

MRO

SERVICE

SOLUTIONS

TOOLS

PRAXIS



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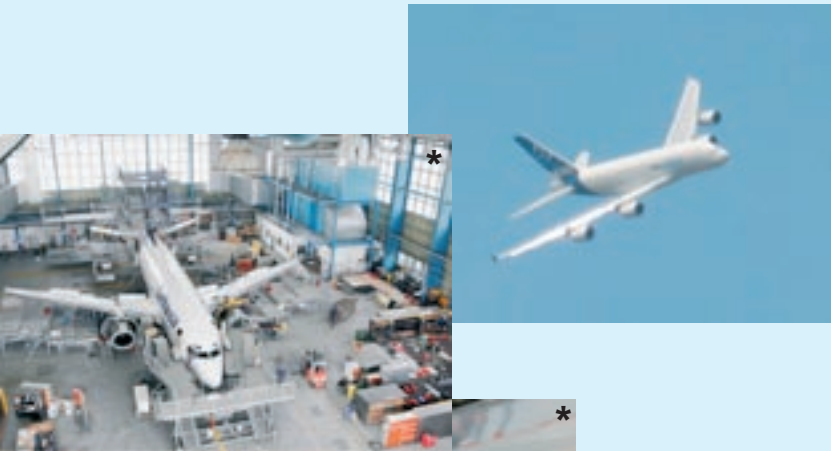
PFERD – Tools

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Faster, less noise, more cost efficiency – air transport is one of the few industries which still exhibit sustained growth, both in the United States and worldwide.

A modern large-body aircraft consists of almost 30 million individual parts. It is difficult to imagine that these sophisticated planes will age but imperceptibly and attain useful service lives in excess of 30 years.

But then again, aerospace industry has always been an industry noted for its particularly strict manufacturing and machining standards and the most exacting manufacturing and maintenance, repair and overhaul (MRO) specifications imaginable.



In this industry, precision and uniformity in machining operations are just as vital as thorough testing and inspections of the highly special materials used for numerous components. Machining these materials, which usually qualify as “difficult to machine”, is a challenge to any supplier.

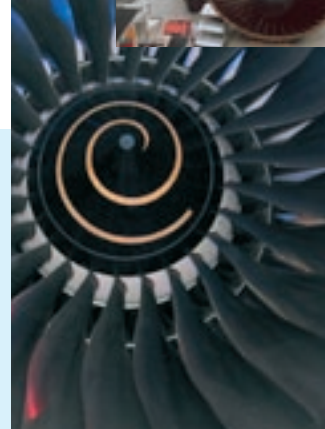
AEROSPACE

A Global Partner to the Aerospace Industry

An exact understanding of the specific wear and performance behavior of the materials deployed is of critical importance in the manufacture, maintenance, repair and overhaul (MRO) of civil and military aircraft, jet engines and their components. The diverse range of materials to be handled in the various processes includes titanium and nickel-based alloys for parts subject to combined loading by high dynamic forces and elevated operating temperatures (e.g., vanes, blades and combustion chamber in the hot section of jet engines).

PFERD tools meet the special requirements of these materials in every one of the associated machining processes. As a premium supplier to the aerospace industry, PFERD offers an extensive tool range comprising approx. 7,000 stock solutions. In addition, we develop customized tool versions for (usually complex) machining tasks in close co-operation with the aerospace industry.

***Every PFERD tool is built to achieve the following objectives:
Unsurpassed performance, process optimization and cost reduction.***



PFERD. The Company

Tradition, Progress, Innovation

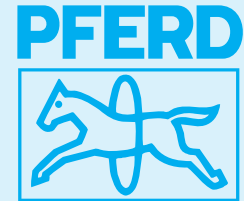
PFERD INC. is the U.S. subsidiary of August Rüggeberg & Co. Founded in 1799, PFERD began by making files for blacksmiths ("PFERD" is German for "Horse") in Marienheide, Germany.

For more than 200 years, the PFERD brand name has been synonymous with outstanding premium-quality tools. Today, our extensive range comprises more than 10,000 surface finishing and cutting tools. We are a "single stop" supplier in the true sense – for the benefit of our customers.

PFERD quality tools ensure exceptional results and unsurpassed cost-efficiency.



PFERD INC. Leominster, MA/USA



Headquarters Marienheide/Germany



*The PFERD Group employs over 1,700 people worldwide.
Our goal: Deliver unparalleled service and solutions to the customer.*

▶ PFERD. The Company

Efficient Logistics and a Global Presence



Júndiz/Spain



Araia/Spain



Milwaukee, WI/USA



Spartan/South Africa

Manufacturing sites in major markets and a global distribution network comprising 17 company-owned local subsidiaries and over 100 international sales offices and agencies guarantee PFERD's local presence – wherever the customer may be located.

As a leading manufacturer of quality tools, PFERD is a member of the oSa organization for abrasive tool safety. This voluntary commitment reflects our determination to manufacture safe quality tools which embody state-of-the-art accident prevention features and meet all applicable U.S. and European safety standards



Hermeskeil/Germany

The PFERD quality management system is EN ISO 9001 certified.

A sophisticated and effective logistics system keeps PFERD tools readily available all over the world.

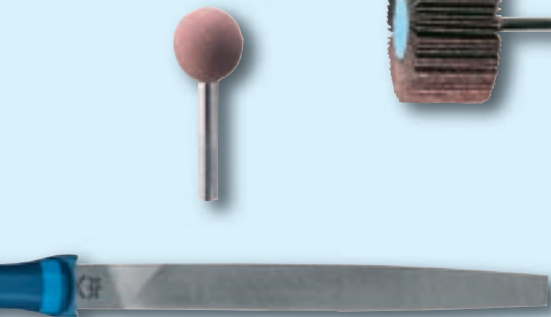
Our goal: Quick and prompt availability of PFERD-tools for our customers.

▶ PFERD. Tools

Premium Quality “made by PFERD”

PFERD offers a full and comprehensive system range of high-grade products for cutting and machining materials to any desired condition, from coarse to mirror-polished.

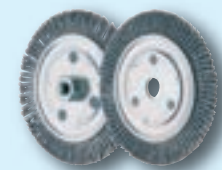
Our product development and advanced manufacturing technology reflect latest market standards and customer needs. Thus, every PFERD tool is optimized for unsurpassed application performance.



- Product Groups**
- Files and Rasps
 - Tungsten Carbide Burs and Hole Saws
 - Mounted Points
 - Fine Grinding and Polishing Tools
 - Superhard Diamond and CBN Files, Grinding Tools and Cut-Off Wheels
 - Grinding and Cut-Off Wheels
 - Power and Maintenance Brushes
 - Power Tools



- Fields of Application**
- Cutting
 - Grinding
 - Milling
 - Filing
 - Brushing
 - Polishing
 - Cleaning
 - Rust removal
 - Deburring
 - Matt finishing



At PFERD, we define quality as the most advanced, cost-efficient and personalized solution to the customer's application problem.

▶ PFERD. Tools

Optimum Solutions for the User

PFERD tools are used wherever exacting quality demands are placed on the efficiency and outcome of cutting and surface finishing operations. A breakdown of target markets into business segments enables us to analyze segment requirements in detail, and to address them with industry-specific solutions.

Innovative ideas and development enable PFERD to maintain its leadership in terms of quality, performance and cost-efficiency.

Our goal: With our quality tools and skilled application support, we are dedicated to providing the right solution to any machining problem in industry and the trades.

PFERD business segments

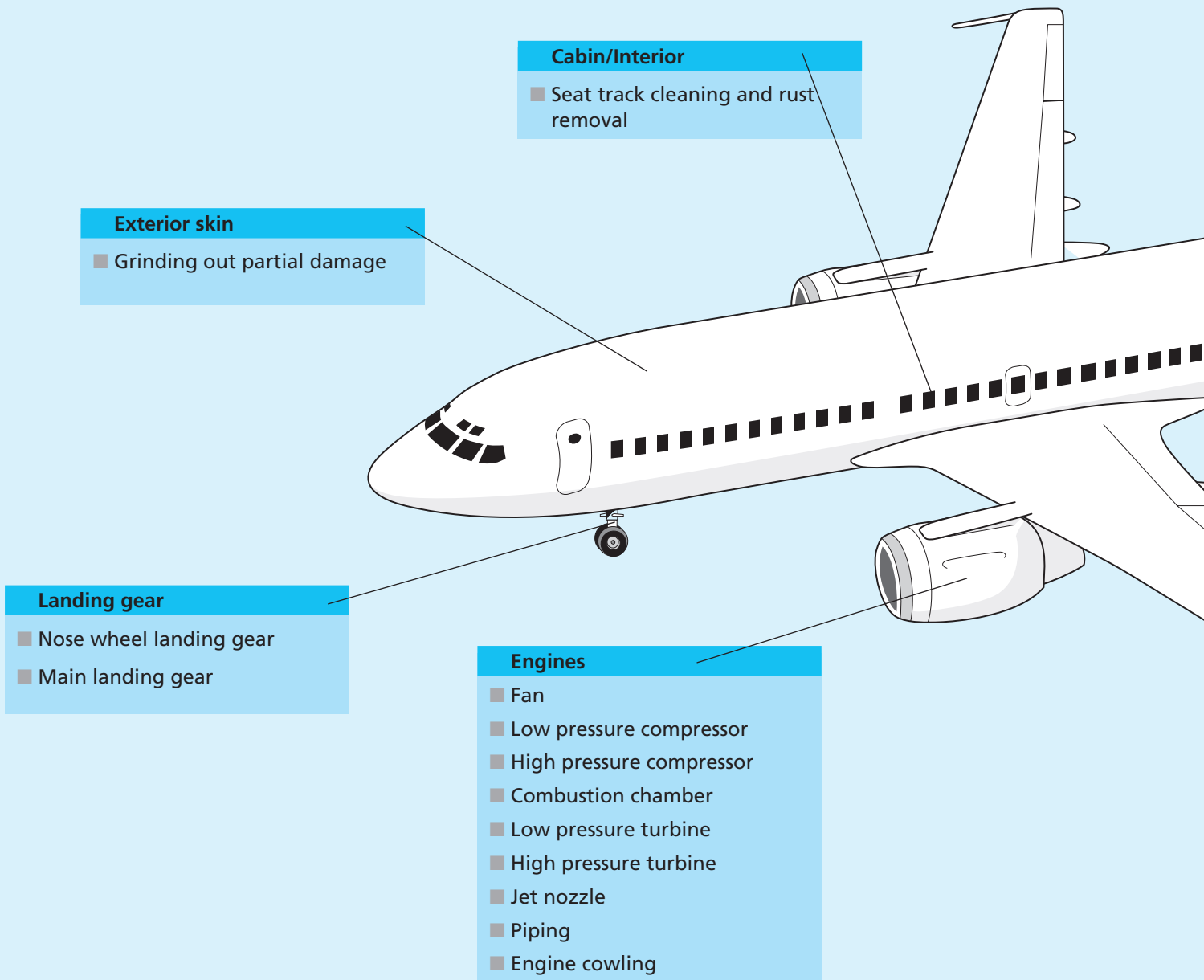
- Chemical and process industry (assembly, maintenance, pipeline construction)
- Apparatus engineering and tank construction
- Foundries
- Tool, die and mouldmaking
- Shipyards
- Automotive applications
- Structural steelwork & metalworking
- Aerospace applications, gas turbines (fabrication and maintenance)
- Mechanical engineering



AEROSPACE

Components, Machining Processes, Materials

PFERD tools are used in the manufacture and maintenance, repair and overhaul (MRO) of civil and military aircraft, jet engines and components, serving in diverse processes such as cutting, grinding, milling, filing, and brushing as well as for cleaning, deburring and producing defined surface finishes.

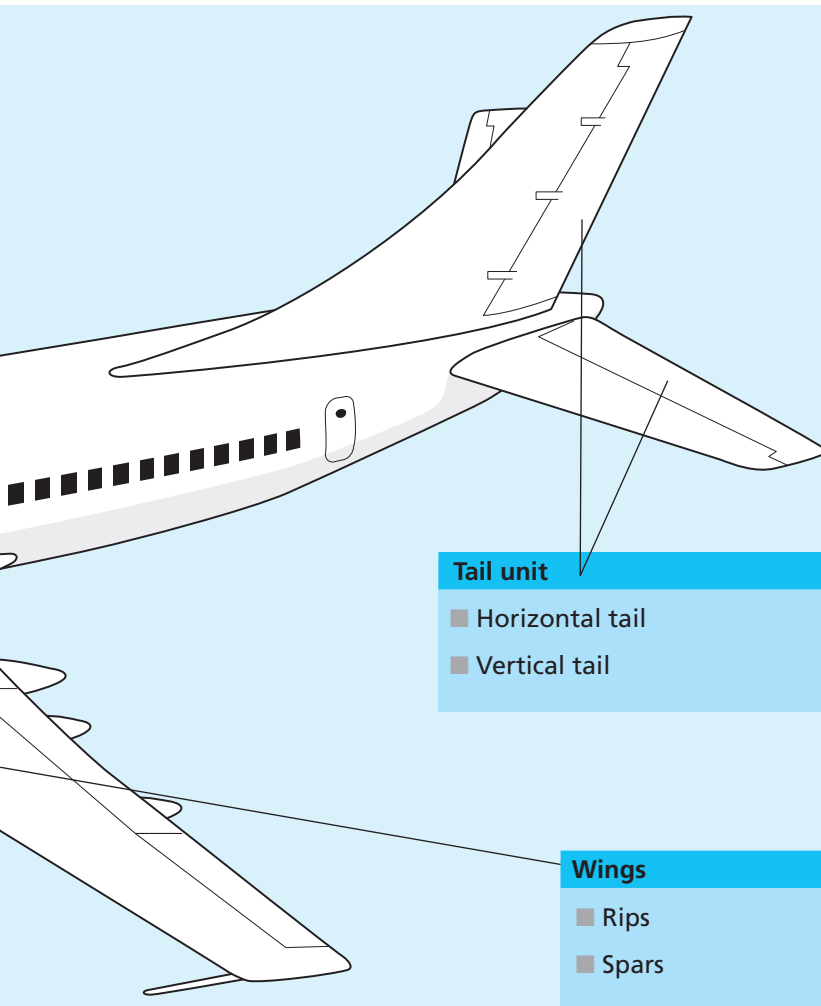
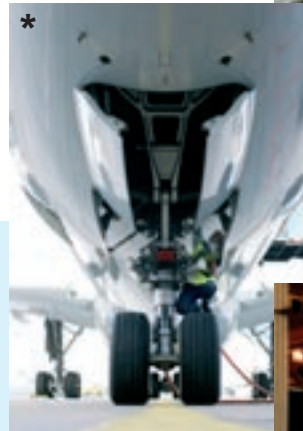


AEROSPACE

Components, Machining Processes, Materials

PFERD offers an extensive range of standard and customized tools, with power tools to match, for any of the diverse materials encountered in aerospace applications.

Objectives: Process optimization and cost reduction.



- Materials**
- Super alloys
 - Nickel-based alloys
 - Cobalt-based alloys
 - Titanium alloys
 - Composite materials
 - Glass fibre reinforced plastics (GFR)
 - Carbon fibre reinforced plastics (CFK)
 - Kevlar
 - Nonferrous metals
 - Aluminium
 - Stainless steels

PFERD will be glad to provide free advice, without any obligation on your part, on any machining issues encountered in the aerospace industry. Our experienced key account management will be pleased to assist you. Contact us today!

Service and Security



Finding the most suitable tool for a specific application problem is an exacting task in view of given complex requirements. PFERD relies on experienced key account management to develop on-site application engineering solutions in conjunction with the user.

Joint workshops are held to analyze processes and to develop alternative solution proposals in an effort to cost reduction through process optimization.

Objective: To meet and exceed user expectations.

Although PFERD supplies the industry's broadest range of tools with over 6,500 items available from stock, some highly specialized processes do require customized tools to achieve the desired productivity. With more than 20,000 customized tools which are "made to order" – i.e., special products made for a specific application – PFERD ensures optimum solutions and best machining results at maximum cost efficiency.



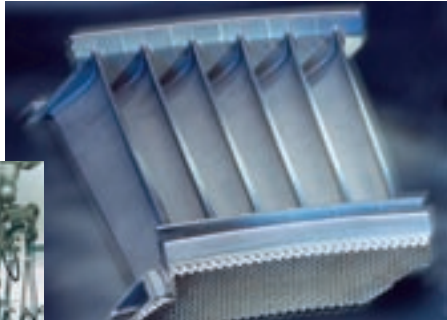
In co-operating with its customers, PFERD meets these partners' objectives with precision and outstanding reliability through

- Excellent tools meeting individual customer needs
- Just-in-time delivery
- Personalized catalogs
- Application recommendations

PFERD quality is EN ISO 9001 certified.

AEROSPACE

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