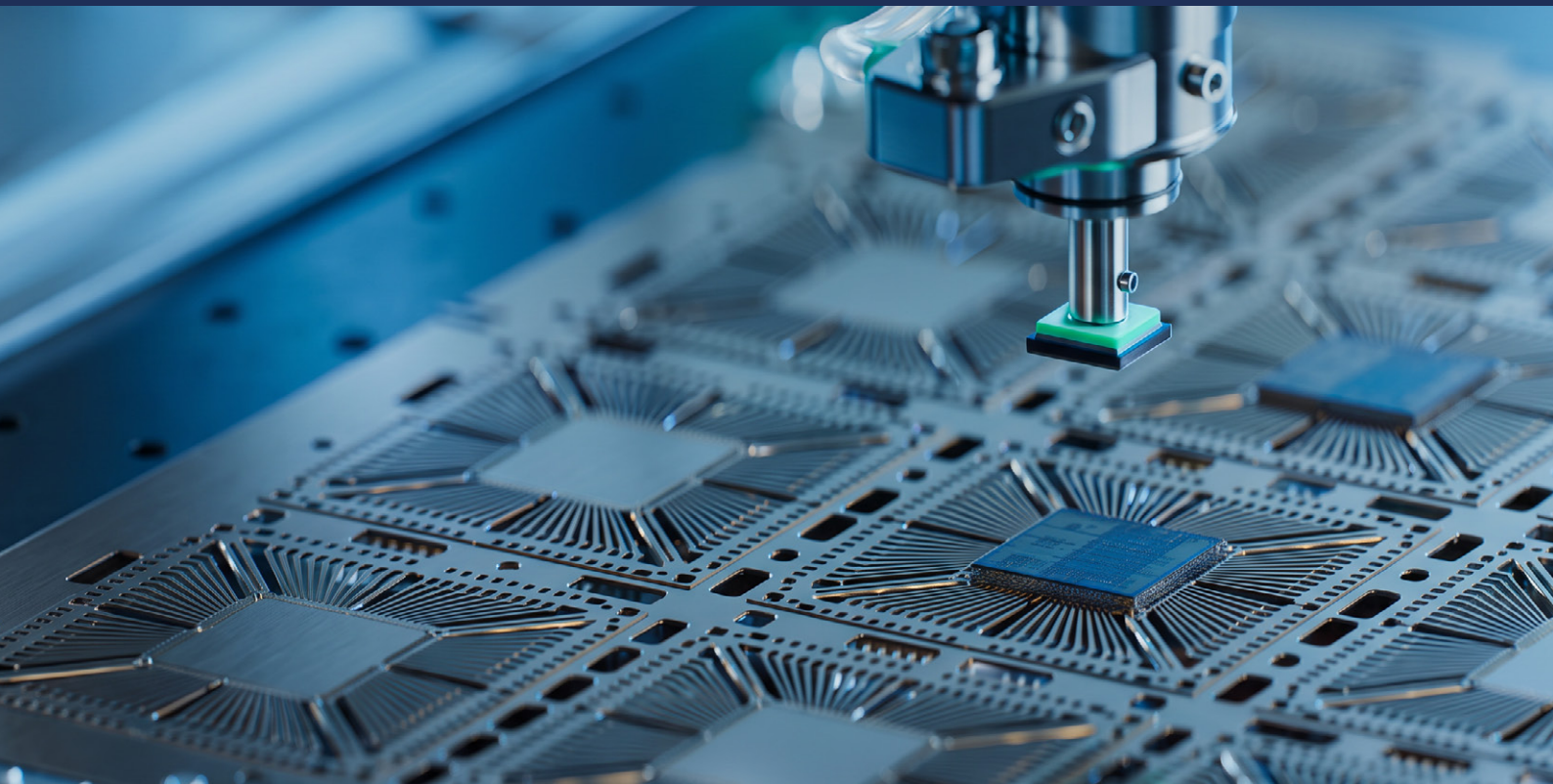
NIPPON SANSO

Semiconductor Specialty Gases

Solutions for the semiconductor and photovoltaics industry





Who is Nippon Sanso

Nippon Sanso is a leading industrial and medical gases company part of Nippon Sanso Holdings Corporation. In Europe, the company's present in 13 different countries, namely Belgium, Denmark, France, Germany, Ireland, Italy, The Netherlands, Norway, Poland, Portugal, Spain, Sweden and the UK. With 4,000 employees, the company is one of the four largest industrial gas companies in Europe.

Nippon Sanso specialises in providing safe, reliable gas-based solutions tailored to a variety of markets, drawing on technological expertise.

Application-oriented advice based on many years of international experience and excellent service are the basis for a trusting customer-supplier relationship.



13 operational countries



4k employees
30.9% of which are women



150K customers



390K patients



Achieving revenues
above 2B€ in FYE2025

Nippon Sanso Holdings Corporation

The Nippon Sanso Holdings Group is the world's fourth-largest supplier of industrial, electronic, and medical gases, operating in four geographic hubs - Japan, the U.S., Europe and Asia & Oceania - covering over 30 countries and regions. In addition, the Thermos business supplies THERMOS branded products to more than 120 countries around the world.

Since its foundation as Nippon Sanso Ltd. in 1910, the group stands for creating social value through innovative gas solutions that increase industrial productivity, enhance human well-being and contribute to a more sustainable future. With more than 20,000 employees, together, we are "The Gas Professionals" and we all have the same goal: **"Making life better through gas technology"**

$9B In FY2026 sales	20,000+ Employees	30+ Countries
110+ Years of history	297 Group companies	 Japan Head office in Tokyo

Total Electronics

Nippon Sanso Holdings Corporation's global semiconductor business.

NSHD's global presence and network in Semiconductor Specialty Gases (SSG) represents an important share in its presence worldwide, approximately 18% of total group sales. of total group sales. Therefore, the group operates a strong virtual Total Electronics Organization that focuses on Global Sales, Procurement and Strategic Supply Chain Planning.

The Group also has local operations in 32 countries and dedicated SSG plants in Japan, China, Southeast Asia, Korea, the USA and Belgium. Local teams are available in each of these countries to serve you in local languages and timezone.

Everywhere you need

In specialty gases, proximity is not a convenience, it's a necessity.

Nippon Sanso operates across Europe to ensure that supply continuity, technical support, and service are always close to your operations. Our local teams understand customer specifications, quality requirements and regulatory environments, enabling faster decisions and reliable execution where it matters.

With production, filling, and service capabilities distributed across key regions, we combine local responsiveness with global standards. From high-purity gases to complex mixtures, we support applications that demand consistency, traceability, and technical expertise.

Scan to learn more about our Specialty Gases Solutions

Semiconductor specialty gases (SSG) production

State-of-the-art SSG facility in Belgium

The Nippon Sanso Group supplies Semiconductor Specialty Gases to customers' facilities across the globe through its many subsidiaries and affiliates.

All group companies stand for the same principles: excellent product quality, robust supply chains and state-of-the-art production facilities.

Nippon Sanso produces Semiconductor Specialty Gases in a dedicated, high quality production facility in Oevel, Belgium. A motivated and knowledgeable team of experienced employees ensure that gases are shipped safely, timely and in the required quality to manufacturing location.

Advantages:

- The facility offers a complete portfolio of gases produced on fully automated (PLC- controlled) equipment.
- High precision hydride and hydrocarbon mixing and analysis capabilities.
- Advanced technology processes to drain, prepare, fill, mix and analyse cylinders to meet highest quality standards.
- Continuous investments in new products and manufacturing capabilities to keep up with changing market requirements.
- Local manufacturing capabilities and inventories improve supply chain robustness and delivery flexibility.



Responsible Business Alliance (RBA)

Nippon Sanso is a proud member of the RBA - a voluntary code of conduct with social, environmental and ethical industry standards, aligned with our company's DNA.

Certifications:
- ISO 9001
- ISO 14001
- ISO 17025
- ISO 27001

Scan for more information:

Our portfolio of semiconductor specialty gases in europe

Nippon Sanso provides a gas supply base that integrates all the gases required for our customers' manufacturing processes.

Product	Grades	Mixed inhouse	NSHD group product*	Multiple Sources	Low CO_2 footprint**
Ammonia (NH_3)	5.0, 5.5, 6.0			●	●
Argon (Ar)	5.0, 6.0		●	●	●
Arsine (AsH_3)	6.0, 6.5	●	●		
Boron Trichloride (BCl_3)	3.0, 4.0, 5.0	●	●		
Boron Trifluoride (BF_3)	2.5				●
Chlorine (Cl_2)	4.0, 5.0				●
Deuterium (D_2)	4.0	●		●	●
Diborane (B_2H_6)	4.0	●	●	●	
Dichlorosilane (DCS – SiH_2Cl_2)	2.0, 2.7, 4.0			●	
Disilane (Si_2H_6)	4.8	●			
Ethylene (C_2H_4)	3.5, 5.0	●	●	●	●
Germane (GeH_4)	5.0	●		●	
Halocarbon-116 (C_2F_6)	5.0				
Halocarbon-14 (CF_4)	3.6, 4.7			●	
Halocarbon-218 (C_3F_8)	5.0				
Halocarbon-32 (CH_2F_2)	4.8		●		
Halocarbon-C318 (C_4F_8)	4.8				
Halocarbon-41 (CH_3F)	2.0, 4.0		●		
Hexafluoro-1,3 Butadiene (C_4F_6)	4.0				
Helium (He)	5.0, 6.0	●		●	

* NSHD Group Product = molecule synthesised in-house by NSHD group company.
** Low CO_2 footprint = molecule sourced within European Union

Product	Grades	Mixed inhouse	NSHD group product*	Multiple Sources	Low CO_2 footprint**
Hydrogen (H_2)	5.0, 6.0	●	●	●	●
Hydrogen Bromide (HBr)	4.5			●	●
Hydrogen Chloride (HCl)	4.5, 5.0	●		●	●
Hydrogen Selenide (H_2Se)	4.8	●	●		
Hydrogen Sulfide (H_2S)	2.5, 5.0	●	●	●	●
Krypton (Kr)	5.0	●		●	
Laser Gas Mixtures (Kr/Ne, Ar/Xe/Ne).	Cymer, Gigaphoton qualified	●		●	
Lens Gas Mixtures	All Grades				●
Neon (Ne)	5.0	●		●	
Nitrogen (N_2)	5.0, 6.0	●	●	●	●
Nitrogen Trifluoride (NF_3)	4.0, 4.5			●	
Nitrous Oxide (N_2O)	4.8, 5.5	●	●	●	●
Phosphine (PH_3)	5.8, 6.0	●	●	●	
Propane (C_3H_8)	5.0	●	●		
Propylene (C_3H_6)	3.7, 4.0		●		
Silane (SiH_4)	5.0, 6.0	●		●	
Silicon Tetrachloride ($SiCl_4$)	4.0, 6.0			●	●
Sulphur Hexafluoride (SF_6)	4.5, 5.0			●	
Trichlorosilane (TCS – $SiHCl_3$)	4.0	●			
Xenon (Xe)	5.0	●	●	●	●

All Nippon Sanso hydride mixtures are produced with grade 6.0 H_2, N_2, Ar or He as balance gas.
For more information or other gases and grades availability please contact your local Nippon Sanso sales representative.

Total solutions for the semiconductor industry

Nippon Sanso Holdings Corporation (NSHD) operates a “total gas center” with high purity nitrogen manufacturing equipment and Semiconductor Specialty Gases (SSG) supply systems adjacent to the customer’s semiconductor and liquid-crystal manufacturing plants, providing a round-the-clock stable supply of high purity nitrogen and material gases via pipelines.

We are your total solutions provider to the semiconductor industry.

Nippon Sanso’s solutions include:

Products: we supply all the semiconductor specialty gases (SSG) required for our customers’ processes.

Equipment: we install various equipment to ensure a stable and high quality gas supply.

Services: As Nippon Sanso is a recognised leader in service, safety, and dependability, we are also a good choice for site gas management. Site services is a broad term that includes but is not limited to total gas and chemical management (TGCM), safety trainings and remote monitoring systems.



Enabling the future of innovation and technology in the electronics market.

We believe in this future.

Nippon Sanso is applying its global knowledge and research capabilities to invest in the local expansion of its facilities, to ensure reliability of gas supply and support customers’ growth.



Group capability for equipment

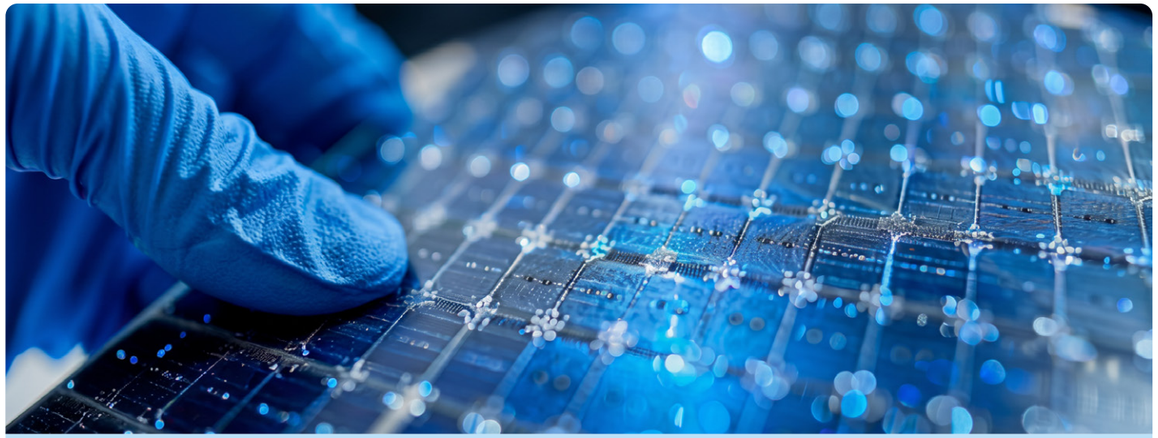
Nippon Sanso Holdings Corporation, alongside its affiliates, provides a suite of innovative equipment solutions for the electronics industry, a.o. **Nanochem®** purifiers, MOCVD tools as well as abatement systems.

Adapted technology for each case:

Productivity improvement
High performance and productivity to reduce the cost per wafer.

Power devices production
Enable ultrapurification of gases used in wafer and semiconductor fabrication.

Less waste emissions
Allowing more sustainable processes.





Nanochem®
Offering comprehensive solutions for the source, point-of-use, bulk and proximate purification requirements of specialty gas users.

For more info, scan the QR



MOCVD Reactors
Serves for deposition of Compound Semiconductor Thin Films for Electronics and Optoelectronics.

For more info, scan the QR



Abatement systems
Nippon Sanso Holdings Corporation has extensive experience in the development, design, and manufacture of exhaust gas treatment (abatement) equipment to safely and completely detoxify various gases used in your manufacturing location.

Get in touch with us for all the details.

Making life better through gas technology



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