



Oil-free compressed air and gases for
medical and laboratory applications





Hospital and Medical Practices

With oil-free compressors from Dürr Technik you can generate high-quality compressed air for highly sensitive applications



COMPRESSED AIR EXPERTS

Whether in a hospital, clinic or doctor's practice – clean, dry and continuously supplied compressed air is essential in the medical sector.

With more than 85 years of experience in the dental and medical sector, Dürr Technik has comprehensive know-how and meets the particularly high demands on the availability and purity of the compressed air with special products.

Dürr Technik compressors have optimal characteristics for the use of compressed air in medicine:

Zero oil. Zero problems.

Oil-free piston compressor technology stands for high compressed air quality (ISO 8573-1) and sustainability.

Dry and clean

The combination of oil-free piston compressors with fine filter units and our patented membrane drying system perfectly achieves the highest air quality classes according to DIN ISO 8573-1.

Compressed air for medical applications drives surgical and medical tools and instruments, supplies anesthesia systems and is part of many different treatment processes.

High quality from the heart of Germany for the global market

Many years of experience and a highly qualified project planning and engineering team for your customer-specific solutions.

Reliable, quiet, compact and efficient appliances

We work according to recognised standards and fulfil numerous certifications, for example:

- DIN EN ISO 9001
- Medical device certification in accordance with Regulation (EU) 2017/745 (MDR)
- UL

Dürr Technik ■ Quality
■ Made in
■ Germany



OUR PRODUCTS IN USE

Application examples for compressed air

- Phaco and vitrectomy systems
- Analytical devices
- Suction devices
- Medical tools



SICOLAB



KK8 / KK15 series



P2B-304M



KK8 / KK15 series



SICOLAB mini ENDO

1 Compressed air supply for phacoemulsification and vitrectomy machines
High quality compressors for efficient, safe and precise ophthalmic surgery

2 Compressed air for shock wave therapy with ESWT devices
Low noise generation mechanical shock waves

3 Central compressed air supply
Compressed air system for the permanent supply of small hospitals, day clinics and joint practices

4 Supply of drying and sterilisation cabinets
Drying of medical instruments with oil-free compressed air is recommended by the independent group "Arbeitskreis Instrumentenaufbereitung" (AKI)

5 Drying of endoscopes and MIC instruments
Manual drying of the endoscopy channels with filtered, oil-free compressed air. Certified Class I medical device in accordance with the European Medical Device Regulation MDR 2017/745



WE PUT PRESSURE AND GAS IN THE LABORATORY

Laboratories today are equipped with a variety of measuring devices, tools and instruments. They are used, among other things, for pharmaceutical, chemical or medical examinations and analyses, experiments and quality controls. Many applications require high-quality oil-free compressed air and gases like nitrogen, zero air and hydrogen.

Dürr Technik products have optimum properties for the use in the laboratory:

Zero oil. Zero problems.

Oil-free compressors and gas generators are an advantage for reliable operation of instruments and measuring devices as well as reliable results. Oil vapors damage valves, obstruct nozzles and contaminate or distort measurement results.

Quiet and compact

Space-saving design for use directly at the workplace. Extremely quiet due to special sound insulation.

Economical & low-maintenance thanks to efficient design and to modern components.

The 5 gases expert

Dürr Technik can advise you on the hardware best suited to your needs and provide you with a complete solution for your instrument demand. All relevant laboratory gases and compressed air from one hand.

LABORATORY

Space-saving and quiet, the oil-free compact units from Dürr Technik bring high-quality compressed air and gases into your laboratory

Laboratory gases

ULTRA HIGH-PURITY NITROGEN

High-purity Nitrogen (up to 99.9995%) is required for Gas Chromatography (GC) applications.

NITROGEN

For LC-MS, sample evaporation and other applications requiring inert gas, our Nitrogen Generators deliver up to 99.5% purity. Available with or without integrated air source.

ZERO AIR

Our Zero Air Generators produce a continuous flow of air free of organic contaminants by removing hydrocarbons from the air supply or lab environment. Perfect for Gas Chromatography (GC).

HYDROGEN

Hydrogen Generators produce Hydrogen gas from water by means of water electrolysis. Hydrogen gas is used in the laboratory for various applications such as Gas Chromatography (GC) as a fuel or carrier gas.

COMPRESSED AIR

Oil-free compressors for critical applications where high reliability and low noise levels are important, such as instrument or Gas Chromatography air supplies.



OUR PRODUCTS IN USE

Application examples

- Auto-samplers
- Blood analysis
- Bioreactors
- Liquid Handling
- LC-MS and GC
- Food analysis



SICOLAB

1 Compressed air for gas chromatography and LC-MS analysis
For the analysis of chemical components

2 Compressed air for particle measurement and shape analysis
For the analysis of particle properties

3 Compressed air for rheometers
For the analysis of the viscosity of liquids



HF30A

4 Nitrogen generator for LC-MS analysis
On-site production of nitrogen of the highest nitrogen quality



SICOLAB mini

5 Compressed air for analytical instruments such as spectrosopes
Constant and dry compressed air supply as working medium



KV15 series

6 Vacuum for vacuum furnace
Optimum vacuum for fast and gentle drying of temperature-sensitive materials



P4B-304MS

7 Central compressed air supply
Compressed air system for the permanent supply of medium-sized laboratories





SICOLAB Silent. Compact. Mobile.

Noise at the workplace disturbs concentration and can make you ill. The quiet, low-vibration SICOLAB provides pleasant working conditions in the laboratory and practice.

The compressor station practically disappears under the laboratory table and finds the necessary space even in small rooms.

Advantages

- Compact to fit under the lab desk
- Adjustable outlet pressure simply set the desired pressure up to 8 bar
- Endurance – designed to run at 100% duty-cycle
- Automatic condensate evaporator – elimination of manual drainage
- Air tank with anti-bacterial and anti-corrosion coating
- Secondary rear panel outlet connection
- Maintenance-free – except easy-to-replace filter

Type	Delivery rate at 5 bar (l/min)	Noise level at PN dB (A)	Nominal voltage (V)	Frequency (Hz)	Weight (kg)	Compressed air class according to ISO 8573-1
SICOLAB 062	37	48	230	50/60	66	4:x:1
SICOLAB 100	70	52	230	50/60	76	4:x:1
SICOLAB 200	145	54	230	50	93	4:x:1
SICOLAB 062M	32	48	230	50/60	68	4:3:1
SICOLAB 062M	36	49	115	60	77	4:3:1
SICOLAB 100M	59	52	230	50/60	78	4:4:1
SICOLAB 100M	67	53	115	60	89	4:4:1
SICOLAB 200M	122	54	230	50	95	4:5:1
SICOLAB 062MFA	32	48	230	50/60	68	1:3:1
SICOLAB 100MFA	59	52	230	50/60	78	1:4:1
SICOLAB 200MFA	122	54	230	50	95	1:5:1

Nominal pressure (PN) 7 bar
Volume of vessel 25 l
Dimensions LxWxH (mm) 510x580x653

M = Models with membrane dryer
MFA = Models with membrane dryer, fine filter 0.01 µm and activated carbon filter

Our products

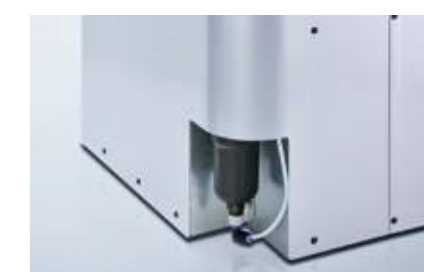
The right solution for every application



Don't let them stress you out
With its particularly low sound pressure level, SICOLAB is the ideal compressed air station for use in laboratories and practices. High performance in whisper mode



Stay flexible
Swivel castors and carrying handles ensure mobility, and thanks to plug-and-play the station is ready for use everywhere



Keep all options open

- Integrated membrane dryer 100% duty-cycle (optional)
- Fine filter (optional) filtration grade 0.01 µm
- Activated carbon filter (optional) removes odor and other impurities from the compressed air

SICOLAB mini SICOLAB mini ENDO

Class I Medical Device in accordance with MDR 2017/745

The compact SICOLAB mini models are light-weight and portable. The oil-free, ready-to-connect compressor unit is built into a ventilated sound insulation box and offers maximum flexibility with minimum maintenance.

The SICOLAB mini ENDO model is particularly suitable for drying endoscopes and is preset at 1 bar to protect highly sensitive equipment parts.

Advantages

- Oil-free plug-and-play compressor unit ready for connection
- Compact dimensions
- Maintenance-free (except filter exchange)
- Extremely quiet
- 100% duty-cycle

Type	Delivery rate at 5 bar (l/min)	Noise level at PN dB (A)	Nominal voltage (V)	Frequency** (Hz)	Weight (kg)
SICOLAB 025 mini	10	52	230	50	14
SICOLAB 038 mini	18	52	230	50	18
SICOLAB 038 mini	21	54	115	60	14
SICOLAB 062 mini	38	55	230	50	20
SICOLAB 062 mini	44	56	115	60	14
SICOLAB mini ENDO	33*	52	230	50	16

* Deliver rate at 1 bar

** Models with 230V also 60Hz capable, delivery rate approx. 18% higher

Nominal pressure (PN) SICOLAB mini 7 bar | Volume of vessel 2 l
Outlet pressure SICOLAB mini ENDO 1 bar | Dimensions LxWxH (mm) 396x295x321



SICOLAB mini ENDO

- Class I Medical Device in accordance with MDR 2017/745
- Comes as standard with fine filter, compressed air hose and stainless steel compressed air pistol
- Various optional attachments for other applications



Simple operation

- On and off switch
- Quick coupling
- Readable working pressure



Ready for use anywhere

- Light-weight, plug-and-play device
- Carrying handles

Chromalytic Gas Generators

High-purity nitrogen, zero air and hydrogen are essential gases in modern analytical laboratories. Reliable gas supply is critical for stable results and efficient workflows.

Compared to traditional gas cylinders, on-site gas generators provide a safer, more cost-effective and continuous solution.

Advantages

- Continuous, unlimited gas on demand
- Consistent gas quality
- Inexpensive: low operating costs, no bottled gas costs, rapid amortization
- High purity gases up to 99.9995%
- Safe
- Flexible service options
- Easy to operator
- Environmentally friendly and sustainable



Type	Product / Series	Gas	Compressor	Main Applications	Key Features
Nitrogen Generators	HF30A	Nitrogen	integrated	LC-MS (Single Quad, Triple Quad, TOF, QTOF)	All-in-one-system, up to 99.5% purity, integrated oil-free compressor, 24/7 operation
	HF30P	Nitrogen	integrated	LC-MS, sample evaporation	Compact complete solution for medium nitrogen demand
	HF30N/HF60N	Nitrogen	–	LC-MS	Higher flow rate when supplied with external compressed air
	HF30N-MG/HF60N-MG	Nitrogen + compressed air	–	LC-MS	Additional compressed air outlet for instruments (optional)
	HP	Nitrogen	optional	GC	Ultra-high purity nitrogen for sensitive applications
Zero Air Generators	UHP	Nitrogen	optional	GC	Ultra-high purity nitrogen for sensitive applications
	ZA2A	Zero Air	integrated	GC-FID, GC-NPD, GC-FPD, GC-AES	Integrated compressor < 0.05 ppm hydrocarbons
Hydrogen Generators	ZA4	Zero Air	–	GC with external compressed air	Higher flow rate, bench-top system
	H2 Generators	Hydrogen	integrated	GC, GC-MS, ICP-MS	Water electrolysis, up to ≥ 99.9996% purity, safe alternative to gas cylinders, up to 1,000 ml/min

Oil-free compressor stations ready for connection

You have the choice: In addition to our standard equipment, Dürr Technik offers the possibility of developing customized compressor designs especially for your application together with our specialized project planning and development engineers.

Our diverse product range with ready-to-connect compressor stations are available with a membrane dryer, DürrTronic Control, sound-insulated housing or as a mobile unit mounted on a robust stainless steel frame with a foldable handle for convenient handling.

We use high-quality pressure vessels from 3 to 90 litres. Compressor stations are available from 25 - 860 l/min at 5 bar pressure.



A selection of our standard models with membrane dryer can be found here:

Type	Delivery rate at 5 bar (l/min)	Nominal pressure PN (bar)	Noise level at PN dB (A)	Volume of vessel (l)	Nominal voltage (V)	Frequency* (Hz)	Dimensions LxWxH (mm)	Weight (kg)	Compressed air class** according to ISO 8573-1
TA-065M	35	7	68	25	230	50	615x470x670	36	4:3:1
TA-100M	59	7	68	25	230	50	615x470x670	52	4:4:1
TAG-132M	63	7	70	25	230	50	615x475x670	40	4:4:1
TA-200M	122	7	69	25	230	50	630x470x675	54	4:4:1
TB-100M	73	6	66	25	400	50	620x429x666	66	4:4:1
HA-200M	122	7	69	55	230	50	925x450x720	70	4:4:1
HB-200M	122	7	69	55	400	50	920x480x720	65	4:4:1
H2A-160M	230	7	69	55	230	50	760x790x520	90	4:4:1
H2B-160MS	230	7	69	55	400	50	760x790x520	90	4:4:1
HB-304M	215	10	77	55	400	50	745x522x755	83	4:4:1
P2B-304MS	430	7	74	90	400	50	1020x630x820	143	4:5:1
P4B-304MS	860	7	78	90	400	50	1150x770x1140	285	4:5:1

* Models with 60Hz on request, delivery rate at 60Hz approx. 18% higher
 ** 1:-: with optional fine filter 0.01 µm
 -:1 in oil-free environment

M = Models with membrane dryer

Additional market specific solutions are available in the USA, China and UK

DürrTronic – electronic control and monitoring

DürrTronic monitors your compressor station for safe and reliable operation.

The electronic control system controls the function of the system and ensures the effective condensate management. The automatic monitoring shows the most important operating parameters and performance statistics, providing warns if there is a high frequency of switching cycles.



It shows the optimal time for the replacement of components and thus ensures an optimum service life of the system.

DürrTronic is one product from our comprehensive lineup of electronic control systems.

Compressed air quality – dry and clean

The quality of compressed air in hospitals, practices and laboratories is of great importance. The ISO 8573-1:2010 standard (compressed air class) classifies the quality and purity of compressed air in the following three categories: Oil content, moisture and solid particles.

The compressors from Dürr Technik supply oil-free compressed air with air quality up to class 1:3:1. For this reason, they are ideally suited for sensitive laboratory and medical applications.

Patented membrane drying

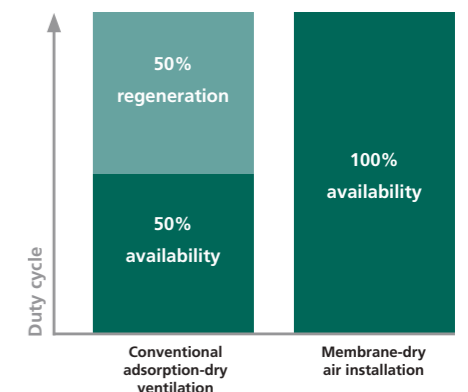
The Dürr Technik membrane drying plant supplies dry and clean air. The membrane dryers are very convinant and have an economical purge (low consumption) which gives 100% availability in continuous operation.

Advantages

- Dry air protects sensitive instruments, promotes their value retention and ensures hygienic conditions. Measurement results are not falsified
- Maintenance-free, except annual filter exchange



Performance comparison of one-chamber drying systems and membrane dryers





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Edition 03/2026