

Industry

Industrial solutions for a better standard of clean



Introduction

A complete range of cleaning solutions for your operation

Industry is a microcosm where people work, where technologies often find their most advanced applications, and where all activities are oriented toward maximizing operational efficiency.

To be efficient, an industry environment requires attention to health, safety, and the comfort of operators, who are the real driving force behind a manufacturing operation.

Nilfisk, one of the leading producers of professional cleaning solutions, has always focused on making facilities more effective, efficient, and comfortable, regardless of environment or operating conditions.

This brochure lists some of the many Nilfisk solutions that can help your company reach maximum effectiveness in compliance with regulations. Read on to learn more about the most advanced cleaning technologies applied to operational processes, all provided by a single supplier with decades of industry experience.

KEY TO ICONS:



METAL



COSMETIC



OPTICS



OENOLOGY



FOOD



OEM



PACKAGING



OIL PRODUCTION



PHARMA/
CHEMICAL



ATEX



INALATION-
HAZARD



ROBOTICS



CHEMICAL



BIOMEDICAL



FARM



ADDITIVE
MANUFACTURING

Table of contents

Introduction	2
Helping producers succeed	4
Product overview	6
Pharma	8
Food & beverage	12
Metal	16
Warehouses & logistics	20
Other industries	23
Professional service	24
Global presence	25

Helping producers succeed

When it comes to cleaning, your opportunities for improving productivity, product quality, and workplace safety are extensive.

Significant increases in cleaning effectiveness, efficiency, and impact, can be achieved with advanced vacuum technology. But finding the right solution is a process that requires – and deserves – thorough consideration.

Nilfisk offers a broad portfolio of systems that can clean any surface, contain any kind of dust, transport any ingredient, and help improve any automated process, but such actions can differ in nature and specification from sector to sector. This brochure provides an overview of the distinctions Nilfisk makes when helping you implement these systems.

We believe that a cleaner environment is a safer, more productive environment. The solutions we produce, as part of our collaboration with some of the biggest companies in global industry, can adapt to specific environments and segments – including yours. Read on to discover how you can raise your standard of clean with help from Nilfisk.





Product overview



Industrial vacuums

Available in single-phase, three-phase, or compressed-air versions, and ideal for removal of many types of material – even hazardous dust – Nilfisk industrial vacuums are the optimal solution for maintenance, cleaning, and production automation. They are equally useful in areas where dust emissions must be eliminated (e.g. laboratories or clean-room facilities).



Pneumatic conveyors

Pneumatic conveyors transfer grains, powders, tablets, and empty capsules, according to time/quantity presets, from raw-material containers to processing machines. The Nilfisk range includes electric and compressed-air pneumatic conveyors, and both varieties are excellent for increasing your automation efficiency while maintaining or improving mixture quality.



Centralized vacuum systems

A Nilfisk centralized vacuum system is the perfect setup for efficiently cleaning large areas, even on multiple floors, whenever access space is too limited for a mobile solution, or when there is significant waste that must be continuously collected from connected processes. Our solutions offer the ability to position the vacuum unit, filtering unit, and exhaust system, outside of the production environment so that only the vacuuming hoses remain within.



Dust-containment systems

Our dust-containment systems are the safest way to collect high-potency compounds (e.g. APIs and HPAPIs). Nilfisk has developed a range of high-containment units, each equipped with a Bag In-Bag Out filter system and cyclonic pre-separation unit, to ensure the highest level of hazard-protection – up to OEB 5 – for personnel working with the unit.



Scrubber dryers

Nilfisk scrubber dryers ensure effective cleaning with high productivity. You can trust our scrubber dryers to operate easily, over a long equipment lifespan, with minimal maintenance and service costs. Our models range from small walk-behind models to large engine-powered ride-ons – and everything between.



Sweepers

Nilfisk sweepers help you control and remove debris while keeping dust under control. Our range enables dust-free sweeping for applications of any size – both indoor and outdoor. Durable, and highly productive, our solutions are designed to withstand long use in any environment.



High-pressure washers

Whether you require a hot- or cold-water solutions, the Nilfisk portfolio of high-pressure washers can cope with the toughest of cleaning situations. Our range includes mobile, stationary, electrical and fuel-powered models, all of which are powerful, reliable, and available in different sizes.



Specific accessories

Nilfisk offers specific accessories in accordance with a solution's application and segment, all designed to improve operational efficiency, effectiveness, and workplace safety.

PHARMA

- **A** Floors
- **B** Dust containment
- **C** Powder/granule conveyance
- **D** Cleanroom facilities
- **E** Equipment
- **F** Compressor feeding
- **G** Capsule-filler feeding
- **H** Empty-capsule conveyance
- **I** Powder recovery
- **J** Packaging-scrap recovery
- **K** Equipment/vehicle washing





Standards of hygiene, safety, and productivity, are extremely high in the pharmaceutical sector, as they should be when the ultimate aim is to provide consumers with safe, effective products. Nilfisk helps you prioritize each with zero-compromise solutions.

- Ensure maximum product quality
- Protect your hygienic standard
- Prevent cross-contamination
- Ensure a cleaner, healthier workplace
- Increase productivity

PHARMA



Floors

Maintaining the highest level of floor hygiene prevents dirt from entering your production areas, and is critical to ensuring product quality and safety. A walk-behind Nilfisk scrubber dryer offers comfortable productivity in a compact, easy-to-clean design. Floors are deep-cleaned and dried in a single pass, even within small or congested areas, and the Nilfisk Ecoflex system allows for a temporary boost in water and detergent use during more aggressive cleaning tasks.



Dust containment

The recovery of APIs and HPAPIs requires specialized systems that can protect operators from contact. Nilfisk has designed a high-containment filter unit (up to OEB 5) for this application, available in versions ranging from industry-standard to highly customized.



Powder/granule conveyance

Nilfisk pneumatic conveyors move dry raw materials, such as powders or granules, to feed-processing systems of any type, and they can move your product from one point to many – or vice-versa – without segregation.



Cleanroom facilities

Contamination is not an option in cleanrooms, and adhering to that standard requires proper cleaning of all floors and surfaces with a HEPA-filter vacuum. The most important element is filtration, either high (HEPA) or ultra-high (ULPA), depending on the nature of the contaminants to be controlled.



Equipment

Nilfisk White-line vacuum cleaners are specifically designed to clean inside and outside process machines, and are also suited for general cleaning of working areas. The White range is GMP-compliant, easy to clean and sanitize, and possesses no pockets for potential accumulation of dirt, in order to ensure the highest level of hygiene. The range is also available in AISI316L stainless steel, and equipped with specific filters for recovery of very fine or toxic materials.



H

Empty-capsule conveyance

A pushing system is frequently used to transport empty capsules of different sizes without damaging them. Capsules are emptied into a collection container, and dispensed at an adjustable rate into the capsule-filling machine. Nilfisk machines move a material to the required location, in selected quantities and within a designated timeframe. This product-conveyance process takes place in perfectly hygienic conditions, respecting both workplace-safety requirements and the operators' health.



I

Powder recovery

Automatic machines require a constant vacuum in order to avoid residual contamination of products, or powder-release into the environment. Because filtration is a crucial element in fixed-vacuuming applications, Nilfisk vacuum cleaners are equipped with HEPA- and/or ULPA-certified filters. These high-performance vacuums help ensure safe, pure, effective manufacturing, and are available in fixed or mobile versions, with cleanroom-compliant, explosion-proof design.



J

Package-scrap recovery

An industrial vacuum from the Nilfisk R series, which has been designed specifically for packaging applications, eliminates interruptions normally required for cutting-machine cleanup. The trim-extractor collects waste continuously while the machine is running.



K

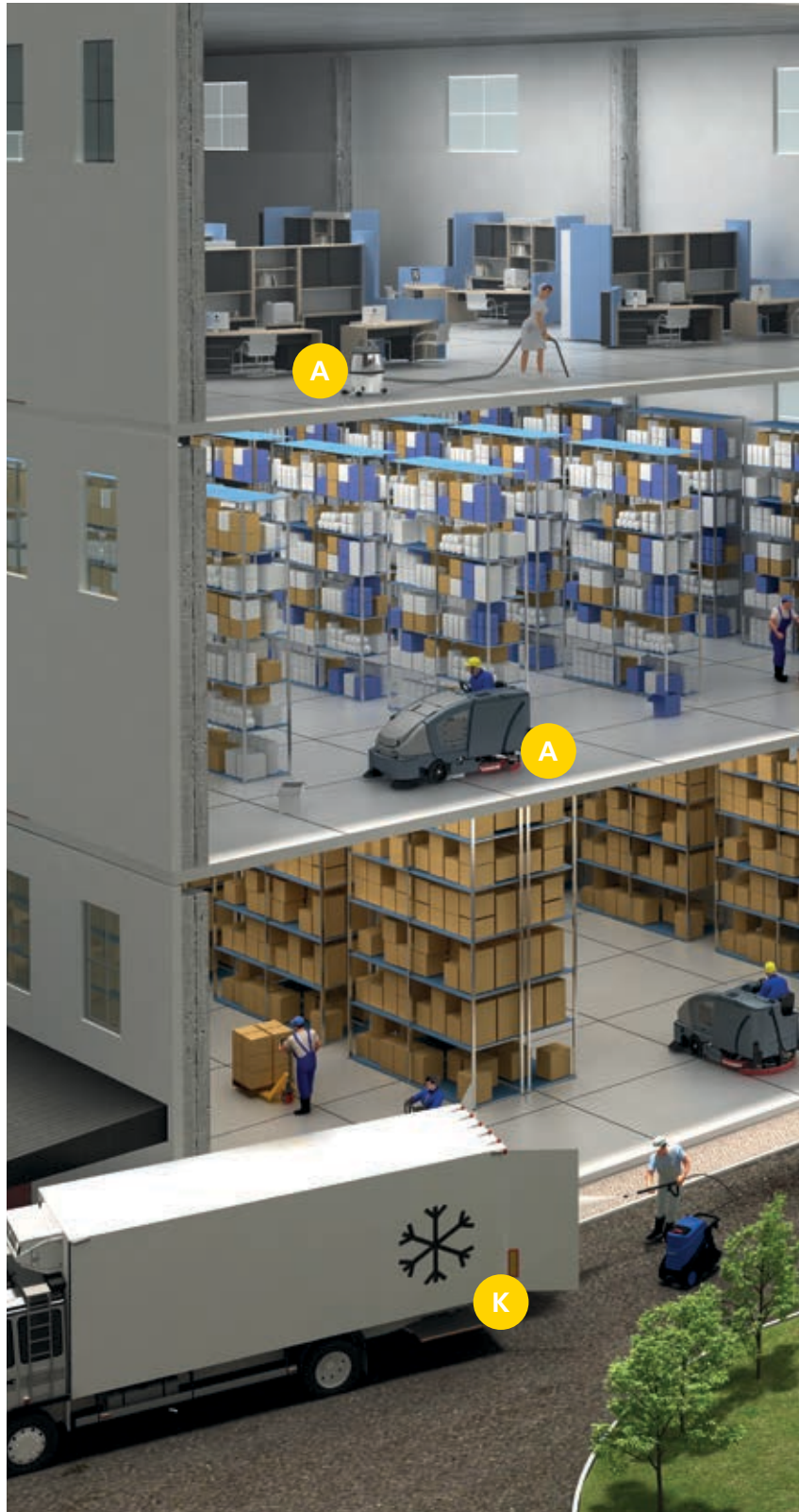
Equipment/vehicle washing

Nilfisk high-pressure washers help maintain any kind of equipment with hot- or cold-water cleaning, and can cope with the toughest of cleaning situations. You can trust them to provide exemplary performance in a wide range of settings, including pharmaceutical production; high-pressure washers are ideal for cleaning containers and bins used during the production process, and for washing trucks and other vehicles used in transport.



FOOD & BEVERAGE

- A Floors
- B Ovens
- C Laboratories
- D Overhead
- E Package-trim recovery
- F Production line
- G Production area
- H Liquid recovery
- I Material conveyance
- J Machinery/conveyor-belt washing
- K Refrigerator-truck washing





Just as with pharmaceuticals, product quality and safety are of the utmost importance in food and beverage manufacturing. Regardless of your setup, Nilfisk solutions help to ensure safe, hygienic, and efficient production.

- Full hygienic compliance
- Safer, healthier, cleaner working environments
- Improved product quality
- Zero cross-contamination
- Optimal efficiency

FOOD & BEVERAGE



Floors

Nilfisk provides a complete floorcare range according to the size of a given area, and the material needing removed. For maintaining office cleanliness, we offer smaller, low-noise vacuum cleaners. For warehousing and logistics departments, our scrubber-dryers and sweepers support an ideal hygienic standard, quickly eliminating dirt and increasing workplace safety. Nilfisk industrial vacuums and centralized vacuum systems are designed for quick recovery of any type of production waste, enabling full hygienic compliance and supporting the safest possible work conditions.



Ovens

Keeping your ovens free of burnt crumbs, flour, and other production waste, helps prevent contamination of your product. Nilfisk recommends using industrial vacuums equipped with Nomex® filters, which are self-extinguishing. You can also customize our vacuum cleaners with a wide range of accessories specifically designed for use during recovery of hot materials.



Laboratories

Your food-production site may be classified as an explosion-proof environment, especially if production involves recovery of flour, sugar, or other material classified as combustible. Using ATEX-, Hazloc-, or IECEx-certified Nilfisk industrial vacuums will improve product quality and safety, while also ensuring a clean, pleasant working environment. Moreover, Nilfisk industrial vacuums feature non-sparking, stainless-steel construction and anti-static hoses, both of which help to protect operators from sparks caused by static electricity.



Overhead

Particles that accumulate on ceiling beams, and other hard-to-reach areas in industrial plants, often cause problems. When these particles fall onto production lines and machinery, they can cause technical malfunctions, and may even contaminate your product. Cleaning elevated surfaces can be challenging, but with Nilfisk industrial vacuums, such tasks are accomplished quickly and easily: our solutions feature specialized, easy-to-use, FDA-approved accessories, all colored according to the color-coding program typically utilized in the food-production industry.



Package-trim recovery

Nilfisk produces a range of industrial vacuums for recovery of manufacturing scraps, plastic, paper, and fabric, produced during your packaging cycle. Industrial vacuums prevent the continuous interruptions typically required for cutting-machine cleanup; avoid scattering waste within the work environment; and enable you to conduct real-time assessment of product quality by containing any fine powder that might pose a contamination risk.



Production lines

Adherence to a cleaning schedule helps prevent your product from being contaminated by burnt crumbs, flour, and other production waste – and reduces waste, in general. The three-phase range is an excellent solution for working manually on lines. The cleaning operation can also be performed as a continuous cycle, by distributing vacuuming points along the production line and connecting them to a three-phase industrial vacuum or centralized vacuuming system.



Production areas

A clean environment serves as the foundation for guaranteeing quality and safety. Cleaning of floors and production lines, as well as all applicable systems, is an operation well suited to Nilfisk mobile industrial vacuums. Exceptional results are achieved with help from accessories that improve cleaning speed and efficiency; only a few minutes are required, and the results are immediately noticeable. For large production lines, a centralized vacuum system may be the best solution, allowing for simultaneous cleaning with more operators, across multiple floors.



Liquid recovery

Nilfisk produces industrial vacuums designed for cleaning areas where vacuuming of liquids and solid organics is necessary. There are three immediate advantages: time savings, improved environmental hygiene and safety, and reduced maintenance-associated resource costs.



Material conveyance

Nilfisk pneumatic conveyors are designed for transferring powders and grains released at certain distances, times, and quantities. Using pneumatic conveyors enables you to transport your product from a single point to multiple destinations at the same time, and vice versa. The entire transfer process is done hygienically, with respect for your workers and their work environment.



Washing of machinery/vehicles

Nilfisk high-pressure washers deep-clean your equipment, conveyors, and tanks. Fast and efficient, they are ideal for daily cleaning in small areas thanks to their compact, powerful, and reliable design. They can also be used to wash containers and flooring in your loading and unloading areas. For larger environments, stationary solutions have become standard in the food-production sector. They offer excellent added value for cleaning, even under the most severe conditions, and they are perfect for ensuring hygienic conveyance and vehicle interiors.

METAL

- A Floors
- B Additive manufacturing
- C Tank-liquid recovery
- D Recovery of shavings/oil & recycling of oil
- E Separation of shavings from oil & recycling of oil
- F Machine tools
- G Vehicle washing
- H Degreasing





One of the biggest challenges in metal production is maintaining clean machines and a safe work environment. Nilfisk works with companies around the world to develop highly reliable professional solutions that can quickly improve your daily operations.

- Reduce downtime for greater productivity
- Optimize your product quality
- Maintain workplace safety
- Improve workplace sanitation and health effects

METAL



Floors

Soils, ranging from ordinary dust and dirt to oil and debris, are commonplace in industrial environments, and they require industrial-strength floorcare. Nilfisk's durable, high-performance cleaning equipment tackles such challenges with ease, improving productivity without requiring extensive, difficult maintenance.



Additive manufacturing

The additive-manufacturing process produces unavoidable waste in the form of various residues, which must be removed in order to prevent cross-contamination and ensure optimal product quality. Many of these residues can easily explode, so Nilfisk has designed a dedicated range of ATEX-certified industrial vacuum cleaners, equipped with specific immersion-separator containers, which collect powders and neutralize them through mineral-oil submersion.



Tank-liquid recovery

Mechanical production invariably necessitates cleanup of oil, emulsions, chemical solutions, and water. With a Nilfisk VHO industrial vacuum, such cleaning becomes a cost- and time-saving measure. The VHO series performs suction and microfiltration of both solids and liquids, and allows liquid to be expelled at pressure, facilitating drum storage or disposal into appropriate receptacles. Emulsions can be filtered and reused, and time dedicated to cleaning and maintaining your machinery, as well as surrounding areas, is reduced.



D
E

Recovery of shavings/oil & recycling of oil

A Nilfisk industrial vacuum quickly removes metal shavings from machinery tools after each production cycle, even when they are mixed with liquids (e.g. oil, coolants, or emulsions). Solid and liquid components are separated with macrofiltration, allowing reuse of emulsions. Because of this, industrial vacuum cleaners are the most effective tool available for emptying tanks of oil and shavings; manually cleaning a 1000L tank would take nearly five hours for two people, while the same job would require only 2.5 hours with the appropriate industrial-vacuum solution.



F

Machine tools

Keeping your machinery tools in their best state will help maintain production efficiency; machinery will require less maintenance, helping you avoid downtime.



G
H

Degreasing

A hot-water pressure washer from Nilfisk is the perfect tool for removing oil and other lubricants from your machinery and flooring. With the proper attention, your equipment will be fully degreased and ready for use, while your floors remain perfectly clean and safe for traffic.

WAREHOUSES & LOGISTICS

A Floors

B Aisles/pick-and-pack areas

C Waste recovery

D Floor/vehicle washing





Whether an environment is used for storage or logistics, its cleanliness standards will have an impact on workplace safety, personnel health, and operational efficiency. Nilfisk can help you strengthen all three.

- Improve operational efficiency
- Reduce slip-and-fall risk
- Reduce water/chemical usage
- Decrease cleaning time and labor cost

WAREHOUSES & LOGISTICS



A

Floors

Nilfisk offers a broad portfolio of floorcare machines that enable fast, detail-oriented cleaning on a daily or weekly basis. Whether you opt for walk-behind or ride-on equipment, we can provide a solution suited to your environment's size and surface, as well as the properties of your waste.



B

Aisles/pick-and-pack areas

Frequent deliveries, forklifts, and foot traffic all contribute to dusty, dirty conditions that impact the safety and comfort of personnel. The right Nilfisk equipment can remove dust quickly and effectively, even in confined spaces (e.g. between aisles).



C

Waste recovery

Nilfisk industrial vacuum cleaners can clean in the most inaccessible areas, including beneath conveyor belts, between pallets, or along pipes located several meters above ground.



D

Floor/vehicle washing

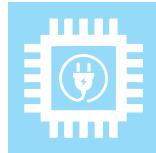
High-pressure washing is often the best method for maximizing cleanliness in the shortest amount of time. With Nilfisk pressure-washing solutions, your containers, trucks, and all types of furnishings can be made ready for use with minimal effort and high resource efficiency.

OTHER INDUSTRIES

Whatever your segment, Nilfisk provides professional solutions for the many challenges associated with large-scale production.



AUTOMOTIVE



ELECTRONICS



NAVAL YARDS



TEXTILE



B&C



ENGRAVING OF
STONE/MARBLE



PAPER



TOBACCO



CERAMIC



HEAVY INDUSTRY



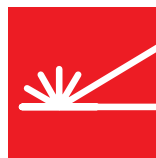
PLASTICS/RUBBER



RECYCLING



COATING



LASER



WOOD

Professional service

Maintain full control over your cleaning program

Why choose Nilfisk Services?

- Prolong the lifetime of your cleaning equipment with assistance from Nilfisk-certified technicians.
- Provide a reliably healthier work environment for personnel and a better impression for visitors.
- Increase and maintain workplace safety, leading to improved personnel satisfaction and productivity.
- Prevent unnecessary production downtime, reducing maintenance costs and improving your bottom line.
- Dramatically reduce long-term costs with proactive maintenance and original Nilfisk spare parts.

Efficient cleaning for better cost management

To maintain optimal efficiency, periodic equipment assessment is needed in order to verify and ensure full component functionality. Correct assessments, performed by trained Nilfisk technicians, will prolong your equipment lifecycle, maximizing return on investment.

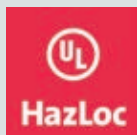
ATEX-certification renewal for maximum safety

Maintenance is an important part of ensuring equipment efficiency, but where ATEX-certified vacuums are concerned, maintenance is critical to ensuring workplace safety.

Together with our standard service, ATEX-certified Nilfisk industrial vacuums require planned interventions, which prolong the validity of the Declaration of Conformity released by Nilfisk. In the event that maintenance is neglected, the Declaration of Conformity is consequently rendered invalid.

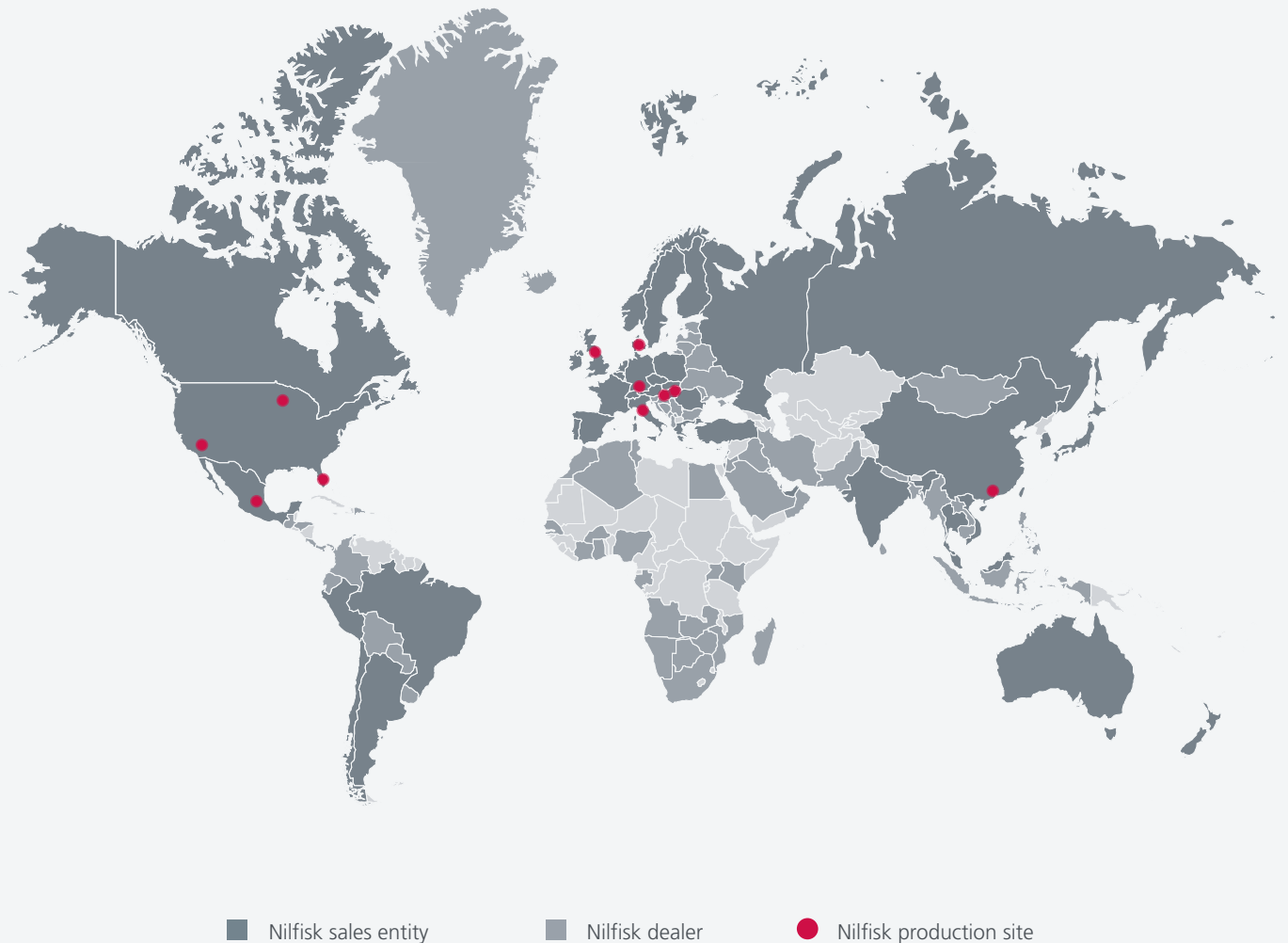


Certifications



Safety is integral to our philosophy at Nilfisk, and we have elected to solicit a third party for certification of our systems, thereby ensuring total compliance with current and future regulations, while also protecting our customers and ensuring optimal operational safety. Thanks to our partnership with these main certification bodies, which are responsible for testing the functional safety of our equipment, Nilfisk is able to provide the safest possible solutions. Our portfolio meets all safety requirements for operation in explosion-risk environments, as well as those where dust poses a hazard for human health and/or the environment.

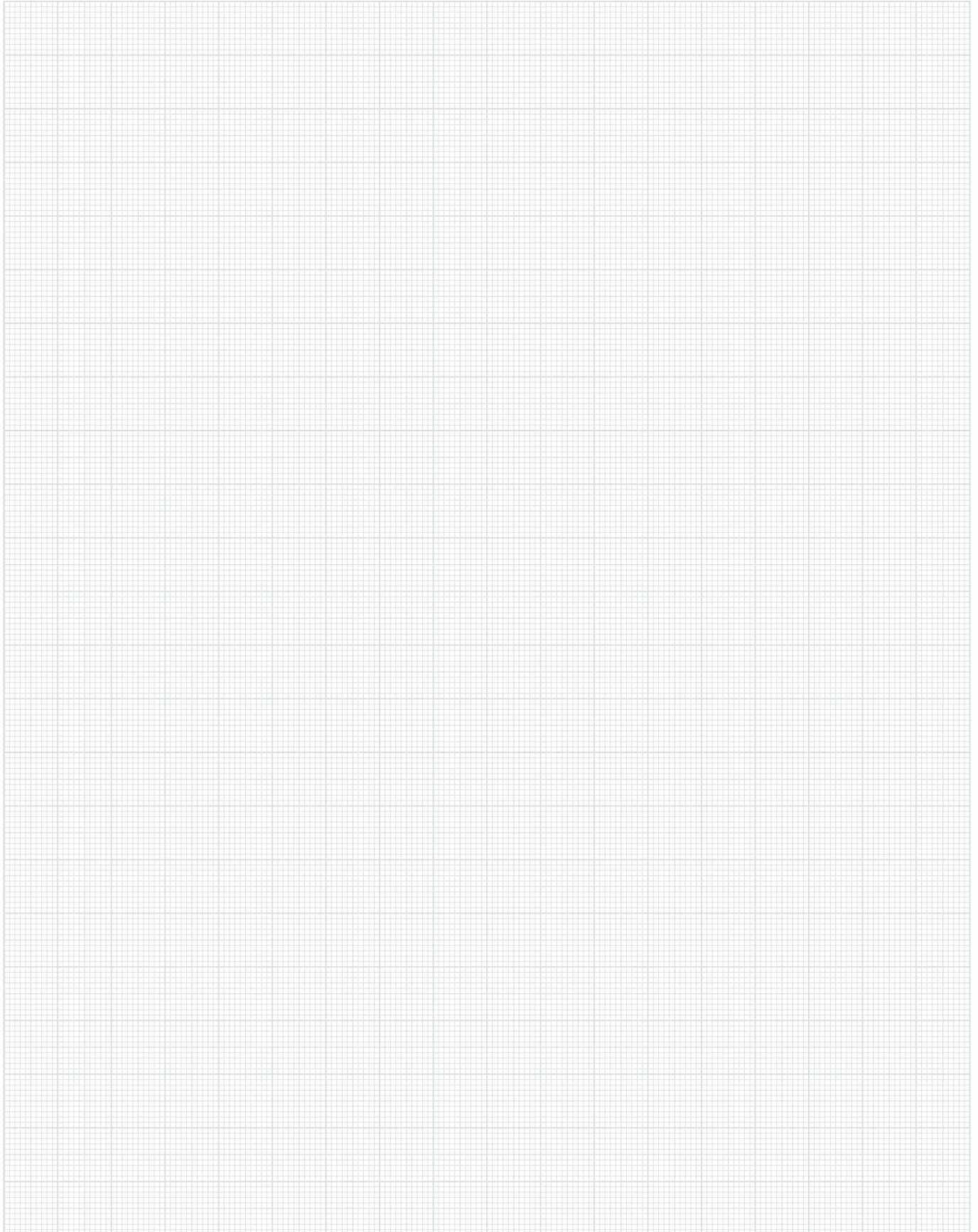
Wherever you operate, Nilfisk is ready to help



Nilfisk has its own sales companies in over 40 countries around the world, and our products are sold in more than 100 countries.

Global reach, and a commitment to service excellence, enables Nilfisk to be a partner to some of the world's largest producers of food products, pharmaceuticals, and OEM equipment.

Notes



Notes

