



Healthcare Systems

Clean rooms & Controlled climates



Air quality and energy efficiency



About us

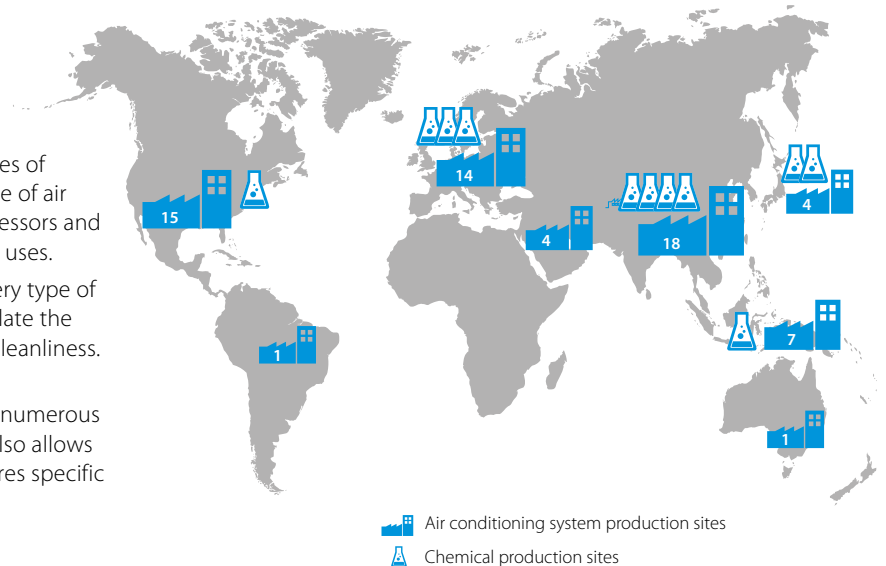
Daikin has been a worldwide leader in air conditioning systems since 1924

A company that is one of a kind

Daikin is the only manufacturer involved in all the stages of production, marketing and maintenance of a broad line of air conditioning products. It manufactures its own compressors and conducts research on the chemicals and refrigerants it uses.

Our staff of experts find ways to meet the needs of every type of region, climate and culture, by providing ways to regulate the four elements of air: temperature, moisture, flow and cleanliness.

We do business and are actively involved in more than 150 countries around the world, which not only offers numerous advantages in terms of sales and manufacturing, but also allows us to understand the needs of our clients and the desires specific to each region, and thus plan for them in advance.



Daikin has high-level corporate values

Organisation

Our vertical organisation is Daikin's guarantee of quality

The fact that we control 100% of our production is Daikin's guarantee of quality. All the key components of Daikin products come from our own production plants, which are regularly subjected to rigorous Quality Certifications. This practice early on enabled us to direct our production towards systems that are more environment friendly, from design to use, whether in terms of manufacturing, distribution or installation.

ISO norms

Daikin's efforts in the environmental field and the importance the group grants to client satisfaction also mean obtaining certificates for the **ISO 14001 and ISO 9001** norms at all of our sites.

This double certification process unites all Daikin Airconditioning France employees around a common objective: to improve our corporate structure to make client satisfaction the heart of our business plan and faithfully implement good environmental practices. The sign of a commitment to continuous progress, this environmental quality certification also reflects the responsibilities of a corporate citizen that is attentive to the effects of its business operations.



Products

Daikin offers the largest line of systems on the market

Residential, small or large tertiary, industries, etc. Whatever the projects you submit to us are, there is a suitable match in Daikin's product line. Daikin products are among the most innovative and most efficient in their sector. Every year, Daikin makes every effort to develop systems that comply with regulations and suit the needs of our clients, who are ever more demanding, especially in terms of energy costs and environmental standards.

Services

In order to provide greater flexibility and efficiency in planning its interventions, Daikin has set up a single entry point called "**Service Contact**", that is designed to analyse every request for intervention and ensure its scheduling. Thus, our regional sites focus on the operational factors in order to assure you get high-quality interventions.

Environment

Protecting the environment is a mandate for all of us

For Daikin, minimising the effects of its business operations on the planet is not a problem, but rather a prime opportunity. Eliminating fluids that are a threat to the ozone layer, collecting and recycling refrigerants, reducing plant energy use, etc. mean that Daikin has set the bar very high with an ambitious environmental policy.

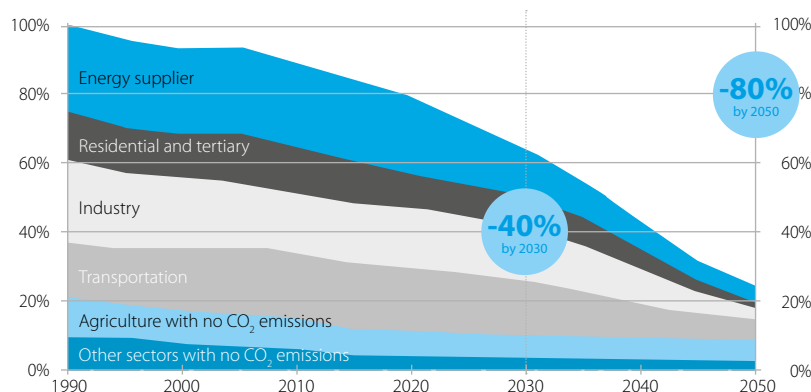
2050 environmental vision

Zero CO₂ emissions objective

Daikin has come up with a 2050 Environmental Vision where the goal is to contribute to the long-term resolution of worldwide environmental problems that are getting worse and worse. In the interest of reducing to zero our net CO₂ emissions, we are defining objectives and taking actions every five years as part of our Fusion business management plans.

The importance of energy efficiency

- › The EU has produced a roadmap to achieve up to an 80% reduction in greenhouse gas emissions by 2050.
- › That roadmap seeks to obtain a 40% reduction in emissions by 2030 and an 80% reduction by 2050.
- › That includes reducing the emissions of energy suppliers, and of residential, tertiary and industrial systems. Reducing product energy use, along with increasing the use of renewable energy sources, are key actions.
- › The emissions that stem from refrigerants are low, but measures have already been set up to reduce their effect.



EU roadmap to promote a low carbon emission economy



F-Gas regulations: Daikin systems with low GWP*

In order to plan for future mandates on the use and handling of refrigerants, Daikin offers the best solutions on the market in terms of fluids. Thus, whatever the type of technology used in Daikin equipment, we propose refrigerants with the lowest GWP ratings, such as:

- › **R-32** (GWP: 675)
- › **R-1234ze** (GWP: 7)
- › **R-513A** (GWP: 631)



*GWP = Global Warming Potential

EEC provisions: we assist you with your project

Whether a tertiary or industrial application is involved, the efficiency of Daikin equipment allows you to maximise the Cumac kW cumulation. A few examples of EEC certificate eligibility:

- › **Floating HP**
- › **Floating BP**
- › **Heat recovery**
- › **Motor speed variation**
- › **Motor-regulated systems**
- › **High-efficiency condenser**



Air handling and filtration

Energy efficiency and air quality

Technical choices to achieve maximum efficiency

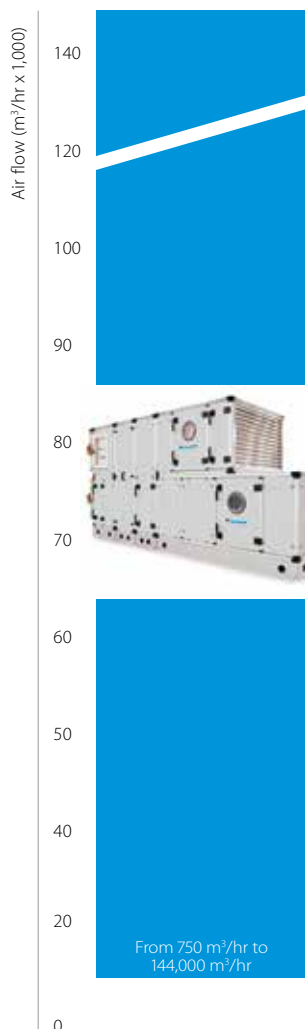
All of our units are developed for maximum output. Heat exchanger surface areas, motor efficiency, filtration, insulation, friction reduction and load loss reduction for the air inside the AHU are some of the most important factors we have taken into account when developing our equipment. We thus offer you a product ready to be easily incorporated into any system at all, and capable of providing major energy savings.



Applications



Our line of Daikin air handling units



Professional

- › Tunnel on demand
- › System suited to the individual client
- › Modular construction

Modular

- › Pre-set sizes
- › "Plug & Play" design
- › Chilled water fan technology
- › Compact design

Modular R

- › Energy recovery heat wheel (sensitive and sorption technology)



Modular R
D-AHU

From 500 m³/hr to
25,000 m³/hr

Modular P

- › High efficiency aluminium counter flow plate heat exchanger



Modular P
D-AHU

From 500 m³/h to
25,000 m³/hr

Modular L

- › High efficiency aluminium counter flow plate heat exchanger
- › Low-height unit
- › For use in false ceilings



Modular L

From 150 m³/hr to
3,400 m³/hr

Modular T NEW

- › High efficiency aluminium counter flow plate heat exchanger
- › Air duct connections on the top



Modular T

From 200 m³/hr to
4,200 m³/hr

Daikin & AAF are committed to improving indoor air quality

Clean room environments

Thanks to our hygienic line of Daikin air handling units, combined with the filtration systems of AAF - an uncontested world leader in the field of particle, chemical and biological filtration, the Daikin group is able to meet the needs of the most demanding applications in the field of clean work environments.



An overall air handling system

Daikin D-AHU-professional

This is a line of air handling units designed for health products applications in compliance with the specifications of the DIN 1946-4 standards and the VDI 6022 guideline.



Exterior panels

Rust-proof paint
RC5 class (EN 10169-2)



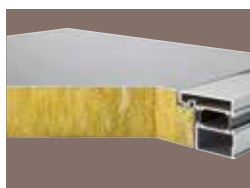
Interior panels

Grade 304 stainless steel
or pre-coated
Stainless steel floor alone available



Panel insulation

Thickness: 42 or 62 mm
Rock wool: 120 kg/m³



Frames

Anodised aluminium
Interruption of thermal bridges



Door seals

Continuous fluid gasket to ensure a complete seal



Panel internal joints

Antibacterial seals between panels and frames



Smooth interior angles

Rounded-off angle chamfers
Cleaning made easy



Battery condensates tray

Grade 304 stainless steel, multi-slope tray
Expanded tray with maintenance access



Chilled water fan coatings

White hygienic paint
Makes cleaning easy



MegaCel III HEPA filters

H13/H14 very high efficiency filters (EN 1822)
with low load loss
Reduced energy consumption due to the eFRM medium



FFU/DFU Astrofan Autonomous Module

Module for very high efficiency filter
Minimises down-time costs
Several drive possibilities (AstroDrive)



FS Astrogel

"Laminar flow" blowing plenum for operating rooms
Limits the induction effects engendered by blockage of the scialytic passageway



Cold and heat production

Daikin is a pioneer in inverter technology

It has the largest and most flexible line of liquid chillers and heat pumps on the market



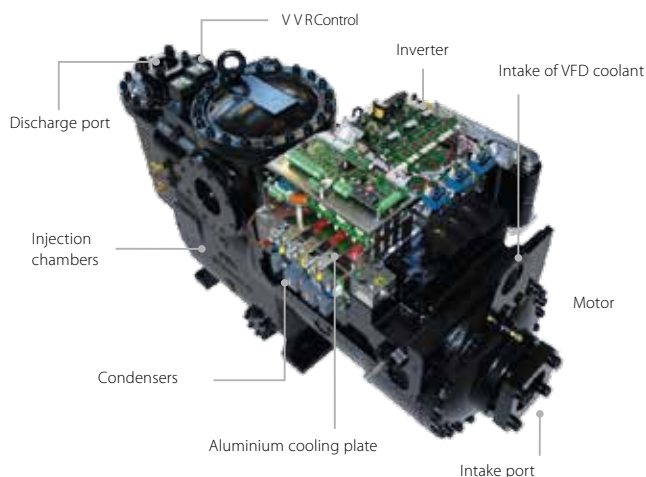
We develop and produce our own compressors

In contrast to many other manufacturers, Daikin produces its own compressors. This is a critical point since a compressor is the core part of any system. Daikin, always out in front in compressor technology, now offers a full line: Swing, Scroll, screw-driven and centrifugal.

In 2007, based on its experience, Daikin was the first manufacturer to offer VSD (inverters) incorporated into its single-screw compressors. That technology is now applied to our entire line, providing enhanced levels of comfort and efficiency.

Daikin Inverter Single-Screw Compressors

- › SEER values up to 5.7 for air and 9.3 for water
- › SEPR values up to 8.5 for air and 11.3 for water
- › Quick ROI
- › An inverter incorporated into the compressor and cooled by the refrigerant (no risk of overheating when air temperature increases)



Reducing operating costs

Energy recovery (options no. 01 & 03)

For applications that require heat while cooling is under way, our heat recovery options serve to produce heat free of charge, or nearly so, for other needs at your site.



Free Cooling (option no. 113)

For cooling applications when the ambient air temperature falls below the chilled water set-point of the machine, part or all of the water goes through the free cooling system, thus allowing the compressors to shut down, thereby substantially reducing energy use (by up to 75%). Efficiency coefficients of up to 30 kW/kW can be achieved in free cooling operation.



Fast restart (option no. 110)

If there is a power outage, the unit can be restarted in 30 seconds after power is restored and ramp-up to 100% load in less than 3 min. (usually, some 20 minutes are required to reach full load).

Intelligent Manager

Why opt for an Inverter Single-Screw Compressor?

- › To maximise efficient operation and render the facility reliable via:
 - Maximum efficiency in start-ups, sequencings and active/stand-by phase switching of the units
 - Adaptation of the production capacity to the real needs of the facility
- › Reducing maintenance costs
- › Remote monitoring and control from spot use to real-time use.



Efficiency services and monitoring

Management of the life cycle of your facilities

How can Daikin help you guarantee the long working life and efficiency of your facility?

We offer you a set of solutions to ensure the reliability of your equipment, while also helping limit your energy expenses over the long term. These solutions include plans for maintenance, monitoring of your facilities, consumption monitoring and custom-designed options.

Maintenance plans and services

Builder maintenance visit contract

By means of a customised maintenance visit plan, your equipment will always be up to date and have the best performance levels. An operational status report and recommendations for preventive maintenance are produced directly on site. By means of such services, we also aim to increase our presence at your side and strengthen the relationship between the builder and the maintenance company.

Close-up on spare parts

There is no such thing as a zero risk of failure for machine parts, even with a tailored maintenance plan. In order to alleviate that risk, we have a substantial stock of spare parts and provide quick delivery. Every year, we handle more than 70,000 requests and delivery within 24-48 hours.

Warranty extensions on new equipment

Daikin also offers warranty extensions for parts and labour. This service offers you maximum peace of mind over time. It is not a replacement for a tailored maintenance plan, but rather a supplement to it. It allows the operator to easily deal with the replacement of a part for their facility over time. Unforeseen events are thus minimised and the operator's business operations are consequently not disrupted.

Assistance with compiling a DESP file (French regulations for equipment under pressure)

Daikin gives you every assistance for the recertification of your machines by providing its expertise and making the required technical documentation available.



Leasing of units - Daikin Rental Services

- › Emergency back-up cooling and heating systems
- › Emergency back-up cooling for critical applications and processes
- › Cold production during a scheduled shut-down or in the event of a break-down
- › Solutions for load variations and special events



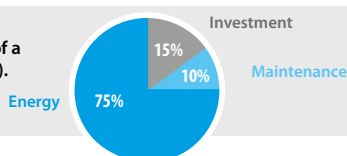
Sensor 360® /TCO Diagnostic®

Sensor360 has revolutionised the scheduling of air filter maintenance

- › The Sensor360 program helps facility managers solve problems of poor indoor air quality by watching it due to instantaneous checking and automatic monitoring of PM1, PM2.5 and PM10 particle levels.
- › No other device on the current market offers this level of clarity and specificity in terms of filter efficiency and indoor air quality.



Total cost of the life cycle of a chilled water unit (15 years).

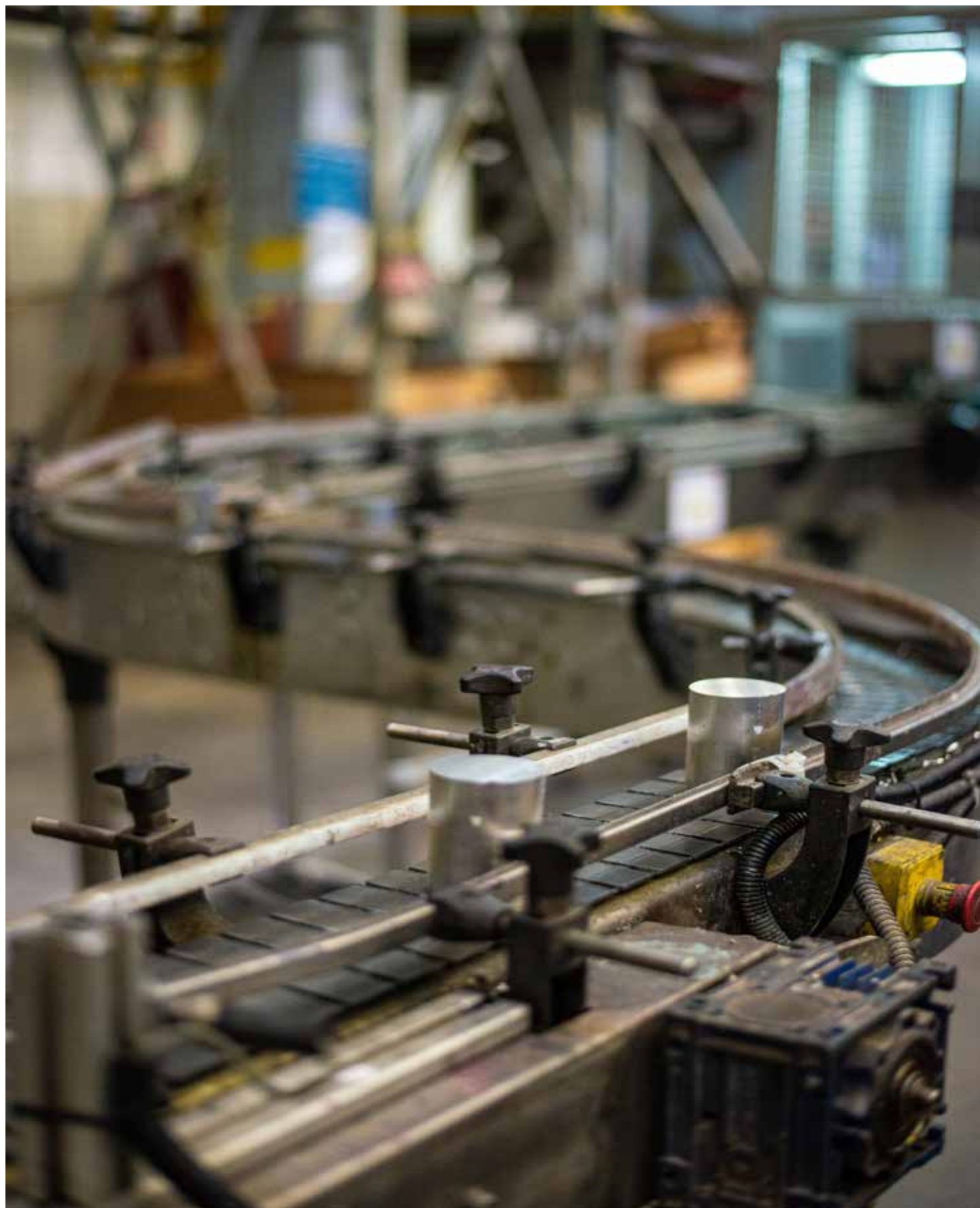


Daikin On Site

Remote management and monitoring of your facilities by Daikin

- › This decreases the down-time of your facility and reduces malfunctions
- › It provides the greatest efficiency and reduces energy waste
- › It increases the working life of your facility and prevents wear and tear
- › You get information about how to best operate your equipment with advice from a Daikin expert.





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Daikin Europe N.V. participates in the Eurovent Certified Performance programme for Fan Coil Units and Variable Refrigerant Flow systems. Daikin Applied Europe S.p.A. participates in the Eurovent Certified Performance programme for Liquid Chilling Packages, Hydronic Heat Pumps and Air Handling Units. Check the on-going validity of certificates: www.eurovent-certification.com

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