



Airport Fuelling Solutions



Dabico, Airports

Fuelling aircraft

Dabico is a leading Ground Support Equipment (GSE) specialist, engineering a wide range of state-of-the-art systems and services for contact gates, remote aprons and Maintenance Repair and Overhaul (MRO) hangars for commercial and military applications.

Working closely with customers and industry bodies, Dabico is a solution provider for fully integrated gate and remote apron systems that minimize the use of auxiliary power units, thereby reducing fuel costs and emissions.

Dabico's comprehensive range of systems meet all aircraft requirements including the New Generation Aircraft Generation (NGA) such as the A380, B787 and A350. Our innovative solutions include 400Hz and 28VDC Ground Power Units (GPU), Pre-Conditioned Air (PCA) systems, wet services and fuel systems integrated under passenger boarding bridges, as well as in-ground pits and tunnel systems.

Our integrated airports solution, DABiConnect, connects all GSE assets including GPU, PCA, Visual Docking Guidance

Systems (VDGS), passenger boarding bridges, potable water, sewage and blue water systems, in-ground pit systems and other aircraft stand equipment.

This fully integrated and automated solution includes automatic billing for airlines, thereby reducing human errors and operating costs. This results in an increase in efficiency and airport revenues.

Who works with us:

- | | | | |
|---|--|---|---|
| » Adelte Group | » Bahrain Airport Company | » ThyssenKrupp | » ShinMaywa Industries LTD |
| » Airbus | » Airbus Helicopters (former Eurocopter Group) | » Paris Charles de Gaulle Airport | » Hong-Kong International Airport |
| » Beijing Capital International Airport | » The Emirates Group | » Munich Airport GmbH | » Shenzhen CIMC-TianDa Airport Support CO.LT |
| » Boeing Corporation | » Frankfurt Airport | » Shaanxi Aircraft Company | » GMR Group and the US Air Force among others |
| » Bombardier | » Heathrow International | » Shanghai Pudong International Airport | |
| » Dubai International Airport | » Lufthansa AG | | |

Dabico is a leading GSE specialist, developing state-of-the-art systems for gates, remote aprons and MRO hangars for commercial and military applications.



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Our Offering

Dabico's vital role as a trusted partner in aviation fuelling is defined with its vision statement **Accelerating our journey towards a sustainable future**, and mission to bring innovative solutions to the aviation industry that **safeguard people and protect the environment, while increasing productivity**.

As a leading ground support equipment manufacturer and service provider, **Dabico Airport Solutions** offers a comprehensive range of state-of-the-art, turn-key systems for contact gates, remote aprons, for commercial and defence applications.

We help Airports to refuel aircraft efficiently and reduce environmental impact by engineering turnkey solutions for contact gates and remote aprons that simplifies aircraft servicing. Dabico offers decades of expertise in providing robust user friendly refuelling equipment which has been developed and improved through user feedback.

Dabico's comprehensive range of refuelling equipment meet all aircraft requirements including the New Aircraft Generation (NGA) such as A380, B787 and A350.

Our fuelling portfolio includes:

- » Hydrant pit boxes
- » Internal components incl. hydrant pit valves, high point vent/low point drain assemblies
- » Isolation valve pits
- » Vault access covers
- » Emergency stop systems and components
- » Cathodic protection system components
- » Leak detection system components

Applications

Dabico's cutting-edge products and solutions provides alternate system to APU and reduces tarmac congestion, improve overall performance, safety and efficiency, reduces the environmental impact and increases the profit to the customers



Contact gates

The airports sector continually looks for ways to improve airport capacity and connectivity, reduce environmental impact, and improve the service it offers to airlines and passengers. Dabico supports these aims with systems that ensure critical aircraft services are available directly at the gate, guaranteeing that aircraft are serviced quickly and efficiently.

Dabico offers decades of expertise in providing design and engineering turnkey solutions for fuelling.



Remote aprons

Dabico fuelling systems ensure safe and efficient aircraft servicing at passenger, cargo and military remote aprons. We seek to reduce the amount of mobile equipment present on the apron, thereby improving service of aircraft, reducing maintenance and operating costs and ultimately improves airports profitability.

Our in-ground pit systems minimise tarmac congestion, improve efficiency and reduce environmental impact. This helps airlines and airports to enhance passenger movement and achieve safety and environmental targets.

In addition, in-ground pit systems reduce the incidence of collisions between mobile GSE and aircraft, which represents a substantial risk for high cost for the industry.





Airport Fuelling Systems

Dabico's engineering and systems integration expertise has seen the Group lead the development of aviation ground fuelling solutions for military and civil applications for many years.

Dabico revolutionised the aviation sector with its introduction of the fuel hydrant pit box that enables refuelling via an under-

ground fuel hydrant line. All major airports have adopted the fuel hydrant system, improving productivity, reducing airport congestion and improving safety.

Dabico E³ Fuelling illustrates our wide fuelling portfolio engineered and manufactured based on the highest industry standards (ATA, EI, JIG, STS-M, TÜV, UFGS).





Dabico is an advanced fuel system designer, integrator, and commissioner.

Commercial fuelling

Fuel System Design and Integration

Dabico's commercial and military hydrant systems have been in use in the industry for more than 40 years.

We work closely with major oil companies, airports and defence organisations to test innovations, and meet and exceed customer requirements and standards.

Commercial fuel hydrants

Dabico's commercial fuel hydrant pit assemblies provide on/off and pressure/flow control for a wide variety of commercial applications.

These units are available in one and two-piece (environmental) designs, with bottom or side entry pipe-work, and pits manufactured in either high-grade fibreglass GRP, or fabricated, coated or steel.

All our fuel hydrant pit systems comply with relevant industry standards, including JIG 90 Bulletin.

High-/Low-Point pit assemblies

Dabico's Low-Point drain pit assemblies remove any non-fuel fluids and other contaminants from fuel lines. Our High-Point vent pit assemblies remove air pockets from fuel lines, thereby preventing compressed air build-up.

Cathodic Protection Systems

Current industry standards mandate that aviation fuel hydrant systems should be provided with Cathodic Protection systems to prevent pipeline corrosion. Dabico has a long experience of providing in-ground test stations to monitor cathodic protection systems or to provide access to buried anodes. Available with a variety of cover options to suit customer requirements pits can be custom designed to suit on-site conditions.

Emergency Stop Systems

The emergency stop system is an essential safety system installed at airports with underground aviation fuel hydrant systems and enables the hydrant system to be depressurised in the event of an emergency. Dabico manufactures a variety of different emergency stop system components (call point posts, cable draw pits, manhole covers etc.) to suit customer and project requirements.







Isolation valve chambers

Dabico isolation valve chambers are pre-fabricated and aircraft load rated - to a maximum of 900kN - and are sand-, dust-, and water-proof.

Their unique cover design provides full overhead access, allowing one hand opening, (without the need for any electric, hydraulic or external mechanical lifting equipment), and enable easy on-site installation.

Unique design features ensure long-term mechanical protection for valves in the pit assembly. They are also compatible with military and commercial fuel systems.

Vault Access Pit Covers

Prefabricated vault access pit covers provide easy access into prefabricated fibre-glass vaults or concrete chambers for operational and maintenance requirements of in-ground systems. The covers are dimensioned for easy entrance and exit of personnel (max. cover lift weight 12kg), allowing for easier routine

maintenance access or emergency access for removal of personnel overcome by fumes.

Dabico's vault access covers have a waterproof cover frame preventing fluids and dirt/debris from entering the vault/pit area.

All our covers are aircraft load rated with a 4:1 safety factor.

Fuel Isolation Valve Pit Assembly

Dabico's fuel isolation valve pit assemblies house isolation valves - DBBV, butterfly, ball, gate – valves up to 600mm (24") in diameter. They allow routine and emergency shut-off.

A unique waterproof cover and frame assemblies, with aluminium covers, prevent fluids and debris from entering the pit once the cover is closed.







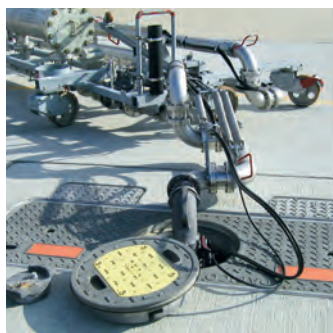
Military fuelling

Military Fuel Hydrant pit assemblies

Dabico's innovative military fuel hydrant pit assemblies efficiently dispense fuel to tactical and strategic aircraft. The assemblies provide on/off or pressure/flow control.

Unique waterproof covers and frame assemblies, fitted with aluminium doors, prevent fluids and debris from entering pits when closed. Patented torsion spring actuated covers maximise available workspace within the pit assembly.

These assemblies are also spring actuated or have counter weighted covers.



Pantographs

Dabico pantographs refuel aircraft safely, quickly and efficiently without the need for dispensers or tank trucks. Our pantographs directly refuel wide-body aircraft, tactical aircraft, helicopters and tank trucks at airports and airfields throughout the world.

Since 1980, Dabico's stainless steel fueling arms have seen service in military and commercial applications around the globe.

Dabico's pantographs are compatible with military and commercial aircraft, and perform fuselage and under-wing refueling operations.

Our pantograph systems service all types of military aircraft, and can be operated by a single person. The innovative design eliminates the need for hoses, and it allows refuelling with engines running and hot brakes.







After-sales service

Dabico's Services division helps customers to maximise the availability of their assets, reduce operating costs and extend equipment lifespan.

With 70 service experts in more than 30 countries, Dabico supports customers with a range of service offerings, including:

- » inspection, training and preventive maintenance
- » spare parts
- » repair and replacement
- » equipment renovation and upgrades

Furthermore, four service level agreements have been developed to support the maintenance of the 18,000 Dabico units currently in service worldwide:

- » Dabico Care
- » Dabico Care Enhanced
- » Dabico Care Enhanced Plus
- » Total Dabico Care

References

Aircraft manufacturers

- » Airbus France, Toulouse
- » Airbus Germany, Hamburg
- » Airbus China, Tianjin
- » Boeing Assembly lines, Seattle
- » Dassault Aviation, France
- » EADS Spain, Sevilla
- » Eurocopter France
- » Eurocopter Germany
- » Lockheed Martin Assembly Lines
- » Shaanxi Aircraft Corporation, China

MRO hangars

- » Air France A380, Paris
- » Aeromexico, Mexico
- » AMECO A380, Beijing
- » AMMROC, UAE
- » DHL Leipzig
- » Emirates Airline A380, Dubai
- » Fedex, Memphis
- » Lufthansa A380, Frankfurt

- » Newark
- » Qatar Airways A380, Doha
- » Qantas A380, Sydney
- » Oman Air, Oman
- » Riyadh & Jeddah MoF
- » US Airways, Philadelphia

Airports

- » Anchorage, Alaska
- » Atlanta, Georgia
- » Athens Airport
- » Bangalore Airport
- » Bahrain Airport
- » Barcelona Airport
- » Beijing Airport
- » Brasilia Airport
- » Buenos Aires Airport
- » Charlotte, North Carolina
- » Chicago (O'Hare), Illinois
- » China Eastern Airlines, Shanghai
- » Dalian Airport
- » Dallas / Ft. Worth, Texas
- » Dakar New Airport
- » Denver, Colorado

- » Detroit (Metro), Michigan
- » Dortmund Airport
- » Dubai DXB Airport
- » Dubai JXB Airport
- » Fiumicino Airport
- » Frankfurt Airport
- » Guangzhou Airport
- » Helsinki-Vantaa Airport
- » Hong Kong Airport
- » Hongqiao Airport
- » Houston (Intercontinental)
- » Hyderabad Airport
- » Kunming Airport
- » Las Vegas, Nevada
- » Leipzig Airport
- » London Heathrow Airport
- » Los Angeles Airport (International)
- » Macau Airport
- » Madrid Airport
- » Manchester Airport
- » Miami, Florida
- » Minneapolis / St. Paul,
- » New York (JFK), New York

- » Mumbai Airport
- » Munich Airport
- » New Delhi Airport
- » New Doha International Airport
- » New Islamabad Int' Airport
- » New Oman Airport
- » Noi Bai Airport, Vietnam
- » Orlando, Florida
- » Paris CDG Airport
- » Philadelphia, Pennsylvania
- » Phoenix, Arizona
- » Qingdao Airport
- » San Francisco, California
- » Santiago de Chile Airport
- » Sao Paulo Airport
- » Seattle (Seatac), Washington
- » Singapore Airport
- » Shanghai Pudong Airport
- » Shenzhen International
- » Shermetjevo Airport
- » Soekarno-Hatta Airport
- » Stockholm Arlanda Airport
- » Sydney Airport

We are present in:

- | | | | |
|-------------|-------------|-------------------|----------|
| » Australia | » Germany | » The Netherlands | » Turkey |
| » China | » Hong Kong | » Singapore | » UAE |
| » Denmark | » India | » Spain | » UK |
| » France | » Italy | » Sweden | » USA |

