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NEW!

# WASTE TANK CLEANING TROLLEY

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## WASTE TANK CLEANING TROLLEY



### WTC1 Device Cleaning, XXL Waste Tank

This GSE is designed to fulfill the AIRBUS maintenance procedure „Cleaning of waste tank assembly“. It is compulsory for A350 step7 onward and other different aircraft types (ATA Chapter 38). Additional adaptations to other Airbus types such as A321XLR are planned. Due to the system control of the GSE, the cleaning process is performed autonomous. After the installation and start, a permanent observation by an operator is not required. As cleaning fluid a mixture of water and citric acid is used in a recirculation process. After the cleaning procedure the A/C waste tank is flushed with fresh water.

- > Fully automatic cleaning process (no monitoring required)
- > Minimized contamination of germs and bacteria in the aircraft and hangar environment during the cleaning process compared to previous cleaning tasks
- > Implementation during standard maintenance tasks (e.g. Line Maintenance Check)
- > Parallel cleaning of two waste tanks or one XXL waste tank
- > Included fresh water flushing to avoid remaining cleaning fluid in the system
- > Environmental friendliness is ensured by usage of water and citric acid as cleaning agents







## TECHNICAL PRODUCT DETAILS WTC1

### > Power supply >WTC1<:

Mains supply:	3/PE AC 50-60Hz 380-480V
	3/N/PE AC 50-60Hz 380-480V
Nominal current:	max. 25A
Power:	17.32kVA
Preliminary fuse:	32A gL

### > Power supply >WTC1D<:

Diesel generator set

Mains supply:	3/PE AC 50-60Hz 380-480V
	3/N/PE AC 50-60Hz 380-480V
Nominal current:	max. 25A
Power:	17.32kVA
Preliminary fuse:	32A gL

### > Dimensions and weight:

Length:	3,660mm	(144.1in)
Width:	1,600mm	(63.0in)
Height:	1,500mm	(59.1in)
Weight >WTC1<:	approx. 1,500kg	(approx. 3,307lb)
Weight >WTC1D<:	approx. 2,160kg	(approx. 4,762lb)

### > Operating conditions:

Ambient temperature:	5 to 40°C (41 to 104°F)
Storage temperature:	0 to 60°C (32 to 140°F)
Altitude:	max. 1,000m MSL (3,280ft)
Humidity:	5 to 90% (non-condensing)

## STANDARD SCOPE OF DELIVERY

- > Waste drain hose, 10m (33ft), with couplings and caps, stored in an extractable drawer
- > Hose supports
- > Blanking caps for cleaning hose
- > Vent hose adapter
- > Grounding cable
- > Power supply cab



Tank cleaning nozzle



## Maintenance and Ground Support Equipment

### Hydraulic Ground Power - HGPU, PGRAT1, RATMK, WSS4



*HGPU50-30-1S*

#### HYDRAULIC GROUND POWER UNIT

Proven technology and solutions tested by major OEMs and MROs. A highly sophisticated ventilation concept avoids oil fumes.

- > Electric driven
- > Certified for all AIRBUS aircraft, recognized by BOEING
- > Free from Skydrol vapours
- > Automatic over-temp protection
- > Separate low pressure circuit for anti-cavitation
- > Entire life cycle and spares support



*PGRAT1 with RSIK1 and RATMK*

#### RAM AIR TURBINE TEST EQUIPMENT

- > This test equipment is necessary to accomplish a functional test of the Ram Air Turbine (RAT)
- > Compact stainless steel construction
- > Storage space for RAT-Motor, cables and hoses in the test device
- > Skydrol-resistant construction with sealed electrical chamber and safety glass cover plate
- > RAT-Motor available in two versions (tubes or hoses)
- > Operation with battery / mains or aircraft supply



*WSS4*

#### WATER SEPARATOR AND HYDRAULIC PURIFIER

Hydraulic fluids are hygroscopic. They absorb water from the atmosphere rapidly. The higher the temperature, the faster the absorption. Acids in hydraulic medium cause corrosion and slowly destroy the hydraulic components. The Water Separator System removes the water content from the hydraulic fluid and eliminates particles to extend its lifetime. Connect the Water Separator in the course of routine maintenance activities in the return line between A/C and a hydraulic ground power unit (e.g. HGPU50-30-1S). Certified for A350 and 3000psi AIRBUS AIC.

## Maintenance and Ground Support Equipment

### Bonding and Loop Resistance - BLRT3, IM2FSAL, MVP10



BLRT3

#### BONDING AND LOOP RESISTANCE TESTER

Is especially used in aircraft manufacturing. It can be used on different aircraft types. It is capable of performing various tests depending on used accessories. The test capability ranges from manual 4-wire-bonding tests and loop resistance tests with current clamps up to the possibility to carry out these tests automatically and to store the measuring values directly in the database.

- > All measuring functions can be selected and combined independently and can also be retrofitted at a later stage
- > Long testing period by hot-swap capable Li-Ion batteries
- > A wide range of accessories is available for this tester



IM2FSAL2

#### LOOP RESISTANCE TESTER - AIRLINER SET

Designed for fast and simple checking of loop impedance:

- > Battery powered, rechargeable in situ or removed
- > Galvanically isolated interface for remote control or data exchange
- > Automatic residual current compensation
- > Range is switched automatically
- > Search mode for rapid location of faulty connections
- > Including self test unit for function control of the test equipment and the measuring clamps
- > Equivalent AIRBUS P/N TS11194
- > AIRBUS certified tool for MRO tasks



MVP10L-FS

#### BONDING TESTER

Is used for fast and simple inspection of bonding connections. Test currents of up to 10A are injected and the contact resistance is measured using the 4 wire test method.

- > Battery powered, rechargeable in situ or removed
- > Galvanically isolated interface for remote control or data exchange
- > Measurement current up to 10A with impulse current testing, automatic field switching and automatic polarity reversal
- > Automatic 4 wire identification





## Maintenance and Ground Support Equipment

### Equipment for Waste - WLC1, VTBR2, WCT1



WLC1

#### WALICLEAN - WASTE LINE CLEANING

Cleans the vacuum waste lines of different A/C types with negative pressure. A warm solution of water and citric acid circulates through the waste lines

- > Developed with experts for waste line cleaning
- > Certified for all AIRBUS A/C, Boeing NTO
- > Fully automatic cleaning process
- > Automatic leakage test before starting the cleaning process
- > Preselectable cleaning time
- > No dismounting of waste lines necessary
- > Helps to save time and money, a green way of waste line cleaning



VTBR2

#### VACUUM TOILET BLOCKAGE REMOVER

This product serves as universally applicable equipment to clear and remove pipeline blockage of vacuum-lavatory systems on A/C within 30 minutes, it is a real emergency tool.

- > Simple, manual operation
- > Autonomous due to integrated diesel engine
- > Connection for tank drainage with Waste Service Truck



SCST1

#### TEST EQUIPMENT FOR SUPPLEMENTAL COOLING SYSTEM A350

This product is for fully-automatic filling, draining, bleeding, replenishing and emptying of the Supplemental Cooling System (SCS) on the AIRBUS A350 (ATA Chapter 21). World-wide universal connection (compatible with multiple voltages)

- > Simple handling
- > SCS system of the A/C automatically turns to maintenance mode
- > Exactly planned service time
- > Minimizes service time
- > For hangar and outdoor application

## Maintenance and Ground Support Equipment

### Potable Water - WHA2, DC2, DCT3



WHA2

#### WHA2 HOT WATER FLUSH UNIT

This GSE is foreseen for the cleaning of the potable water pipes of new A320 A/Cs before delivery. It performs the AIRBUS procedure „Fill up the aircraft potable water tank with hot water and pressurizes the potable water system as for normal service. Therefore dirt and lubricants are dissolved from the entire potable water system. The GSE is delivered with all necessary accessories, properly stored inside the GSE



DC2

#### DISINFECTION CART

It is developed for easy and comfortable disinfection of the A/C potable water system, e.g. before re-entry into service.

The Disinfection Cart is available in two versions:

- > Basic version for outdoor & apron use
- > Extended version for hangar & tap water supply use
- > Automatic injection of hydrogen peroxide disinfectant to the water line during filling process
- > Water source: - Potable water service truck (basic version)
- > Tap water supply (extended version)



DCT3

#### DISINFECTION AND CONSERVATION TOOL

The main purpose of the water test tool is to check the functionality and the leak tightness of the potable water and waste water system of the Airbus single aisle family. The tool has a fresh water supply circuit controlled by an electronic control valve and designed for a water pressure of max.10 bar as well as a pressurized air supply circuit controlled by an electronic control valve and designed for an air pressure of max. 6bar. The computerized system offers the possibility of automatic test sequences and also manual operation.



## Maintenance and Ground Support Equipment

### Pressure - KDP, CPT



KDP20

#### CABIN PRESSURIZATION TROLLEY

Developed for pneumatic pressure tests on aircraft types according to ATA Chapter 36.

Three tests can be carried out: Preliminary Seal Leak Check, Cabin Proof Pressure Test and Cabin Air Leakage Test. It is possible to adapt this trolley for pressure tests with other parameters.

- > Outlet and cabin pressure, flow, temperature, speed
- > Integrated roots blower to generate the pressures and flows
- > Integrated aftercooler for a max. outlet temperature of 60°C
- > Heat protection cover to protect the operator during test runs
- > Chassis with turntable steering, solid rubber tires and integrated automatic parking brake
- > Box for hose storage
- > Holding for supply cable storage



KDP4AF

#### CABIN PRESSURIZATION TROLLEY

Developed for performing pneumatic pressure tests on the aircraft type A320 family according to ATA Chapter 21.

Serves for verifying cabin tightness as well as for testing the security valve at the aircraft. It is possible to adapt this trolley for other aircraft types.



CPT900-13

#### CABIN PRESSURIZATION TROLLEY

Developed for performing pneumatic pressure tests and according to GSE Design Specification GSEO. Serves for performing the following tests: Cabin pressurization Leakage and positive Pressure Relief. It is possible to adapt this trolley for other aircraft types.

- > Digital: cabin pressure and air flow, analog: outlet pressure, temperature and vertical speed (rate of climbing)
- > Integrated roots blower to generate the pressures and flows necessary for pressure tests
- > Integrated cooler for a max. outlet temperature of 60°C
- > Heat protection cover to protect the operator during test runs
- > Storage box for hose, adapter and tools and holding for supply cable storage



## Manufacturing - product depth

### COMPANY ACTIVITIES

With the most modern manufacture techniques we are capable of offering a large variety of services. Next to the traditional design and manufacture of test systems TEST-FUCHS also manufactures components, assemblies and modification kits for the aerospace industry on demand.

#### Our Manufacture Capacities:

- > Material disposition
- > Machining (CNC, CAD-CAM)
- > Sheet metal techniques
- > Special processes (composites)
- > Surface treatments finishing
- > Non-destructive tests
- > Fitting of assemblies

### TEST SYSTEMS

#### a) Design, Development and Manufacture of

- > Test systems for components for different medias, e.g. fuel, hydraulic, pneumatic, electric/electrical and engine test stands
- > Ground support equipment (GSE), e.g. HGPU, RATMK, etc.
- > Portable test equipment, e.g. Bonding / Loop Resistance Tester,...

#### b) Manufacturing of sub-assemblies, like

- > Test cables, transformers, electrical devices, dynamic and static converters
- > Printed circuit boards, digital instruments
- > Precision angle gearboxes, actuators, high-speed power gears, torque measuring devices
- > Valves, cartridges, test blocks, flow measuring turbines

**TEST-FUCHS** can provide everything from one source, quick reaction time, express manufacturing, reliability, highest quality levels with the corresponding certifications, individual packaging and logistic solutions as quick realization.

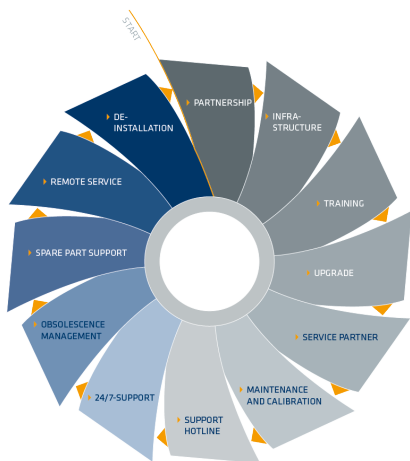




## SERVICE - Benefit from a large variety of service options

**TEST-FUCHS** customer services provide local support solutions. From project planning to on-site maintenance, direct contact with our customers saves time and reduces costs.

We are able to provide direct line support via our offices in Germany, Italy, France, UK, Spain, Singapore, China and the USA. Profit from the service for our products during their entire life cycle:



**TEST-FUCHS** service teams are located all around the world to manage and coordinate your service requests. We can provide various maintenance teams for repairs who can be sent quickly to your locations for service, support and repairs. Our maintenance teams at the different TEST-FUCHS service centers take care of any arising issue.

At TEST-FUCHS headquarters specialists from all our departments are actively involved in finding solutions. Remote service accelerates the trouble analysis and repair of failures without losing precious time.

The company counts on a huge **spare parts stock**, and our customers profit from an **obsolescence management** throughout the entire product life cycle.

Take the optimal advantage of your test systems by training your staff accordingly. Choose from operator trainings, maintenance trainings, software or calibration trainings. Rely on the accuracy of your test systems and trust in more than 50 years of experience in calibration and metrology at **TEST-FUCHS**. Our calibration teams are close to your test equipment.

**Profit from service and support in every situation!**

## TEST-FUCHS products and certifications

All our products are characterised by high quality and rapid availability. We offer innovative solutions for line and base maintenance. Increase safety and productivity while reducing costs and minimizing downtime. Our Ground Support Equipment is designed with the objectives of the crew and maintenance teams in mind.

The wide range of products includes **AIRBUS Certified GSE for AIRBUS A320, AIRBUS A350, AIRBUS A400M**. Our maintenance products are in regular use by our customers for **BOEING B737** through to **BOEING B787** and many more aircraft types. Select your suitable product and for further details please contact our sales team.



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Location Neu-Wulmstorf



Location Erding

## TEST-FUCHS Germany: service and support activities

**50 members of the international TEST-FUCHS team are at your service in Hamburg and Erding**

- > Support for civil and military aviation
- > Maintenance and calibration of test equipment at the customers' premises or at TEST-FUCHS
- > Performance of recurrent inspections (e.g. DGUV V3, BGVC10, BGR327, etc.)
- > Problem analysis during component tests
- > Component maintenance for civil and military aviation
- > Modification of test systems
- > Delivery of spare parts
- > Obsolescence management
- > Remote support
- > Training
- > 24/7 service

### Accreditation

Accreditation of the German accreditation body for the calibration laboratory Germany according to DIN EN ISO/IEC 17025:2018 at the Neu-Wulmsdorf site.

### Certifications

DIN EN ISO 9001:2015  
AQAP2120 / ZV A1-1525/0-8901  
EASA Part-145



## Historic background of TEST-FUCHS Germany (Hamburg and Erding)

TEST-FUCHS was founded in Austria in 1946. Already in the **1950s** the company established relationships with the **German Air Force**. The positive development of this relationship resulted in the creation of the German subsidiaries of TEST-FUCHS, which was formally founded in Bonn on the 3rd of July in 1962. As a service and support business, it was essential to be close to the customer. Therefore the company was transferred to **Erding** in Bavaria, close to a big air base, in **1969**.

In 1979 the company moved to its current location in the **Albert-Einstein-Strasse 4**, with space for workshops, offices and spare part storage. In 1985 another workshop was added and the growth of the company lead to a new 1.300 sqm storehouse in 2015.

At the moment a completely new building is being constructed next to the existing building to meet the

growing requirements.

As the number of TEST-FUCHS products and support activities increased in the civil aviation, TEST-FUCHS Germany established a second service location in **Hamburg**, to be closer to civil segment. The positive development made it necessary to move to bigger premises. In 2015 a location in **Neu Wulmstorf** with workshops, offices and storehouses was inaugurated. The new building in Erding was also successfully completed in **2021** and will now be given a new look.

### We work to keep you productive!

Safety is the base of our high quality in service and in our products. We are proud of our good relationship with our customers. They profit from a solid, long-year partnership, years of experience, high quality and reliable service.



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