to comply with these standards, airframe rinse and engine wash operations are required to use clean water with less than 500 parts per million of Total Dissolved Solids (TDS). However, air base water quality often fails to meet water quality standards set forth in TM 1-1-500-344-23-2, TO 1-1-691, and NAVAIR 01-1A-509 standards for aircraft cleaning. Water that does not meet or exceed water quality standards can decrease effectiveness and actually introduce new corrosion causing contaminants to airframes and engines such as Iron, Chlorine, and Salts commonly found in potable water sources.

Utilizing a combination of softening, particulate, carbon, and reverse osmosis, the Riveer system accepts base-supplied water and targets common contaminants found in antiquated and unreliable base supply systems such as Iron, Chlorine, TSS, and Salts. The result is 2000 gallons of water that is compliant with aircraft corrosion control processes and is also highly absorbent to more effectively pull contaminants off the aircraft.



Riveer employs a quality management system that is ISO 9001:2008 certified.  
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**RIVEER**<sup>™</sup>

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