



Customised hygiene equipment for the railway industry



- ▶ FOREFRONT OF TECHNOLOGY
- ▶ UNIQUE KNOW-HOW
- ▶ FLEXIBLE CUSTOMER SERVICE
- ▶ CUSTOMISED SOLUTIONS
- ▶ RELIABILITY AND ECONOMY

**BUILD-IN
HAND DRYERS
BABY CHANGING
STATIONS
RECIRCULATION
AIR HEATERS**



Customising for the railway industry

DAN DRYER is mostly known for hand dryers and lavatory inventory for installation in toilets and changing facilities in buildings accessible to the public. However, DAN DRYER also supplies a wide range of products for the railway industry.

A major DAN DRYER objective is to be at the forefront of technology. - Living up to the specification requirements of the future. Through this vision, DAN DRYER has earned a unique position as a niche manufacturer of primarily build-in hand dryers for integration in railway vehicles.

The DAN DRYER build-in hand dryers are available for either pushbutton or touchless activation - and, if required, with a recirculation heating function by connection to external temperature control.

Standards and requirements for railway equipment are many and complex. For equipment like hand dryers to be approved for installation in rolling stock, norms and standards to comply with are comprehensive.

At DAN DRYER we have great expertise in developing and manufacturing build-in hand dryers for rolling stock in countries such as Norway, France, Germany and Switzerland. We possess unique know-how and experience, making us market leaders in this highly specialized field.

In addition to build-in hand dryers, DAN DRYER also develops and delivers recirculation heaters for installation in rolling stock passenger areas as well as customised baby changing stations, compliant to TSI-requirements.

DAN DRYER railway equipment because we provide

- Extensive know-how, expertise and experience
- Flexible and customised solutions
- A focus on high quality and durability
- Thorough knowledge of norms and standards
- Professional guidance and sparring



FOREFRONT OF TECHNOLOGY

Living up to the specification requirements of the future. Within the development of high-quality hygiene equipment for the railway industry, DAN DRYER aims to be at the forefront of technology.



UNIQUE KNOW-HOW

DAN DRYER offers a unique know-how and expertise based on many years of experience within the development of equipment for railway projects across Europe.



RELIABILITY AND ECONOMY

Reliability, durability and high quality to avoid frequent reinvestment and reduce operating costs is key to DAN DRYER railway products.



FLEXIBLE CUSTOMER SERVICE

Product reliability is imperative. Thus, DAN DRYER offers individual and flexible customer service in order to react quickly to customer requirements at all project stages.



CUSTOMISED SOLUTIONS

DAN DRYER railway products are compliant to relevant railway regulations and can be customised to meet individual needs and requirements.

Build-in hand dryer

For installation on board rolling stock

Housing:

2 mm aluminium plate - welded or riveted.

Installation:

Air inlet to be held free. Minimum distance to facing surface: 10 mm.
The outlet nozzle is meant for the mounting of a flexible aluminium hose.

Air volume:

72 l/sec. measured at the outlet.

A precondition for a high air volume is that the flexible hose is kept as short and as straight as possible to avoid air pressure build-up.

Motor:

110 W radial fan motor with sealed ball bearings. Brushless.
Humidity protected. Automatic thermal cut-out.

Heating element:

1500 W optimized alloy filament coil mounted on a mica support in a non-inflammable cone. 2-level automatic thermal cut-out.

Timer:

Electronic timer unit to be activated through external IR sensor.

IR sensor:

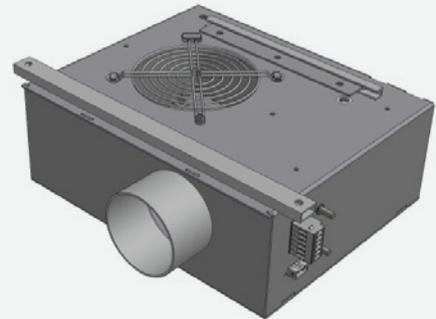
External IR sensor unit controlled by the timer is included with the dryer unit.
Standard length of connector cable: 75 mm [other lengths on request].

Connection:

Power supply: 230 Volt, 50 Hz – through WAGO type connector.
Insulation class: Class I. The hand dryer may be earthed through WAGO connector or externally on two 6 mm threaded grounding studs.

Functionality:

Upon activation, the dryer will run until hands are removed again. Automatic stop after 3 min. of continuous use.



Dimensions:

Height excl. outlet nozzle:	246 mm
Height incl. outlet nozzle:	293 mm
Width:	297 mm
Depth:	122 mm
Outlet nozzle [outside]:	Ø 80 mm

The listed data apply to a standard DAN DRYER build-in hand dryer.

Our product range and customisation options cover:

- Housing in untreated or powder-coated aluminium
- Activation via pushbutton or through IR sensor
- 24 V or 230 V
- Heating element in different capacities (up to 2250 W)
- Option for use as combined hand dryer / recirculation heater.

**Compliant
to the following
rolling stock norms:**

- EN 50121-3-2 (EMC)
- EN 50155 (Electronic Eqpt)
- EN 45545-2 (Fire & Smoke, HL3)
- EN 61373 (Shock & Vibration,
Cat. 1 Class B)

Baby changing station

Space-saving baby changing station with a carrying capacity that exceeds TSI-requirements.

- Made of the best materials; changing surface in powder-coated aluminium and axle and levers in electro galvanized steel.
- Very strong construction providing optimum carrying capacity and long product life.
- To save space, the table folds up against the wall when not in use. Torsion springs in the wall unit ensure easy and gentle opening and closing.
- Cleaning-friendly design with slightly rounded edges.
- Colour: Coatings according to customer specifications possible.
- TSI-PRM compliant.
- 2-year warranty.
- Under evaluation for the GS Mark [Proven Safety]



New BJÖRK baby changing station for rolling stock and station buildings.

Recirculation air heating

For installation in passenger areas on board rolling stock, DAN DRYER will assist in developing the right solution for forced ventilation comfort heating.

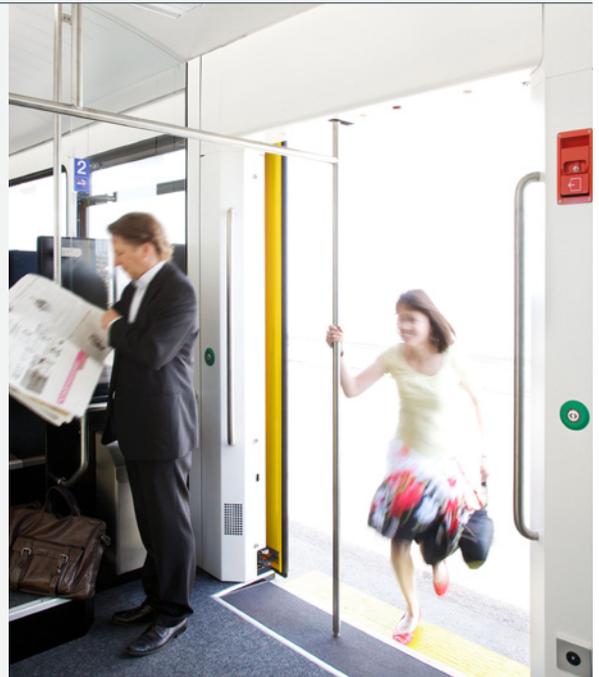
CASE:

For Stadler Altenrhein, DAN DRYER developed a very compact recirculation heating unit for mounting in the door columns of regional railcars for the Swiss operators RBS (Regionalverkehr Bern-Solothurn) and LEB (Lausanne-Echallens-Bercher).

The heaters were to be activated upon the opening of exterior doors in the wintertime to aid the existing heating system when passengers entering the railcar would draw in cold air.

Requirements:

- Compact size for fitting inside door columns
- 1000 W heating
- External monitoring from driver cabin



DAN DRYER recirculation air heater mounted in door column of Niederflur-Express NExT operated by RBS.



DAN DRYER hygiene equipment For rolling stock and station buildings



A close dialogue-based cooperation with our customers is key to the development of customised solutions for the railway industry. With this collaborative approach DAN DRYER has successfully developed build-in hand dryers, baby changing stations, etc. for a large number of railway projects across Europe.

In addition, DAN DRYER offers a wide selection of other toilet equipment such as waste bins, toilet paper dispensers and soap dispensers, making us able to deliver complete hygiene solutions for installation both on board rolling stock and in station buildings.

The convenience of one-stop-shopping and dealing with only one supplier when equipping public toilet rooms is an important factor for many of our customers and one of the reasons why DAN DRYER has gone on to establish a leading position as a supplier within this field of expertise.

Select projects with DAN DRYER railway equipment:

- TGV Atlantique, Lacroix
- TGV Sud-Est, RISE-refurb
- Alstom TGV 2N2 Euroduplex
- Alstom Coradia/Nordwestbahn
- M6 Belgium
- First Scotrail/Siemens Desiro Class 380
- Thameslink/Siemens Desiro City
- RBS Next
- NedTrain VIRM refurbishments



More than 30 years' experience within equipment for public toilets



Supplier - Advisory Service - Product Development

DAN DRYER was one of the very first hand dryer manufacturers on the market, and the company has gone on to establish a leading position as a supplier of toilet equipment. The Viking logo is easily recognisable in public toilets all over the world. Many years' experience has led to the company becoming specialists within development and production of toilet equipment. We now offer our customers a wide range of products, right from hand dryers to complete hygiene solutions.

DAN DRYER is a solution-oriented company, developing products according to market needs, an approach that results in close dialogue-based cooperation with our customers. We do not consider ourselves merely a supplier. We act as the ideal consultant and partner for discussion - always prepared to do more for our customers and to join product development projects.

With this approach, DAN DRYER has positioned itself internationally as one of the most preferred suppliers of toilet equipment, e.g. to airports, public institutions and retail chains, and we have earned a unique position as a niche manufacturer of technically complex and customised products to the rail industry.

Our strength lies in unique know-how and a company structure that enables us to respond quickly and flexibly to individual requirements and specifications. Whatever part of the process - from initial to final project stage - we can always help find the right hygiene solution.

DAN DRYER A/S

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