purgas TGA

Filter series TGA PN16/PN25/PN50

Brief description

Purgas filters from Parker Zander offer you a wide selection of separation techniques for solid and liquid particles as well as vapours from critical industrial gases and natural gasses, as standard.

The TGA filter series is available for pressure levels PN16, PN25 and PN50. They are characterised by the employment of high-quality materials, thorough cleaning and production methods, as well as the traceability of the products.

The housings consist of aluminium casting, internally and externally chromated, and they also have an additional epoxy coating on their exterior. All TGA filters are equipped with a stainless steel needle valve on the outlet, as standard.

A variety of different elements are available for the separation: separator/demister inserts, surface filter elements for coarse separation, micro filter elements for depth filtration, as well as cartridge inserts for the adsorption of oil vapours and moisture.

Optionally, filters from the TGA series can be supplied in a dissipative design with classification based on Ex II 2G.

Applications

- Critical industrial gases and natural gases classified in fluid group 1 as per PED (DGRL) 97/23/EC
- Zone 1 and zone 2 as per ATEX 94/9/EC

Design and purchased parts package

- Ready-for-operation filter with nominal pressure 16 bar (up to 120°C / 248°F), 25 bar (up to 80°C/176°F) or 50 bar (up to 80°C/176°F); maximum operating temp. depends on element/seal selected
- Includes filter element/insert/cartridge
- Includes needle valve as outlet
- Internal thread connection as per DIN ISO 228 (BSP-P) or as per ANSI B 1.20.1 (NPT-F)
- FEPM seal as standard, optional FKM, EPDM, NBR, CR, etc.
- Connection bores prepared for differential pressure gauges (sealed)
- Wetted surfaces, cleaned to be oil and grease-free
- Filter with ATEX option in a dissipative design, individually tested, earthing points prepared

Product specification

Filter series TGA PN16/PN25/PN50

Particle filtration

Element	Scope of application	Efficiency grade in % [1]	Fineness in µm	Operating temp. in °C	Material
S	Separation of fluids (wall flow) over wide pressure/flow areas, wear-free, ideal for employment on intermediate- or aftercoolers of compressors.	98.5	–	1.5 - 120	PPS [2]
P [3]	Coarse separation of solid particles from dry gas flows.	99.99	3	1.5 - 60	Impregnated cellulose
PL12	Coarse separation of solid particles. Element reusable after ultrasound cleaning.	99.99	12	1.5 - 120	Stainless steel mesh
PL25		99.99	25		
PL12NX	Coarse separation of solid and liquid particles, also for high-temperature usage.	99.99	12	1.5 - 120	Stainless steel mesh, aramid coat
PL25NX		99.99	25		
C [3]	Micro filtration of solid and liquid particles.	99.9999	1	1.5 - 80	Borosilicate microfibre
CF [3]		99.99999	0.01		
CSF [3]		99.99999	0.01		
CHTCR	Micro filtration of liquid particles, with increased loads, also for high-temperature usage.	99.9999	1	1.5 - 120	Borosilicate microfibre, aramid coat
CFHTCR		99.99999	0.01		
CSFHTCR		99.99999	0.01		

[1] As per nominal capacity. [2] Polyphenylene sulphide.
[3] Additional code letter E for an ATEX-suitable element with stainless steel end caps, if deviating from its standard.

Oil adsorption

Element / cartridge	Area of application	Residual oil content in mg/m³ [1] [2]	Operating temp. in °C	Material
A [3]	Adsorption of oil vapour, volatile organic components (VOCs) and odorous matter. With light loads.	0.003	1.5 - 40	Activated carbon mesh
KA (Model [4] TK_A)	Adsorption of oil vapour, volatile organic components (VOCs) and odorous matter. With increased loads.	0.003	1.5 - 40	Activate carbon granules
KDG (Model [4] TK_DG)	Adsorption of oil vapour at higher temperatures.	0.003	40 - 80	Silica gel granules

[1] m³ referring to 1 bar (a), 20°C. [2] Predrying required.
[3] Additional code letter E for an ATEX-suitable element with stainless steel end caps, if deviating from its standard.
[4] Models for cartridges are required for the ordering of single cartridges as spare parts.

Water vapour adsorption

Cartridge	Area of application	Residual vapour in mg/m³ [1] [2]	Operating temp. in °C	Material
KMD (Model [3] TK_DG)	Adsorption of water vapour at higher temperatures.	150	1.5 - 55	3Å molecular sieve granule
KMS (Model [3] TK_DG)		150	1.5 - 55	4Å molecular sieve granule
KMZ		150	1.5 - 55	10Å molecular sieve granule

[1] m³ referring to 1 bar (a), 20°C. [2] Prefiltration required.
[3] Models for cartridges are required for the ordering of single cartridges as spare parts.

Product specification

Filter series TGA PN16/PN25/PN50

Available filter fittings

Housing																																						
Size (TGA)	102			104			106			108			110			112			114			116			118			120			122			124		
Nominal pressure (PS)	16	25	50	16	25	50	16	25	50	16	25	50	16	25	50	16	25	50	16	25	50	16	25	50	16	25	50	16	-	-	9	-	-	8	-	-
Nominal temperature (TS)	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80	120	80	80
Connection sizes (G)	¼			¼			3/8			1/2			3/4			1			1 ½			1 ½			2			2			2 ½			3		
Outlet - needle valve	EV05/64DTG																								EV07/64DTG											
Element series	Without ATEX																																					
S				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													
P/C/CF/CSF/A	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●			●		
CHTCR/CFHTCR/ CSFHTCR	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●			●		
PL12/PL25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●			●		
PL12NX/PL25NX	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●			●		
KA				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													
KDG				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													
KMD				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													
KMS				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													
KMZ				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													
Element series	With ATEX																																					
PE/CE/CFE/ CSFE/AE	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●			●		
CHTCR/CFHTCR/ CSFHTCR	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●			●		
PL12/PL25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●			●		
PL12NX/PL25NX	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●			●		
KA				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													
KDG				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													
KMD				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													
KMS				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●													

● = Available

Application: Natural gases

Medium	**ATEX**								**Natural gases**				
Products		10	16	25	50	100	250	350	**CNG**	**Propane**	**Methane**	**Biomethane**	**Raw biogas**
Composition												**Gas distribution system quality**	
TGA	●		●	●	●				●	●	●	●	

● = Available

Application: Industrial gases

Medium	**ATEX**	**Pressure levels (bar)**							**Industrial gases**									
									Critical gases								**Inert gases**	
Products		10	16	25	50	100	250	350	**O_2**		**CO_2**		**NH_3**		**H_2**		**N_2**	**He**
Relative humidity[%]]									**< 1.5**	**> 1.5**	**< 1.5**	**> 1.5**	**Dry < 120°C**	**Humid < 80°C**	**< 1.5**	**> 1.5**		
TGA	●		●	●	●				●		●		○	○	●		●	●

● = Available ○ = Available upon request

Approval

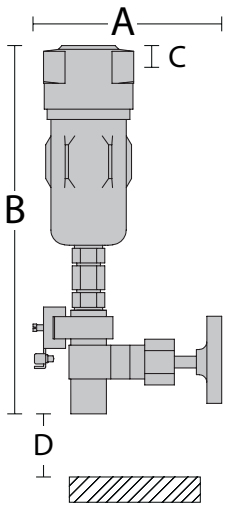
With CE marking as per Directive 97/23/EC (PED) for fluid group 1; where applicable, no marking is permitted as per art. 3, para. 3. Optionally with CE marking as per Directive 94/9/EC (ATEX) in line with Ex II 2G (for zones 1 and 2).

Product specification

Filter series TGA PN16/PN25/PN50

Dimensions and weight

Type	Performance (m^3/h)	Connection (BSP-P)	Dimensions (mm)				Weight (kg)			Element [1]	Cartridge [1]
			A	B	C	D	PN 16	PN 25	PN 50		
TGA 102	Depends on medium, upon request	G ¼	120	249	14	60	0.75	0.75	0.75	TA30_	TKA08_
TGA 104		G ¼	134	309	21	75	1.1	1.1	1.1	TA 50_	TKA12_
TGA 106		G	134	309	21	90	1.1	1.1	1.1	TA 70_	TKA12_
TGA 108		G ½	134	379	21	160	1.4	1.4	1.4	TA 90_	TKA18_
TGA 110		G ¾	155	416	43	135	4.1	4.1	4.1	TB 10_	TKB16_
TGA 112		G 1	155	516	43	235	4.1	4.1	4.1	TB 20_	TKB23_
TGA 114		G 1 ½	155	616	43	335	5.3	5.3	5.3	TB 30_	TKB33_
TGA 116		G 1 ½	155	816	43	525	6.5	6.5	6.5	TB 50_	TKB53_
TGA 118		G 2	172	797	48	520	8.9	8.9	8.9	TC 50_	
TGA 120		G 2	172	1047	48	770	12			TC 75_	
TGA 122		G 2 ½	250	1024	74	600	24.2			TC 60_	
TGA 124		G 3	250	1174	74	750	26.6			TC 75_	



Product key Example for a filter with the nominal pressure PN16 (PN9/PN8)

Filter	Size	/	Nominal pressure	Element series	Accessories	-	Connection	/	Options
TGA	102	/	16	S		-	B BSP		
TGA	104	/	16	P		-	N NPT	/	C CR seals
TGA	...	/	16	C		-	B	/	D EPDM seals
TGA	120	/	16	H		-	B	/	O_2 Oxygen design
TGA	122	/	9	...		-	B	/	P NBR seals
TGA	124	/	8	KMS		-	B	/	V FKM seals

Available accessories ATEX-suitable

Locking screw on the outlet	V	VTG08/100/MV (TGA102-116), VTG/5/356/MV (TGA118-124)
Autodrain	KF	11LD/28TG
Differential pressure gauge	D	HZD80/50RTGG (not for TGA102)
Differential pressure gauge with potential-free contact	DE	HZDE80/50RTGG (not for TGA102)

Example of an order ...

... for a filter up to 9 bar, 2 1/2" NPT connection, ATEX-suitable to zone 1, housing and element seals in EPDM, includingTC60CSFHTCR element, including 11LD/28TG autodrain instead of EV07/640TG mounted on the outlet:

Filter	Size	/	Nominal pressure	Element series	Accessories	-	Connection	/	Options
TGA	122	/	9	CSFHTCR	KF	-	N	/	AD

EMEA Product Information Centre
Free phone: 00 800 27 27 5374
(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL, IS, IT, LU, MT, NL, NO, PL, PT, RU, SE, SK, UK, ZA)
US Product Information Centre
Toll-free number: 1-800-27 27 537
www.parker.com/hzd

Refrigerant air dryers

FD VSD 100-300, FD 5-95 and FX 5-300
(5-300 l/s/11-636 cfm)

Why dry your compressed air?

Compressed air contains oil, solid particles and water vapors. It is the inherent result of the compression process, which concentrates the natural water vapors and particles in the air that surrounds us. This untreated compressed air poses a substantial risk to your air system and end products. Its moisture content alone can cause corrosion in pipe work, premature failure of pneumatic equipment, product spoilage and more. An air dryer is therefore essential to protect your systems and processes.

Refrigerant dryers by Atlas Copco

Atlas Copco's refrigerant dryers provide the clean, dry air you need to expand the life of your equipment and ensure the quality of your products. Our FD and FX dryers are designed in-house and tested using the most stringent methods. They meet or exceed the international standards for compressed air purity and are tested according to ISO 7183:2007.

FX 5-300

Quality Performance

- Available in 16 sizes from 6 to 300 l/s/15 to 636 cfm.
- Pressure dew point as low as +3°C/+37.4°F.
- Electronic no-loss drain with safety function.
- Controller with pressure dew point display.
- Easy installation.
- Minimal maintenance.

FD 5-95

First-Rate Efficiency

- Available in 11 sizes from 6 to 95 l/s/13 to 201 cfm.
- Pressure dew point as low as +3°C/+37.4°F.
- Electronic no loss drain with safety function.
- Controller with pressure dew point display, energy saving option, alarm contacts, …
- Quiet operation.
- Constant purity class -;4 - according ISO 8573-1:2010.

FD VSD 100-300

Unrivalled Energy Savings

- Available in 6 sizes from 100 to 300 l/s/212 to 636 cfm.
- Supreme energy savings: up to 50% on indirect energy costs and up to 70% on direct energy costs.
- Low pressure drop, typically below 0.2 bar/2.9 psi.
- Pressure dew point as low as +3°C/+37.4°F.
- Advanced touchscreen controller: visualization, alarm history, remote control,…
- All-in-one design with very small footprint.
- Delivered ready for use.
- Quiet operation.
- Constant purity class -;4;- according ISO 8573-1:2010.

VSD

Extending your VSD energy savings to your quality air

The introduction of Atlas Copco's VSD (and later VSD+) compressor technology was an industry milestone. By automatically adjusting its motor speed as air demand fluctuates depending on production flow or time, a VSD compressor offers double digit reductions in energy use and in lifecycle costs. With the FD VSD, Atlas Copco is extending this energy-saving principle to your quality air equipment.

FD VSD 100-300:
Unrivalled Energy Savings

1

VSD inverter

Controls the speed of the compressor to match your air demand and ensure the highest possible energy savings.

2

High-efficiency heat exchanger

Counter-flow compact brazed plate or aluminum heat exchanger, with air-to-air side for optimum cooling efficiency and the lowest possible pressure drop.

3

Integrated water separator

Low velocity with high separation efficiency, even in low flow conditions.

4

Electronic no-loss condensate drain

Opens the drain only when needed to eliminate unnecessary loss of compressed air during timed draining.

5

Elektronikon® Touch controller

Provides advanced control and allows for remote monitoring.

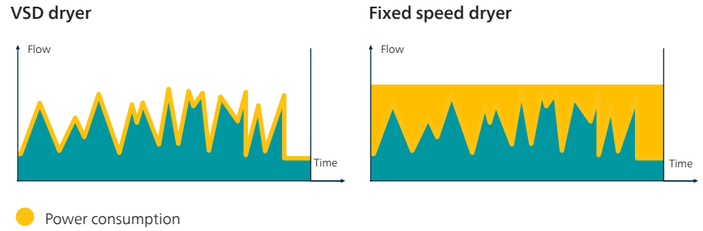
6

Single electrical connection

Ensures plug-and-play installation.

VSD for superior energy savings

Atlas Copco's in-house developed VSD technology matches your FD dryer's power consumption to your production's actual air flow. While a traditional refrigerant dryer can only be turned on or off, Atlas Copco's FD VSD mirrors your production's demand for compressed air as it fluctuates during the day, week or year. This ensures supreme energy savings as well as a stable dew point.



Minimal environmental impact

FD VSD dryers use the CFC-free R410A refrigerant, which has an ozone depletion potential (ODP) of zero. The refrigerant meets the strict F-Gas regulations and, due to its low power consumption, has an an outstanding TEWI (Total Equivalent Warming Impact) performance.

Optimum performance and safety in all conditions

- Hot gas bypass valve prevents freezing at lower loads.
- The extremely reliable R410A rotary compressor provides the best performance with minimum environmental impact. Capillary tubes cope with all conditions – no moving parts for extra reliability.
- Condenser with louvered fin technology for improved performance in dusty environments.

Advanced remote monitoring and control

- High-tech Elektronikon® Touch controller with warning indications, dryer shutdown and maintenance scheduling.
- Standard SMARTLINK remote monitoring to maximize air system performance and energy savings.

Robust and compact design

- Forklift opening for smooth transport.
- Easy front and side panel access.
- No bulky thermal mass heat exchanger needed to save on energy.

Filters

If your production requires higher levels of air quality and filtration, UD+ filters can be added on to your FD VSD dryer.

FD 5-95:
First-Rate Efficiency

1

Low-noise compressor with liquid separator

Lasts longer thanks to limited vibrations, minimal moving parts, and reduced risk of leakage.

2

High-efficiency heat exchanger

Counter-flow compact brazed plate or aluminum heat exchanger, with air-to-air side for optimum cooling efficiency and the lowest possible pressure drop.

3

Integrated water separator

Low velocity with high separation efficiency even in low flow conditions.

4

Electronic no-loss condensate drain

With level sensor, backup manual drain and drain alarm.

6

Hot gas bypass valve

Ensures stable pressure dew point and prevents freezing at lower loads.

5

Fan switch

Reduces energy consumption and optimizes the pressure dew point at very low temperatures.

7

Refrigerant separator

Eliminates the chance of moisture entering the compressed air system.

8

Single electrical connection

Allows for plug-and-play installation.

Supreme energy efficiency

- The FD offers a low pressure drop – typically below 0.2 bar/2.9 psi – and minimal energy consumption.
- The compact brazed plate or aluminum heat exchanger was designed specifically to provide optimal pre-cooling and the lowest possible pressure drop.
- The electronic no-loss condensate drain comes with a level sensor to open the drain only when needed, preventing unnecessary loss of compressed air.

Comprehensive control and monitoring options

- The Elektronikon® Alpha controller displays the pressure dew point and relative humidity.
- Remote alarm and start/stop control through voltage-free contact.
- Additional features such as alarm history and standard remote visualization.

Easy installation and long maintenance intervals

- Small footprint thanks to an innovative all-in-one design.
- Delivered ready for use, minimizing costly production downtime.

Low environmental impact

FD dryers use CFC-free refrigerants (R134A and R410A) with an ozone depletion potential (ODP) of zero.

Reliable performance in tough conditions

- Hot gas bypass valve prevents freezing at lower loads.
- R134A piston compressor with high coefficient of performance (extremely reliable R410A rotary compressor for models FD 60-FD 95) provides the best performance with minimum environmental impact. Capillary tubes cope with all conditions – no moving parts for extra reliability.
- Condenser with louvered fin technology for improved performance in dusty environments.

FX 5-300: Quality Performance

1

Refrigerant separator

No chance of moisture entering the compressed air system.

2

Hot gas bypass

Ensures stable pressure dew point and eliminates the possibility of condensate freezing.

3

Digital display

Provides peace of mind through precise monitoring of pressure dew point.

4

Single electrical connection

Allows for plug-and-play installation.

5

Easy access to key components

For straightforward servicing.

6

Water separator

Offers high efficiency for better pressure dew point.

7

Compact design

For a small footprint.

8

Low-noise rotary compressor with integrated liquid separator

Lasts longer thanks to limited vibrations, minimal moving parts, and reduced risk of leakage.

Pressure dew point precision

The FX comes in a wide range of sizes (6-300 l/s or 13 -636 cfm) to offer a steady pressure dew point as low as +3°C/+37.4°F. Its easy to use digital display precision-measures and monitors the pressure dew point and dryer performance.

Digital display

- Pressure dew point: exact measurement and visual monitoring.
- Status: refrigerant compressor and fan.
- Alarms: high/low pressure dew point and probe failure.
- Service warning.

Reliable

Built according to the stringent Atlas Copco standards, the FX is made of high quality, generously sized components.

Hot environments

High ambient temperatures can put your equipment to the test. The FX range offers several high temperature models that ensure dependable performance in conditions up to 46°C/115°F.

Significant cost savings

- Increased reliability and lifetime of tools and equipment.
- Reduced pipe work leaks and thus a lower energy bill.
- Less equipment breakdowns and operational interruptions.
- Minimal chance of product damage as a result of moisture carryover.

Sustainable refrigerant

The FX range comes with refrigerant that is compliant with F-Gas regulations to ensure the lowest possible carbon footprint and energy consumption.

VSD:
a game-changer in energy savings

When purchasing a refrigerant dryer, the main focus is usually on the initial cost. However, this only represents approximately 10% of the lifecycle cost of the dryer. Energy, maintenance and installation make up the bulk of your actual dryer costs. Direct and indirect (pressure drop) energy costs are the most important.

Indirect energy costs

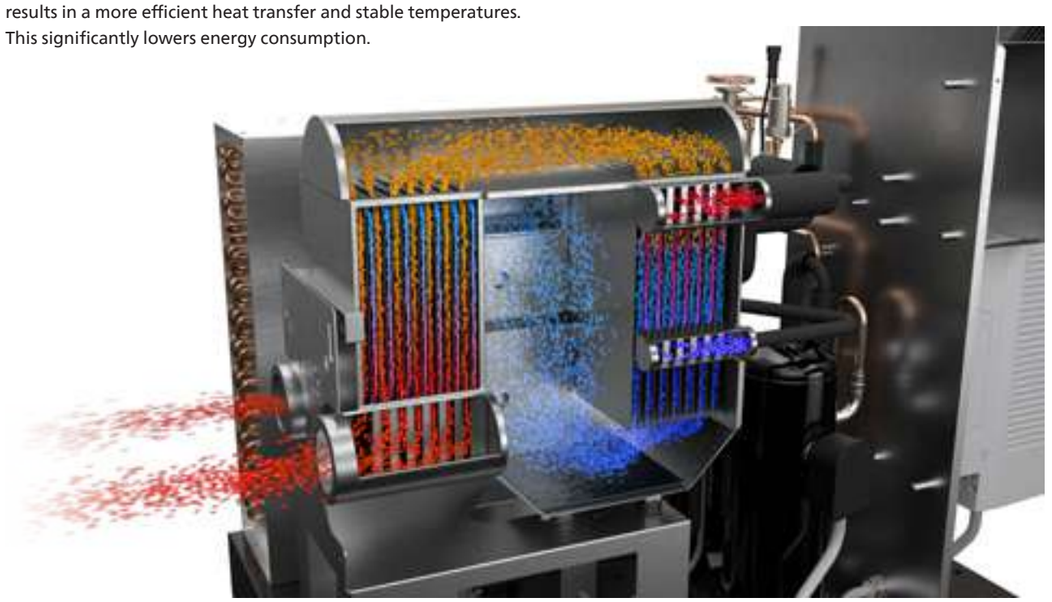
Indirect energy costs are related to the extra energy your air compressor must consume to overcome the pressure drop that takes place in the air dryer. By design, Atlas Copco FD VSD dryers offer a low pressure drop and efficient heat transfer – both of which contribute to a reduction of the indirect energy costs.

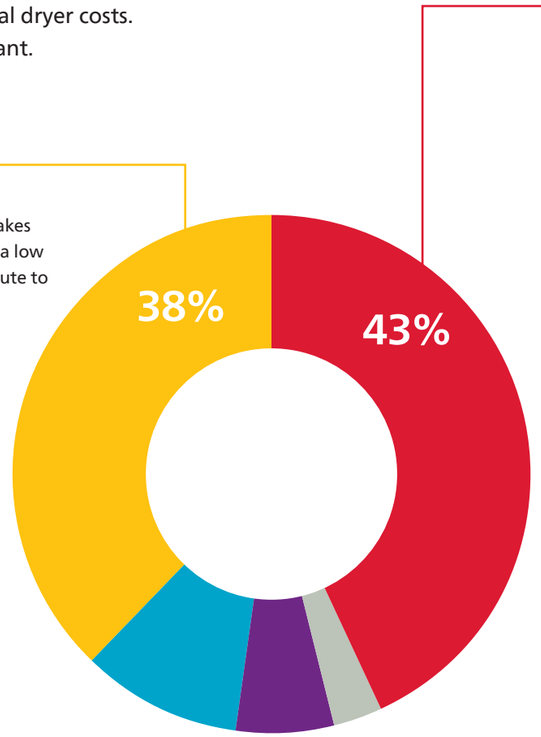
Low pressure drop

If a refrigerant dryer has a high internal pressure drop, the compressor needs to run at a higher pressure. This wastes energy and increases operating costs. Atlas Copco has designed our refrigerant dryers to minimize pressure drop. A pressure drop typically below 0.2 bar/2.9 psi at full flow is ensured by the heat exchanger technology, an integrated low velocity water separator, and generously sized components.

Efficient heat exchanger technology

Atlas Copco's refrigerant dryers use a counter flow heat exchanger on both the air-to-air and air-to-refrigerant side. Compared to a cross flow heat exchanger, the counter flow design results in a more efficient heat transfer and stable temperatures. This significantly lowers energy consumption.





Lifecycle cost

- Direct energy costs
- Indirect energy costs
- Investment
- Maintenance
- Installation

Direct energy costs

Direct energy costs are related to the power that the dryer consumes. Atlas Copco's FD VSD dryers match their energy usage to the actual compressed air demand. This reduces energy consumption by as much as 70% compared to conventional dryers.

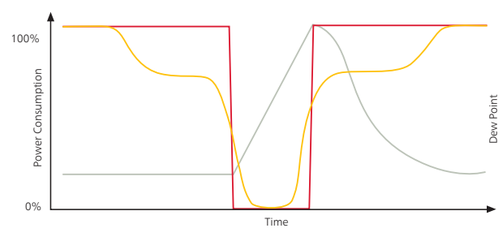
Reduce your total lifecycle cost by up to 50% with Atlas Copco's VSD dryers

- Up to 50% savings on indirect energy costs
- Up to 70% savings on direct energy costs

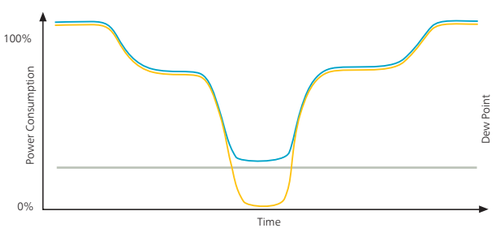
VSD outperforms thermal mass technology

Many conventional dryers rely on thermal mass technology to reduce energy costs. Also called cycling dryers, these units come with thermal mass storage which can be used to dry the air with the dryer's compressor temporarily switched off. While thermal mass technology certainly generates energy savings, these are offset by the additional energy these dryers require to cool the thermal mass. In addition, as the refrigerant compressor's operation is controlled by the thermal mass, the compressed air dew point rises and falls significantly. This can compromise your air quality by up to 2 purity classes. Finally, thermal mass dryers offer only limited or no energy savings in environments with high ambient temperatures. VSD technology has proven to deliver superior results in terms of energy use, dew point stability and service costs.

**Thermal mass:
some energy savings and unstable dew point**



**VSD:
superior energy savings and stable dew point**



Flow · Power Consumption thermal mass · Power Consumption VSD · Dew point

Advanced control

Atlas Copco's refrigerant dryers are built to reliably and efficiently deliver quality air. But in the end, it's all about how they perform on your work floor, meeting your individual needs and responding to your specific conditions. That is why the FD VSD, FD and FX come with comprehensive control options to allow you to get the best performance from your Atlas Copco dryer.

FD VSD 100-300: Elektronikon® Touch controller

- 4.3-inch high-definition color display with clear pictograms and service indicator.
- Internet-based dryer visualization using a simple Ethernet connection.
- Automatic restart after voltage failure.
- Built-in SMARTLINK online monitoring.
- More flexibility: four different week schedules.
- Graphical service plan indication.
- Remote control and connectivity functions.

FD 5-95: Elektronikon® Alpha controller

- Exact measurement and visual monitoring of pressure dew point and ambient temperature.
- High/low pressure dew point alarm.
- Relative humidity indicator.
- Energy saving mode.
- Switch off at freezing alarm.
- Alarm history and standard remote visualization.

FX 5-300: Digital display

- Pressure dew point: exact measurement and visual monitoring.
- Energy saving mode.
- Alarms: high/low pressure dew point and probe failure.
- Service warnings.

Remote monitoring

SMARTLINK: Data Monitoring Program

SMARTLINK captures live data from your compressed air equipment and translates it in clear insights. At a glance, you can check uptime, energy efficiency and machine health.

- Remote monitoring that helps you optimize your compressed air system and save energy and costs.
- Provides a complete insight in your compressed air network.
- Anticipates potential problems by warning you upfront.
- Efficient service planning and parts handling to give you improved uptime.

SMARTLINK & Total Responsibility

Get the most out of SMARTLINK as part of a Total Responsibility Plan. Step back, relax, and let our service engineers monitor your compressed air system. We know exactly when to service your machines, diagnose any issues and be there on time to fix them.

Technical specifications FD VSD 100-300

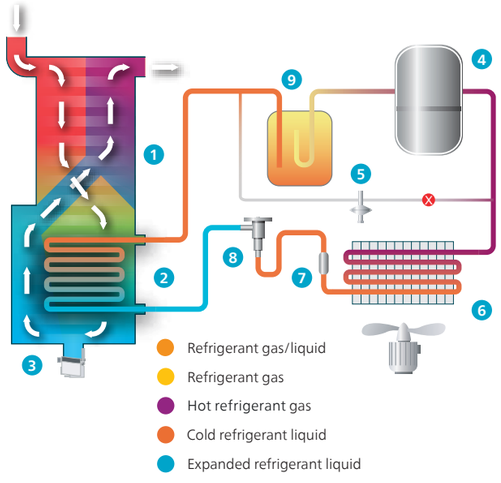
Model	Maximum inlet conditions at full flow (ambient/ inlet)	Inlet flow with a pressure dew point of 3°C/37.4°F		Pressure drop at full flow		Power consumption		Max. working pressure		Compressed air connections	Dimensions						Weight	
											Length		Width		Height			
	°C	l/s	cfm	bar	psi	kW	hp	bar	psi		mm	in	mm	in	mm	in	kg	lb
FD 100 VSD	60	100	212	0.16	2.3	0.66	0.90	14.5	210	G 1 1/2 F (NPT for UL version)	805	31.69	962	37.87	1040	41	130	287
FD 140 VSD	60	140	297	0.11	1.6	1.04	1.41	14.5	210	G 2 F (NPT for UL version)	805	31.69	962	37.87	1040	41	130	287
FD 180 VSD	60	180	381	0.18	2.6	1.54	2.09	14.5	210	G 2 F (NPT for UL version)	805	31.69	962	37.87	1040	41	134	295
FD 220 VSD	60	220	466	0.14	2	1.77	2.41	14.5	210	G 2 1/2 F (NPT for UL version)	805	31.69	962	37.87	1040	41	143	315
FD 260 VSD	60	260	551	0.1	1.5	1.9	2.58	14.5	210	G 2 1/2 F (NPT for UL version)	805	31.69	962	37.87	1040	41	150	331
FD 300 VSD	60	300	636	0.18	2.6	2.64	3.59	14.5	210	G 2 1/2 F (NPT for UL version)	805	31.69	962	37.87	1040	41	165	364

Technical specifications FD 5-95 50 Hz & 60 Hz

Model	Maximum inlet conditions at full flow (ambient/ inlet)	Inlet flow with a pressure dew point of 3°C/37.4°F		Pressure drop at full flow		Power consumption		Max. working pressure		Compressed air connections	Dimensions						Weight	
											Length		Width		Height			
	°C	l/s	cfm	bar	psi	kW	hp	bar	psi		mm	in	mm	in	mm	in	kg	lb
FD 5	60	6	13	0.07	1.02	0.2	0.27	16 (1)	233 (1)	R 3/4	525.5	20.7	390	15.4	530	20.9	27	60
FD 10	60	10	21	0.11	1.6	0.2	0.27	16 (1)	233 (1)	R 3/4	525.5	20.7	390	15.4	530	20.9	27	60
FD 15	60	15	32	0.12	1.75	0.33	0.45	16 (1)	233 (1)	R 3/4	525.5	20.7	390	15.4	530	20.9	32	70
FD 20	60	20	42	0.12	1.75	0.41	0.56	16 (1)	233 (1)	R 3/4	525.5	20.7	390	15.4	530	20.9	34	75
FD 25	60	25	53	0.17	2.47	0.41	0.56	16 (1)	233 (1)	R 3/4	525.5	20.7	390	15.4	530	20.9	34	75
FD 30	60	30	64	0.25	3.64	0.41	0.56	16 (1)	233 (1)	R 3/4	525.5	20.7	390	15.4	530	20.9	34	75
FD 40	60	40	85	0.2	2.91	0.57	0.76	16 (1)	233 (1)	R 1	716	28.2	389	15.3	679	26.8	57	125
FD 50	60	50	106	0.2	2.91	0.54	0.72	16 (1)	233 (1)	R 1	716	28.2	389	15.3	679	26.8	58	128
FD 60	60	60	127	0.22	3.2	0.63	0.84	13	189	R 1	795	31.3	482	19.0	804	31.7	80	176
FD 70	60	70	148	0.22	3.2	0.87	1.17	13	189	R 1	795	31.3	482	19.0	804	31.7	81	178
FD 95	60	95	201	0.22	3.2	1.18	1.58	13	189	R 1	795	31.3	482	19.0	804	31.7	87	192

How refrigerant dryers work

A refrigerant dryer uses a refrigerant circuit and heat exchanger(s) to pre-cool air, refrigerate it to condense out moisture vapor, and then re-heat the air to prevent pipe sweating downstream.



Air circuit

1. Air-to-air heat exchanger: Incoming air is cooled down by the outgoing dry, cold air
2. Air-to-refrigerant heat exchanger: The air is cooled to the required dew point by the refrigerant circuit. The water vapor condenses into water droplets
3. Integrated water separator: The moisture is collected and evacuated by the electronic drain

Refrigerant circuit

4. Refrigerant compressor: Compresses the gaseous refrigerant to a higher pressure
5. Regulation device: The hot gas bypass valve regulates the dryer to prevent freezing at lower load conditions
6. Refrigerant condenser: Cools the refrigerant so that it changes from a gas to a liquid
7. Refrigerant filter: Protects the expansion device from harmful particles
8. Thermostatic expansion valve: The expansion process reduces the pressure and cools the refrigerant further
9. Liquid separator: Ensures that only refrigerant gas enters the compressor

Technical specifications FX 5-300 50& 60Hz

Model	Inlet capacity		Pressure drop		Maximum working pressure		Electrical supply		Dimensions						Weight		Compressed air connections
							voltage/phase/frequency		Length		Width		Height				
	l/s	cfm	bar	psi	bar	psi			mm	inch	mm	inch	mm	inch	kg	lb	
FX5	6	13	0.15	2.18	16	232	230/1/50Hz	115-230/1/60Hz	493	19.41	350	13.78	450	17.72	19	42	3/4" M
FX10	10	21	0.25	3.63	16	232	230/1/50Hz	115-230/1/60Hz	493	19.41	350	13.78	450	17.72	19	42	3/4" M
FX15	14	30	0.25	3.63	16	232	230/1/50Hz	115-230/1/60Hz	493	19.41	350	13.78	450	17.72	20	44	3/4" M
FX20	20	42	0.25	3.63	16	232	230/1/50Hz	115-230/1/60Hz	493	19.41	350	13.78	450	17.72	25	55	3/4" M
FX30	30	64	0.3	4.35	16	232	230/1/50Hz	115-230/1/60Hz	493	19.41	350	13.78	450	17.72	27	60	3/4" M
FX40	39	83	0.14	2.03	14	203	230/1/50Hz	115-230/1/60Hz	497	19.57	370	14.57	764	30.08	51	112	1" F
FX50	50	106	0.2	2.90	14	203	230/1/50Hz	115-230/1/60Hz	497	19.57	370	14.57	764	30.08	51	112	1" F
FX60	60	127	0.18	2.61	14	203	230/1/50Hz	115-230/1/60Hz	557	21.93	460	18.11	789	31.06	62	137	1 1/2" F
FX70	68	144	0.18	2.61	14	203	230/1/50Hz	115-230/1/60Hz	557	21.93	460	18.11	789	31.06	62	137	1 1/2" F
FX90	87	184	0.25	3.63	14	203	230/1/50Hz	115-230/1/60Hz	557	21.93	460	18.11	789	31.06	62	137	1 1/2" F
FX110	108	229	0.2	2.90	14	203	230/1/50Hz	230/1/60Hz	557	21.93	580	22.83	899	35.39	82	181	1 1/2" F
FX130	128	271	0.26	3.77	14	203	230/1/50Hz	230/1/60Hz	557	21.93	580	22.83	899	35.39	82	181	1 1/2" F
FX170	167	354	0.16	2.32	14	203	400/3/50Hz	460/3/60Hz	1040	40.94	805	31.69	962	37.87	145	320	2" F
FX200	200	424	0.23	3.34	14	203	400/3/50Hz	460/3/60Hz	1040	40.94	805	31.69	962	37.87	158	348	2" F
FX250	250	530	0.18	2.61	14	203	400/3/50Hz	460/3/60Hz	1040	40.94	805	31.69	962	37.87	165	364	2 1/2" F
FX300	300	636	0.18	2.61	14	203	400/3/50Hz	460/3/60Hz	1040	40.94	805	31.69	962	37.87	164	362	2 1/2" F

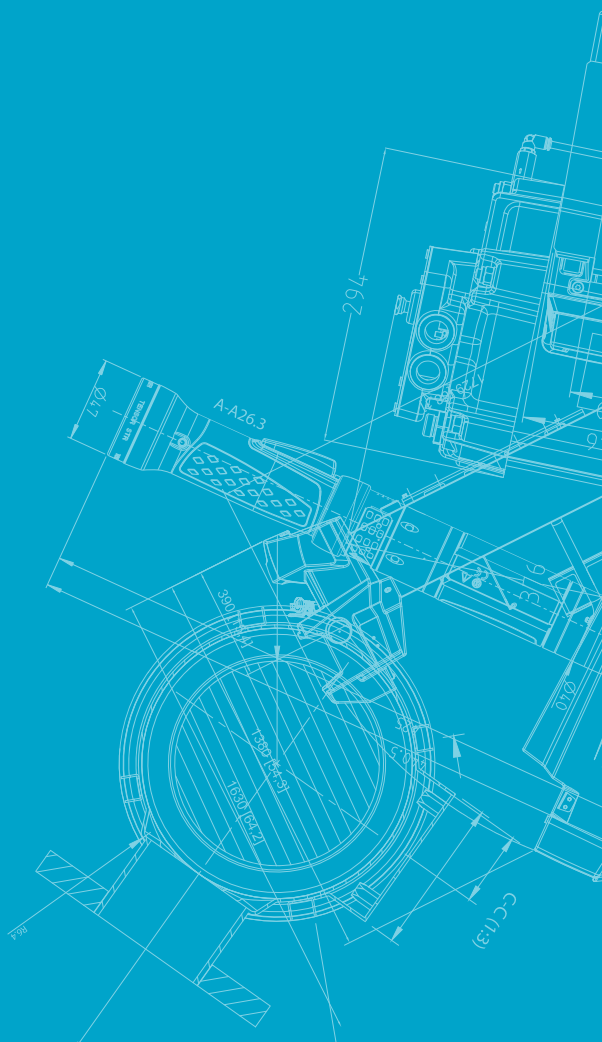
Reference conditions Limitations

		Reference conditions		Limitations	
		Standard	UL-approved	Standard	UL-approved
FX 5-300	Ambient temperature	25°C	100°F	5°C-43°C (1)	41°F-109°F (1)
	Inlet temperature	35°C	100°F	5°C-55°C	41°F-131°F
	Operating pressure	7 bar	100 psi	6-14 bar (2)	87-203 psi (2)
FD 5-95	Ambient temperature	25°C	100°F	1°C-46°C	34°F-131°F
	Inlet temperature	35°C	100°F	5°C-60°C	41°F-115°F
	Operating pressure	7 bar	100 psi	6-14 bar (3)	87-203 psi (3)
FD VSD 100-300	Ambient temperature	25°C	100°F	5°C-46°C	41°F-131°F
	Inlet temperature	35°C	100°F	5°C-60°C	41°F-140°F
	Operating pressure	7 bar	100 psi	6-14 bar	87-203 psi

Tested according to ISO 7183:2007 (1) FX 170-300: 46°C/131°F (2) FX 5-30: 16 bar/232 psi (3) FD 5-50:16 bar/232 psi

Notes

Refrigerant types:	R513A for FX 5-50, FD 5-50
	R410A for FX 60-300, FD 60-95, FD VSD



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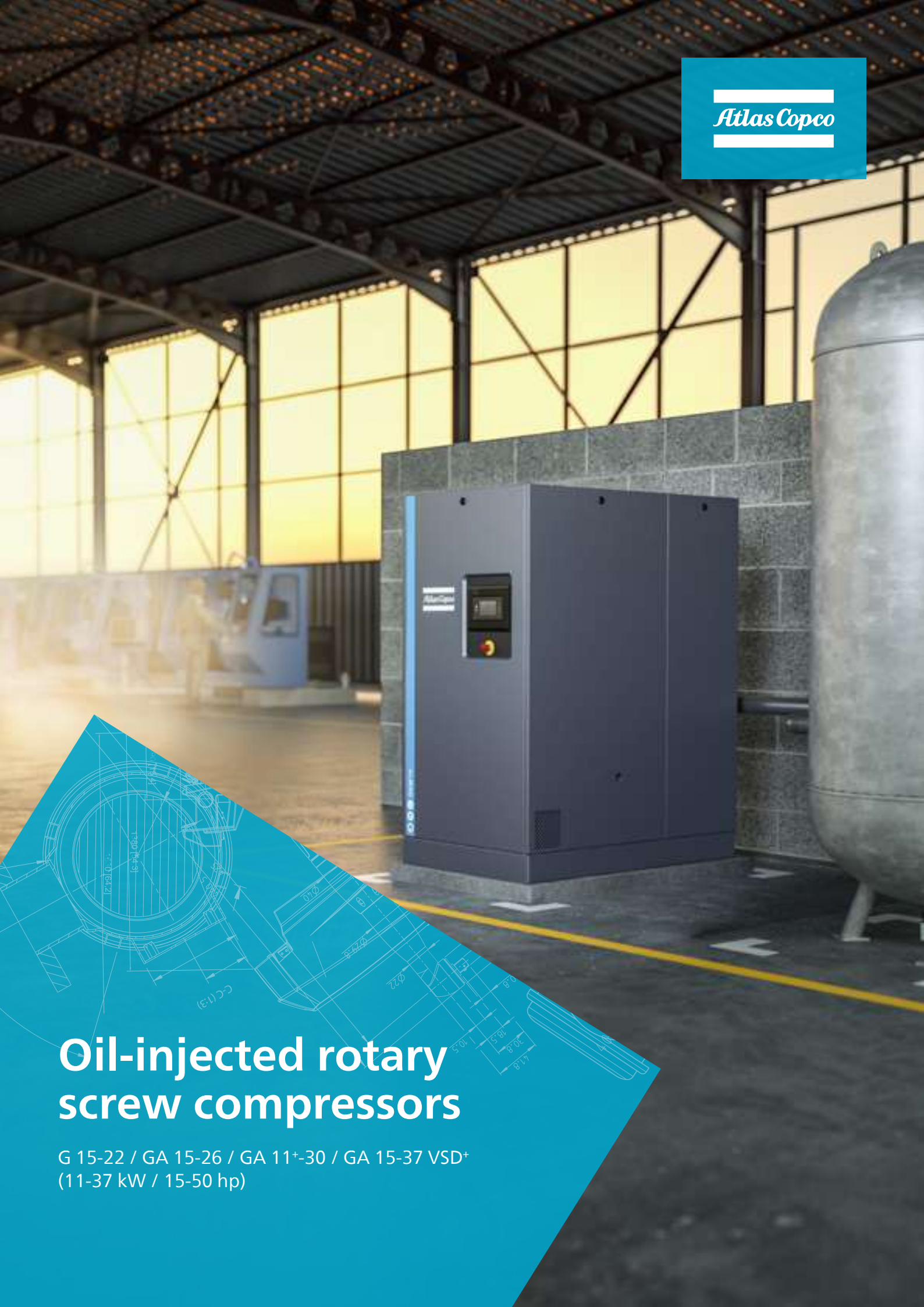
Atlas Copco

atlascopco.com



Oil-injected rotary screw compressors

G 15-22 / GA 15-26 / GA 11+-30 / GA 15-37 VSD+
(11-37 kW / 15-50 hp)

Meeting your every need for compressed air

Atlas Copco's G, GA, GA+, and GA VSD+ oil-injected screw compressors provide you with industry-leading performance, reliability and low cost of ownership. The G 15-22 is a high-quality, reliable air compressor with the lowest initial investment cost. The GA 15-26 provides all-in-one technology and reduced sound levels. The GA 11+-30 delivers top quality and efficiency in the fixed speed compressor segment. Our premium product, the GA 15-37 VSD+, is a unique state-of-the-art air compressor with unparalleled performance and energy savings.

G 15-22
Robust economical compressors

- Atlas Copco premium quality and reliability at the lowest initial investment cost.
- Easy installation and maintenance.
- User-friendly, simplified BASE controller.

GA 15-26
Compact industrial air systems

- Premium GA quality and optimal serviceability at a low initial investment cost.
- Quality, dry air thanks to the integrated dryer.
- Total control and assured efficiency with the Elektronikon® Swipe controller.

GA 11+-30
Industry-leading performers

- Exceptional Free Air Delivery and efficiency.
- Best-in-class power consumption and noise emission.
- Thanks to the integrated dryer, high quality dry air is guaranteed.
- Easy control and maintenance with the Elektronikon® Touch controller with high-definition color display.

GA 15-37 VSD+
Ultimate energy savers

- On average 50% energy savings compared to traditional fixed speed compressors.
- Excellent-quality, dry air at the lowest energy cost with the new, integrated dryer range.
- Easy monitoring and maintenance thanks to the Elektronikon® Touch controller with high-definition color display.
- Innovative vertical design minimizes the required floor space while improving serviceability.

G 15-22:
Robust economical compressors

The all new G 15-22 belt-driven compressor from Atlas Copco is quiet, efficient, powerful and reliable. In short, it checks all the boxes that matter most to small business owners with limited running hours. And what's even better, this robust quality comes with the lowest initial investment cost.

1
Belt-driven element & motor

- Atlas Copco's patented rotary screw element allows for a 100% duty cycle.
- The complete unit is designed to operate at ambient temperatures of up to 46°C/115°F.
- Reduced noise levels and low vibration.

2
Control & monitoring

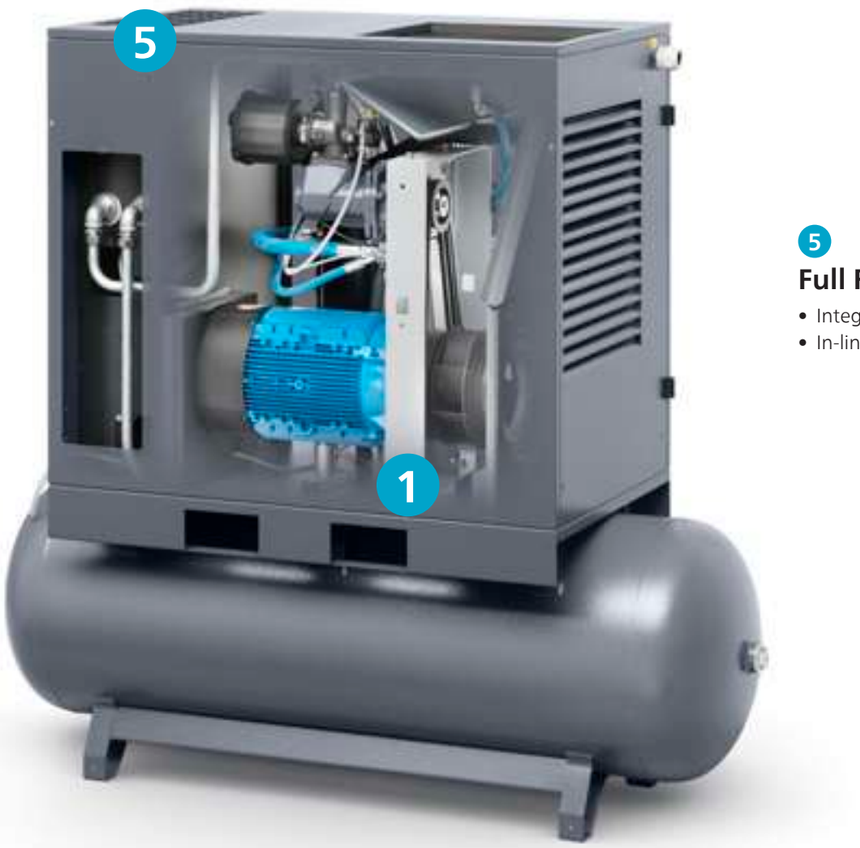
- New BASE controller offers straightforward monitoring and control.
- Icon-based display, pressure settings, temperature reading.
- Running hours/hours working @ load.
- Service warnings.
- Outlet pressure setting directly on the controller.
- Pressure and element outlet temperature reading.

3
Cost-efficient maintenance

All the main components, the oil separator and oil filter are easily accessible, ensuring fast and simple maintenance.

4
Easy installation

- Available in multiple configurations – including floor or tank-mounted and with or without integrated dryer.
- Extremely small footprint and cooling air discharge from the top allow for placement against a wall or even in a corner.



5
Full Feature (FF)

- Integrated refrigerant air dryer.
- In-line air filters.

GA 15-26:
Compact industrial air systems

Atlas Copco's all-in-one GA 15-26 compressor is always ready to supply high-quality air and help you tackle your daily challenges. Beating any workshop solution, the GA 15-26 keeps your air network clean and your production up and running.

3
High-tech oil vessel

- Protection from oil contamination: very low oil carry-over thanks to the vertical design of the oil vessel.
- Extremely low air losses during load/unload cycle thanks to minimized oil vessel size.

1
Robust element & motor

- The GA 15-26's new compression element is combined with an IE3 efficiency motor.
- 5-6% higher efficiency compared to belt-driven systems.
- Gear-driven drive train for best-in-class reliability and limited maintenance.

4
Integrated quality air solutions

- The integrated dryer avoids condensation and corrosion in the network. Optional filters for air quality up to ISO Class 1 level (<0.01 ppm).
- Standard included water separator.
- Additional energy savings with the dryer's electronic no-loss drain.

2
Advanced monitoring

- State-of-the-art monitoring thanks to the Elektronikon® Swipe with built-in connectivity.
- Service and warning indications, error detection and compressor shut-down.
- Standard SMARTLINK remote monitoring to maximize air system performance and energy savings.
- Optional Elektronikon® Touch controller for enhanced remote monitoring features and service time indications.

5
Easy installation

- A true plug-and-play solution for installation companies and OEMs.
- Optional integrated dryer, air filters and factory-mounted 500L receiver.
- Easy transportation by forklift.
- Remarkably compact footprint.

GA 11+-30:
Industry-leading performers

Advanced connectivity and control, ground-breaking efficiency, superior reliability, … the GA 11+-30 meets and exceeds the highest expectations. In addition, it comes with the widest range of options so you can tailor the unit to your specific requirements. If you need the very best, the GA 11+-30 delivers without compromise.

3
Advanced control

- High-tech Elektronikon® Touch controller with warning indications, compressor shut-down and maintenance scheduling.
- Easy to use and designed to perform in the toughest conditions.
- Built-in phase sequence relay for motor control and protection.
- Standard SMARTLINK remote monitoring to maximize air system performance and energy savings.
- Optional multiple compressor control (2, 4 or 6 compressors).

1
Reliable motor & drive train

- At the heart of the GA11+-30 is Atlas Copco's state-of-the-art compression element.
- The element is coupled with a maintenance-free and highly efficient gearbox.
- The IE4 efficiency rated motor and drive train are greased for life to avoid improper re-greasing.
- Free Air Delivery is increased by 6-10% and power consumption is reduced by 3-8% thanks to packaging and the high-performance compression element.

2
Electrical cubicle

- Reduced cubicle temperature doubles the lifetime of the electrical components.

4
Quality air solutions

- Integrated dryer range with counterflow heat exchanger, integrated water separator and optional Dryer Saver Cycle.
- The integrated dryer can be outfitted with optional DD or UD+ filters, resulting in oil carry-over as low as 0.01 ppm.
- Water separation of nearly 100% in all conditions with the standard electronic no-loss drain and integrated water separator in the aftercooler.

5
Innovative fan

- Based on the newest technologies.
- Highly efficient, compliant with ERP2015.
- Low noise levels.

GA 15-37 VSD+: Ultimate energy savers

With its innovative vertical design, Atlas Copco's GA 15-37 VSD+ is a game changer in the compressor industry. It offers Variable Speed Drive as standard, a compact motor and small footprint thanks to its in-house design and iPM (permanent magnet) technology. The GA VSD+ reduces energy consumption by on average 50%, with uptimes assured even in the harshest conditions.

1
Interior Permanent Magnet (iPM) motor

- Very high efficiency: matches IE5 standards.
- Compact, customized design for optimal cooling by oil.
- Designed in-house in Belgium.
- IP66 protection rating.
- No cooling air flow required.
- Oil-lubricated motor bearing: no grease/re-greasing for increased uptime.

2
Element

- The new, Atlas Copco-made compression element provides unparalleled energy savings.
- Robust and silent.

3
Direct drive

- Vertical design, fewer parts.
- Oil-cooled, pressure-tight.
- No gears or belts, no shaft seal.
- Compact: footprint down 60%.

5
Robust oil filter/separator

- Integrated bypass valve with the oil filter.
- Easy maintenance.

6
Electronic no-loss water drain

- Included as standard.
- Efficient removal of condensate without loss of compressed air.
- Manual integrated bypass for effective condensate removal in case of power failure.

7
Elektronikon® Touch controller

- Integrated smart algorithms reduce system pressure and energy consumption.
- Warning indications, maintenance scheduling and online status visualization.
- Graphic display of key parameters (day, week, month) and 32 language settings.
- Standard SMARTLINK remote monitoring to maximize air system performance and energy savings.
- Optional multiple compressor control (2, 4 or 6 compressors).

4
Innovative fan

- Based on the newest technologies.
- Compliant with ERP2015.
- Low noise levels.

9
VSD+ cubicle

- VSD+ is superior to idling machines.
- Electrical components remain cool, enhancing their lifetime.
- Dedicated drive for iPM technology motors.
- 5% DC choke as standard.
- Heat dissipation of inverter in separate compartment.

8
Sentinel inlet valve

- No inlet arrestor.
- No blow-off losses.
- Maintenance-free.

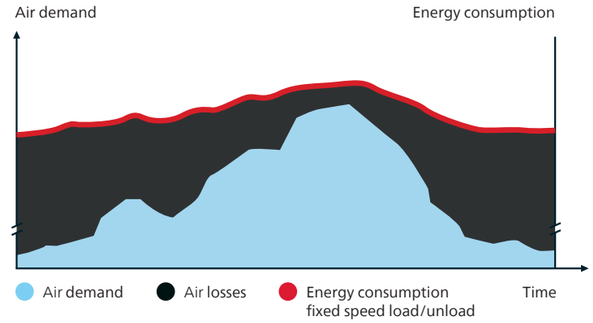
VSD+ for 50% average energy savings*

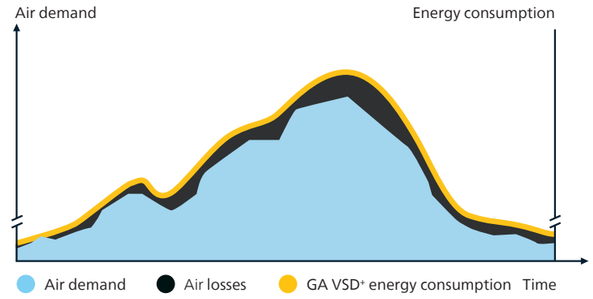
Atlas Copco's GA Variable Speed Drive+ (VSD+) technology closely matches the air demand by automatically adjusting the motor speed. Combined with the innovative design of the iPM (Permanent Magnet) motor, this results in average energy savings of 50% and an average reduction of 37% in the lifecycle cost of a compressor.

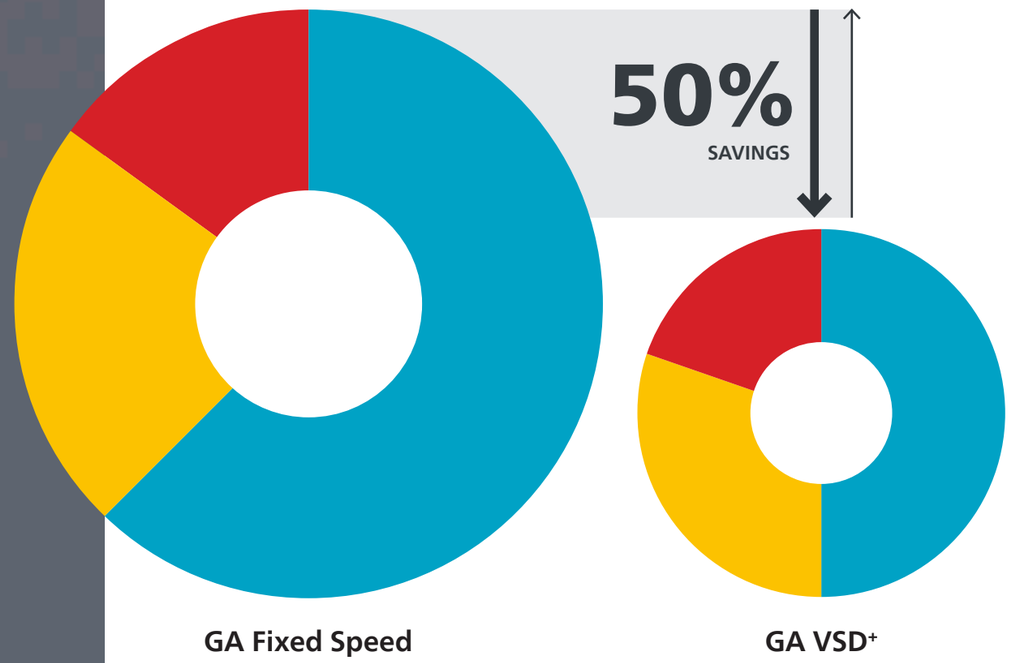
Why Atlas Copco Variable Speed Drive+ technology?

- On average 50% energy savings with an extensive flow range (20-100%).
- Integrated Elektronikon® Touch controls the motor speed and high-efficiency frequency inverter.
- No wasted idling times or blow-off losses during operation.
- Compressor can start/stop under full system pressure without the need to unload.
- Eliminates peak current penalty during start-up.
- Minimizes system leakage due to a lower system pressure.
- EMC compliance to directives (2004/108/EG).

In almost every production environment, air demand fluctuates depending on different factors such as the time of the day, week or even month.







* Compared to fixed speed compressors, based on measurement performed by an independent energy audit agency.

A step ahead in monitoring and controls

The next-generation Elektronikon® operating system offers a great variety of control and monitoring features that allow you to increase your compressor's efficiency and reliability. To maximize energy efficiency, the Elektronikon® controls the main drive motor and regulates system pressure within a predefined and narrow pressure band.

GA 15-26: Elektronikon® Swipe

- Improved ease of use: intuitive navigation system with clear pictograms and extra 4th LED indicator for service.
- Visualization through web browser using a simple Ethernet connection.
- Easy to upgrade.

Key features:

- Automatic restart after voltage failure.
- Delayed Second Stop function.
- Dual pressure set point.
- Built-in SMARTLINK online monitoring.
- Option to upgrade to the advanced Elektronikon® Touch controller

GA 11+-30 & GA 15-37 VSD+: Advanced Elektronikon® Touch controller

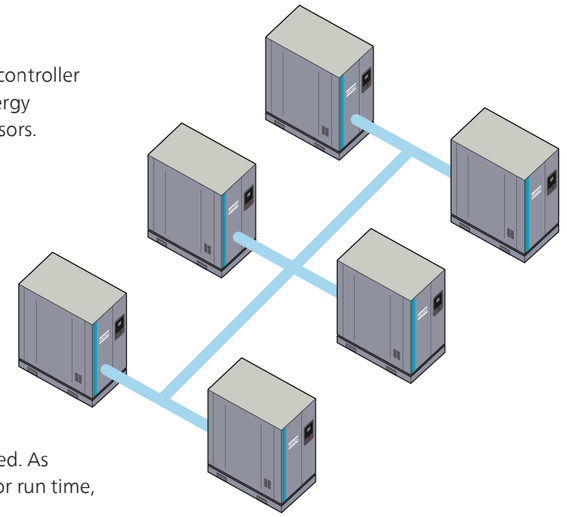
- Improved user-friendliness: 4.3-inch high-definition color display with clear pictograms and service indicator.
- Internet-based compressor visualization using a simple Ethernet connection.
- Increased reliability: new, user-friendly, multilingual user interface.

Key features:

- Automatic restart after voltage failure.
- Built-in SMARTLINK online monitoring.
- Dual pressure set point.
- More flexibility: four different week schedules that can be programmed for a period of 10 consecutive weeks.
- On-screen Delayed Second Stop function and VSD savings indication.
- Graphical service plan indication.
- Remote control and connectivity functions.
- Software upgrade available to control up to 6 compressors by installing the optional integrated compressor controller.

Optional integrated compressor controller

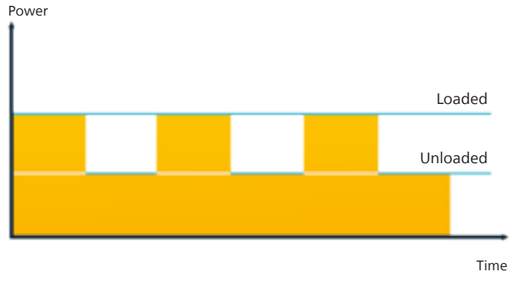
Install, with a simple license, the optional integrated compressor controller and get simple, central control to reduce system pressure and energy consumption in installations of 4 (EQ4i) or 6 (EQ6i) VSD+ compressors.



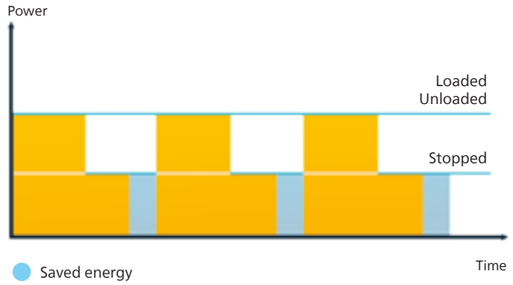
Dual pressure set point & delayed second stop

Most production processes create fluctuating levels of demand which, in turn, can create energy waste in low use periods. Using either an Elektronikon® Swipe or Touch controller, you can manually or automatically create two different system pressure bands to optimize energy use and reduce costs at low use times. In addition, the sophisticated Delayed Second Stop (DSS) runs the drive motor only when needed. As the desired system pressure remains steady at minimal drive motor run time, energy consumption is kept at a minimum.

Without DSS

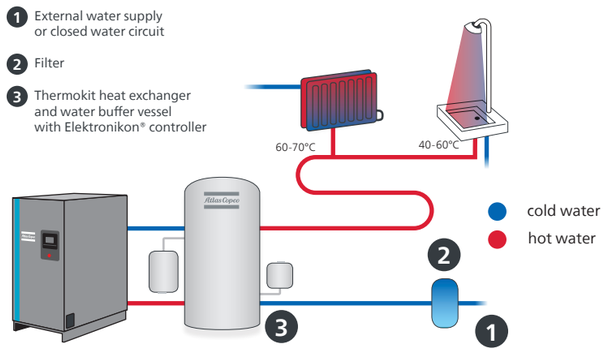


With DSS



Recover and save energy

As much as 90% of the electrical energy used by a compressed air solution is converted into heat. Using Atlas Copco's integrated energy recovery systems, it is feasible to recover up to ≈ 75% of that power input as hot air or hot water without any adverse influence on the compressor's performance. Through efficient usage of the recovered energy, you generate important energy cost savings and a high return on investment.

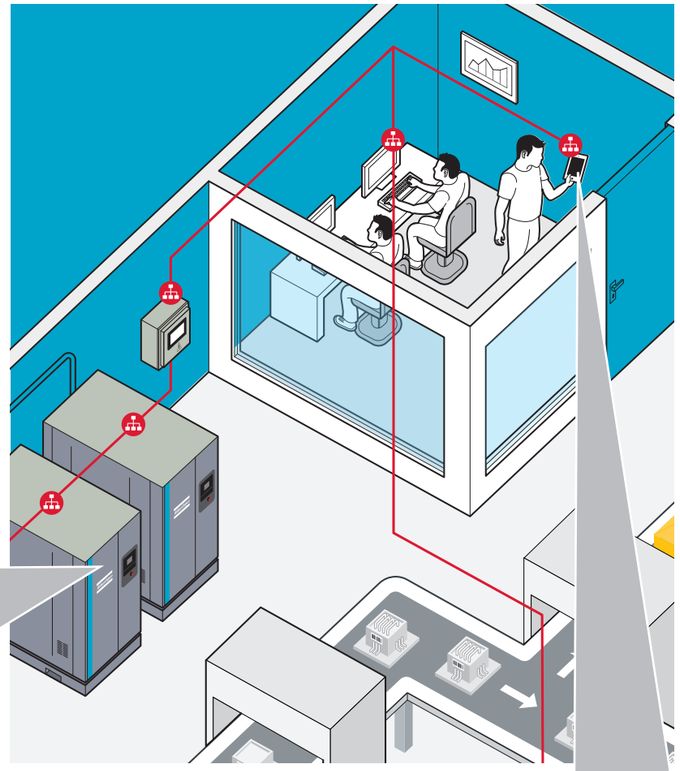


Applications

- Auxiliary or main heating of warehouses, workshops…
- Industrial process heating.
- Water heating for laundries, industrial cleaning and sanitary facilities.
- Canteens and large kitchens.
- Food industry.
- Chemical and pharmaceutical industries.
- Drying processes.

Ready for Industry 4.0

Do you operate a smart factory or Industry 4.0 production environment? Atlas Copco's GA, GA+, and GA VSD+ compressors will fit right in. Their advanced monitoring, control and connectivity features allow you to optimize performance and efficiency.



CONTROL

The Elektronikon® operating system gives you numerous control and monitoring options to optimize compressor performance.

CONNECT SMARTLINK*: Data Monitoring Program

- Remote monitoring system that helps you optimize your compressed air system and save energy and costs.
- Provides a complete insight in your compressed air network.
- Anticipates potential problems by warning you up-front.

* Please contact your local sales representative for more information.

Always at your service

Atlas Copco is a truly global organization with support available in more than 160 countries. As a result, one of our 4850 field service engineers is never far away. We pride ourselves on the swift assistance that keeps your Atlas Copco compressed air system performing reliably and efficiently.

Service plan

Our service plans keep your Atlas Copco compressed air system in excellent shape.

Stand-by solutions

Atlas Copco help is available 24/7. We keep spare parts in stock so you are up and running again as quickly as possible.

Rental

Our specialty rental services meet your temporary compressed air needs. With Customer Centers strategically located around the globe, Atlas Copco Rental can provide a solution for virtually any application.

Excellence in quality air

Untreated compressed air contains moisture, aerosols and dirt particles that can damage your air system and contaminate your end product. The resulting maintenance costs can far exceed air treatment costs. GA compressors provide the clean, dry air that improves your system's reliability, avoiding costly downtime and production delays, and safeguarding the quality of your products.

Integrated purity

Many Atlas Copco compressors (Full Feature option) come with an integrated dryer that efficiently removes moisture, aerosols and dirt particles to protect your investment. This quality air expands the life of your equipment, increasing efficiency and ensuring quality of your final product.

Main benefits of the new, integrated dryer solutions

- Thanks to the Saver Cycle and its extra ambient sensor, the dryer will shut down when a normal dewpoint is reached, allowing 2/3 of the dryer's power to be recuperated (standard on GA VSD+, optional for GA+).
- Available in several variants, allowing you to gain high-quality air in all ambient conditions.
- The heat exchanger with integrated water separator minimizes the energy required to reach a certain air quality.
- Pressure dewpoint at 3°C/37°F on GA+ and GA VSD+ (100% relative humidity at 20°C/68°F, 5°C/41°F on GA).
- The dryer's global warming potential has been reduced by 44% on average. This not only results from the refrigerant's environmentally-friendly characteristics, but also from the smaller volume that is needed (valid for both GA+ and GA VSD+).
- Can be outfitted with optional UD+ filters to obtain the exact air quality you need.

	ISO QUALITY CLASS*	DIRT PARTICLE SIZE	WATER PRESSURE DEWPOINT GA**	WATER PRESSURE DEWPOINT GA+**	OIL CONCENTRATION
Pack unit	3.-.4	3 microns	-	-	3 ppm
Full Feature unit	3.4.4	3 microns	+5°C/41°F	+3°C/37°F	3 ppm
Full Feature unit with Class 2 integrated filter	2.4.2	1 micron	+5°C/41°F	+3°C/37°F	0.1 ppm
Full Feature unit with Class 1 integrated filter	1.4.1	0.01 microns	+3°C/37°F	+3°C/37°F	0.01 ppm

* The table values are maximum limits according to the respective ISO quality class.
** Water pressure dewpoint based on 100% RH at 20°C/68°F.

Tailored to your needs

Some applications may need or may benefit from additional options, more refined control or air treatment systems. To meet these needs, Atlas Copco has developed options and easily integrated compatible equipment providing the lowest cost compressed air.

	G 15-22	GA 15-26	GA 11+-30	GA 15-37 VSD+
Integrated filter (DD+ or UD+)	•	•	•	•
Dryer bypass	-	•	•	•
Gear/Direct Driven	-	✓	✓	✓
Electronic Water Drains (EWD) on coolers	•	•	✓	✓
Air receiver drain EWD	•	•	N/A	N/A
Motor space heater + thermistors	-	•	•	-
Phase sequence relay	-	✓	✓	✓
Tropical thermostat	•	•	•	•
Freeze protection	-	•	•	-
Heavy duty air inlet filter	-	•	•	•
Fan Saver Cycle	-	•	•	•
Compressor inlet pre-filter	-	•	•	•
Wooden package	•	•	•	•
Rain protection	-	-	•	-
Lifting device	-	-	•	-
Nema 4 & Nema 4X cubicle	-	-	•	-
Central control license 4 (EQ4i) or 6 (EQ6i) machines	-	•	•	•
Elektronikon® Touch*	-	•	✓	✓
FoodGrade oil	•	•	•	•
Roto Synthetic Xtend oil	•	•	•	•
Energy recovery	-	•	•	•
Modulating control	-	-	•	-
Main power isolator switch	-	•	•	•
High ambient temperature versions (55°C/131°F for pack, 50°C/122°F for FF)	-	-	•	N/A
Dryer Save Cycle	-	-	•	•
Performance certificates	•	•	•	•

* Except on GA 30.

✓: Standard • : Optional - : Not available

Technical specifications G 15-22

Compressor type		Max. working pressure: Work Place bar(e)	Work Place psig	WorkPlace Full Feature bar(e)	WorkPlace Full Feature psig	Capacity FAD* l/s	Capacity FAD* m³/hr	Capacity FAD* cfm	Installed motor power kW	Installed motor power hp	Noise level** dB(A)	Weight*** FM kg	Weight*** FM FF kg	Weight*** TM kg	Weight*** TM FF kg
50 Hz version															
G 15	7.5	7.5	108.8	7.3	105	32.4	116.7	68.7	15	20	67	205	268	270	340
	10	10	145.0	9.8	141	29.1	104.8	61.7	15	20	67	205	268	270	340
	13	13	188.5	12.8	185	22.8	82.1	48.3	15	20	67	205	268	270	340
G 15L****	7.5	7.5	108.8	7.3	105	42.5	153.0	90.1	15	20	67	313	371	493	537
	10	10	145.0	9.8	141	38.5	138.6	81.6	15	20	67	313	371	493	537
	13	13	188.5	12.8	185	31.2	112.3	66.1	15	20	67	313	371	493	537
G 18	7.5	7.5	108.8	7.3	105	52.1	187.6	110.4	18	25	69	328	392	508	545
	10	10	145.0	9.8	141	45.1	162.4	95.6	18	25	69	328	392	508	545
	13	13	188.5	12.8	185	38.5	138.6	81.6	18	25	69	328	392	508	545
G 22	7.5	7.5	108.8	7.3	105	62.0	223.2	131.4	22	30	70	344	408	524	561
	10	10	145.0	9.8	141	54.1	194.7	114.5	22	30	70	344	408	524	561
	13	13	188.5	12.8	185	46.4	167.1	98.3	22	30	70	344	408	524	561
60 Hz version															
G 15	100	7.4	107	7.2	104	33.1	119.3	70.2	15	20	68	205	268	270	340
	125	9.1	132	8.9	129	29.6	106.7	62.8	15	20	68	205	268	270	340
	150	10.8	157	10.6	154	27.3	98.4	57.9	15	20	68	205	268	270	340
	175	12.6	182	12.3	178	23.1	83.3	49.9	15	20	68	205	268	270	340
G 15L****	100	7.4	107	7.2	104	44.0	158.4	93.2	15	20	67	313	371	493	537
	125	9.1	132	8.9	129	38.8	139.7	82.2	15	20	67	313	371	493	537
	150	10.8	157	10.6	154	37.0	133.2	78.4	15	20	67	313	371	493	537
	175	12.6	182	12.3	178	32.7	117.7	69.3	15	20	67	313	371	493	537
G 18	100	7.4	107	7.2	104	51.8	186.5	109.8	18	25	69	328	392	508	545
	125	9.1	132	8.9	129	46.9	168.8	99.4	18	25	69	328	392	508	545
	150	10.8	157	10.6	154	43.3	155.9	91.7	18	25	69	328	392	508	545
	175	12.6	182	12.3	178	39.9	143.6	84.5	18	25	69	328	392	508	545
G 22	100	7.4	107	7.2	104	60.5	217.8	128.2	22	30	70	344	408	524	561
	125	9.1	132	8.9	129	53.7	193.3	113.8	22	30	70	344	408	524	561
	150	10.8	157	10.6	154	48.6	175.0	103.0	22	30	70	344	408	524	561
	175	12.6	182	12.3	178	46.0	165.6	97.5	22	30	70	344	408	524	561

* Unit performance measured according to ISO 1217 ed. 4 2009, annex C, latest edition.
** Mean noise level measured at a distance of 1 m according to ISO 2151: 2004 using ISO 9614/2 (sound intensity method); tolerance 3 dB(A).
*** **FM:** Floor-mounted, **FM FF:** Floor-mounted Full Feature, **TM:** Tank-mounted, **TM FF:** Tank-mounted Full Feature.
**** **L = larger drivetrain. This model is part of a different series with different specifications and additional benefits: more energy savings, higher FAD, and a lower noise level.**

Reference conditions:
- Absolute inlet pressure 1 bar (14.5 psi).
- Intake air temperature 20°C/68°F.

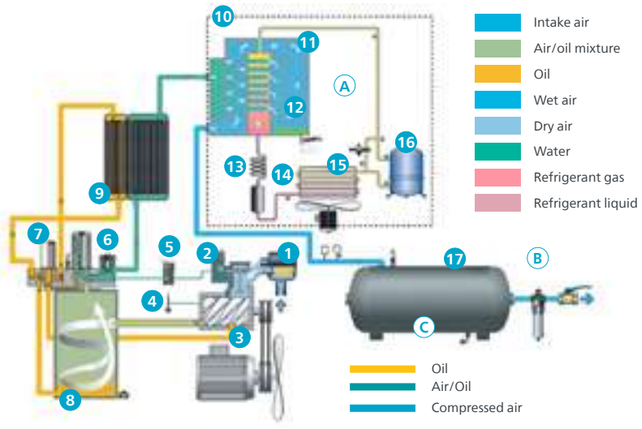
FAD is measured at the following effective working pressures:
7 bar(e), 9.5 bar(e), 12.5 bar(e)

Maximum working pressure:
13 bar(e) (188 psig)

FM Standard
L: 1130 mm, 44.5”
W: 833 mm, 32.8”
H: 1220 mm, 48.0”

FM Full Feature
L: 1280 mm, 50.4”
W: 833 mm, 32.8”
H: 1220 mm, 48.0”

TM
L: 1921 mm, 75.6”
W: 833 mm, 32.8”
H: 1832 mm, 72.1”



1 Inlet air filter
2 Inlet valve
3 Compression element
4 Temperature probe
5 Air suction solenoid valve
6 Minimum pressure valve
7 Oil separator element
8 Oil reservoir
9 Oil cooler
10 Aftercooler
11 Evaporator
12 Water separator
13 Capillary tube
14 Condenser
15 Electronic automatic drain
16 Refrigerant compressor
17 Air receiver
A Full Feature
B High efficiency air filter
C Electronic receiver drain

Technical specifications GA 15-26

Compressor type		Max. working pressure				Capacity FAD*			Installed motor power		Noise level**	Weight (kg)***			
		Work Place		WorkPlace Full Feature								FM	FM FF	TM	TM FF
		bar(e)	psig	bar(e)	psig	l/s	m³/hr	cfm	kW	hp	dB(A)	kg	kg	kg	kg
50 Hz version															
GA 15	7.5	7.5	108.8	7.3	105	46.9	168.8	99.4	15	20	67	455	529	645	718
	8.5	8.5	123.3	8.3	120	43.5	156.6	92.2	15	20	67	455	529	645	718
	10	10	145.0	9.8	141	39.3	141.5	83.3	15	20	67	455	529	645	718
	13	13	188.5	12.8	185	33.3	119.9	70.6	15	20	67	455	529	645	718
GA 18	7.5	7.5	108.8	7.3	105	59.6	214.6	126.3	18	25	68	464	559	654	749
	8.5	8.5	123.3	8.3	120	57.0	205.2	120.8	18	25	68	464	559	654	749
	10	10	145.0	9.8	141	49.5	178.5	105.0	18	25	68	464	559	654	749
	13	13	188.5	12.8	185	40.0	144.0	84.8	18	25	68	464	559	654	749
GA 22	7.5	7.5	108.8	7.3	105	65.6	236.2	139.0	22	30	69	480	575	670	765
	8.5	8.5	123.3	8.3	120	63.3	227.9	134.1	22	30	69	480	575	670	765
	10	10	145.0	9.8	141	55.3	199.1	117.2	22	30	69	480	575	670	765
	13	13	188.5	12.8	185	49.3	177.5	104.5	22	30	69	480	575	670	765
GA 26	7.5	7.5	108.8	7.3	105	72.5	260.9	153.6	26	35	70.2	490	585	680	775
	8.5	8.5	123.3	8.3	120	66.6	239.7	141.1	26	35	70.2	490	585	680	775
	10	10	145.0	9.8	141	64.3	231.4	136.2	26	35	70.2	490	585	680	775
	13	13	188.5	12.8	185	56.6	203.9	120.0	26	35	70.2	490	585	680	775
60 Hz version															
GA 15	100	7.4	107.0	7.1	103	47.6	171.4	100.9	15	20	67	455	529	645	718
	125	9.1	132.0	8.9	128	43.3	155.9	91.7	15	20	67	455	529	645	718
	150	10.8	157.0	10.6	153	40.0	144.0	84.8	15	20	67	455	529	645	718
	175	12.6	182.0	12.3	178	33.5	120.6	71.0	15	20	67	455	529	645	718
GA 18	100	7.4	107.0	7.1	103	60.3	217.1	127.8	18	25	68	464	559	654	749
	125	9.1	132.0	8.9	128	57.7	207.7	122.3	18	25	68	464	559	654	749
	150	10.8	157.0	10.6	153	49.5	178.2	104.9	18	25	68	464	559	654	749
	175	12.6	182.0	12.3	178	39.4	141.8	83.5	18	25	68	464	559	654	749
GA 22	100	7.4	107.0	7.1	103	67.2	241.9	142.4	22	30	69	480	575	670	765
	125	9.1	132.0	8.9	128	63.2	227.5	133.9	22	30	69	480	575	670	765
	150	10.8	157.0	10.6	153	60.2	216.7	127.6	22	30	69	480	575	670	765
	175	12.6	182.0	12.3	178	49.9	179.6	105.7	22	30	69	480	575	670	765
GA 26	100	7.4	107.0	7.1	103	69.1	248.8	146.4	26	35	70.3	490	585	680	775
	125	9.1	132.0	8.9	128	66.5	239.4	140.9	26	35	70.3	490	585	680	775
	150	10.8	157.0	10.6	153	63.7	229.3	135.0	26	35	70.3	490	585	680	775
	175	12.6	182.0	12.3	178	56.6	203.8	119.9	26	35	70.3	490	585	680	775

* Unit performance measured according to ISO 1217 ed. 4 2009, annex C, latest edition.
** Mean noise level measured at a distance of 1 m according to ISO 2151: 2004 using ISO 9614/2 (sound intensity method); tolerance 3 dB(A).
*** **FM:** Floor-mounted, **FM FF:** Floor-mounted Full Feature, **TM:** Tank-mounted, **TM FF:** Tank-mounted Full Feature.

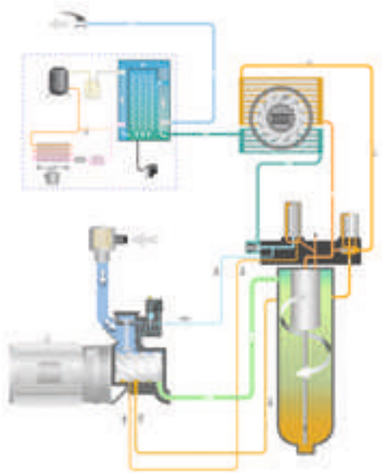
Reference conditions:
- Absolute inlet pressure 1 bar (14.5 psi).
- Intake air temperature 20°C/68°F.

FAD is measured at the following effective working pressures:
7 bar(e), 8 bar(e), 9.5 bar(e), 12.5 bar(e)

Maximum working pressure:
13 bar(e) (188 psig)

Standard
H TM: 1832 mm, 72”
H FM: 1220 mm, 48”
L TM: 1904 mm, 74”
L FM: 1280 mm, 50”
W: 833 mm, 33”

Full Feature
H TM: 1832 mm, 72”
H FM: 1220 mm, 48”
L TM: 1904 mm, 74”
L FM: 1775 mm, 69”
W: 833 mm, 33”



- Intake air
- Air/oil mixture
- Oil
- Wet compressed air
- Condensate
- Dry air
- Gaseous coolant
- Liquid coolant
- Compressed air without free water
- Dry compressed air
- Water
- Refrigerant gas/liquid mixture
- High pressure, hot refrigerant gas
- Low pressure, cool refrigerant gas
- High pressure refrigerant liquid
- Low pressure refrigerant liquid

Technical specifications GA 15-37 VSD+

Compressor type	Max. working pressure WorkPlace		Capacity FAD* min-max			Installed motor power		Noise level**	Weight (kg)	
	bar(e)	psig	l/s	m³/h	cfm	kW	hp	dB(A)	WorkPlace	WorkPlace Full Feature
GA 15 VSD+	5.5	80	7.2-42.3	25.9-152.3	15.2-89.6	15	20	64	199	288
	7	102	7.1-41.8	25.6-150.5	15.0-88.6	15	20	64	199	288
	9.5	138	6.8-35.5	24.5-127.8	14.4-75.2	15	20	64	199	288
	12.5	181	7.3-27.9	26.3-100.4	15.5-59.1	15	20	64	199	288
GA 18 VSD+	4	58	15.1-63.9	54.4-230.0	32.0-135.4	18	25	67	367	480
	7	102	14.9-62.5	53.6-225.0	31.6-132.4	18	25	67	367	480
	9.5	138	17.1-53.6	61.6-193.0	36.2-113.6	18	25	67	367	480
	12.5	181	16.4-43.5	59.0-156.6	34.7-92.2	18	25	67	367	480
GA 22 VSD+	4	58	15.3-76.9	55.1-276.8	32.4-162.9	22	30	67	363	485
	7	102	15.0-75.1	54.0-270.4	31.8-159.1	22	30	67	363	485
	9.5	138	17.3-65.2	62.3-234.7	36.7-138.2	22	30	67	363	485
	12.5	181	17.1-54.1	61.6-194.8	36.2-114.6	22	30	67	363	485
GA 26 VSD+	4	58	14.9-86.3	53.6-310.7	31.6-182.9	26	35	67	373	490
	7	102	14.5-85.5	52.2-307.8	30.7-181.2	26	35	67	373	490
	9.5	138	17.0-78.4	61.2-282.2	36.0-166.1	26	35	67	373	490
	12.5	181	16.4-64.5	59.0-232.2	34.7-136.7	26	35	67	373	490
GA 30 VSD+	4	58	15.1-98.0	54.4-352.8	32.0-207.7	30	40	67	376	500
	7	102	15.0-97.4	54.0-350.6	31.8-206.4	30	40	67	376	500
	9.5	138	17.1-85.6	61.6-308.2	36.2-181.4	30	40	67	376	500
	12.5	181	16.7-72.0	60.1-259.2	35.4-152.6	30	40	67	376	500
GA 37 VSD+	4	58	15.3-116.5	55.1-419.4	32.4-246.8	37	50	67	376	500
	7	102	14.8-115.0	53.3-414.0	31.4-243.7	37	50	67	376	500
	9.5	138	17.1-102.3	61.6-368.3	36.2-216.8	37	50	67	376	500
	12.5	181	16.4-86.7	59.0-312.1	34.7-183.7	37	50	67	376	500
GA 37L VSD+***	4	58	25.9-131.5	93.2-473.4	54.9-278.6	37	50	67	860	1060
	7	102	25.8-130.4	92.9-469.4	54.7-276.3	37	50	67	860	1060
	9.5	138	24.8-115.0	89.3-414.0	52.5-243.7	37	50	67	860	1060
	12.5	181	38.2-98.0	137.5-352.8	80.9-207.7	37	50	67	860	1060

* Unit performance measured according to ISO 1217 ed. 4 2009, annex E, latest edition.
** Mean noise level measured at a distance of 1 m according to ISO 2151: 2004 using ISO 9614/2 (sound intensity method); tolerance 3 dB(A).
***** L = larger drivetrain. This model is part of a different series with different specifications and additional benefits: more energy savings, higher FAD, and a lower noise level.**

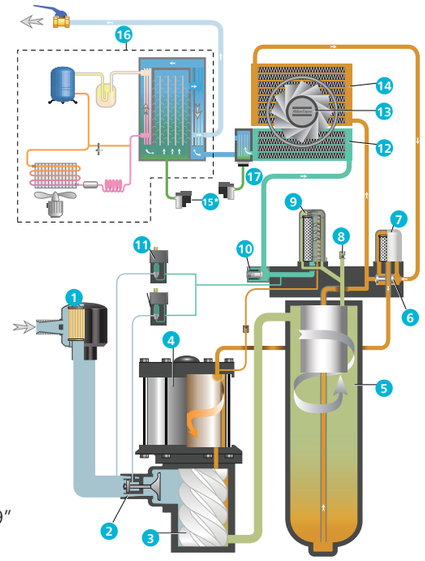
Reference conditions:
- Absolute inlet pressure 1 bar (14.5 psi).
- Intake air temperature 20°C/68°F.

FAD is measured at the following effective working pressures:
5.5 bar(e), 7 bar(e), 9.5 bar(e), 12.5 bar(e)

Maximum working pressure:
13 bar(e) (188 psig)

GA 15 VSD+ (Standard/ Full Feature)
H: 1420 mm, 56”
L: 630 mm, 25”
W: 610/985 mm, 24/39”

GA 18-37 VSD+ (Standard/ Full Feature)
H: 1590 mm, 63”
L: 780 mm, 31”
W: 811/1273 mm, 32/50”

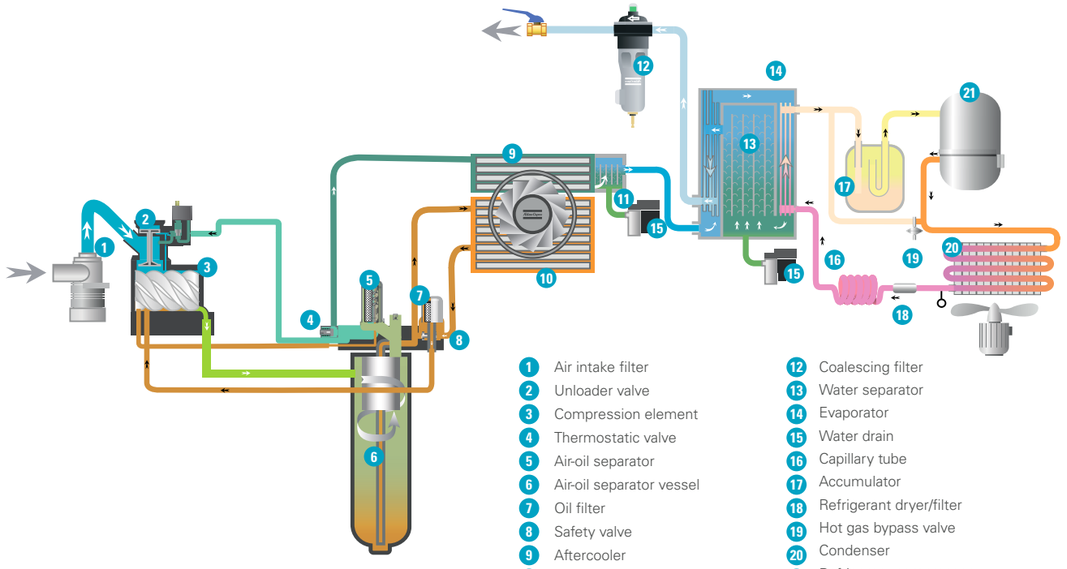


- Wet compressed air
- Condensate
- Dry compressed air
- Intake air
- Air/oil mixture
- Oil

1. Inlet filter
2. Sentinel valve
3. Screw element
4. Interior permanent magnet motor (iPM)
5. Air/oil vessel
6. Thermostatic bypass valve
7. Oil filter
8. Safety valve
9. Oil separator
10. Minimum pressure valve
11. Solenoid valve
12. After-cooler
13. Fan
14. Oil-cooler
15. Electronic drain (* mounted on after-cooler on models without dryer)
16. Dryer (Full Feature option)
17. Condensation prevention cycle

Technical specifications
GA 11⁺-30 (50 Hz version)

Compressor type		Max. working pressure				Capacity FAD*			Installed motor power		Noise level**	Weight	
		WorkPlace		WorkPlace Full Feature								WorkPlace	WorkPlace Full Feature
		bar(e)	psig	bar(e)	psig	l/s	m³/hr	cfm	kW	hp	dB(A)	kg	kg
GA 11⁺	7.5	7.5	109	7.3	105	37.2	133.9	78.8	11	15	68	411	451
	8.5	8.5	116	8.3	120	35.7	128.5	75.6	11	15	68	411	451
	10	10	145	9.8	141	32.3	116.3	68.4	11	15	68	411	451
	13	13	189	12.8	185	26.7	96.1	56.6	11	15	68	411	451
GA 15⁺	7.5	7.5	109	7.3	105	51.7	186.1	109.5	15	20	69	427	483
	8.5	8.5	116	8.3	120	46.1	166.0	97.7	15	20	69	427	483
	10	10	145	9.8	141	41.1	148.0	87.1	15	20	69	427	467
	13	13	189	12.8	185	36.9	132.8	78.2	15	20	69	427	467
GA 18⁺	7.5	7.5	109	7.3	105	62.6	225.4	132.6	18.5	25	69	428	484
	8.5	8.5	116	8.3	120	58.2	209.5	123.3	18.5	25	69	428	484
	10	10	145	9.8	141	51.3	184.7	108.7	18.5	25	69	428	484
	13	13	189	12.8	185	45.8	164.9	97.0	18.5	25	69	428	484
GA 22⁺	7.5	7.5	109	7.3	105	72.6	261.4	153.8	22	30	67	487	545
	8.5	8.5	116	8.3	120	69.7	250.9	147.7	22	30	67	487	545
	10	10	145	9.8	141	62.6	225.4	132.6	22	30	67	487	545
	13	13	189	12.8	185	55.1	198.4	116.8	22	30	67	487	545
GA 26⁺	7.5	7.5	109	7.3	105	87.2	313.9	184.8	26	35	68	490	548
	8.5	8.5	116	8.3	120	83.7	301.3	177.4	26	35	68	490	548
	10	10	145	9.8	141	76.5	275.4	162.1	26	35	68	490	545
	13	13	189	12.8	185	66.2	238.3	140.3	26	35	68	490	545
GA 30	7.5	7.5	109	7.3	105	94.0	338.4	199.2	30	40	70	509	567
	8.5	8.5	116	8.3	120	93.1	335.2	197.3	30	40	70	509	567
	10	10	145	9.8	141	86.4	311.0	183.1	30	40	70	509	567
	13	13	189	12.8	185	77.0	277.2	163.2	30	40	70	509	567



Technical specifications
GA 11⁺-30 (60 Hz version)

Compressor type		Max. working pressure				Capacity FAD*			Installed motor power		Noise level**	Weight	
		WorkPlace		WorkPlace Full Feature								WorkPlace	WorkPlace Full Feature
		bar(e)	psig	bar(e)	psig	l/s	m³/hr	cfm	kW	hp	dB(A)	kg	kg
GA 11⁺	100	7.4	107	7.2	104	39.4	141.8	83.5	11	15	68	411	451
	125	9.1	132	8.9	128	34.3	123.5	72.7	11	15	68	411	451
	150	10.8	157	10.6	153	30.4	109.4	64.4	11	15	68	411	451
	175	12.6	183	12.3	179	26.1	94.0	55.3	11	15	68	411	451
GA 15⁺	100	7.4	107	7.2	104	51.9	186.8	110.0	15	20	69	427	483
	125	9.1	132	8.9	128	46.1	166.0	97.7	15	20	69	427	483
	150	10.8	157	10.6	153	40.5	145.8	85.8	15	20	69	427	467
	175	12.6	183	12.3	179	36.0	129.6	76.3	15	20	69	427	467
GA 18⁺	100	7.4	107	7.2	104	63.6	229.0	134.8	18.5	25	69	428	484
	125	9.1	132	8.9	128	56.6	203.8	119.9	18.5	25	69	428	484
	150	10.8	157	10.6	153	51.2	184.3	108.5	18.5	25	69	428	484
	175	12.6	183	12.3	179	45.3	163.1`	96.0	18.5	25	69	428	484
GA 22⁺	100	7.4	107	7.2	104	73.8	265.7	156.4	22	30	67	487	545
	125	9.1	132	8.9	128	69.2	249.1	146.6	22	30	67	487	545
	150	10.8	157	10.6	153	63.0	226.8	133.5	22	30	67	487	545
	175	12.6	183	12.3	179	58.1	209.2	123.1	22	30	67	487	545
GA 26⁺	100	7.4	107	7.2	104	85.3	307.1	180.7	26	35	68	490	548
	125	9.1	132	8.9	128	80.6	290.2	170.8	26	35	68	490	548
	150	10.8	157	10.6	153	72.7	261.7	154.0	26	35	68	490	545
	175	12.6	183	12.3	179	66.1	238.0	140.1	26	35	68	490	545
GA 30	100	7.4	107	7.2	104	93.8	337.7	198.8	30	40	70	509	567
	125	9.1	132	8.9	128	90.4	325.4	191.5	30	40	70	509	567
	150	10.8	157	10.6	153	83.7	301.3	177.4	30	40	70	509	567
	175	12.6	183	12.3	179	75.8	272.9	160.6	30	40	70	509	567

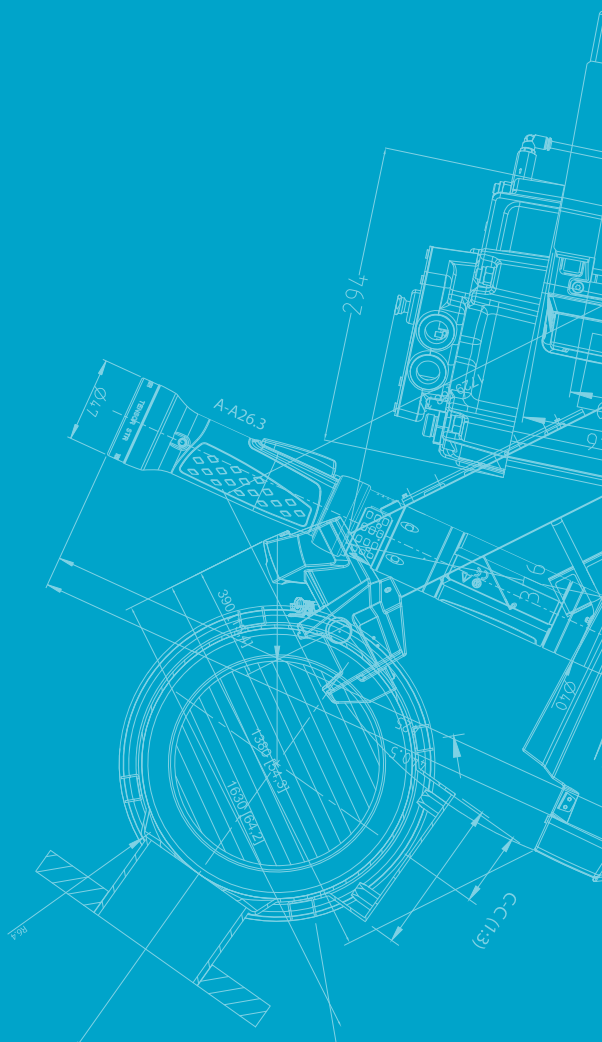
* Unit performance measured according to ISO 1217, Annex C, latest edition.
** Mean noise level measured according to ISO 2151/Pneuro/Cagi PN8NTC2 test code; tolerance 2 dB(A).

Reference conditions:
- Absolute inlet pressure 1 bar (14.5 psi)
- Intake air temperature 20°C, 68°F

FAD is measured at the following working pressures:
- 7.5 bar versions at 7 bar
- 8 bar versions at 8 bar
- 10 bar versions at 9.5 bar
- 13 bar versions at 12.5 bar

Pressure dewpoint of integrated refrigerant dryer of GA 11⁺ - GA 15⁺ - GA 18⁺ - GA 22⁺ - GA 26⁺ - GA 30 at reference conditions 2°C to 3°C, 36°F to 37°F.

Dimensions



LLOYD'S REGISTER · LRQA
ISO 9001 • ISO 14001
OHSAS 18001

Atlas Copco

atlascopco.com

EWD

ATLAS COPCO QUALITY AIR SOLUTIONS

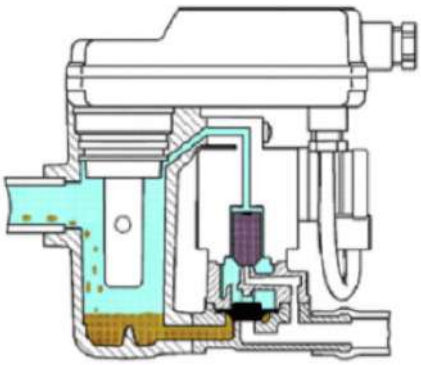
General Description

Atlas Copco's range of EWD electronically controlled condensate drains is synonymous with safe, dependable and economical condensate management.

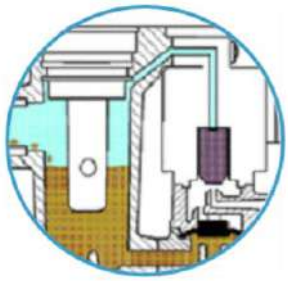
The intelligent drain function monitors condensate build-up with liquid level sensors and evacuates the condensate only when necessary, thereby avoiding compressed air waste and providing for considerable energy savings.

The EWD drain device offers security and confidence, enabling you to solve all condensate discharge problems even in heavily contaminated systems.

A wide range of EWD drains is available for oil-contaminated condensate and may be provided with additional hard coating for use with oil-free and aggressive condensate.



Working Principle



Condensate enters the drain and collects in sump. The diaphragm valve is closed due to the solenoid valve allowing pressure compensation through the pilot supply line. The pressurised space above the diaphragm is larger than that below it, ensuring and absolutely leak proof seal. As the condensate drains away, the level probe monitors the speed at which the level drops, calculating exactly when to shut the diaphragm, so that no air escapes. If there should be a blockage on the outlet or faulty diaphragm, the drain switched to “fault mode”. Both the flashing alarm light and the volt free contact are activated. The drain switches to a “timer mode” until the situation is solved.

Scope of Supply

- Led Display
- Alarm
- Electronics component
- Flexible pipe inlet
- Non wearing capacitive sensor
- IP 64 Nema 13 protection

Features & Benefits

Energy Savings

- Energy efficient
    - Absolutely no waste of compressed air

Reliable operation

- Proven durable design
    - No moving parts
    - Wide drain way passage

Easy set-up and use

- Operational ease
    - LED display and alarms work together to make daily operations as hands off as possible
    - Electronic control ensures reliable performance
    - Plug and play set up

Compressed air filters

COMMITTED TO SUPERIOR PRODUCTIVITY

In-house development & testing

Since 1998, our dedicated filtration team is responsible for in-house development of cutting-edge filtration solutions. This results in expert know-how of filtration mechanisms, state-of-the-art test facilities and breakthrough innovations. For many years, our filtration team has cooperated closely with the University of Karlsruhe, a leading institute in research of filtration mechanisms.

Rigorous quality control

To ensure the highest standards, all Atlas Copco products are subjected to rigorous quality control testing. The entire filter range is produced in-house, on the most advanced production lines, using the most stringent methods in the industry. You can rest assured at all times that strict certification and testing procedures are conducted to ensure our filtration products meet the highest standards.

THE ATLAS COPCO SOLUTION

Compressed air can be contaminated by dirt, water and oil, which can be further divided as follows:

- **DIRT**: micro-organisms, dust, solid particles, rust particles.
- **WATER**: water vapor, condensed liquid water, water aerosols, acidic condensates.
- **OIL**: liquid oil, oil aerosol, hydrocarbon vapor.

Atlas Copco offers a wide selection of filtration solutions and application knowledge. Different product types and grades are available to meet your every demand. Only genuine spare cartridges guarantee the Atlas Copco filter performance.

Welded design
6 grades
12 sizes
550 → 8,000 l/s
1,200 → 17,000 cfm

Cast design
6 grades
13 sizes
9 → 550 l/s
19 → 1,200 cfm

850 → 1,100 l/s
1,801 → 2,331 cfm

Tower design
1 grade
14 sizes
20 → 1800 l/s
42 → 3814 cfm

20 bar / 290 psi
50 bar / 725 psi
100 bar / 1,450 psi
350 bar / 5,075 psi

Threaded design
5 grades
9 sizes
15 → 944 l/s
32 → 2,000 cfm

Threaded design
5 grades
11 sizes
9 → 520 l/s
19 → 1,102 cfm

Threaded design
1grade
10 sizes
400 → 6,700 l/min
14 → 237 cfm

Name	DDp+	PDp+	DD+	PD+	UD+	QD+	QDT	H High pressure			SFA Silicone-free			MV Medical vacuum
	DDp	PDp	DD	PD		QD								
Grade	Rough	Fine	Rough	Fine	Ultimate	Basic	Optimal	Rough & Fine	Rough & Fine	Basic	Rough & Fine	Rough & Fine	Basic	Fine
Contaminant	Dry dust		Oil aerosol / wet dust			Oil vapor								Dry dust
	General applications							Special applications						

Dry dust	Micro-organisms	Oil aerosol	Wet dust	Oil vapor	Water drops

CERTIFIED PERFORMANCE

Atlas Copco filters are qualified according to the ISO 8573-1:2010 standard. This is the latest edition of the standard. Beware of filters that comply with earlier editions, such as ISO 8573-1:1991 or ISO 8573-1:2001. The difference is inferior quality of the delivered compressed air. This qualification is a result of our filters being tested according to ISO 12500-1:2007, ISO 12500-2:2007, and ISO 12500-3:2009. These specify the test layout, test procedures and inlet conditions required for testing coalescing filters, vapor filters, and solid particle filters used in compressed air systems, to determine their effectiveness in removing oil aerosol, oil vapor and solid particles. The measurements of the air purity downstream the filter for each specific contaminant have been performed according to the test methods described in respectively ISO 8573-2:2007, ISO 8573-5:2001 and ISO 8573-4:2001. Tests have been conducted in-house as well as in external labs, and are independently validated by TÜV.

ISO certification

Atlas Copco's filters have been fully tested and qualified according to the following ISO standards:

- ISO 8573-1:2010: Compressed air - Contaminants and purity classes
- ISO 8573-2:2007: Compressed air - Test method for oil aerosol content
- ISO 8573-4:2001: Compressed air - Test method for dust
- ISO 8573-5: 2001: Compressed air - Test method for oil vapor and organic solvent content
- ISO 12500-1:2007: Filters for compressed air - test methods - oil aerosols
- ISO 12500-2:2007: Filters for compressed air - test methods - oil vapors
- ISO 12500-3:2009: Filters for compressed air - test methods - particulates

Certified peace of mind

FILTER APPROVALS

CE ASME CRN

COMPANY CERTIFICATION

ACTIVE MEMBER OF

pneurop CAGI bcas VDMA

A SOLUTION FOR EVERY APPLICATION

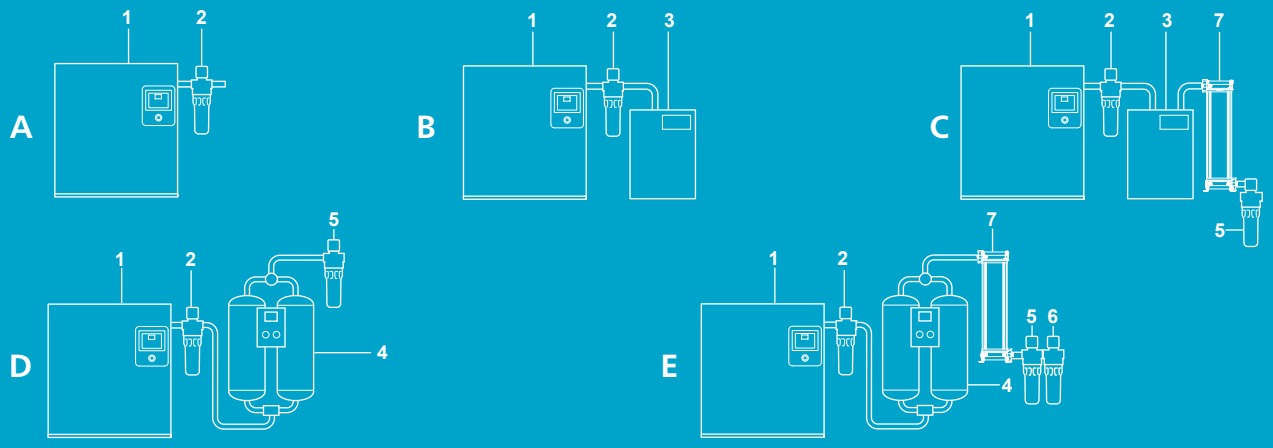
At different points of use, different compressed air purities might be needed, depending on the application. The various air purity classes are provided in the table below, which clearly shows the various Atlas Copco filters and dryers that meet all the different classes.

ISO 8573-1:2010 CLASS	Solid particles		Water	Oil (= aerosol, liquid, vapor)
	Wet conditions	Dry conditions		
0	As specified by the customer*			Oil-free compressor
1	DD+ & PD+	DDp+ & PDp+	Desiccant dryer	DD+ & PD+ & QD+/QDT
	UD+			UD+ & QD+/QDT
2	DD+	DDp+	Desiccant dryer	DD+ & PD+
				UD+
3	DD+	DDp+	Desiccant dryer, membrane dryer, rotary drum dryer	DD+
4	DD+	DDp+	Membrane dryer, refrigerant dryer	DD+
5	DD+	DDp+	Membrane dryer, refrigerant dryer	-
6	-	-	Membrane dryer, refrigerant dryer	-

* Please contact your Atlas Copco sales representative.

Examples of typical installations

A	Compressor - UD+	Air purity class ISO 8573-1:2010 [1:-:2]
B	Compressor - UD+ - Refrigerant dryer	Air purity class ISO 8573-1:2010 [1:4:2]*
C	Compressor - UD+ - Refrigerant dryer - QDT - DDp+	Air purity class ISO 8573-1:2010 [2:4:1]
D	Compressor - UD+ - Desiccant dryer - DDp+	Air purity class ISO 8573-1:2010 [2:2:2]
E	Compressor - UD+ - Desiccant dryer - QDT - DDp+ - PDp+	Air purity class ISO 8573-1:2010 [1:2:1]



1. Compressor
2. UD+ filter
3. Refrigerant dryer
4. Desiccant dryer
5. DDp+ filter
6. PDp+ filter
7. QDT filter

* Particle class 1 is reached directly after UD+. As downstream piping & vessels can add particles, it is advised to install particle filters DDp+ and PDp+ just before the application to reach particle class 1 at point of use.

The compressor should be equipped with a liquid water separation system such as an after cooler including a drain or a water separator (WSD). Always install a water separator in front of a coalescence filter. In case of critical applications, install extra air treatment products at point of use for the removal of pipeline contamination and condensation.

UD+ SERIES

Two-in-one oil coalescing filters with supreme energy savings

UD+ filters efficiently reduce oil aerosol, wet dust and water drops in your compressed air stream to protect your investment, equipment and processes. The UD+ combines two filtration steps (DD+ and PD+) into one, a unique technology to meet the high-quality requirements of diverse applications and provide ultimate energy savings.

YOUR BENEFITS

40% energy savings
A 40% lower pressure drop than the conventional filter combination results in 40% higher energy efficiency.

Pure air
Air purity is equal to that obtained using two filters in line, thanks to the thick filter package of UD+ filters.

Save space
The two-in-one filtration concept reduces installation space and complexity, making UD+ filters particularly suitable for applications where space is at a premium.

Save money
Install UD+ filters to enjoy significant cost savings compared to conventional filters.

Performance

	UD+
Contaminant	Oil aerosol/wet dust
Test method	ISO 8573-2:2007, ISO 12500-1:2007
Maximum oil carry-over (mg/m^3)*	0.0009
Wet pressure drop (mbar)	245
Element service	After 4,000 operating hours or 1 year
Precede with	Water separation

* Inlet oil concentration = 10 mg/m^3. Oil = oil aerosol and liquid.

Sizing & dimensions

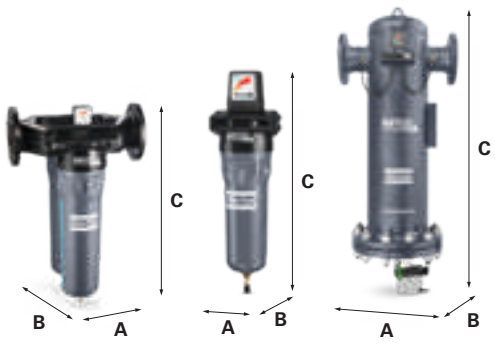
FILTER SIZE UD+	Nominal capacity		Reference pressure		Maximum pressure		Connections	Dimensions						Free space for cartridge replacement		Weight	
								A		B		C		D			
	l/s	cfm	bar(e)	psig	bar(e)	psig	in	mm	in	mm	in	mm	in	mm	in	kg	lbs
9+	9	19	7	102	16	232	3/8	90	3.5	61	2.4	268	10.6	75	2.9	1.0	2.2
15+	15	32	7	102	16	232	1/2	90	3.5	61	2.4	268	10.6	75	2.9	1.1	2.4
25+	25	53	7	102	16	232	1/2	90	3.5	61	2.4	323	12.8	75	2.9	1.3	2.9
45+	45	95	7	102	16	232	3/4 & 1	110	4.3	99	3.9	374	14.7	75	2.9	1.6	4.2
60+	60	127	7	102	16	232	1	110	4.3	99	3.9	414	16.3	75	2.9	2.1	4.6
100+	100	212	7	102	16	232	1	140	5.5	105	4.0	425	16.7	100	3.9	3.7	8.2
140+	140	297	7	102	16	232	1-1/2	140	5.5	105	4.1	520	20.5	100	3.9	4.2	9.3
180+	180	381	7	102	16	232	1-1/2	140	5.5	105	4.1	603	23.7	100	3.9	4.5	9.9
220+	220	466	7	102	16	232	1-1/2	140	5.5	105	4.1	603	23.7	100	3.9	4.6	10.1
310+	310	657	7	102	16	232	2 & 2-1/2	179	7.1	121	4.8	689	27.1	150	5.9	6.9	15.2
425+	425	901	7	102	16	232	3	210	8.3	128	5.1	791	31.1	200	7.9	11.0	24.2
550+	550	1165	7	102	16	232	3	210	8.3	128	5.1	961	37.8	200	7.9	12.6	27.8
550+F	550	1165	7	102	16	232	DN80	370	14.6	280	11.0	1295	51.0	1375	54.1	76.0	167.6
850+T	850	1.801	7	102	16	232	DN100	510	20.1	418	16.5	796	31.3	200	7.9	35.2	77.6
850+F	850	1801	7	102	16	232	DN100	510	20.1	410	16.1	1360	53.5	1500	59.1	141.0	310.9
1100+T	1.100	2.331	7	102	16	232	DN100	510	20.1	418	16.5	966	38.0	200	7.9	37.4	82.4
1100+F	1100	2331	7	102	16	232	DN100	510	20.1	410	16.1	1360	53.5	1500	59.1	143.0	315.3
1400+F	1400	2967	7	102	16	232	DN150	620	24.4	485	19.1	1480	58.3	1560	61.4	210.0	463.0
1800+F	1800	3814	7	102	16	232	DN150	640	25.2	490	19.3	1555	61.2	1640	64.6	176.0	388.0
2200+F	2200	4662	7	102	16	232	DN150	640	25.2	490	19.3	1555	61.2	1640	64.6	178.0	392.4
3000+F	3000	6357	7	102	16	232	DN200	820	32.3	650	17.7	1745	68.7	1710	67.3	420.0	925.9
4000+F	4000	8476	7	102	16	232	DN200	820	32.3	650	17.7	1745	68.7	1710	67.3	428.0	943.6
5000+F	5000	10595	7	102	16	232	DN200	820	32.3	650	17.7	1745	68.7	1710	67.3	432.0	952.4
6000+F	6000	12714	7	102	16	232	DN250	920	36.2	815	32.1	2085	82.1	1625	64.0	671.0	1479.3
7000+F	7000	14833	7	102	16	232	DN250	920	36.2	815	32.1	2085	82.1	1625	64.0	675.0	1488.1
8000+F	8000	16952	7	102	16	232	DN300	1040	40.9	930	36.6	2070	81.5	1625	64.0	900.0	1984.2

Correction factors

Inlet pressure (bar)	1	2	3	4	5	6	7	8	10	12	14	16
Inlet pressure (psig)	15	29	44	58	72.5	87	102	116	145	174	203	232
Correction factor	0.38	0.53	0.65	0.75	0.83	0.92	1.00	1.06	1.20	1.31	1.41	1.50

Example

- Working pressure 3 bar(g), compressed air flow 35 l/s.
- Multiply the nominal capacity of the selected filter with the corresponding correction factor at the required working pressure to obtain the capacity at working pressure:
  - Size 45+: 45 l/s * 0.65 = 29 l/s => the 45+ filter size is not large enough.
  - Size 60+: 60 l/s * 0.65 = 39 l/s => the 60+ filter size is the size to select.



850+T & 1100+T | 9+ – 550+ | 550+F – 8000+F

Options

- Filter connection kit for easy mounting in series (9-550 l/s).
- Wall mounting kit simplifies installation (9-550 l/s).
- Quick coupling connects the filter with a drain or oil/water separator.
- Voltage-free contact mounted in the differential pressure gauge, to give remote indication of cartridge replacement.
- EWD electronic drain with no loss of compressed air and an alarm function (EWD is optional on size 9⁺ - 550⁺, 850⁺T and 1100⁺T; standard on size 550⁺F and larger).

Wall mounting kit

Certification

- ISO 8573-2:2007
- ISO 12500-1:2007

DD(+)/PD(+) SERIES

High performance oil coalescing filters

DD(+) and PD(+) filters efficiently reduce oil aerosol, wet dust and water drops in your compressed air stream. These could come from the lubrication of the compressor element, the intake air, and the compressor installation itself. These innovative filtration solutions are engineered to cost-effectively provide the best air purity and meet today's increasing quality demands.

YOUR BENEFITS

Maximum oil aerosol, wet dust and water droplet filtration and drainage
High-efficient glass fiber and foam media.

Significant energy savings & limited system operating costs
Optimal design and filter media allow low pressure losses.

High reliability
High-performance stainless steel cores, double O-rings, epoxy sealed caps, and anti-corrosive coated filter housing.

Easy maintenance
External ribs on the threaded housing, or a rotating bottom cover for the welded housings, and push-on elements.

Monitoring of energy use
Differential pressure indication (indicator for sizes 10-35 l/s, gauge for sizes 50-8000 l/s) (optional for standard range).

Performance

	DD	PD	DD+	PD+
Contaminant	Oil aerosol/wet dust			
Test method	ISO 8573-2:2007, ISO 12500-1:2007			
Maximum oil carry-over (mg/m^3)*	0.1*	0.01*	0.07*	0.008*
Wet pressure drop (mbar)	245	280	180	215
Element service	After 4,000 operating hours or 1 year			
Precede with	Water separation	Water separation DD	Water separation	Water separation DD+

* Inlet oil concentration = 10 mg/m^3. Oil = oil aerosol and liquid.

Sizing & dimensions

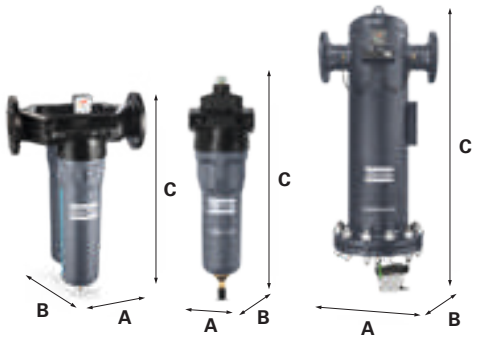
FILTER SIZE DD/PD		Nominal capacity				Reference pressure		Maximum pressure		Connections	Dimensions						Free space for cartridge replacement		Weight	
		Standard		+							A		B		C		D			
Standard	+	l/s	cfm	l/s	cfm	bar(e)	psig	bar(e)	psig	in	mm	in	mm	in	mm	in	mm	in	kg	lbs
12	10+	12	25	10	21	7	102	16	232	3/8	90	3.5	61	2.4	268	10.6	75	2.9	1.0	2.2
25	20+	25	53	20	42	7	102	16	232	1/2	90	3.5	61	2.4	268	10.6	75	2.9	1.1	2.4
45	35+	45	95	35	74	7	102	16	232	1/2	90	3.5	61	2.4	323	12.7	75	2.9	1.3	2.9
65	50+	65	138	50	106	7	102	16	232	3/4 & 1	110	4.3	99	3.9	374	14.7	75	2.9	1.6	4.2
90	70+	90	191	70	148	7	102	16	232	1	110	4.3	99	3.9	414	16.3	75	2.9	2.1	4.6
160	130+	160	339	130	275	7	102	16	232	1-1/2	140	5.5	105	4.1	520	20.5	100	3.9	4.2	9.3
215	170+	215	456	170	360	7	102	16	232	1-1/2	140	5.5	105	4.1	603	23.7	100	3.9	4.5	9.9
265	210+	265	562	210	445	7	102	16	232	1-1/2	140	5.5	105	4.1	603	23.7	100	3.9	4.6	10.1
360	310+	360	763	310	657	7	102	16	232	2 & 2-1/2	179	7.0	121	4.8	689	27.1	150	5.9	6.9	15.2
525	425+	525	1112	425	901	7	102	16	232	3	210	8.3	128	5.0	791	31.1	200	7.9	11.0	24.2
690	550+	690	1462	550	1165	7	102	16	232	3	210	8.3	128	5,0	961	37.9	200	7.9	12.6	27.8
630F	550+F	630	1335	550	1165	7	102	16	232	DN80	370	14.6	280	11	1295	51.0	1375	54.1	76.0	167.6
-	850+T	-	-	850	1801	7	102	16	232	DN100	510	20.1	418	16.5	796	31.3	200	7.9	35.2	77.6
970F	850+F	970	2055	850	1801	7	102	16	232	DN100	510	20.1	410	16.1	1360	53.5	1500	59.1	141.0	310.9
-	1100+T	-	-	1100	2331	7	102	16	232	DN100	510	20.1	418	16.5	966	38.0	200	7.9	37.4	82.4
1260F	1100+F	1260	2670	1100	2331	7	102	16	232	DN100	510	20.1	410	16.1	1360	53.5	1500	59.1	143.0	415.3
1600F	1400+F	1600	3390	1400	2967	7	102	16	232	DN150	620	24.4	485	19.1	1480	58.3	1560	61.4	210.0	463.0
2200F	1800+F	2200	4662	1800	3814	7	102	16	232	DN150	640	25.2	490	19.3	1555	61.2	1640	64.6	176.0	388,0
2400F	2200+F	2400	5086	2200	4662	7	102	16	232	DN150	640	25.2	490	19.3	1555	61.2	1640	64.6	178.0	392.4
3600F	3000+F	3600	7628	3000	6357	7	102	16	232	DN200	820	32.3	650	25.6	1745	68.7	1710	67.3	420.0	925.9
-	4000+F	-	-	4000	8476	7	102	16	232	DN200	820	32.3	650	25.6	1745	68.7	1710	67.3	428.0	943.6
-	5000+F	-	-	5000	10595	7	102	16	232	DN200	820	32.3	650	25.6	1745	68.7	1710	67.3	432.0	952.4
-	6000+F	-	-	6000	12714	7	102	16	232	DN250	920	32.3	815	32.1	2085	80.3	1625	64	671.0	1479.3
-	7000+F	-	-	7000	14833	7	102	16	232	DN250	920	36.2	815	32.1	2085	82.1	1625	64	675.0	1488.1
-	8000+F	-	-	8000	16952	7	102	16	232	DN300	1040	40.9	930	36.6	2070	81.5	1625	64	900.0	1984.2

Correction factors

Inlet pressure (bar)	1	2	3	4	5	6	7	8	10	12	14	16
Inlet pressure (psig)	15	29	44	58	72.5	87	102	116	145	174	203	232
Correction factor	0.38	0.53	0.65	0.75	0.83	0.92	1.00	1.06	1.20	1.31	1.41	1.50

Example

- Working pressure 3 bar(g), compressed air flow 35 l/s.
- Multiply the nominal capacity of the selected filter with the corresponding correction factor at the required working pressure to obtain the capacity at working pressure:
  - Size 50+: 50 l/s * 0.65 = 33 l/s => the 50+ filter size is not large enough.
  - Size 70+: 70 l/s * 0.65 = 46 l/s => the 70+ filter size is the size to select.



850+T & 1100+T | 9+ – 550+ | 550+F – 8000+F

Options

- Filter connection kit for easy mounting in series (10+ - 550+ l/s and 12-690 l/s).
- Wall-mounting kit simplifies installation (10+ - 550+ l/s and 12-690 l/s).
- Quick coupling connects the filter with a drain or oil/water separator.
- Voltage-free contact mounted in the differential pressure gauge, to give remote indication of cartridge replacement.
- EWD electronic drain with no loss of compressed air and an alarm function (EWD is optional on sizes 10+ - 550+ l/s and 12-690 l/s; standard on sizes ≥550F).


EWD electronic drain

Certification

- ISO 8573-2:2007
- ISO 12500-1:2007

DDp(+)/PDp(+) SERIES

Optimal dry dust filtration

DDp(+) and PDp(+) filters efficiently prevent dust, particulates and micro-organisms arising from corrosion, dirt and adsorption material from entering your compressed air stream. These innovative filtration solutions are engineered to cost-effectively provide the best air purity and meet today's increasing quality demands.

YOUR BENEFITS

Maximum dirt, solid particles, micro-organisms and rust particles removal
High-efficient glass fiber and foam media.

Significant energy savings & limited system operating costs
Optimal design and filter media allow for low pressure losses.

High reliability
High-performance stainless steel cores, double O-rings, epoxy sealed caps, and anti-corrosive coated filter housing.

Easy maintenance
External ribs on the threaded housing, or a rotating bottom cover for the welded housings, and push-on elements.

Monitoring of energy use
Differential pressure indication (indicator for sizes 10-35 l/s, gauge for sizes 45-8000 l/s) (optional for standard range).

Performance

	DDp	PDp	DDp+	PDp+
Contaminant	Dry dust			
Test method	ISO 8573-4:2001, ISO 12500-3:2009			
Particle removal efficiency (% at MPPS)	99.81	99.97	99.92	99.98
Dry pressure drop (mbar)	135	150	85	100
Element service	After 4,000 operating hours or 1 year or 350 mbar pressure drop			
Precede with	Dryer	Dryer DDp	Dryer	Dryer DDp+

Sizing & dimensions

FILTER SIZE DDp/PDp		Nominal capacity				Reference pressure		Maximum pressure		Connections	Dimensions						Free space for cartridge replacement		Weight	
		Standard		+							A		B		C		D			
Standard	+	l/s	cfm	l/s	cfm	bar(e)	psig	bar(e)	psig	in	mm	in	mm	in	mm	in	mm	in	kg	lbs
12	10+	12	25	10	21	7	102	16	232	3/8	90	3.5	61	2.4	268	10.6	75	2.9	1.0	2.2
25	20+	25	53	20	42	7	102	16	232	1/2	90	3.5	61	2.4	268	10.6	75	2.9	1.1	2.4
45	35+	45	95	35	74	7	102	16	232	1/2	90	3.5	61	2.4	323	12.7	75	2.9	1.3	2.9
65	50+	65	138	50	106	7	102	16	232	3/4 & 1	110	4.3	99	3.9	374	14.7	75	2.9	1.6	4.2
90	70+	90	191	70	148	7	102	16	232	1	110	4.3	99	3.9	414	16.3	75	2.9	2.1	4.6
160	130+	160	339	130	275	7	102	16	232	1-1/2	140	5.5	105	4.1	520	20.5	100	3.9	4.2	9.3
215	170+	215	456	170	360	7	102	16	232	1-1/2	140	5.5	105	4.1	603	23.7	100	3.9	4.5	9.9
265	210+	265	562	210	445	7	102	16	232	1-1/2	140	5.5	105	4.1	603	23.7	100	3.9	4.6	10.1
360	310+	360	763	310	657	7	102	16	232	2 & 2-1/2	179	7.0	121	4.8	689	27.1	150	5.9	6.9	15.2
525	425+	525	1112	425	901	7	102	16	232	3	210	8.3	128	5.0	791	31.1	200	7.9	11.0	24.2
690	550+	690	1462	550	1165	7	102	16	232	3	210	8.3	128	5,0	961	37.9	200	7.9	12.6	27.8
630F	550+F	630	1335	550	1165	7	102	16	232	DN80	370	14.6	280	11	1295	51.0	1375	54.1	76.0	167.6
-	850+T	-	-	850	1801	7	102	16	232	DN100	510	20.1	418	16.5	796	31.3	200	7.9	35.2	77.6
970F	850+F	970	2055	850	1801	7	102	16	232	DN100	510	20.1	410	16.1	1360	53.5	1500	59.1	141.0	310.9
-	1100+T	-	-	1100	2331	7	102	16	232	DN100	510	20.1	418	16.5	966	38.0	200	7.9	37.4	82.4
1260F	1100+F	1260	2670	1100	2331	7	102	16	232	DN100	510	20.1	410	16.1	1360	53.5	1500	59.1	143.0	415.3
1600F	1400+F	1600	3390	1400	2967	7	102	16	232	DN150	620	24.4	485	19.1	1480	58.3	1560	61.4	210.0	463.0
2200F	1800+F	2200	4662	1800	3814	7	102	16	232	DN150	640	25.2	490	19.3	1555	61.2	1640	64.6	176.0	388,0
2400F	2200+F	2400	5086	2200	4662	7	102	16	232	DN150	640	25.2	490	19.3	1555	61.2	1640	64.6	178.0	392.4
3600F	3000+F	3600	7628	3000	6357	7	102	16	232	DN200	820	32.3	650	25.6	1745	68.7	1710	67.3	420.0	925.9
-	4000+F	-	-	4000	8476	7	102	16	232	DN200	820	32.3	650	25.6	1745	68.7	1710	67.3	428.0	943.6
-	5000+F	-	-	5000	10595	7	102	16	232	DN250	820	32.3	650	25.6	1745	68.7	1710	67.3	432.0	952.4
-	6000+F	-	-	6000	12714	7	102	16	232	DN250	920	32.3	815	32.1	2085	80.3	1625	64	671.0	1479.3
-	7000+F	-	-	7000	14833	7	102	16	232	DN300	920	36.2	815	32.1	2085	82.1	1625	64	675.0	1488.1
-	8000+F	-	-	8000	16952	7	102	16	232	DN300	1040	40.9	930	36.6	2070	81.5	1625	64	900.0	1984.2

Correction factors

Inlet pressure (bar)	1	2	3	4	5	6	7	8	10	12	14	16
Inlet pressure (psig)	15	29	44	58	72.5	87	102	116	145	174	203	232
Correction factor	0.38	0.53	0.65	0.75	0.83	0.92	1.00	1.06	1.20	1.31	1.41	1.50

Example

- Working pressure 3 bar(g), compressed air flow 35 l/s.
- Multiply the nominal capacity of the selected filter with the corresponding correction factor at the required working pressure to obtain the capacity at working pressure:
  - Size 50+: 50 l/s * 0.65 = 33 l/s => the 50+ filter size is not large enough.
  - Size 70+: 70 l/s * 0.65 = 46 l/s => the 70+ filter size is the size to select.

850+T & 1100+T | 9+ – 550+ | 550+F – 8000+F

Options

- Filter connection kit for easy mounting in series (10+ - 550+ l/s and 12-690 l/s).
- Wall-mounting kit simplifies installation (10+ - 550+ l/s and 12-690 l/s).
- Voltage-free contact mounted in the differential pressure gauge, to give remote indication of cartridge replacement.

Certification

- ISO 8573-4:2001
- ISO 12500-3:2009

Voltage-free contact

QDT SERIES

Activated carbon towers for optimal oil vapor filtration

The high efficiency activated carbon tower is capable of removing hydrocarbons, odors and oil vapor from compressed air.
The activated carbon will, by the use of adsorption, reduce the residual oil content to lower than 0.003 mg/m³.
The pressure drop is low and stays minimal during the filter's lifetime.

YOUR BENEFITS

Maximum oil vapor removal
Superb activated carbon material.

Low pressure drop
Optimal internal flow path.

High reliability
Robust design and optimal filter material.

Options
- Oil indicator ensures pure air.
- Wall mounting kit for easy installation (20 – 185 l/s).

Certification
ISO 8573-5:2001

Performance

	QDT
Contaminant	Oil vapor
Test method	ISO 8573-5:2001, ISO 12500-2:2007
Maximum oil carry-over (mg/m³)*	0.003
Dry pressure drop (mbar)	125 (QDT 20-310) 72 (QDT 425-1800)
Element service	After 4,000 operating hours or 1 year
Precede with	Water separation UD+ or DD+/PD+ Dryer

* After UD+ or DD+/PD+ with inlet oil concentration of 10 mg/m³.

Sizing & dimensions

FILTER SIZE QDT	Nominal capacity		Connections G or NPT threaded	Dimensions						Weight	
				A		B		C			
	l/s	cfm	DIN or ANSI flanged	mm	in	mm	in	mm	in	kg	lbs
20	20	42	1/2"	490	19	223	9	190	7	10	22
45	45	95	1"	715	28	223	9	190	7	15	33
60	60	127	1"	840	33	223	9	190	7	18	40
95	95	210	1"	715	28	387	15	190	7	29	64
125	125	265	1 1/2"	840	33	387	15	190	7	34	75
150	150	318	1 1/2"	715	28	551	22	190	7	42	93
185	185	392	1 1/2"	840	33	551	22	190	7	50	110
245	245	519	1 1/2"	840	33	715	28	190	7	67	148
310	310	657	1 1/2"	840	33	879	35	190	7	84	185
425	425	901	DN80 / 3"	2148	85	710	28	600	24	264	581
550	550	1165	DN80 / 3"	2190	86	710	28	670	26	302	664
850	850	1801	DN100 / 4"	2320	91	724	29	805	32	391	860
1100	1100	2331	DN100 / 4"	2450	97	934	37	820	32	602	1324
1800	1800	3814	DN150 / 6"	2612	103	1046	41	980	39	882	1940

Correction factors

For other compressed air inlet temperatures, please multiply the filter capacity by the following correction factor (Kt):

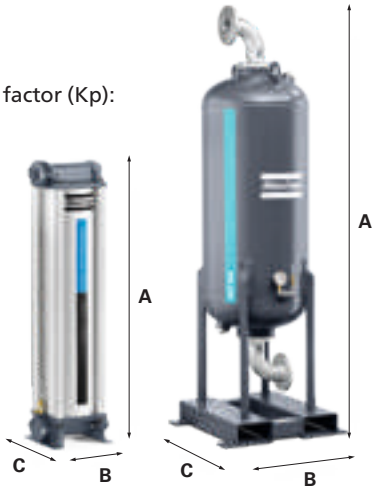
Inlet temperature °C	20	25	30	35	40	45	50	55	60
Inlet temperature °F	68	77	96	95	104	113	122	131	140
Correction factor	1	1	1	1	0.85	0.67	0.59	0.48	0.42

For other compressed air inlet pressures, please multiply the filter capacity by the following correction factor (Kp):

Inlet pressure bar	3	4	5	6	7	8	9	10	11	12	13
Inlet pressure psi	44	58	73	87	102	116	131	145	160	174	193
Correction factor	0.57	0.77	0.83	1	1	1	1	1.05	1.05	1.11	1.18

Example

- Working temperature 50°C, pressure 12 bar(g), compressed air flow 120 l/s.
- Multiply the nominal capacity of the selected filter with the corresponding correction factors at the required working temperature and pressure to obtain the capacity at operating condition
  - QDT 150: 150l/s * 0.59 * 1.11 = 98l/s => A QDT 150 filter is not large enough
  - QDT 195: 195l/s * 0.59 * 1.11 = 128l/s => A QDT 195 filter is the correct size



QDT 20-310 QDT 425-1800

UD+ & QDT: the winning combination

UD+	QDT
Liquid oil & oil aerosol removal	Oil vapor removal
Guaranteed 0.0009 mg/m³ aerosol and liquid	Guaranteed 0.003 mg/m³ vapor
40% pressure drop reduction compared to DD+/PD+	65% pressure drop reduction compared to previous QDT
50% footprint reduction	Extremely compact compared to vessel designs

CLASS 1: Total oil, according ISO 8573-1:2010

The Atlas Copco UD+ - QDT filter train meets the requirements of air purity class 1 for total oil, according to ISO 8573-1:2010, in a typical compressed air installation.

QD(+) SERIES

High performance oil vapor filters

QD(+) filters efficiently reduce hydrocarbons, odors and oil vapor in your compressed air stream to protect your investment, equipment and processes. The activated carbon layers will, by the use of adsorption, reduce the residual oil content to less than 0.003 mg/m³. The pressure drop is low and stays minimal during the lifetime of the filter.

YOUR BENEFITS

Maximum oil vapor removal
Highly efficient activated carbon layers.

Significant energy savings & limited system operating costs
Low pressure losses.

High reliability
High-performance stainless steel cores, double O-rings, epoxy sealed caps, and anti-corrosive coated filter housing.

Easy maintenance
External ribs on the threaded housing, or a rotating bottom cover for the welded housings, and push-on elements.

Options
- Filter connection kit for easy mounting in series (10+ - 550+ l/s and 12-690 l/s).
- Wall mounting kit simplifies installation (10+ - 550+ l/s and 12-690 l/s).

For sizing and dimensions, please refer to the product pages of the DD(+) & PD(+) Series.

Performance

	QD	QD+
Contaminant	Oil vapor	
Test method	ISO 8573-5:2001	
Maximum oil carry-over (mg/m³)*	0.003*	
Dry pressure drop (mbar)	190	140
Element service	After 1,000 operating hours or 1 year. Service life is decreased when inlet temperature exceeds 35°C, 95°F	
Precede with	Water separation DD/PD Dryer	Water separation UD+ or DD+/PD+ Dryer

* After UD+ or DD(+)/PD(+) with inlet oil concentration of 10 mg/m³.

SFA SERIES

Silicone-free removal of oil aerosol, dust and oil vapor

Superb air purity is a prerequisite to safeguard your instruments and end product. Our silicone-free SFA filters efficiently prevent dry and wet dust, particulates, oil aerosol and water drops from entering your compressed air system. The SFA series is manufactured and treated according to the high standards of silicone-free equipment, and certified by the Fraunhofer Institute as guaranteed silicone-free.

YOUR BENEFITS

Maximum contaminant removal
Removal of dry and wet dust, particulates, oil aerosol and water droplets. High-efficiency glass fiber and fleece media.

Significant energy savings & limited system operating costs
Optimal design and filter media allow for low pressure drops.

High reliability
High-performance stainless steel cores, double O-rings, epoxy sealed caps and anti-corrosive coated filter housing.

Easy maintenance
External ribs on the threaded housing and push-on elements.

Monitoring of energy use
Differential pressure indication (indicator for sizes 9-32 l/s, gauge for sizes 44-520 l/s) (optional).

Applications
- Painting
- Automotive

Options
- Filter connection kit (9-520 l/s).
- Wall-mounting kit (9-520 l/s).
- Quick coupling (DD & PD only).
- EWD no-loss electronic drain (DD & PD only).
- Voltage-free contact mounted in the differential gauge (not for QD).

Certification
Paint compatibility certificate (Fraunhofer Institute)

The performance of the SFA filters is comparable to the performance of the + range filters (please refer to pages 8, 10 and 14).

Sizing & dimensions

FILTER SIZE	Nominal capacity*		Maximal capacity*		Connections G or NPT	Dimensions						Free space for cartridge replacement		Weight	
						A		B		C		D			
DD, DDp, PD, PDp, QD	l/s	cfm	l/s	cfm	in	mm	in	mm	in	mm	in	mm	in	kg	lbs
9	9	19	11	23	3/8	90	3.54	61	2.40	268	10.55	75	2.95	1	2.2
17	17	36	21	45	1/2	90	3.54	61	2.40	268	10.55	75	2.95	1.1	2.4
32	32	68	40	85	1/2	90	3.54	61	2.40	323	12.72	75	2.95	1.3	2.9
44	44	93	55	117	3/4 & 1	110	4.33	98.5	3.88	374	14.72	75	2.95	1.9	4.19
60	60	127	75	159	1	110	4.33	98.5	3.88	414	16.3	75	2.95	2.1	4.6
120	120	254	150	318	1-1/2	140	5.51	105	4.13	520	20.47	100	3.94	4.2	9.3
150	150	318	188	399	1-1/2	140	5.51	105	4.13	603	23.47	100	3.94	4.5	9.9
175	175	371	219	464	1-1/2	140	5.51	105	4.13	603	23.47	100	3.94	4.6	10.1
280	280	594	350	742	2 & 2-1/2	179	7.05	121	4.76	689	27.13	150	5.91	6.9	15.2
390	390	827	488	1035	3	210	8.27	128	5.04	791	31.14	200	7.87	11	24.2
520	520	1102	650	1378	3	210	8.27	128	5.04	961	37.83	200	7.87	12.6	27.8

* Nominal pressure: 7 bar(e)/102 psig; temperature: 20°C, 68°F.

H SERIES

Guaranteed air purity up to 350 bar

High pressure filters efficiently reduce oil aerosol, dust and wet dust, particulates, water droplets and oil vapor in your compressed air stream to protect your investment, equipment and processes. Our innovative high pressure filtration solutions are engineered to cost effectively provide the best air purity and meet today's increasing quality demands up to working pressures of 350 bar. All high pressure filter housings are hydraulically tested to ensure safe and reliable operation at all times. A pressure test certificate accompanies each filter.

YOUR BENEFITS

Maximum contaminant removal (dry & wet dust, particulates, oil aerosol and water droplets)

High-efficient glass fiber and fleece media.

Significant energy savings & limited system operation cost

Optimal design and filter media allow for low pressure losses.

High reliability

High-performance stainless steel cores, double O-rings, epoxy sealed caps and anti-corrosive coated filter housing.

Applications

- Chemical
- Food & beverage
- Manufacturing
- Military
- Oil & gas

Performance

	DDHp+	PDHp+	DDH+	PDH+	QDH+
Contaminant	Dry dust		Oil aerosol/wet dust		Oil vapor
Test method	ISO 8573-4:2001 ISO 12500-3:2009		ISO 8573-2:2007 ISO 12500-1:2007		ISO 8573-5:2001
Maximum oil carry-over (mg/m^3)	-	-	0.08*	0.007*	0.003**
Particle removal efficiency (% at MPPS)	99.92 (0.1)	99.98 (0.06)	N/A	N/A	N/A
Dry pressure drop (mbar)	85	100	N/A	N/A	140
Wet pressure drop (mbar)	N/A	N/A	180	215	N/A
Element service	After 4,000 operating hours or 1 year or 350 mbar pressure drop		After 4,000 operating hours or 1 year		After 1,000 operating hours or 1 year
Precede with	N/A	DDHp+	N/A	DDH+	DDH+/PDH+

Always install a liquid water separation system in front of a filter. Water separation is not needed in the high pressure line if there is a sufficiently low PDP in the low pressure line (e.g. nitrogen skid, low pressure line with adsorption dryer).

* Inlet oil concentration = 10 mg/m^3. Oil = oil aerosol and liquid.
** After DD(+)/PD(+) with inlet oil concentration of 10 mg/m^3.

Sizing & dimensions

FILTER SIZE	Nominal capacity			Connections	Dimensions						Weight	
					A		B		C			
DDH, DDHp, PDH, PDHp, QDH	m^3/h	l/s	cfm	in	mm	in	mm	in	mm	in	kg	lbs
20 bar Aluminum												
15+	54	15	32	3/8	90	3.5	61	2.4	268	10.6	1.0	2.2
32+	115	32	68	1/2	90	3.5	61	2.4	268	10.6	1.1	2.4
55+	198	55	117	1/2	90	3.5	61	2.4	323	12.7	1.3	2.9
80+	288	80	170	3/4 & 1	110	4.3	99	3.9	374	14.7	1.6	3.5
110+	396	110	233	1	110	4.3	99	3.9	414	16.3	2.1	4.6
200+	720	200	424	1 1/2	140	5.5	105	4.1	520	20.5	4.2	9.3
270+	972	270	572	1 1/2	140	5.5	105	4.1	603	23.7	4.5	9.9
330+	1188	330	699	1 1/2	140	5.5	105	4.1	603	23.7	4.6	10.1
490+	1764	490	1038	2 & 2 1/2	179	7.0	121	4.8	689	27.1	6.9	15.2
50 bar Aluminum												
160+	160	44	94	1/4	63	2.5	63	2.5	150	5.9	0.3	0.7
250+	250	69	147	3/8	63	2.5	63	2.5	190	7.4	0.3	0.7
450+	450	125	265	1/2	114	4.4	114	4.4	305	11.9	2.6	5.7
550+	550	153	324	3/4	114	4.4	114	4.4	305	11.9	2.6	5.7
835+	835	232	491	1	114	4.4	114	4.4	395	15.4	3.3	7.3
1250+	1250	347	736	1 1/2	146	5.7	146	5.7	435	17.0	7.5	16.5
1725+	1725	479	1015	1 1/2	146	5.7	146	5.7	435	17.0	7.5	16.5
1925+	1925	535	1133	2	146	5.7	146	5.7	435	17.0	7.5	16.5
3200+	3200	889	1883	2	146	5.7	146	5.7	635	24.8	10	22.0
50 bar Stainless Steel												
100+	100	28	59	1/4	85	3.3	85	3.3	202	7.9	1.7	3.7
200+	200	56	118	3/8	85	3.3	85	3.3	227	8.9	2	4.4
340+	340	94	200	1/2	85	3.3	85	3.3	257	10.0	2.2	4.8
500+	500	139	294	3/4	110	4.3	110	4.3	270	10.5	4	8.8
1000+	1000	278	589	1	110	4.3	110	4.3	422	16.5	5	11.0
1700+	1700	472	1000	1 1/2	150	5.9	150	5.9	517	20.2	15	33.1
2040+	2040	567	1200	2	150	5.9	150	5.9	517	20.2	15	33.1
3400+	3400	944	2000	2	150	5.9	150	5.9	817	31.9	21	46.3
100 bar Stainless Steel												
100+	100	28	59	1/4	65	2.5	65	2.5	135	5.3	3.2	7.1
315+	315	88	185	1/2	65	2.5	65	2.5	250	9.8	5.6	12.3
460+	460	128	271	3/4	88	3.4	88	3.4	275	10.7	6.1	13.4
680+	680	189	400	1	135	5.3	135	5.3	265	10.3	10.5	23.1
1200+	1200	333	706	1	135	5.3	135	5.3	480	18.7	14.7	32.4
1700+	1700	472	1000	1 1/2	150	5.9	150	5.9	525	20.5	22	48.5
3400+	3400	944	2000	2	150	5.9	150	5.9	815	31.8	28	61.7
350 bar Stainless Steel												
48+	48	13	28	1/4	41	1.6	41	1.6	103	4.0	1.6	3.5
111+	111	31	65	1/4	65	2.5	65	2.5	135	5.3	3.2	7.1
255+	255	71	150	1/2	88.5	3.5	88.5	3.5	210	8.2	5.6	12.3
510+	510	142	300	3/4	88.5	3.5	88.5	3.5	280	10.9	6.1	13.4
750+	750	208	441	1	150	5.9	150	5.9	330	12.9	14.5	32.0
1330+	1330	369	783	1	150	5.9	150	5.9	480	18.7	17.4	38.3

Correction factors

20 bar Aluminum											
Operating pressure	barg	-	-	-	-	-	14	16	18	20	
	psig	-	-	-	-	-	203	232	261	290	
Correction factor							0.9	0.95	1	1.05	

50 bar Aluminum & Stainless Steel											
Operating pressure	barg	4	6	8	10	15	20	30	40	50	
	psig	58	87	116	145	218	290	435	581	726	
Correction factor		0.14	0.22	0.28	0.34	0.47	0.56	0.7	0.85	1	

100 bar Stainless Steel											
Operating pressure	barg	20	30	40	50	60	70	80	90	100	
	psig	290	435	581	726	871	1016	1161	1306	1451	
Correction factor		0.45	0.57	0.68	0.8	0.84	0.88	0.92	0.96	1	

350 bar Stainless Steel											
Operating pressure	barg	-	-	50	100	150	200	250	300	350	
	psig	-	-	726	1451	2177	2903	3628	4354	5080	
Correction factor				0.73	0.78	0.82	0.87	0.91	0.96	1	

Example

- Working pressure 300 bar(g), compressed air flow 500 m^3/h.
- Multiply the nominal capacity of the selected filter with the corresponding correction factor at the required working pressure to obtain the capacity at working pressure:
  - Size 510+: 510 m^3/h * 0.96 = 490 m^3/h => the 510+ filter size is not large enough.
  - Size 750+: 750 m^3/h * 0.96 = 720 m^3/h => the 750+ filter size is the size to select.

MV SERIES

Medical vacuum filters for optimal protection of man and machine

Medical vacuum filters are installed at the inlet of the vacuum pump to remove any liquid, solid or bacterial contamination which could damage the vacuum pump and biologically infect the downstream air.
Our innovative medical vacuum filtration solutions comply with HTM medical standards.

YOUR BENEFITS

Maximum contaminant removal
Removal of dry and wet dust, particulates, oil aerosol and water droplets.
High-efficiency glass fiber and fleece media.

Significant energy savings & limited system operation cost
Optimal design and filter media allow for low pressure losses.

High reliability
High performance stainless steel cores, double O-rings, epoxy sealed caps and anti-corrosive coated filter housing.

Easy maintenance
External ribs on the threaded housing and push-on elements.

Monitoring of energy use
Differential pressure indication show the pressure loss.

Applications
- Medical
- Dental
- Veterinary

Performance

	MV
Contaminant	Dry dust
Maximum temperature	60°C/140°F
Maximum working vacuum	Full vacuum
Test method	Sodium flame test BS 3928:1969, based on requirements of HTM2022
Particle removal efficiency (%)*	99.995
Dry pressure drop (mbar)	30
Element service	After 2,000 operating hours or 1 year or 100 mbar pressure drop

* In accordance with BS 3928-1969.

Sizing & dimensions

FILTER SIZE MV	Nominal Capacity	Connections	Dimensions						Weight	
			A		B		C			
	l/min	in	mm	in	mm	in	mm	in	kg	lbs
10	400	1/2	60	2	90	4	240	9	1.3	2.9
20	800	1	76	3	110	4	300	12	2.1	4.6
60	2400	1 1/2	103	4	140	5	489	19	4.6	10.1
80	3400	2	135	5	179	7	575	22	6.9	15.2
120	4900	3	155	6	210	8	677	26	11.0	24.2
160	6700	3	155	6	210	8	847	33	12.6	27.8

Correction factors

Operating pressure	bar(a)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
	Psig	1	3	4	6	7	9	10	12	13	15
	Torr = mm Hg	75	150	225	300	375	450	525	600	675	750
Correction factor		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1

Example

- Working vacuum 300 mbar(a), capacity 1,000 l/min.
- Multiply the nominal capacity of the selected filter with the corresponding correction factor at the required working vacuum to obtain the correct capacity:
  - Size 60: 2,400 l/min * 0.3 = 720 l/min => the 60 filter size is not large enough.
  - Size 80: 3,400 l/min * 0.3 = 1,020 l/min => the 80 filter size is the size to select.

Options

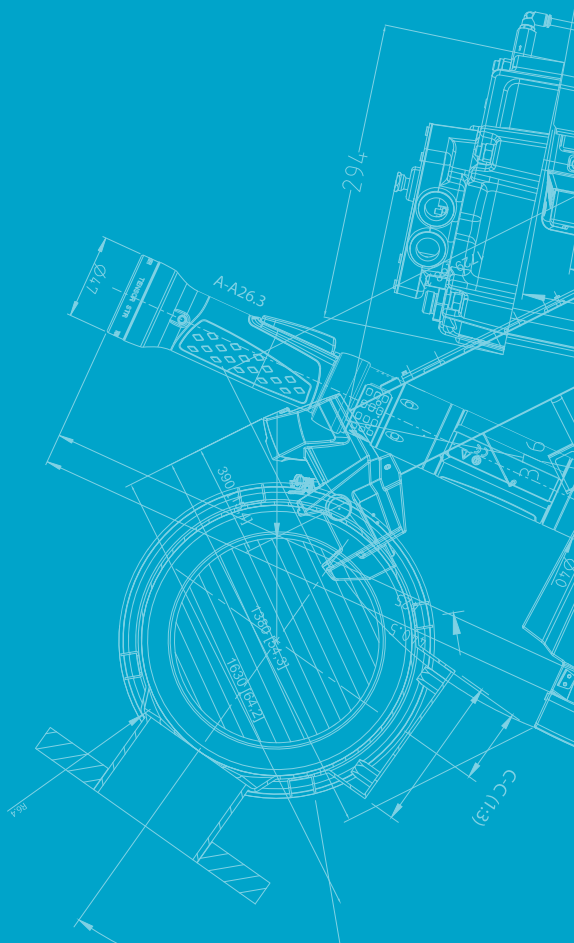
- Wall mounting kit.
- Drain flask.

Drain flask


AIR FILTRATION TEST CERTIFICATE

Certification

BS 3928 Sodium flame test certificate based on requirements of HTM2022.



ISO 9001 • ISO 14001
OHSAS 18001
ISO 22000

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INSPITAL

MEDICAL GAS SYSTEMS
2021

Area Gas Control Panels With Second Stage Regulator

- Second stage pressure reducing from 10 bar to 7 bar/4 bar
- Lockable covers with emergency access lock system
- Stainless steel valve box
- Double or single regulators option
- Under plaster and on plaster types are avaliable

Explanation	Under Plaster Model No	On Plaster Model No
1 gas	GZ71.83F	GZ71.88F
2 gas	GZ71.84F	GZ71.89F
3 gas	GZ71.85F	GZ71.90F
4 gas	GZ71.86F	GZ71.91F
5 gas	GZ71.87F	GZ71.92F

Digital Alarm Panels

INSPITAL Medical Gas Alarm Panel monitors the medical gas sources and the operating pressure in the pipeline distribution systems. System continuously controls the medical gas lines in critical care areas of the facility to ensure that medical gas and vacuum systems remain safe for patient use.

INSPITAL Digital Alarm Panel is designed and manufactured in compliance with HTM2022, HTM 02-01, C11, BS EN 60601-1-2 and BS EN ISO 7396-1.

Sensor-mounted alarm panel displays can be monitored on the computer and other panels by RS232

Capacity	Model No
Single Gas	GZ71.78
Double Gas	GZ71.79
Triple Gas	GZ71.80
Four Gas	GZ71.82
Five Gas	GZ71.81

Central Alarm Panels

- Designed to be used in central gas station manifold systems
- Audible and visual alarms in case of pressure problems
- The panel works with two high pressure switches and one positive pressure sensor to detect pressure changes
- Sensors and switches are not included

Model: GZ71.93

INSPITAL

MEDICAL GAS SYSTEMS
2021

INSPITAL

MEDICAL GAS SYSTEMS

Contents

INSPITAL MEDICAL GAS STATIONS & CONTROL UNITS

INSPITAL offers complete solution for the medical gas system of hospitals.

All the system consist of medical gas generators, manifolds, pipeline system, area control units, alarm systems, monitoring screens and the final gas outlets in Operating Theatres, ICU's and patient rooms.

CENTRAL GAS STATIONS & MANIFOLDS

INSPITAL central gas stations are designed to supply continuous medical gas from the cylinders to hospital pipeline.

Electronically controlled manifold system reduces the cylinder pressure to required level.

Each station controls one primary and one back up cylinder racks and switches between them without interrupting the continous flow.

AREA GAS CONTROL PANELS

INSPITAL Area Gas Control Unit is manufactured to provide isolation of individual floors of medical gases in the hospital.

Area Gas Control Unit includes all features required by the EN ISO 7396-1 and HTM 02-01 standards.

Isolation may be required for installation, maintenance or in case of an emergency.

VACUUM STATIONS

Vacuum is an essential requirement of the supply system for medical gases in hospitals.

INSPITAL develops and manufactures fully automatic, stable and highly reliable vacuum stations which are used to aspirate airways in the operating theatres, on ICU and on regular patient rooms.

Central Gas Station for O_2, N_2O and CO_2

INSPITAL central gas stations are designed to supply continuous medical gases like Oxygen, Nitrous Oxide, Entonox, Medical Air, Carbon Dioxide and Nitrogen from the cylinders to hospital pipeline. Each station controls one primary and one back up cylinder racks.

The two stage regulation system, utilizing separate regulating units for each stage of pressure regulation, offers higher flow rates and smoother flow rate curve.

Station switches to back up system automatically when the pressure of primary rack is dropped.

Station is equipped with non-return valves in order to prevent discharge of the gas in the cylinders during the replacement or in case of leakage from the pipeline.

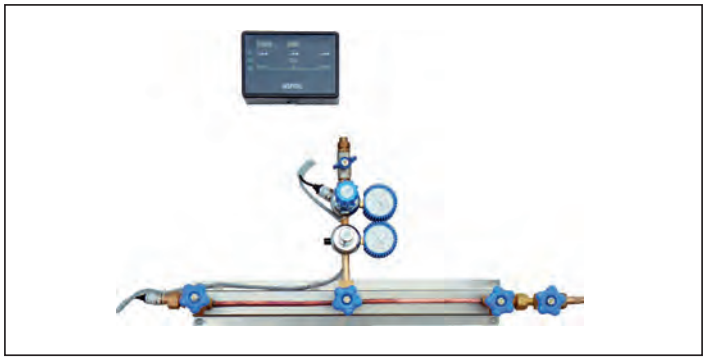
All pressure data and failure alarms are controlled by the digital control panel.

Oxygen Station	**Model No**	GZ71.01	GZ71.02	GZ71.03	GZ71.04	GZ71.05	GZ71.06	GZ71.07
Nitrousoxide Station	**Model No**	GZ71.10	GZ71.11	GZ71.12	GZ71.13	GZ71.14	GZ71.15	GZ71.16
High Pressure Reducer 150 m^3/h		-	-	1 pc	1 pc	1 pc	1 pc	1 pc
High Pressure Reducer 40 m^3/h		1 pc	1 pc	-	-	-	-	-
Cylinder Fixing Chain, Triple		2 pcs	4 pcs	4 pcs	6 pcs	8 pcs	10 pcs	14 pcs
Tail pipe & flexible Hose		6 pcs	12 pcs	12 pcs	18 pcs	24 pcs	30 pcs	42 pcs
Flexible Connection		2 pcs	4 pcs	4 pcs	6 pcs	8 pcs	10 pcs	14 pcs
Ramp Triple			4 pcs	4 pcs	6 pcs	8 pcs	10 pcs	14 pcs
Discharge Valve		2 pcs						
Oxygen / Nitrousoxide Station Alarm panel		Including the High Pressure Regulators (1 pc)						
Cylinder Quantity on Station		2x3 pcs	2x6 pcs	2x6 pcs	2x9 pcs	2x12 pcs	2x15 pcs	2x21 pcs
Bed Quantityx*		30	50	30-50	40-70	70-100	100-150	150-200
Total Operating Room No.* (N20 Central)		3	5	5 - 6	6 - 7	6 - 9	8-12	10-14
Total Station Weight(~)		35 kg	48 kg	58 kg	85 kg	90 kg	120 kg	150 kg

* Bed and Operating Room Numbers are given approximately

Emergency Reserve Manifolds

Oxygen Station	**Model No**	GZ71.09	GZ71.08
Nitrousoxide Station	**Model No**	GZ71.18	GZ71.17
High Pressure Reducer 40 m^3/h		1 pc	1 pc
Cylinder Fixing Chain,		2 pcs	4 pcs
Flexible Connection Pipe		2 pcs	4 pcs
Discharge Valve		1 pc	1 pc
Cylinder Quantity on Station		2 pcs	4 pcs
Bed Quantity		5-10	8-12
Total Station Weight(~)		15 kg	18 kg



GZ71.09 - GZ71.18

INSPITAL emergency reserve menifold includes a two stage regulation system, utilizing separate regulating units for each stage of pressure regulation, offers smooth & continous flow in case of an emergency.

Isolation valves are included at each manifold header connection to enable one cylinder bank is in use while the other bank is closed off during system operation, in compliance with HTM 02-01 standards.

Manifold System with Double Regulator

INSPITAL Automatic Changeover Manifold is designed to provide a continuous supply of Oxygen, Nitrous Oxide, Carbon Dioxide in healthcare facilities. The manifold consists of two banks of cylinders located on each side of the pressure control assembly. These pressured gases are used in Operation Theatres, Intensive Care Units, Neonatal Care Units, Emergency Rooms and Patient Rooms. Automatic Changeover Manifold is designed and manufactured in compliance with HTM 02-01, MDD 93/42/EEC, EN ISO 7396-1 and ISO 13485 standards.

Features

- Special black ABS cover protection against evironmental factors
- Designed to ensure continuous and accurate gas supply
- It is designed according to the principle of continuous transfer functionality. So during exchange of the cylinders, gas supply won't be interrupted.
- Alternative station capacities depending on the type of gas used and the distance
- Fully removable cover for easy access to internal components
- Easy to reach alarm panel connections

Explanation	Model No
W/o alarm 40 m^3/h	GZ71.20
With alarm 40 m^3/h	GZ71.21
W/o alarm 150 m^3/h	GZ71.22
With alarm 150 m^3/h	GZ71.23

- **Manifold Type** : 2 stage, 2 regulators
- **Inlet dia** : 1/2"
- **Outlet dia** : 22 mm
- **Outlet pressure** : 4-5 bar
- **Automation** : Fully Automatic

Optional Accessories

- Emergency reserve manifold
- Heater Kits
- Isolation valve and test gas outlet
- Spare cylinder racks

Pressure Sensor

- Pressure sensors are used in digital alarm panels to detect high and low pressure

Positive Pressure Transmitter Specs:

- Measurement range : 0 - 250bar
- Signal output : 4 - 20mA
- Mechanical connection : G 1/4 "
- Electrical connection : 2m
- Feeding voltage : 8 - 32V

Model No	Description
GZ71.47	Positive Pressure Sensor, Max.10 bar
VK40.01	Vacuum Sensor, -1/0 bar
GZ71.49	High Pressure Reducer Sensor, Max.250 bar

High Pressure Reducer, Single Regulator

INSPITAL High Pressure Reducer provide safe pressure reduction of medical gases between the cylinders and the delivery system. It is designed to regulate line pressure between 5 to 4 bar. All components are degreased for oxygen use.

- Gases : Oxygen, Nitrous Oxide, Carbon Dioxide
- Working Mode : 2 stage, 1 regulator
- Inlet dia : 1/2"
- Outlet dia : 22 mm
- Inlet pressure (max) : 220 bar
- Outlet pressure : 4-5 bar

Explanation	Model No
W/o alarm 100 m^3/h	GZ70.10
With alarm 100 m^3/h	GZ70.20
W/o alarm 40 m^3/h	GZ70.30
With alarm 40 m^3/h	GZ70.40

GZ71.33

GZ72.01

Cylinder Ramp

- Alternative models for connection of 1, 2, 3, 4 or 5 cylinders
- Made of galvanized steel, brass headers and copper pipe

Explanation	Length mm	Model No
Single	180 mm	GZ71.29
Double	330 mm	GZ71.30
Triple	630 mm	GZ71.31
Quadruple	930 mm	GZ71.32
Quintuple	1230 mm	GZ71.33
Triple - Block	280 mm	GZ72.01

GZ71.38

GZ72.02

Cylinder Fixing Chain

- Designed to fix the cylinders safely
- Alternative models for connection of 1, 2, 3, 4 or 5 cylinders

Explanation	Lenght mm	Model No
Single	180 mm	GZ71.34
Double	330 mm	GZ71.35
Triple	630 mm	GZ71.36
Quadruple	930 mm	GZ71.37
Quintuple	1230 mm	GZ71.38
Triple - Block	580 mm	GZ72.02

Tail Pipe & Flexible Hose

- Used for connecting the cylinders to cylinder ramp
- Gas specific thread for O_2, N_2O, CO_2 and medical gas cylinders
- Nut diameter: 1/2”

Explanation	Gas Type	Cylinder nut dia	Model No
Tail Pipe 140 cm	Oxygen (bull-nose)	5/8 (Male)	GZ71.39
Tail Pipe 140 cm	Carbondioxide	Ø 21.8 mm,1/14	GZ71.40
Tail Pipe 140 cm	Oxygen	3/4”	GZ71.41
Tail Pipe 140 cm	Nitrousoxide	3/8”	GZ71.42
Flexible Hose 60 cm	Oxygen (bull-nose)	5/8 (Male)	GZ71.43
Flexible Hose 60 cm	Carbondioxide	Ø 21.8 mm,1/14	GZ71.44
Flexible Hose 60 cm	Oxygen	3/4”	GZ71.45
Flexible Hose 60 cm	Nitrousoxide	3/8”	GZ71.46
Flexible Hose 60 cm	Oxygen (PIN INDEX)	-	GZ71.96
Flexible Hose 60 cm	N_2O (PIN INDEX)	-	GZ71.97

Flexible Connection
Model GZ71.94

Discharge Valve
Model GZ71.95

Flexible Connection Pipe

- Designed to connect ramp to ramp and ramp to manifold
- Made of chrome plated copper material
- Compatible with O_2 and N_2O gases

Discharge Valve

- Designed to be used for the gas discharge of medical gas stations
- Compatible with O_2 and N_2O gases
- Made of brass

Medical Gas Ball Valve & Zone Service Unit

- Designed and specially cleaned to use in medical gas system
- Optional lock and nist connection
- %100 corrosion proof design, no painted steel
- Break out plastic window provides safe access in an emergency

Pipe Dia.	Ball Valve With Box Model No	Ball Valve Model No	Working Pressure (bar)
10 mm	GZ71.50	GZ81.50	78
12 mm	GZ71.51	GZ81.51	64
15 mm	GZ71.52	GZ81.52	55
22 mm	GZ71.53	GZ81.53	50
28 mm	GZ71.54	GZ81.54	40
35 mm	GZ71.55	GZ81.55	40
42 mm	GZ71.56	GZ81.56	35
54 mm	GZ71.57	GZ81.57	27
76 mm	GZ81.58	GZ81.59	16

Stainless Steel

Electrostatic Painted

Area Gas Control Panels

Description

INSPITAL Area Gas Control Unit is manufactured to provide isolation of individual floors of medical gases in the hospital. Area Gas Control Unit includes all features required by the EN ISO 7396-1 and HTM 02-01 standards. Isolation may be required for installation, maintenance or in the case of an emergency.

Classification

- Area Gas Control Unit is manufactured HTM 02-01, HTM 2022, EN ISO 7396-1 and BS EN 15908.

Services

- Oxygen
- Nitrous Oxide
- Medical Air 400 kPa
- Surgical Air 700 kPa
- Medical Vacuum

Feartures

- Controls 1 to 5 gases, including vacuum
- Lockable covers with emergency access lock system
- Window on the cover enables the user to monitor the analog manometers without opening the covers
- Under plaster and on plaster types are avaliable

Alarm Unit

- Local Area Alarm

Pressure Switches

- Pressure switches can be fitted inside the box to enable local monitoring.

Electrostatic Painted

Explanation	Under Plaster Version Model No	On Plaster Version Model No
1 gas w/o alarm	GZ71.58	GZ71.68
1 gas with alarm	GZ71.59	GZ71.69
2 gas w/o alarm	GZ71.60	GZ71.70
2 gas with alarm	GZ71.61	GZ71.71
3 gas w/o alarm	GZ71.62	GZ71.72
3 gas with alarm	GZ71.63	GZ71.73
4 gas w/o alarm	GZ71.64	GZ71.74
4 gas with alarm	GZ71.65	GZ71.75
5 gas w/o alarm	GZ71.66	GZ71.76
5 gas with alarm	GZ71.67	GZ71.77

Stainless Steel

Explanation	Under Plaster Version Model No	On Plaster Version Model No
1 gas with alarm	GZ71.83	GZ71.88
2 gas with alarm	GZ71.84	GZ71.89
3 gas with alarm	GZ71.85	GZ71.90
4 gas with alarm	GZ71.86	GZ71.91
5 gas with alarm	GZ71.87	GZ71.92

AVSU Module

Description

INSPITAL Area Valve Service Unit Module is manufactured to provide isolation of individual floors of medical gases in the hospital. AVSU Module Unit includes all features required by the EN ISO 7396-1 and HTM 02-01 standards. Isolation may be required for installation, maintenance or in the case of an emergency.

Classification

- AVSU Modules Unit is manufactured HTM 02-01, HTM 2022, EN ISO 7396-1 and BS EN 15908.

Services

- Oxygen
- Nitrous Oxide
- Medical Air 400 kPa
- Surgical Air 700 kPa
- Medical Vacuum

Feartures

- Controls 1 to 5 gases, including vacuum
- Lockable covers with emergency access lock system
- Window on the cover enables the user to monitor the analog manometers without opening the covers
- Under plaster and on plaster types are avaliable

Alarm Unit

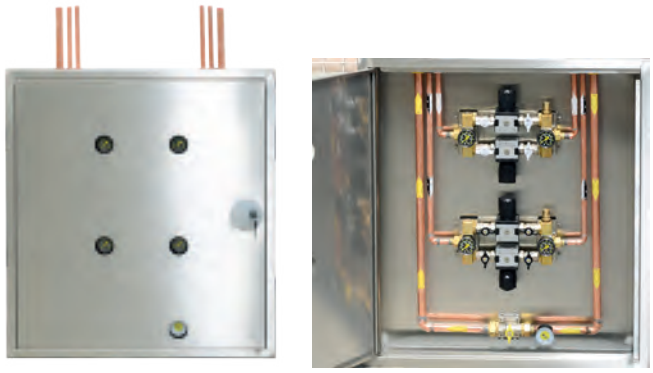
- Local Area Alarm

Pressure Switches

- Pressure switches can be fitted inside the box to enable local monitoring.

Electrostatic Painted

Explanation	Under Plaster Version Model No	On Plaster Version Model No
3 gas w/o alarm	GZ84.05	GZ84.15
3 gas with alarm	GZ84.06	GZ84.16
4 gas w/o alarm	GZ84.07	GZ84.17
4 gas with alarm	GZ84.08	GZ84.18
5 gas w/o alarm	GZ84.09	GZ84.19
5 gas with alarm	GZ84.10	GZ84.20



Area Gas Control Panels With Second Stage Regulator

- Second stage pressure reducing from 10 bar to 7 bar/4 bar
- Lockable covers with emergency access lock system
- Stainless steel valve box
- Double or single regulators option
- Under plaster and on plaster types are avaliable

Explanation	Under Plaster Model No	On Plaster Model No
1 gas	GZ71.83F	GZ71.88F
2 gas	GZ71.84F	GZ71.89F
3 gas	GZ71.85F	GZ71.90F
4 gas	GZ71.86F	GZ71.91F
5 gas	GZ71.87F	GZ71.92F

Digital Alarm Panels

INSPITAL Medical Gas Alarm Panel monitors the medical gas sources and the operating pressure in the pipeline distribution systems. System continuously controls the medical gas lines in critical care areas of the facility to ensure that medical gas and vacuum systems remain safe for patient use.

INSPITAL Digital Alarm Panel is designed and manufactured in compliance with HTM2022, HTM 02-01, C11, BS EN 60601-1-2 and BS EN ISO 7396-1.

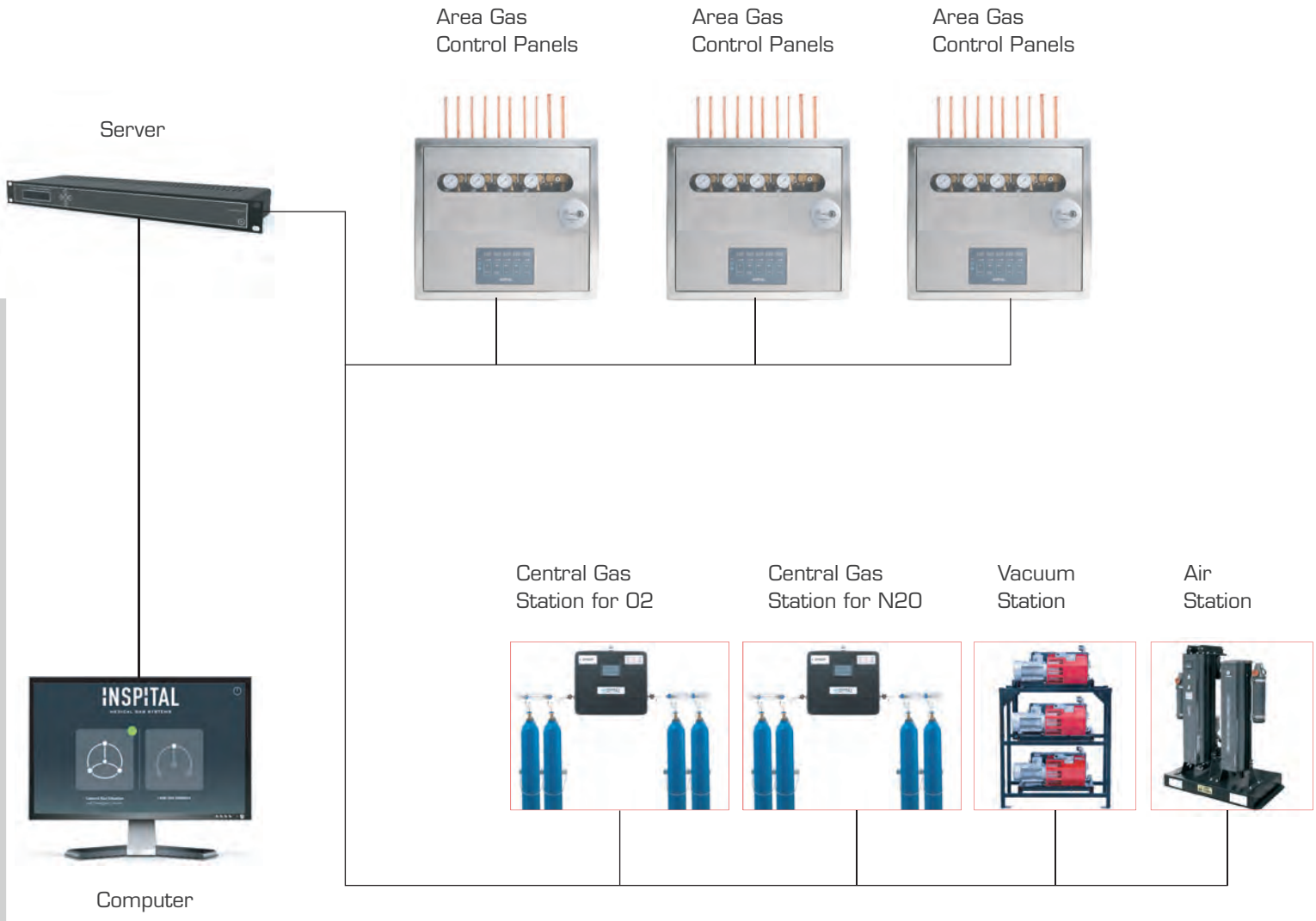
Sensor-mounted alarm panel displays can be monitored on the computer and other panels by RS232

Capacity	Model No
Single Gas	GZ71.78
Double Gas	GZ71.79
Triple Gas	GZ71.80
Four Gas	GZ71.82
Five Gas	GZ71.81

Central Alarm Panels

- Designed to be used in central gas station manifold systems
- Audible and visual alarms in case of pressure problems
- The panel works with two high pressure switches and one positive pressure sensor to detect pressure changes
- Sensors and switches are not included

Model: GZ71.93

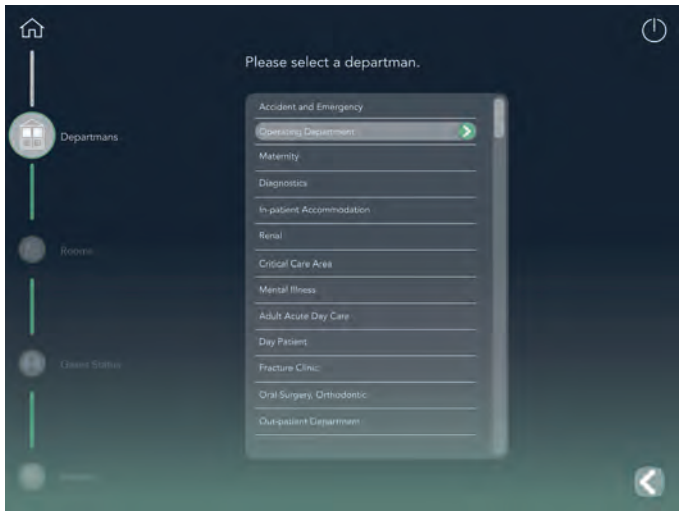


MEDICAL GAS ALARM MANAGEMENT SYSTEM

INSPITAL developed an automation system which allows users to monitor all running medical gas system of the hospital. According to ISO 7396-1, medical gas alarms should monitors continuously medical gas supply, alarm conditions, performance and operation of system. The medical gas alarm management system is required for 7/24 monitoring of the medical gas system.

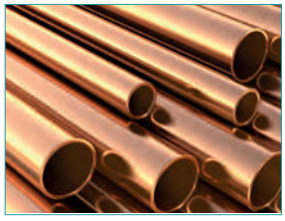
Monitoring system collects all datas from the alarm panel of central vacuum system, medical air system, manifold system and area control panels. All those instant datas can be displayed on specified touch monitor or any computer in related departments by the technicians

Model: GZ71.98



All stations or specified stations can be monitored instantly. System records all signals of operating and emergency alarms. Alarms are monitored both visually and audible indicators.
The Alarm Management System makes sure that technical and clinical personnel are kept informed about the status of the central gas supply at all times. Emergency and operational signals are recorded by data collectors and made accessible to the entire network. Data can be displayed either locally or at a central monitoring station.

Due to the decentralised design, new components can be added or existing configurations can be changed at any time. Since a standard data transfer protocol is used, new components will always be able to communicate with the existing system. As each component has a separate function, existing systems can also easily add on and make use of those new functionalities. Thus, your Medical Gas Alarm Management System can be easily brought up to date as required.



Copper Tubes

Pipeline solutions for medical installations

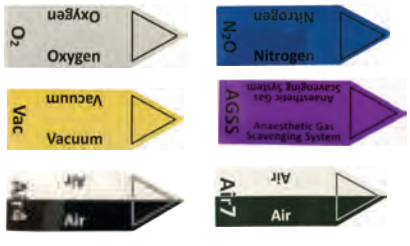
- Medical copper tubes are degreased and marked according to EN 13348 System in accordance with requirement of the medical gas market.
- Straight copper tube is available in 4m lengths and individually red capped.
- Wooden case packing for export deliveries

Specific Benefits Include:

- Specially cleaned copper tubes for medical gas and vacuum systems. Superseding earlier 'hybridised' copper tube standards such as BS EN1057 & BS 2871 Part 1 quoted in HTM 2022 & NHS engineering spec.
- Tighter limits on cleanliness determination.

Copper Pipe Label

Model No	Explanation
MB30.01	Oxygen 250 pcs
MB30.02	Vacuum 250 pcs
MB30.03	Air 250 pcs
MB30.04	Nitrogen 250 pcs
MB30.05	Agss 250 pcs



Model No	Explanation	Thickness	Working Pressure	Length
MB10.01	8 mm	1,0 mm	84 bar	4 m
MB10.02	10 mm	0,6 mm	84 bar	4 m
MB10.03	10 mm	1,0 mm	84 bar	4 m
MB10.04	12 mm	0,6 mm	77 bar	4 m
MB10.05	12 mm	1,0 mm	77 bar	4 m
MB10.06	15 mm	0,7 mm	63 bar	4 m
MB10.07	15 mm	1,0 mm	63 bar	4 m
MB10.08	22 mm	1,0 mm	58 bar	4 m
MB10.09	28 mm	1,0 mm	51 bar	4 m
MB10.10	28 mm	1,5 mm	51 bar	4 m
MB10.11	35 mm	1,0 mm	40 bar	4 m
MB10.12	35 mm	1,5 mm	40 bar	4 m
MB10.13	42 mm	1,0 mm	42 bar	4 m
MB10.14	42 mm	1,5 mm	42 bar	4 m
MB10.15	54 mm	1,5 mm	27 bar	4 m
MB10.16	54 mm	2,0 mm	27 bar	4 m
MB10.17	76 mm	1,5 mm	29 bar	4 m
MB10.18	76 mm	2,0 mm	29 bar	4 m
MB10.19	108 mm	2,0 mm	16 bar	4 m
MB10.20	108 mm	2.5 mm	16 bar	4 m

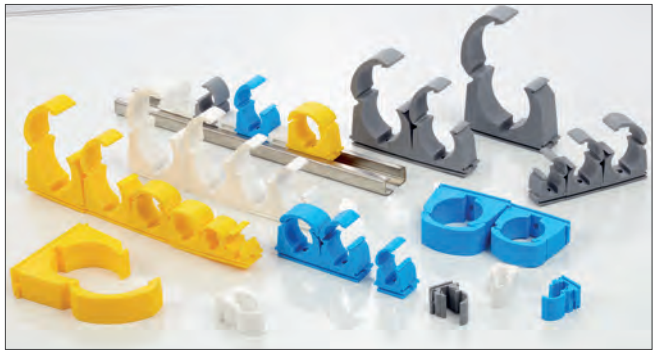
Fittings & Accessories

- INSPITAL's end feed fittings, manufactured according to BS EN 1254-1; 1998 are seamless, monoblock fittings, which makes them stronger and easier to use.
- Biostatic composition of the copper material inhibits bacterial growth on its surface
- End connections: Copper x Copper
- Lightweight, strong and corrosion resistant
- Unaffected by sunlight, has no special storage requirements and does not produce toxic fumes in a fire.
- All fittings supplied contain less than 100mg/m2 (0.01mg cm2) of hydrocarbons on the degreased surface.

	 Elbow 90	 Equal T	 Coupling	 Reducer
Diameter	**Model No**	**Model No**	**Model No**	**Model No**
10 mm	FT50.01	FT50.09	FT50.28	FT50.17 / 12x10 mm
12 mm	FT50.02	FT50.10	FT50.29	FT50.18 / 15x12 mm
15 mm	FT50.03	FT50.11	FT50.30	FT50.19 / 22X12 mm
22 mm	FT50.04	FT50.12	FT50.31	FT50.20 / 15x22 mm
28 mm	FT50.05	FT50.13	FT50.32	FT50.21 / 15x28 mm
35 mm	FT50.06	FT50.14	FT50.33	FT50.22 / 22x28 mm
42 mm	FT50.07	FT50.15	FT50.34	FT50.23 / 22x35 mm
54 mm	FT50.08	FT50.16	FT50.35	FT50.24 / 54x22 mm
76 mm	FT51.09	FT51.17	FT51.36	FT50.25 / 54x28 mm
				FT50.26 / 54x35 mm
				FT50.27 / 76x54 mm
				FT51.28 / 35x28 mm
				FT51.29 / 35x42 mm
				FT51.30 / 54x42 mm

Copper Pipe Clips

- INSPITAL designed clips used as copper tube supports on ceilings and walls.
- Can be mounted directly on the wall or mounted by rail.
- Single and jointed usage
- Color coded clips copmatible with gas standard
- Halogen free, non-flammable material



Explanation	Blue	White	Gray	Yellow
Hook 10 - 12 mm	FT50.39	FT50.46	FT50.53	FT50.60
Hook 15 mm	FT50.40	FT50.47	FT50.54	FT50.61
Hook 22 mm	FT50.41	FT50.48	FT50.55	FT50.62
Hook 28 mm	FT50.42	FT50.49	FT50.56	FT50.63
Hook 35 mm	FT50.43	FT50.50	FT50.57	FT50.64
Hook 42 mm	FT50.44	FT50.51	FT50.58	FT50.65
Hook 54 mm	FT50.45	FT50.52	FT50.59	FT50.66

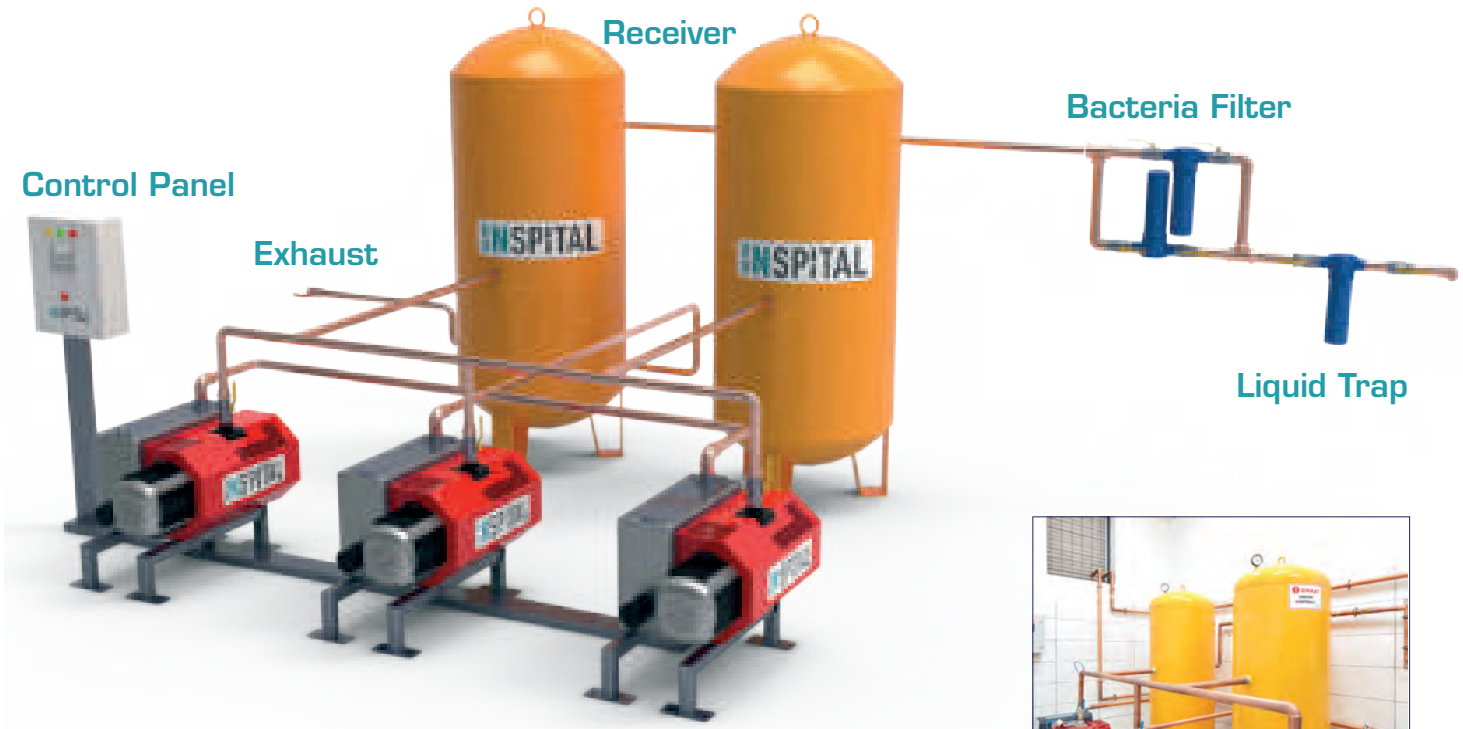
Model No	Explanation
FT50.36	Hook Rail
FT50.37	Stoper
FT50.38	Distance

Medical Vacuum Station

Medical Vacuum is an essential requirement of the supply system for medical gases in hospitals. INSPITAL develops and manufactures fully automatic, stable and highly reliable vacuum stations which are used to aspirate fluids in the operating theatres, on ICU and on regular patient rooms.

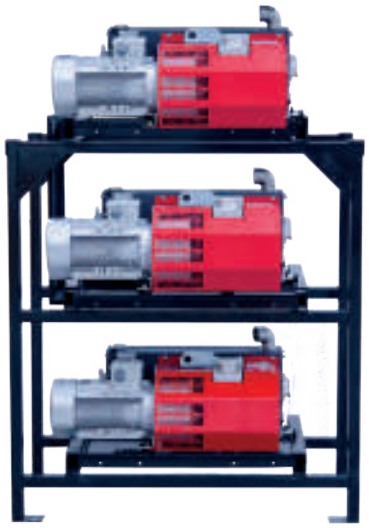
INSPITAL Medical Vacuum Plants are designed and manufactured in compliance with HTM 02-01, HTM 2022, MDD 93/42/EEC EN ISO 7396-1 and C11 standards.

- Station is fully controlled by PLC system. This system enables equal aging of vacuum pumps which means a much longer operating life time
- Protected by bacterial filters
- Equipped with lubricated rotary vane vacuum pumps



Vertical Type– Central Vacuum Station

- Designed to be used for central vacuum systems in operating theatres, ICUs, emergencies and laboratories of hospitals
- PLC controlled full automatic system
- Compact and modular design
- Medical type high efficiency bacteria filters
- Lubricated rotary vane vacuum pumps
- Sliding shelves enable easy access for maintenance



Model No	VK40.02	VK40.03	VK40.04	VK40.05	VK40.06	VK40.07
System Capacity (m^3/h) (50 hz)	47x2	47x3	100x2	100x3	200x2	200x3
Power (kW) (50 Hz)	1,10x2	1,10x3	2,20x2	2,20x3	4,00x2	4,00x2
Pump Qty	2	3	2	3	2	3
Tank Capacity (L)	500	500	1000	1000	1500	1500
Bactery Filter Qty	1 pc	1 pc	1 pc	2 pc	2 pc	2 pc
Liquid Trap	1 pc	1 pc	1 pc	1 pc	1 pc	2 pc
Inlet hose dia.	1”	1”	1”1/4	1”1/4	2”	2”
Outlet hose dia.	1”	1”	1”1/2	1”1/2	2”	2”
Bed Qty	70	50-90	90-180	150-200	160-300	160-350

Tank Mounted – Central Vacuum Station

- Designed to stand alone assemblies with all components and filters mounted on a single horizontal vessel
- PLC controlled full automatic system
- Compact tank top design
- Suitable for low height medical gas plant rooms
- Specifically designed for ease of installation

Model No	VK40.08	VK40.09	VK40.10	VK40.11	VK40.12	VK40.13
System Capacity (m^3/h (50hz)	47x2	47x3	100x2	100x3	200x2	200x3
Power (kW) (50 Hz)	1,10x2	1,10x3	2,20x2	2,20x3	4,8x2	4,8x3
Pump Qty	2	3	2	3	2	3
Tank Capacity (L)	500	500	1000	1000	1000	1000
Bactery Filter Qty	1 pc	1 pc	1 pc	2 pcs	2 pcs	2 pcs
Liquid Trap	1 pc	1 pc	1 pc	1 pc	1 pc	1 pc
PLC Qty	1	1	1	1	1	1
Inlet hose dia.	1"	1"	1"1/4	1"1/4	2"	2"
Outlet hose dia.	1"	1"	1"1/2	1"1/2	2"	2"
Bed Qty	70	50-90	90-180	150-200	160-300	160-350

PLC Control Panel

- INSPITAL PLC panels are fully automatic digital control units
- They are designed to control multiple vacuum pumps of central vacuum stations.
- It enables equal aging of pumps and longer lifetime for the vacuum stations

Pump Type	Capacity m3/h	Dimensions	Model No
Single	25 - 40	350x160x530 mm	VK40.23
Double	65 - 100	350x160x530 mm	VK40.24
Triple	150 - 200	350x160x530 mm	VK40.25

Bacteria Filter Set

- 100 m^3/h flow capacity
- Integrated by-pass valves and discharge system
- Bacteria filtration of 30 micron

Pump Type	Model No
Single	VK40.26
Double	VK40.27

Liquid Trap

- High efficiency trap designed to drain liquids in vacuum pipeline
- 1.5 L capacity
- Inlet and outlet valves included

Model: VK40.28

Vacuum Tank

- Designed to use in central vacuum stations
- Various capacity options
- Vertical or horizontal types avaliable
- Made of highly durable steel material

Capacity (L)	Wall Thickness	Diameter	Length	Model No
500 L	5 mm	630 mm	1800 mm	VK40.29
750 L	5 mm	750 mm	1800 mm	VK40.30
1000 L	6 mm	850 mm	1920 mm	VK40.31
1500 L	6 mm	1100 mm	2200 mm	VK40.32

Vacuum Pumps

The lubricated rotary vane pumps are designed to be used in a wide range of industrial and healthcare applications. They can run continuouslyfrom atmospheric pressure to ultimate vacuum.

- Specially designed for medical applications
- Stable and longlife pumps
- Lubricated rotary vane vacuum pumps
- Single stage
- High pumping speed even at low pressure
- Integrated oil mist filter on the exhaust
- Pumps can run continuously from atmospheric pressure to ultimate vacuum
- Silent and very robust pumps
- Options; Oil level switch, PT100 temperature sensor

Maintenance Kits

Usual maintenance (EC): 3000 h or 24 months

- Inspection / cleaning
- Oil change
- Oil filter replacement
- Oil separating cartridge(s) change
- Inlet valve overhaul
- Gas ballast filter change

- Options; Oil level switch, PT100 temperature sensor

Maintenance Kits

Preventive maintenance (MP): 12 000 hours

- Radial shaft seals change
- Sliding rings change
- Vanes replacement*
- End cover gaskets replacement
- Automatic drain + gaskets replacement
- Rubber feet replacement
- Coupling ring overhaul

Model No	Nominal Flow		Motor Power		Weight	3 000 hours or 24 months, Maintenance Kits	12 000 hours Maintenance Kits
	$m^3.h^{-1}$		Kw				
	50 Hz	60 Hz	50 Hz	60 Hz	kg	Model no	Model no
VK40.16	30	35.3	0,75	0,9	39	VK40.46	VK40.56
VK40.17	47.7	56	1,1	1,32	52		
VK40.18	64.3	72.2	1,5	1,8	75	VK40.48	VK40.58
VK40.19	96	115	2,2	2,70	85	VK40.49	VK40.59
VK40.20	132	156	3	3,6	154	VK40.50	VK40.60
VK40.21	198	240	4	4,8	140	VK40.51	VK40.61
VK40.22	293	354	5,5	6,6	162	VK40.52	VK40.62

VK40.14

VK40.15

Mini Vacuum Station

- Compact and independent ready-to-run vacuum plant
- Lubricated rotary vane vacuum pump
- Standard suction network inlet
- Bacteria filter with aspiration (optional)
- Liquid trap (optional)

Model No	VK40.14	VK40.15
Nominal Capacity (m^3.h-1) 50 Hz	25	2x10
Power (kW) 50 Hz	0,75	2x0,35
Tank Capacity (L)	70	70
Noise Level dB (A)	60	60
Oil Capacity(L)	1,5	1,5
Weight (kg)	85	85

VK50.01
VK50.02

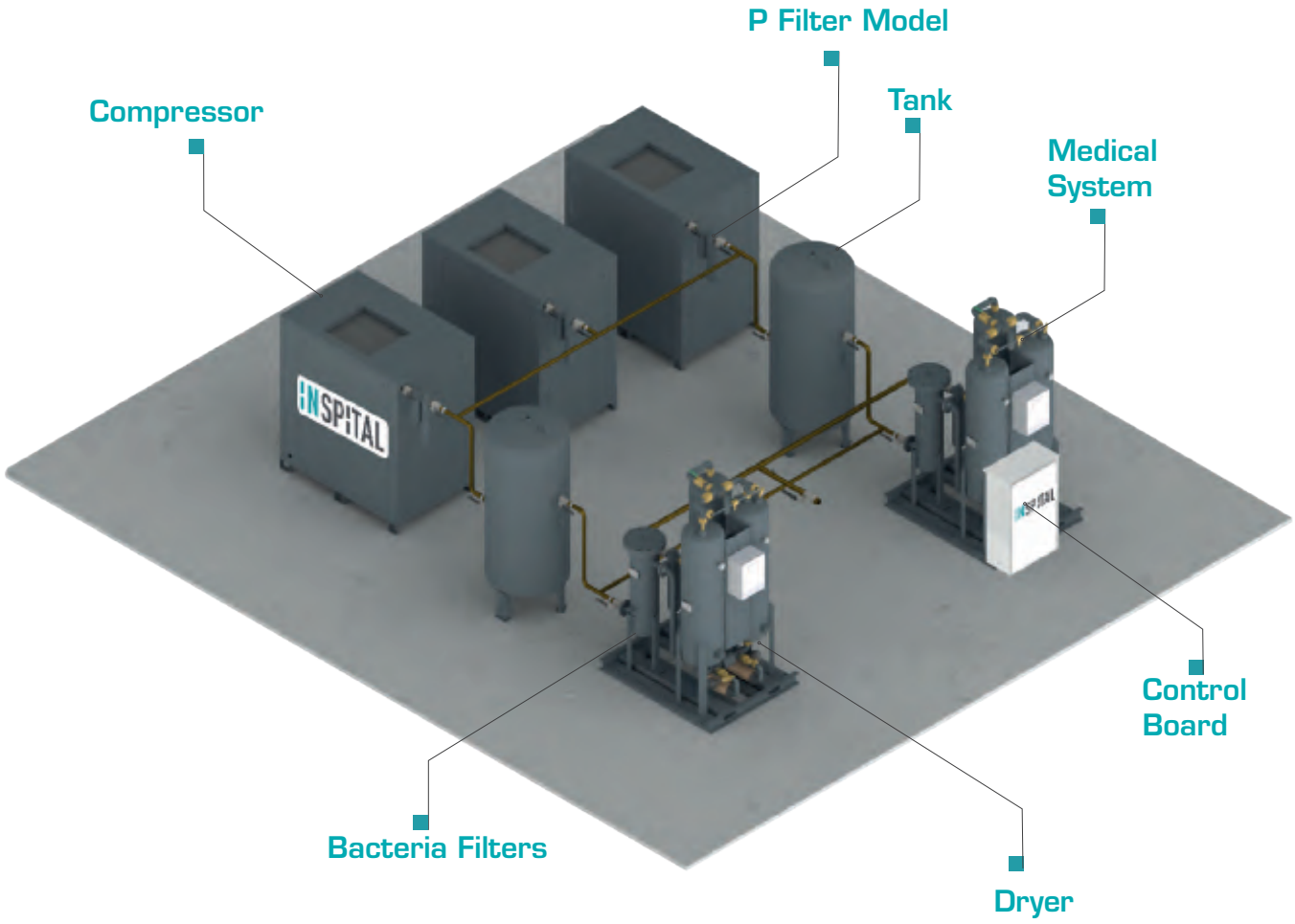
VK50.03
VK50.04

Anaesthetic Gas Scavenging System, Single and Double

Anaesthetic Gas Scavenging the Systems AGSS are designed to remove anesthetic gas mixture formed in the operating room. INSPITAL AGSS systems are CE marked according to MDD 93/42/EEC and comply with HTM 02-01. Anaesthetic Gas Scavenging Plant is classified as Class IIa Medical Devices.
Single and duplex blower versions are avaliable
Blowers are oil-free, air cooled side channel regenerative type and suitable for continuous operation.

Model No	VK50.05	VK50.01	VK50.02	VK50.06	VK50.03	VK50.04
Capacity	24m3/h	80m3/h	130m3/h	2x24m3/h	2x80m3/h	2x130m3/h
Power kw	1,3	1,75	3,4	2x0,75	2x1,75	2x3,4
Vacuum	200 mbar	200 mbar	200 mbar	200 mbar	200 mbar	200 mbar
Inlet Dia mm	38	50,8	50,8	31.75	38	50,8
Outlet Dia mm	44	44	60	44	44	60
Weight	40	50	60	100	120	150

Medical & Surgical Air Plant Systems



Medical Air

Medical air is mainly supplied via a medical gas pipeline system where the air is manufactured by compressors, dryers and filtration system.

In the hospitals medical air supply is a vital life support service, maintaining respiration of the critically ill patients during mechanical ventilation.

The main uses of medical air in the hospitals are:

- Driving ventilators and incubators, where it provides uncontaminated and controlled air flows helping to reduce high concentration of oxygen exposure,
- As a carrier gas for anaesthetic agents
- As a power source for driving surgical tools in the operating theatre

INSPITAL Medical Air Plants are desined and manufactured according to ISO 13485 Quality Management System and comply with MDD 93/42/EEC.

Medical Compressed Air

Medical Compressed air is a widely used gas in hospitals. Therefore, the requirements and quality standards are high. Medical compressed air is important for the ventilation of ICU patient. It is the most important medical gas other than oxygen. International standards such as EN ISO 7396-1 and the European Pharmacopoeia guarantee the continuity of medical compressed air and ensure that quality control is carried out regularly. In addition, it defines the limit values that the medical air must have. With INSPITAL Medical Compressed Air Stations, we ensure that you obtain quality air according to EN ISO 7396-1 and European Pharmacopoeia.

Contamination	European Pharmacopoeia
O2	20.4% <x<21.4%
CO2	<500 ppm
CO	<5 ppm
SO2	<1 ppm
NO	<2 ppm
NO2	<2 ppm
H2O	<67 ppm
Oil vapor	<0.1 mg/m3

Medical Air System

Model No	Compressor Capacity	Compressor Pcs	Compressor Type	Tank Capacity	Filtration and Dryer System	Operating Temperature	Bed Quantitiy
GZ80.20	3x 39 m^3/h	3	Screw Type	2x300 L	2	(+10) - (+50) C°	50-100
GZ80.21	3x 57 m^3/h	3	Screw Type	2x500 L	2	(+10) - (+50) C°	100-150
GZ80.22	3x84 m^3/h	3	Screw Type	2x1000 L	2	(+10) - (+50) C°	150-200
GZ80.23	3x117 m^3/h	3	Screw Type	2x1000 L	2	(+10) - (+50) C°	200-250
GZ80.24	3x138 m^3/h	3	Screw Type	2x1500 L	2	(+10) - (+50) C°	250-300
GZ80.25	3x210 m^3/h	3	Screw Type	2x2000 L	2	(+10) - (+50) C°	300-500
GZ80.26	3x260 m^3/h	3	Screw Type	2x2000 L	2	(+10) - (+50) C°	300-500

Technical Air System

Technical Air Plant is designed to provide a continuous supply of medical quality air. Technical Air is mainly supplied via a medical gas pipeline system where the air is generated by compressors, dryers and filtration system.

INSPITAL Technical Air plant with rotary screw compressors can be used in wide capacity range. Compressor capacities varies from 2.2 kW to 37 kW. High quality screw blocks with perfect lubrication systems enable continuous operation, stability and reliability. At technical air solutions offers compressed air dryers with +3-5 C° dew point temperature.

INSPITAL can offer different capacities according to hospital consumption and bed capacity.

Model No	Compressor Capacity	Compressor Type	Dryer Capacity	Tank Capacity	Operating Temperature	Bed Quantitiy
GZ80.01	1x39 m^3/h	Screw Type	1x50 m^3/h	300 L	(+10) - (+50) C°	20-50
GZ80.02	2x39 m^3/h	Screw Type	1x50 m^3/h	300 L	(+10) - (+50) C°	20-50
GZ80.03	1x84 m^3/h	Screw Type	1x87 m^3/h	500 L	(+10) - (+50) C°	50-100
GZ80.04	2x84 m^3/h	Screw Type	1x87 m^3/h	500 L	(+10) - (+50) C°	50-100
GZ80.05	1x117 m^3/h	Screw Type	1x130 m^3/h	1000 L	(+10) - (+50) C°	100-150
GZ80.06	2x117 m^3/h	Screw Type	2x130 m^3/h	1000 L	(+10) - (+50) C°	100-150
GZ80.07	1x168 m^3/h	Screw Type	1x170 m^3/h	1500 L	(+10) - (+50) C°	150-200
GZ80.08	2x168 m^3/h	Screw Type	2x170 m^3/h	1500 L	(+10) - (+50) C°	150-200
GZ80.09	1x210 m^3/h	Screw Type	1x283 m^3/h	2X1000 L	(+10) - (+50) C°	200-250
GZ80.10	2x210 m^3/h	Screw Type	2x283 m^3/h	2X1000 L	(+10) - (+50) C°	200-250

Medical Gas Plants

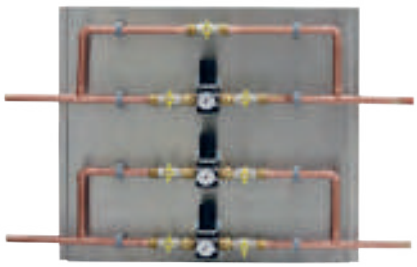
Air Compressors

- Quiet and efficient axial fan directly connected to main motor
- Additional axial fan with temperature control
- Compact, small footprint, easy to service.
- Compressor capacity 21 - 324 m^3 / h
- Integrated PLC control until 2 compressor

Compressed Air Tank

- Made of ST-37 steel
- Operating pressure at 15 atm
- Manufactured and tested according to BS EN 286-1:1998+A2:2005 standards

Model No	GZ82.01	GZ82.02	GZ82.03	GZ82.04	GZ82.08
Capacity (L)	300	500	1000	1500	2000
Trunk (st-37)	(st-37)				
Inlet	1 1/2"				



Compressed Air Regulator Group

- Air Regulator Group is the final regulation process of the air coming from the compressed air station.
- It is used to regulate the air pressure to required level (4 bar or 7 bar)

Model No	GZ82.05	GZ82.06
Capacity (m3/h)	100	200

Compressed Line Filters

- Four different types;
- Pre Filter (General Purpose)
- Fine Filter (Oil Removal)
- Particle Filter (Particle Removal)
- Activated Carbon Filter (Fine Oil Removal)
- Operation up to 20 bar
- Diffirential pressure gauge

Oxygen Production Systems

INSPITAL Oxygen Generators are new generation stations that allows on-site production of oxygen. This helps hospitals to supply oxygen from their own automated system independently. These systems are generally combined with cylinder systems for instant back up.

INSPITAL Oxygen Generators deliver oxygen in a purity up to 95% at flow rate from 3 to 60 m^3/h. Station delivers constant purity rate independent from the consumption. Ideal system consists of air compressors, dryers, O2 generator, active carbon tower, tanks and filters.

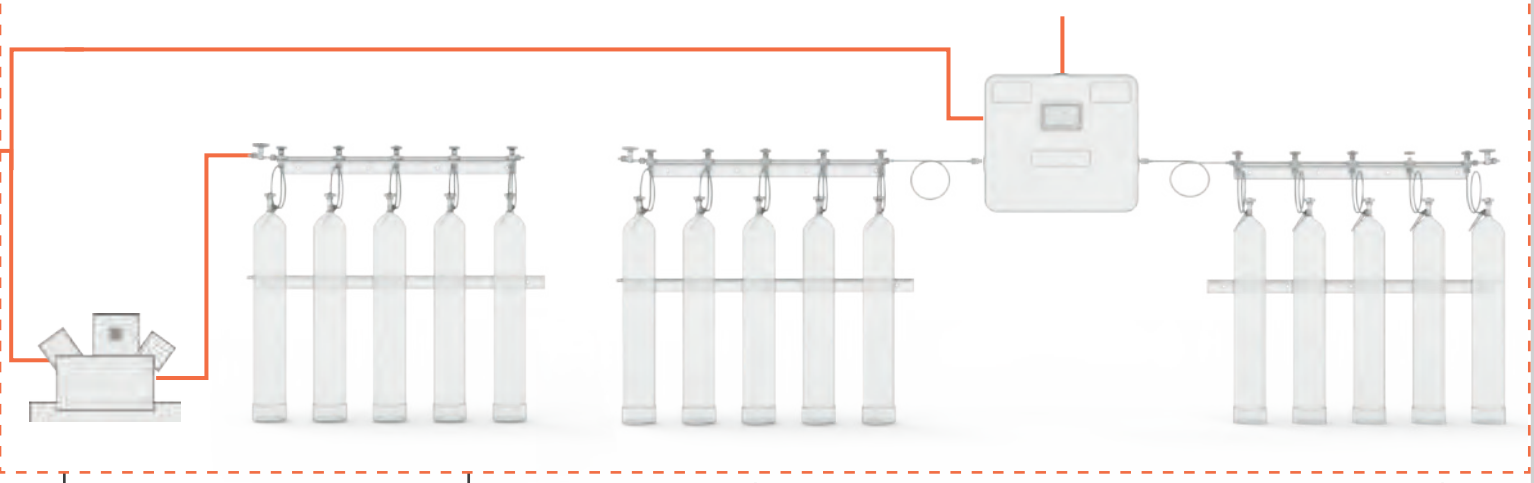
Features:

- Oxygen purity level and outlet pressure indicator
- Easy handling from Touch screen
- Automatic operation
- Reducing operation cost
- Return investment in less than 1 year
- Optional oxygen analyzer

Medical Gas Plants

Model No	O2 Generator Capacity (m³/h)	Bed Number	Compressor Capacity (m³/h)	Compressor Type	Air Tank Capacity	Oxygen Tank Capacity	Dreyer Capacity (m³/h)
GZ81.01	50 L/min - 3	50-100	5,5 kw/45	Screw Type	500 L	500 L	72/(0,26 kw)
GZ81.02	100 L/min - 6		11 kw/100	Screw Type	500 L	500 L	150/(0,6 kw)
GZ81.03	150 L/min - 9		15 kw/150	Screw Type	750 L	750 L	150/(0,6 kw)
GZ81.04	200 L/min - 12	100-150	18,5 kw/185	Screw Type	1000 L	1000 L	216/(0,79 kw)
GZ81.05	250 L/min - 15		22 kw/215	Screw Type	1000 L	1000 L	324/(1 kw)
GZ81.06	300 L/min - 18		22 kw/215	Screw Type	1000 L	1000 L	324/(1 kw)
GZ81.07	350 L/min - 21		30 kw/315	Screw Type	1000 L	1000 L	390/(1,2 kw)
GZ81.08	400 L/min - 24	150-200	30 kw/315	Screw Type	1000 L	1000 L	390/(1,2 kw)
GZ81.09	500 L/min - 30		37 kw/380	Screw Type	1000 L	1000 L	462/(1,44 kw)
GZ81.10	600 L/min - 36		45 kw/425	Screw Type	1000 L	1000 L	600/(1,8 kw)
GZ81.11	700 L/min - 42	200-250	55 kw/560	Screw Type	2000 L	2000 L	720/(1,8 kw)
GZ81.12	800 L/min - 48		55 kw/560	Screw Type	2000 L	2000 L	720/(2 kw)
GZ81.13	900 L/min - 54	250-300	75 kw/740	Screw Type	2000 L	2000 L	900/(2,6 kw)
GZ81.14	1000 L/min - 60		75 kw/740	Screw Type	3000 L	3000 L	900/(2,6 kw)

Optional



Clinders Filling Cystem

Central Gas Station

Cryogenic Oxygen Stations

Main components of the Cyrogenic Oxygen Stations are liquid oxygen (LOX) storage tanks and evaporation systems.

Classification

INSPITAL LOX tanks are specially designed and Manufactured according to 2014/68/EU Pressure Equipment Directive (PED) EN 13445 – Annex C for long term storage of cryogenic liquified gases under pressure.

DESIGN CODE	E N 13458 - PED 97/23/EC
MAX. ALLOWABLE WORKING PRESSURE	16 bar
DESIGN TEMPERATURE	-196°C
INNER VESSEL MATERIAL	Stainless Steel (According to EN 10028-7)
OUTER VESSEL MATERIAL	Carbon Steel (According to EN 10025/EN 10028-3)
INSULATION	Perlite & Vacuum

Features:

- Optional long-distance control with telemetry
- Standard manual or optional digital level indicator
- TUV Austria approved and CE marked
- Included VIE control panel

Air Gas Standard Storage Tanks Dimensions

16 Bar Cryogenic lin/Lox/Lar Storage Tanks

Model no	Gros Capacity	Net Capacity (%95 Filling)	Daily Evap. Rate (02)	ØD	L	W	H	Empty Weight
	liters	liters	%/day	mm	mm	mm	mm	kg
GZ90.00	3450	3280	0.34	1830	4020	2050	2120	2500
GZ90.05	6200	5890	0.30	1830	5910	2050	2120	3750
GZ90.10	10450	9930	0.29	2400	5340	2400	2690	5300
GZ90.15	14850	14110	0.28	2400	6830	2400	2690	6950
GZ90.25	24750	23510	0.24	2400	10625	2400	2690	10800
GZ90.30	31300	29735	0.23	2680	10300	2680	3020	11750
GZ90.50	50000	47500	0.19	3050	3050	11300	12000	20500

Ambient Air Vaporizer

Ambient air vaporisers requires no external source of energy; and enables vaporization through exchange of heat with the surrounding air. The liquefied gas is vaporized, and warmed to almost the surrounding temperature, and finally led to the users in its gaseous state

The vaporisers are for use with liquid:

- Oxygen
- Nitogen
- Argon
- Carbon Dioxide
- Nitrous Oxide
- LNG

Design Specifications

INSPITAL offers a full range of ambient air vaporizers in different versions and for different applications. Our following properties:

- Designed and manufactured according to PED 97/23/EC
- Has CE marking
- Max allowable working pressure 40 bar
- Cleaned for oxygen service
- Seismic requirements acc. to uniform building code-zone 4
- Low pressure drop
- Efficient fin tube desing
- Optimised external and internal surfaces for optimum convection

Vaporiser options

- Ambient air vopariser options are
- Fin tube vaporisers
- Fan assisted vaporiser

Fin tube vaporisers rely on natural convection while fan assisted models are equipped with an models are equipped with an enhance air flow and increase efficiency.

Model no	Exterior Surface (M2)	Capacity for LOX (Nm^3 /h)
GZ90.05	29	93
GZ90.10	59	186
GZ90.15	117	372
GZ90.25	205	650
GZ90.30	292	929
GZ90.50	400	1274

- The evaporator selection is made according to consumption of hospital.
- Evaporator needs to change between reserve at every 8 hours.
- The evaporator capacities to be selected according to the external surface will vary according to the outdoor temperature, working time and fluid type.

Medical Gas Outlets

Outlet Dia : 45 mm
Copper Pipe Dia : 10 mm
Production Standard : BS 5682/EN ISO 9170-1
Color Codes : Oxygen – White
Vacuum – Yellow
Nitrous Oxide – Blue
Compressed Air – Black & White

	 Oxygen	 Vacuum	 Air 4	 Air 7	 N_2O	 CO_2	 02/ N2 - Mix
DIN	PR80.01	PR80.02	PR80.03	PR80.04	PR80.05	PR82.01	-
BS	PR80.06	PR80.07	PR80.08	PR80.09	PR80.10	-	PR82.30

Medical Gas Outlets

Outlet Dia : 43 mm
Copper Pipe Dia : 10 mm
Production Standard : BS 5682/EN ISO 9170-1
Color Codes : Oxygen – White
Vacuum – Yellow
Nitrous Oxide – Blue
Compressed Air – Black & White

	 Oxygen	 Vacuum	 Air 4	 Air 7	 N_2O	 CO_2	O^2 N2 - Mix
DIN-90°	PR80.11	PR80.12	PR80.13	PR80.14	PR80.15	PR82.02	-
BS-90°	PR80.16	PR80.17	PR80.18	PR80.19	PR80.20	-	PR82.31
AFNOR-90°	PR80.21	PR80.22	PR80.23	PR80.24	PR80.25	PR80.26	-
DIN-45°	PR82.11	PR82.12	PR82.13	PR82.14	PR82.15	PR82.03	-
BS-45°	PR82.16	PR82.17	PR82.18	PR82.19	PR82.20	-	PR82.32
AFNOR-45°	PR82.21	PR82.22	PR82.23	PR82.24	PR82.25	PR82.26	-

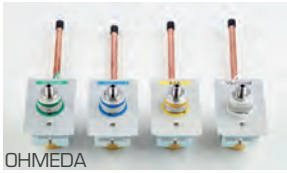
Medical Gas Outlets and Accessories

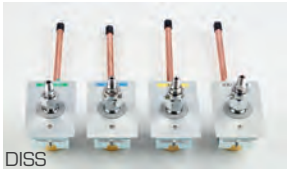

CHEMETRON

Medical Gas Outlets

Outlet Size : 62 X 96 mm
Copper Pipe Dia : 10 mm
Production Standard : BS 5682/EN ISO 9170-1
Color Codes : Oxygen-Green
Vacuum-White
Nitrous Oxide – Blue
Compressed Air – Yellow

	 Oxygen	 Vacuum	 Air	 N_2O
DISS	PR80.32	PR80.33	PR80.34	PR80.35
CHEMETRON	PR80.36	PR80.37	PR80.38	PR80.39
OHMEDA	PR80.40	PR80.41	PR80.42	PR80.43


OHMEDA


DISS

AGSS Terminal Units

INSPITAL AGSS terminal units are designed according to safety and performance requirements of EN ISO 9170-2 standard

Technical specifications

- Can be used as under plaster, on plaster or pendant outlet
- Special port to enable safe connection
- Venturi Type Outlet option
- Made of S/S frame and chrome plated brass material

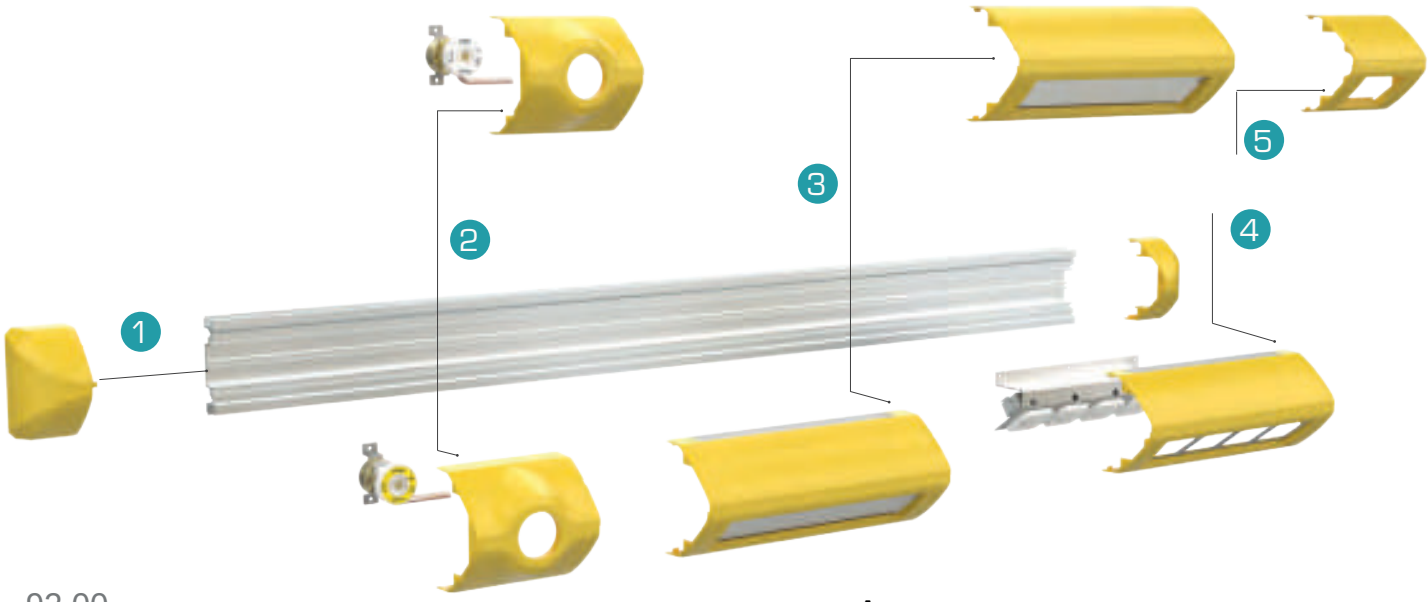
				
Probe Type	BS	BS Probe	DIN (Venturi Type)	DIN Probe
Model No	PR80.26	PR80.27	PR80.30	PR80.31

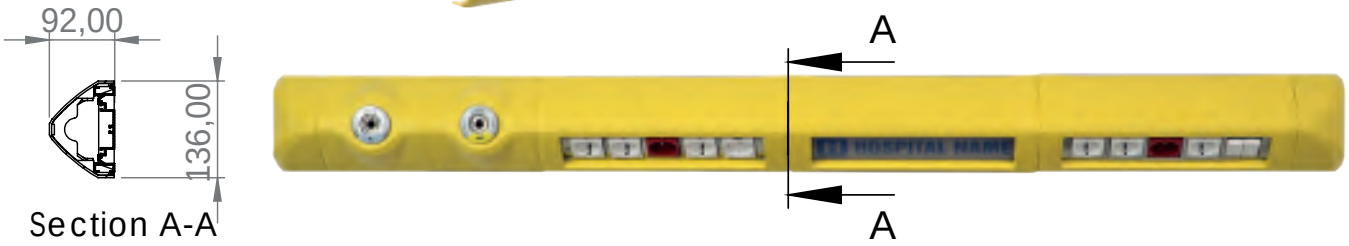

Air Motor
PR81.32


Air Motor Probe
PR81.33

Air Motor

This terminal unit integrates a medical tool drive outlet with a gas scavenging terminal unit.





Section A-A

Modular Bed Head Units

	1 Side Hatch, 75 mm
	2 Med.Gas Outlet Module, (Single Port) 150 mm
	3 Led Lighting Module, 350 mm
	4 Electrical Power Module, (3/4/5 Sockets) 350 mm
	5 Electrical Power Module, (Single Sockets) 150 mm

Colour Options

White	RAL9003
Yellow	RAL1018
Light Grey	RAL7040
Anthracite	RAL7015

Patient Bed Head Units

Modular Bed Head Units

New generation INSPITAL bed head units are designed for new generation hospitals which requires functional, extendable and modular solutions.

Manufactured according to EN 11197 and fully meets all the standards of this regulation.

Innovative design of modular bed head units offer:

- Modular structure
- Configurable unit according to customer's needs both during the order and after the installation
- Aluminum main frame
- ABS cover (optional anti-bacterial version)
- Wide range of color options
- LED light for reading and ambient lighting (optional fluorescent light)
- Electrical sockets available for different country standards
- Name plate option on lamp module

Explanation	Length	Model No
Single bed	1500-1800 mm	GB22.30
Double bed	3000-3600 mm	GB22.40
ICU Single bed	1500-1800 mm	GB22.50
Double arm vertical type	1500-1800 mm	GB22.60
Single arm vertical type	1500-1800 mm	GB22.90

Patient Bed Head Units

Patient Bed Head Unit with Three Channels and Double Lamps

INSPITAL Patient Bed Head Units are designed to provide integrated solutions of medical gas outlets, nurse call systems and electrical outlets in patient areas.
All INSPITAL Bed Head Units designed and manufactured in compliance with EN 11197 standard.
Each unit is custom manufactured to your specific requirements.

Standard Accessories

- Electrical socket :3 pcs 220 V (BS and DIN)
- Reading lamp :2 pcs
- Power button :1 pc

Explanation	Length	Model No
Single bed	1500-1800 mm	GB22.35
Double bed	3000-3600 mm	GB22.45

GB22.01
GB22.02

ICU Type Patient Bed Head Unit with Double Channel and Double Rail

INSPITAL Patient Bed Head Units are designed to provide integrated solutions of medical gas outlets, nurse call systems and electrical outlets in patient areas, especially in ICU's.
All INSPITAL Bed Head Units are designed and manufactured incompliance with EN 11197 standard.

Standard Accessories

- Electrical socket 6 pcs (BS and DIN)
- Earth node 4 pcs

GB22.31
GB22.32

Explanation Wall Type	Length	Model No
Single bed	1500-1800 mm	GB22.01
Double bed	3000-3600 mm	GB22.02
Single bed	1500-1800 mm	GB22.31
Double bed	3000-3600 mm	GB22.32

	Explanation	Model No
Celiling support profiles	For single BHU	GB52.01
	For double BHU	GB52.02

Pendants

Bridge Type ICU Pendant

INSPITAL bridge type pendants are used to provide medical gas outlets, electrical outlet and convenient device positioning around the patient in ICU, recovery and similar departments

Standard Accessories:

Electrical Socket	:	6 pcs EUR/UK/USA
Equipment shelf	:	3 pcs
IV pole	:	1 pc
Drawer	:	2 pcs

Optional Accessories:

Medical gas outlets (BS/DIN/NF), data outlet (RJ45), manometer for medical gases

Technical Specifications

Material	:	Main frame: aluminum; Shelves: 1mm steel
Movements	:	Shelves move horizontally in the rail and rotate manually
Loading capacity	:	50 kg
Color	:	RAL colors are avaliable
Power Input	:	220V AC - 50 Hz
Dimensions	:	(WxLxH)350x2200 x1300mm

Model: FX40.50

Model: FX40.25
Double Joint, Motorised
Pendant

Model: FX40.20
Single Joint, Motorised
Pendant

Model: FX40.15
Double Joint Pendant
with Double Shelf

Model: FX40.10
Single Joint Pendant
with Double Shelf

Pendants

Pendant Systems

INSPITAL single joint pendants are designed to provide single point service for medical gas, electricity and equipment positioning nearby the patient. Mobility, flexibility and heavy duty design gives a strong support in operating theatres.
Every pendnat is custom design by our experienced sales support team.

Features
- High payload capacities up to 1.000 kgs
- Color coded brake buttons and joints
- Optional electromagnetic and pneumatic brake system
- Optional bluetooth sound system
- Visual indicators for movements

Standard Accessories
- Power Outlet: 8 Number UK, USA, Europe
- Grounding Note: 8 Pcs
- Rail Shelf: 1 Pc
- IV Pole 2 Pcs

Optional Accessories
- Shelves
- IV Pole
- Drawer
- Data socket (RJ45)
- Pressure gauge for Medical Gases
- Medical gas outlets (BS, DIN, NF)

Model: FX40.05
Pendant with Monitor Shelf

Model: FX40.20D
Heavy Duty Double Joint Pendant

Model: FX40.15M
Heavy Duty Motorised Pendant

Model: FX40.10S
Heavy Duty Single Joint Pendant

Pendants

Infusion Pump Pole, Double, Rail Type

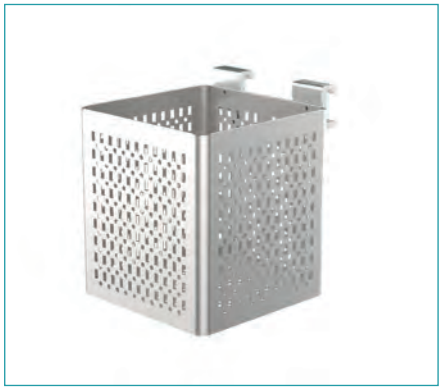
Explanation	Model No
Double	SR10.22

IV Pole

Explanation	Model No
With Clamp	SR10.32

Infusion Pump Pole with Connector

Explanation	Model No
Connector Inclusive	SR10.33



Basket, Stainless Steel, Rail Type

Explanation	Model No
220x220x240 mm	FX41.01
220x400x240 mm	FX41.02

Monitor Tray, Rail Type

Explanation	Model No
Rail Type	FX41.03

Monitor Tray, Wall Type

Explanation	Model No
400 mm Height Adjustment	FX41.04

Drawer for the wall

Explanation	Model No
540 x 360 mm	FX41.05

Shelf with Drawer for Pendants

Explanation	Model No
500 x 400 mm Drawer	FX41.06
500 x 400 mm Shelf	FX41.07

Examination Lamp LED, Rail Type

Explanation	Model No
Rail Type (LED)	LP10.05

Outlet Boxes

Outlet Boxes, On Plaster/ Under Plaster

- Made of 304 quality S/S material
- Suitable to install on plaster / under plaster
- Several length and outlet standard alternatives

On Plaster Model	Under Plaster Model	Length	Outlet Qty
PR81.30	PR81.31	260 mm	1
PR81.01	PR81.07	310 mm	2
PR81.02	PR81.08	460 mm	3
PR81.03	PR81.09	610 mm	4
PR81.04	PR81.10	760 mm	5
PR81.05	PR81.11	910 mm	6
PR81.06	PR81.12	1110 mm	7
PR81.28	PR81.29	145 mm	Single AGSS

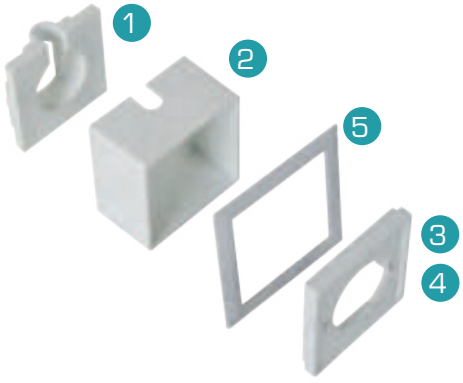
• Without outlets

Plastic Outlet Boxes, Under Plaster

- Made of durable plastic material
- Suitable for under plaster installation
- Several length and outlet standard alternatives

Explanation	Length	Outlet Qty	Model No
Under Plaster	100 mm	1	PR81.17
Under Plaster	250 mm	2	PR81.18
Under Plaster	400 mm	3	PR81.19
On Plaster	100 mm	1	PR81.20

• Without outlets



Medical Outlet Boxes BS/DIN

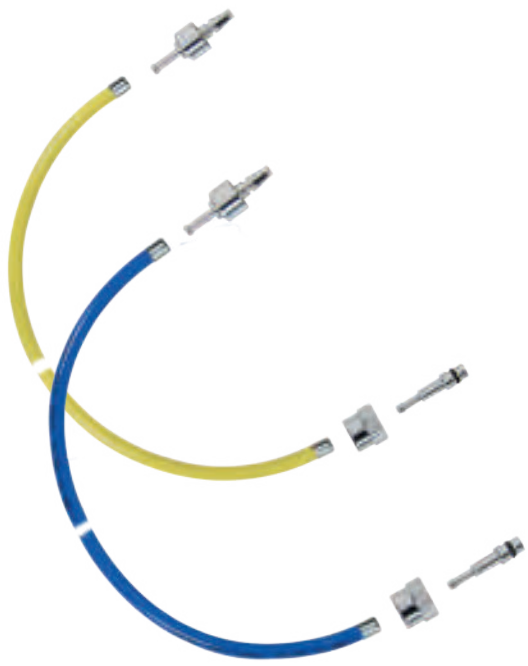
- Consist of 4 parts and made of plastic material
- Compatible with BS or DIN standards

No	Explanation	Dimensions (WxLxH) mm	Model No
1	Base part	82x82x22	PR81.21
2	Main body	86x86x50	PR81.22
3	Cover BS	86x86x12	PR81.23
4	Cover DIN	86x86x12	PR81.24
5	Frame	106x106x12	PR81.25

Medical Outlet Box AFNOR

- Consist of 2 parts. Main frame is plastic and cover is metal.
- Compatible AFNOR standard

Explanation	Dimensions (WxLxH)	Model No
Main frame	65x65x25 mm	PR81.26
Cover	65x65x25 mm	PR81.27



Hose Assembly

INSPITAL offers a complete range of Medical Gas Hoses that are fully compatible according to current ISO 5359 for the manufacture of medical gas hose assemblies. All hoses are CE marked. Different hose configuration are possible with direct probe, angle probes, NIST probes, NIST probe with tail, female NIST probe, Schrader outlets, twin Schrader outlets.

Hose Assembly - 3m

Hose Type	BS	DIN	AFNOR
02,	PR10.01	PR10.11	PR10.21
N20	PR10.02	PR10.12	PR10.22
AIR 4	PR10.03	PR10.13	PR10.23
AIR 7	PR10.04	PR10.14	PR10.24
VAC,	PR10.05	PR10.15	PR10.25

Hose Assembly - 5m

Hose Type	BS	DIN	AFNOR
02,	PR10.06	PR10.16	PR10.26
N20	PR10.07	PR10.17	PR10.27
AIR 4	PR10.08	PR10.18	PR10.28
AIR 7	PR10.09	PR10.19	PR10.29
VAC,	PR10.10	PR10.20	PR10.30

Hose Type	Model No
02, 100 cm	PR81.13
N20, 100 cm	PR81.14
AIR, 100 cm	PR81.15
VAC, 100 cm	PR81.16

Medical Gas Hoses

- Special hoses for medical gases
- Made of thermoplastic and rubber material
- Color coding according to EN 739 standard
- Suitable up to 20 bar pressure
- Inner dia: 6,7 mm Outer dia: 12 mm

Ceiling NIST Blanking Plug

- Universal NIST for blanking pressure gases

Hose Type	Model No
Pressure Gas	PR11.08
AGSS	PR11.09

NIST Probe

- Stainless steel NIST Probe with 'O' Ring
- Gas specific engraving on NIST Probe and Nut
- Gas specific Indexing
- MRI compatible

Hose Type	Model No
02	PR11.01
N20	PR11.02
AIR 4	PR11.03
AIR 7	PR11.04
VAC	PR11.05
CO2	PR11.06
AGSS	PR11.07

Angled Probe

INSPITAL probes are produced according to international standards by using a special labelling for gases..
They are used to supply necessary gases from terminal units to the patient or medical equipments via hose connections or by direct connection to the equipment.
INSPITAL Probes are manufactured in compliance with BS 5682:1992, DIN 13260, AFNOR NF S 90-116.

- Manufactured according to BS, DIN & AFNOR standard
- Special connections for 02, N20, AIR 4 and AIR 7
- Special labeling for each gas type
- Safe hose connection
- Made of chrome plated brass material or Stainless Steel

		 BS	 DIN	 AFNOR	 BS	 DIN	 AFNOR
Oxygen	Stainless Steel	JK90.50	JK90.51	JK90.52	JK92.50	JK92.51	JK92.52
	Brass	JK90.56	JK90.57	JK90.58	JK92.56	JK92.57	JK92.58
Vacuum	Stainless Steel	JK90.60	JK90.61	JK90.62	JK92.60	JK92.61	JK92.62
	Brass	JK90.66	JK90.67	JK90.68	JK92.66	JK92.67	JK92.68
Air 4	Stainless Steel	JK90.70	JK90.71	JK90.72	JK92.70	JK92.71	JK92.72
	Brass	JK90.76	JK90.77	JK90.78	JK92.76	JK92.77	JK92.78
Air 7	Stainless Steel	JK90.80	JK90.81	JK90.82	JK92.80	JK92.81	JK92.82
	Brass	JK90.86	JK90.87	JK90.88	JK92.86	JK92.87	JK92.88
N_2O	Stainless Steel	JK90.90	JK90.91	JK90.92	JK92.90	JK92.91	JK92.92
	Brass	JK90.96	JK90.97	JK90.98	JK92.96	JK92.97	JK92.98
CO_2	Stainless Steel	-	JK91.11	JK91.12	-	JK93.11	JK93.12
	Brass	-	JK91.17	JK91.18	-	JK93.17	JK93.18

Straight Probe

		 DISS	 CHEMETRON	 OHMEDA
Oxygen	Brass	JK90.53	JK90.54	JK90.55
Vacuum	Brass	JK90.63	JK90.64	JK90.65
Air 4	Brass	JK90.73	JK90.74	JK90.75
Air 7	Brass	JK90.93	JK90.94	JK90.95

Flowmeters

INSPITAL offers different models of flowmeters according to their gas flow scale, connection types and humidity jars that can be used with oxygen.
Flowmeters can be either connected to medical gas outlets directly or attached on rail system and connected to the outlets by flexible hoses.

Size (LxWxH) : 80 x 48 x 145 mm
Inlet : Whitworth GAS 1/8"
Pressure : 4.2 Kgs/cm² – 60 psi – 414 kPa
Flow Rate : 0 - 15 L/min
Humidifier capacity : 200 ml

Flowmeters L/min	Without Adaptor	 BS 5682	 DIN 13260	 NF 90 116	 DISS	 CHEMETRON	 OHMEDA
Oxygen							
Wall type	FM20.11	FM20.21	FM20.31	FM20.41	FM20.51	FM20.61	FM20.71
Rail type	FM20.12	FM20.22	FM20.32	FM20.42	FM20.52	FM20.62	FM20.72
Dual wall type	FM20.13	FM20.23	FM20.33	FM20.43	FM20.53	FM20.63	FM20.73
Dual rail type	FM20.14	FM20.24	FM20.34	FM20.44	FM20.54	FM20.64	FM20.74
Air							
Wall type	FM20.15	FM20.25	FM20.35	FM20.45	FM20.55	FM20.65	FM20.75
Rail type	FM20.16	FM20.26	FM20.36	FM20.46	FM20.56	FM20.66	FM20.76
Dual wall type	FM20.17	FM20.27	FM20.37	FM20.47	FM20.57	FM20.67	FM20.77
Dual rail type	FM20.18	FM20.28	FM20.38	FM20.48	FM20.58	FM20.68	FM20.78

Calibrated Flowmeter

Mobile Flowmeter

Flowmeters

INSPITAL flowmeters are instant flow measurement devices regulating the dosage of medical gases particularly suitable in Oxygen therapy.

- Pre-calibrated and measurement tube types
- I/O switch for immediate locking and reactivating
- Large siz adjusting knob with soft grip

Size (LxWxH)	: 61x107x175 mm
Gas supply pressure	: 280÷600 kPa
Gas options	: 02, Air
End of scale values	: 15 L/min.
Flow calibration data	: 1013 mbar 23 °C

Calibrated Flowmeter 15 L/min	Without Adaptor	 BS 5682	 DIN 13260	 NF 90 116	 DISS	 CHEMETRON	 OHMEDA
Wall type	FM21.11	FM21.21	FM21.31	FM21.41	FM21.51	FM21.61	FM21.71
Rail type	FM21.12	FM21.22	FM21.32	FM21.42	FM21.52	FM21.62	FM21.72
Dual wall type	FM21.13	FM21.23	FM21.33	FM21.43	FM21.53	FM21.63	FM21.73
Dual rail type	FM21.14	FM21.24	FM21.34	FM21.44	FM21.54	FM21.64	FM21.74

Mobile Flowmeter 15 L/min	Without Adaptor	 BS 5682	 DIN 13260	 NF 90 116	 DISS	 CHEMETRON	 OHMEDA
Wall type	FM21.15	FM21.25	FM21.35	FM21.45	FM21.55	FM21.65	FM21.75
Rail type	FM21.16	FM21.26	FM21.36	FM21.46	FM21.56	FM21.66	FM21.76
Dual wall type	FM21.17	FM21.27	FM21.37	FM21.47	FM21.57	FM21.67	FM21.77
Dual rail type	FM21.18	FM21.28	FM21.38	FM21.48	FM21.58	FM21.68	FM21.78

150 ml

300 ml

150 ml

355 ml

	150 ml	300 ml	150 ml	355 ml
Model No	FM21.81	FM21.84	FM21.80	FM21.83

Flowmeter Humidifier Bottle

- Designed to humidify oxygen before patient's respiration
- Made of polycarbonate and scaled
- Sterilizable up to 121 °C For 15 min
- 120, 150, 300, 355 ml capacity options
- Connection to Flowmeter : Moving pipe union
- Lid material : Plastic
- Integrated relief valve

Oxygen Mask and Hose

- Oxygen concentration delivered is 40%-60% depending on the patient's breathing. The masks are connected directly to a compressed air or oxygen supply. The products are intended for single use only.
- 2.1m oxygen tubing
- Mask, oxygen tubing material: Polyvinyl chlorid

Model No	Explanation
AT20.60	Adult
AT20.61	Pediatric
AT20.62	Hose

5 Way Flow Selector and Frame

BS Schrader Input Probe on 2m Hose

- Strong aluminium frame
- Extending hooks for hanging
- 2m supply hose to connect to 4 bar oxygen source
- Folding carrying handle
- Four therapy outlets, each with selectable flows, 1/2, 1, 2, 3, 4, 6, 8, 10 and 15 litres per minute
- Plastic feet to base

Model No	Explanation
FM21.11F	5 Way Flow Selector

Vacuum Regulators

- On / Off lever for instant vacuum cut
- Autoclavable safety jar to avoid fluid leakage into central vacuum line
- Chrome plated brass trunk
- Easy to read vacuum gauge
- Flow adjustment knob

Gas Type	Without Adaptor	 BS 5682	 DIN 13260	 NF 90 116	 DISS	 CHEMETRON	 OHMEDA
Vacuum	FG51.01	FG51.02	FG51.03	FG51.04	FG51.05	FG51.06	FG51.07

Vacuum Regulator

- The regulator is made of a strong techno-polymer body, with a quick I/O switch-button, a suction adjustment knob and a control vacuum gauge with three possible end-of-scale choices: -250 mbar pediatric and -1000 mbar.
- De-pressure Safety valve inclueded
- Autoclavable safety jar to avoid fluid leakage into central vacuum line

- Max. suction flow - 1000 : 115 L/min at -950 mb
- Max. suction flow - 250 : 50 L/min at -220mbar
- Vacuum gauge : 0 + -1000 mbar
- I/O switch : Quick push switch button

Gas Type	Without Adaptor	 BS 5682	 DIN 13260	 NF 90 116	 DISS	 CHEMETRON	 OHMEDA
Vacuum -1000 mbar	FG52.10	FG52.11	FG52.12	FG52.13	FG52.14	FG52.16	FG52.15
Vacuum -250 mbar	FG52.20	FG52.21	FG52.22	FG52.23	FG52.24	FG52.26	FG52.25

Probe with Manometer

- Chrome plated brass trunk
- Flow adjustment knob
- Pressure or vacuum gauge
- Gas specific connection port
- Suitable outlet for hose connection

Gas Type	Without Adaptor	BS 5682	DIN 13260	NF 90 116	DISS	CHEMETRON	OHMEDA
Oxygen	FG50.10	FG50.11	FG50.12	FG50.13	FG50.14	FG50.15	FG50.16
Nitrous Oxide	FG50.20	FG50.21	FG50.22	FG50.23	FG50.24	FG50.25	FG50.26
Vacuum	FG50.30	FG50.31	FG50.32	FG50.33	FG50.34	FG50.35	FG50.36
Medical Air 4	FG50.40	FG50.41	FG50.42	FG50.43	FG50.44	FG50.45	FG50.46
Medical Air 7	FG50.50	FG50.51	FG50.52	FG50.53	FG50.54	FG50.55	FG50.56

Portable Oxygen and Vacuum System

- Designed for emergency services, ambulances and examination rooms
- Together with oxygen therapy device, ventury vacuum regulator, portable carrying rack and 1 L vacuum jar

- Regulator Inlet Pressure :200 kg / cm^2
- Regulator Output Pressure :3,5 - 4 kg / cm^2
- Pressure Gauge Scale :0 - 315 kg / cm^2
- Adjustable Flow Rate :0-15 L / min
- Vacuum Capacity :550 mmHg

	With 3 L 02 Cylinder	Without Cylinder
Model No	RS10.01	RS10.00

Thoracic Suction Control Unit:

- Designed to use for closed drainage purpose after Thoracic Surgery or Cardiac Surgery.
- Negative pressure: 0 – 20 cmH20 (water line) for persistent low pressure suction
- Polycarbonate, scaled and sterilizable bottle
- Transparent tube for easy observation on liquid
- Integrated safety trap to prevent back flow of waste fluid

	Without Adaptor	BS	DIN	AFNOR
Model No	FG54.01	FG54.02	FG54.03	FG54.04

Venturi Type Vacuum Regulator

- Designed to provide vacuum by using compressed air or oxygen source
- Chrome coated brass trunk
- Avaliable in BS, DIN, AFNOR, DISS and OHMEDA standards
- Max Suction Flow: 25L/min at-775 mbar
- Gas Consumption at max Scution : 60L/min

Gas Type	Without Adaptor	 BS 5682	 DIN 13260	 NF 90 116	 DISS	 CHEMETRON	 OHMEDA
Medical Air	FG53.01	FG53.02	FG53.03	FG53.04	FG53.05	FG53.07	FG53.06

Oxygen Therapy Device

INSPITAL Oxygen Therapy Device is appropriate to use in hospitals, emergency services and homecare units. This device is designed to adjust and control the oxygen flow.

- Chrome plated brass trunk
- High resistant polycarbonate humidifier bottle suitable for sterilization
- Maximum gas supply pressure : 200 bar
- Regulator Outlet Pressure : 3.5 - 4 bar
- Adjustable Flow : 0 - 15 L/min
- Pressure Gauge Range : 0 - 315 bar
- Sterilization Method : 121 °C

	Bull Nose	DIN	PIN INDEX
Model No	FM21.86	FM21.87	FM21.88

Oxygen Therapy Device Calibrated

- Max. gas supply pressure : 200 bar
- Regulator Outlet Pressure : 3.5 - 4 bar
- Adjustable Flow : 0 - 15 L/min
- Pressure Gauge Range : 0 - 315 bar
- Pressure reducer assy : Double stage with shutter system
- Flow setting data : 1013 mbar 23 °C
- Side gas outlet connection

Tube / Probe	Bull Nose	DIN	PIN INDEX
BS	FM22.01	FM22.02	FM.22.03
DIN	FM22.01D	FM22.02D	FM22.03D
AFNOR	FM22.01A	FM22.02A	FM.22.03A

Oxygen Therapy Device

INSPITAL Oxygen Therapy Device is appropriate to use in hospitals, emergency services and homecare units. This device is designed to adjust and control the oxygen flow.

- Chrome plated brass trunk
- High resistant polycarbonate humidifier bottle suitable for sterilization
- Maximum gas supply pressure : 200 bar
- Regulator Outlet Pressure : 3.5 - 4 bar
- Adjustable Flow : 0 - 15 L/min
- Inlet Pressure Gauge Range : 0 - 315 bar

	Bull Nose	DIN	PIN INDEX
Model No	FM21.96	FM21.97	FM21.98

Laboratory S/S Regulator

- Line groups with body valve
- Inlet pressure : 0 - 40 bar
- Outlet Connection : R 3/8"
- Adjustable Pressure : 0-10 bar & Argon 1,5 bar
- Stainles diaphragm

Model No	Gas type	Gas flow	Inlet Connetion
GZ70.80	Oxygen	70 m³/h	R 1/4 NPT
GZ70.81	Nitrogen	70 m³/h	R 1/4 NPT
GZ70.82	N20	70 m³/h	R 1/4 NPT
GZ70.83	Argon 1,5 bar	15 m³/h	R 1/4 NPT
GZ70.84	C02	12 m³/h	R 1/4 NPT
GZ70.85	Helium	40 m³/h	R 1/4 NPT
GZ70.86	Hydrogen	55 m³/h	R 1/4 NPT
GZ70.87	Dyr Air	15 m³/h	R 1/4 NPT
GZ70.88	Mixed	60 m³/h	R 1/4 NPT

Pressure Regulators

- Double stage stainless
- Inlet pressure : 0 - 230 bar
- Outlet Connection : R 3/8"
- Adjustable Pressure : 0-10 bar CO2 1,5 bar
- Stainles diaphragm,

Sigle Model	Double Model	Gas type	Gas flow	Inlet Connetion
GZ70.60	GZ70.70	Oxygen	30 m³/h	R 3/8"
GZ70.61	GZ70.71	Nitrogen	30 m³/h	R 5/8" Inner
GZ70.62	GZ70.72	Argon	30 m³/h	R 5/8" Inner
GZ70.63	GZ70.73	CO2	11 m³/h	W21, 80X1/14
GZ70.64	GZ70.74	Helium	70 m³/h	R 5/8" Inner
GZ70.65	GZ70.75	Hydrogen	90 m³/h	W21, 80X1/14 Left
GZ70.66	GZ70.76	Dyr Air	30 m³/h	R 3/8"
GZ70.67	GZ70.77	N20	30 m³/h	R 3/8"

Ventilator Regulators

Design to use with ventilator and direct oxygen supply at emergency, ICU and ambulances.

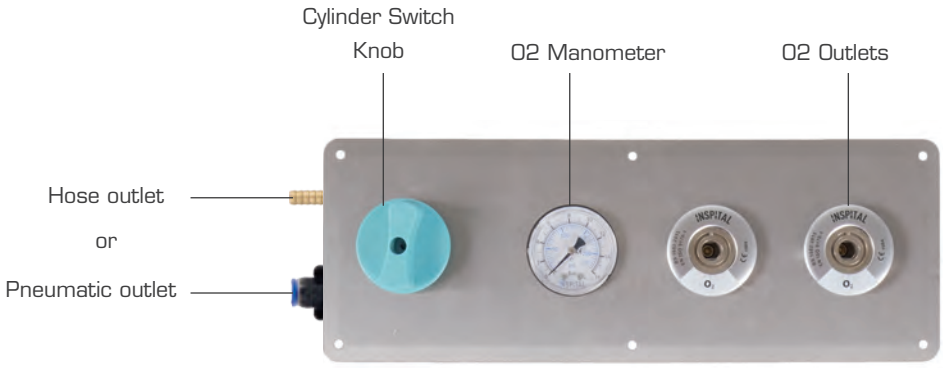
- Maximum gas supply pressure : 200 bar
- Regulator Outlet Pressure : 3.5 - 4 bar
- Pressure Gauge Range : 0 - 315 bar

Tube / Probe	Bull Nose	DIN	PIN INDEX
BS	FM21.91	FM21.92	FM21.93
DIN	FM21.91D	FM21.92D	FM21.93D
AFNOR	FM21.91A	FM21.92A	FM21.93A

Gas Outlets

- Made of S/S material Frame, bras body material
- Oxygen
- BS 5682 / DIN 13260-2 / Afnor NF 90 -116
- Outles and bard end inlet

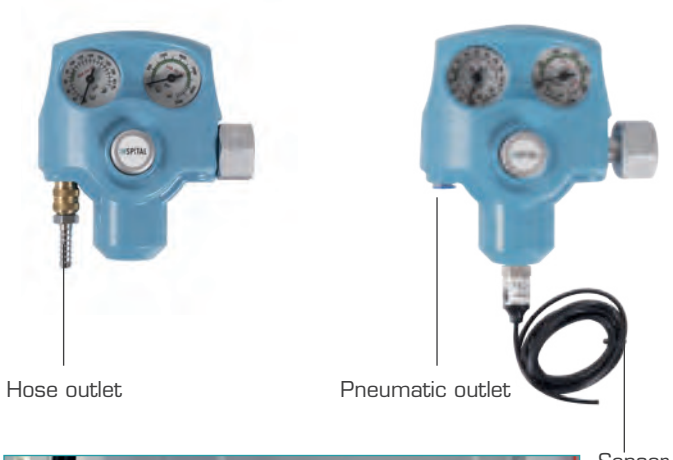
On Plaster Model	Under Plaster Model	Length	Outlet Qty	Gas Type
PR80.11A	PR80.01A	90 mm	1	DIN
PR80.11D	PR80.01D	200 mm	2	DIN
PR80.11T	PR80.01T	300 mm	3	DIN
PR80.21A	PR80.44A	90 mm	1	AFNOR
PR80.21D	PR80.44D	200 mm	2	AFNOR
PR80.21T	PR80.44T	300 mm	3	AFNOR
PR80.16A	PR80.06A	90 mm	1	BS
PR80.16T	PR80.06D	200 mm	2	BS
PR80.16D	PR80.06T	300 mm	3	BS



Ambulance Oxygen Terminal Unit

- Made of 304 quality S/S material
- Several length and outlet standard alternatives
- Modular system fully adaptable to your needs for the most demanding emergency situations
- Quick coupling for any type of hose
- Gas cylinder selector
- Outlet pressure monometer

Hose outlet Model	Pneumatic outlet Model	Length	Outlet Qty	Gas Type
PR41.12H	PR41.12P	360 mm	2	DIN
PR42.12H	PR42.12P	440 mm	3	DIN
PR41.13H	PR41.13P	360 mm	2	AFNOR
PR42.13H	PR42.13P	440 mm	3	AFNOR
PR41.11H	PR41.11P	360 mm	2	BS
PR42.11H	PR42.11P	440 mm	3	BS



Oxygen Pressure Regulators

- Designed to be used up to 200 bar, optimizing the 02 consumption
- Guarantees the the high stability of outlet pressure and precise flow
- Safe and accurate over-pressure valve

Model	Cylinder Fitting	Explanation	Sensor
GZ70.50A	DIN	Hose outlet	w/o
GZ70.50B	DIN	Pneumatic outlet	w/o
GZ70.50C	Bullnose	Hose outlet	w/o
GZ70.50D	Bullnose	Pneumatic outlet	w/o
GZ70.50E	DIN	Hose outlet	Wiht sensor
GZ70.50F	DIN	Pneumatic outlet	Wiht sensor
GZ70.50G	Bullnose	Hose outlet	Wiht sensor
GZ70.50H	Bullnose	Pneumatic outlet	Wiht sensor

Aluminium Cylinder DIN Type

- Aluminium alloy high pressure cylinders for medical gases
- 5 L and 10 L capacity cylinders tested at 300 bar
- The aluminium alloy medical gas cylinders offer noteworthy advantages such as being lightweight, corrosion-resistant and non-magnetic

Model	Capacity (L)	Diameter (mm)	Length (mm)	Weight (kg)
TP05.00	5	140	525	6,70
TP10.00	10	140	970	11,40

1L 2L 3L

Reusable Canister

Model No	Explanation
AT20.01	Canister, 1 L
AT20.02	Canister, 2 L
AT20.03	Canister, 3 L
AT20.04	Reusable lid

- Suitable for high vacuum applications
- New generation easy to use & hygienic system
- Antibacterial & hydrophobic self-sealing filter for extra safety
- Easy connection to central vacuum system

Suction Accessories

Model No	Explanation
AT80.10	Suction Liner, 1 L
AT80.20	Suction Liner, 2 L
AT80.30	Suction Liner, 3 L
AT80.11	Suction Liner With Antifoam, 1 L
AT80.22	Suction Liner With Antifoam, 2 L
AT80.33	Suction Liner With Antifoam, 3 L
AT80.91	Suction Liner With Solidifying Agents, 1 L
AT80.92	Suction Liner With Solidifying Agents, 2 L
AT80.93	Suction Liner With Solidifying Agents, 3 L

Suction Liner

- No contact with patient.
- Liner and lid are made of durable plastic.
- Liners are flexible
- In bags, optionally, disinfectant, foam inhibitor and Solidifying agents are avaliable.

The canisters are made in three sizes, to be used according to the effective requirements about the volumes expected to be suctioned, and they are manufactured in three different versions: suction liner, antifoam, solidifying agents.

Suction liner with solidifying allow us to avoid from liquid decontamination. Suction liner with antifoam finish all foam on liqud and that take advantage to use liner more efficency.

Suction Liner Manometer Probe

- That allows to open and close to suction from top of suction liner.
- Manometer and without manometer options

Rail Attachment

Explanation	Model No
For 25 x 5 mm Rail	AT20.37

Silicone / PVC Tube

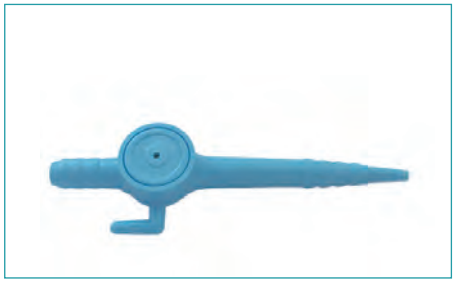
Explanation	Model No
8 x 14 mm (silicone)	AT20.47
6 x 11 mm (silicone)	AT20.46
8 x 12 mm (PVC)	AT20.44
10 x 14 mm (PVC)	AT20.45

Yankauer Tipped Hose

Explanation	Model No
1,8 Meter Hose	AT20.40
Suction Cannula tip	AT20.41

Wall Attachment

Explanation	Model No
Wall Attachment	AT20.50



Vacuum Control Connector

Explanation	Model No
Control Connector	AT20.54

Suction Cannula, Plastic

Explanation	Model No
Non-Sterile	AT20.55

Suction Liner Manometer Probe

Explanation	Model No
Manometer	AT20.78
Without Manometer	AT20.79

Tube Connector

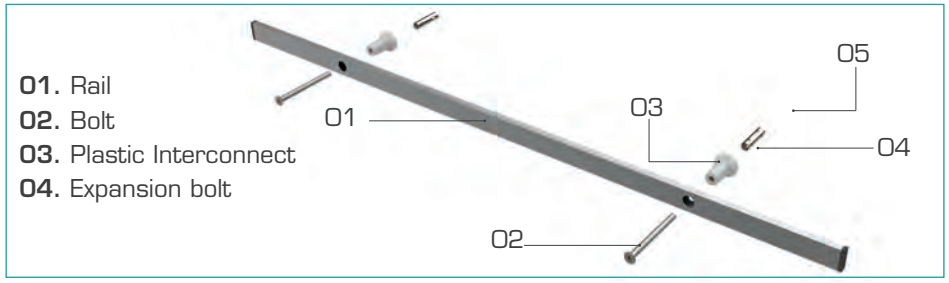
Explanation	Model No
Non-Sterile	AT20.52

Kapkon Connector

Explanation	Model No
Kapkon Connector	AT20.53

Rail

Explanation	Model No
1 meter	AT20.56



Suction Accessories

AT20.75

AT20.75P

Central Vacuum System

- Integrated vacuum regulator
- Liner and lid are made of durable plastic.
- Trolley with 4 pcs vacuum jar capacity
- Polycarbonate, transparent vacuum jars with silicone hoses
- Sterilizable jars at 121°

Model No	Explanation
AT20.75	S/S frame, 4 port
AT20.75C	Powder coating frame, 4 port
AT20.75P	Powder coating frame, 1 port

1. ***Patient port*** - The patient port allows the suction of fluids and all its content safely
2. ***Suction kit*** - Inspital suction system has wide range of accessories for different suction applications
3. ***Vacuum port*** - This port connects to vacuum source coming from surgical suction device or central vacuum station line
4. ***Filter*** - Inspital suction liners are equipped with hydrophobic filter which work as an overflow valve and antibacterial barrier. It also keeps the electrosurgery smoke in the liner and protects the operation environment

Surgical Suction Jar

- Made of transparent polycarbonate material
- Sterilizable jars at 121° C
- Adapter for wall connection
- Integrated hydrophobic filter

Model No	Capacity
AT20.85	5 L
AT20.83	3 L
AT20.82	2 L

Analog System

Nurse Call Panel

The Nurse Call Panel is an intelligent unit with a microcontroller RTC and E^2. It can operate by itself or with a connection to a PC. Mode settings are available. It displays upt to 5 calls at and displays the time, and date. The system communicates via RS485 modules. Other adjustments can be performed manually through a PC connection.

Model: GB22.70

Bedside Call Unit

The Bedside Call Unit is used patient rooms. There are backlit call and cancel buttons on the unit. In an emergency, a patient uses the call button to make an emergency call which appears as an alert on the Nurse Control Panel. Typical locations for this unit are on the walls of patient rooms and living areas as needed.

Model: GB22.76

Basic Handset

The Basic Handset allows the patient's condition to be reported quickly to the hospital staff in an emergency situation. It is easy to use and reinforced with auxiliary visuals. The device works through connection to the Bedside Call Unit. Easy-to-understand images indicate the functions of the buttons. Thanks to LEDs on the unit, the product is easily noticeable in the dark. These LEDs vary according to the last call made.

Model: GB22.72

Pull-cord Call Unit

The Pull-cord Call Unit is used in patient bathrooms or similar areas. There is a backlitcancel button and an emergency call pull-cord on the unit. In an emergency, a patient pulls the cord making an emergency call. This appears as a WC Emergency Call on the Nurse Control Panel.The system gives priority to WC Emergency calls and they appear before other calls.

Model: GB22.78

Over Door Light

The Over Door Light is located above the patient room door in the corridor. Its half-sphere shape makes it easily noticeable from any angle of view. If there is an emergency in the room, it can be seen clearly from the corridor. It can warn with four main colors, yellow, red, green,and blue, and combinations of these, depending on the call status of the room.

Model: GB22.80

Room Control Unit

The Room Control Unit is suitable for surface montage. Can support 3 beds, 1 call reset 1 WC, and 1 bath/shower by default. It can operate without external power supply.

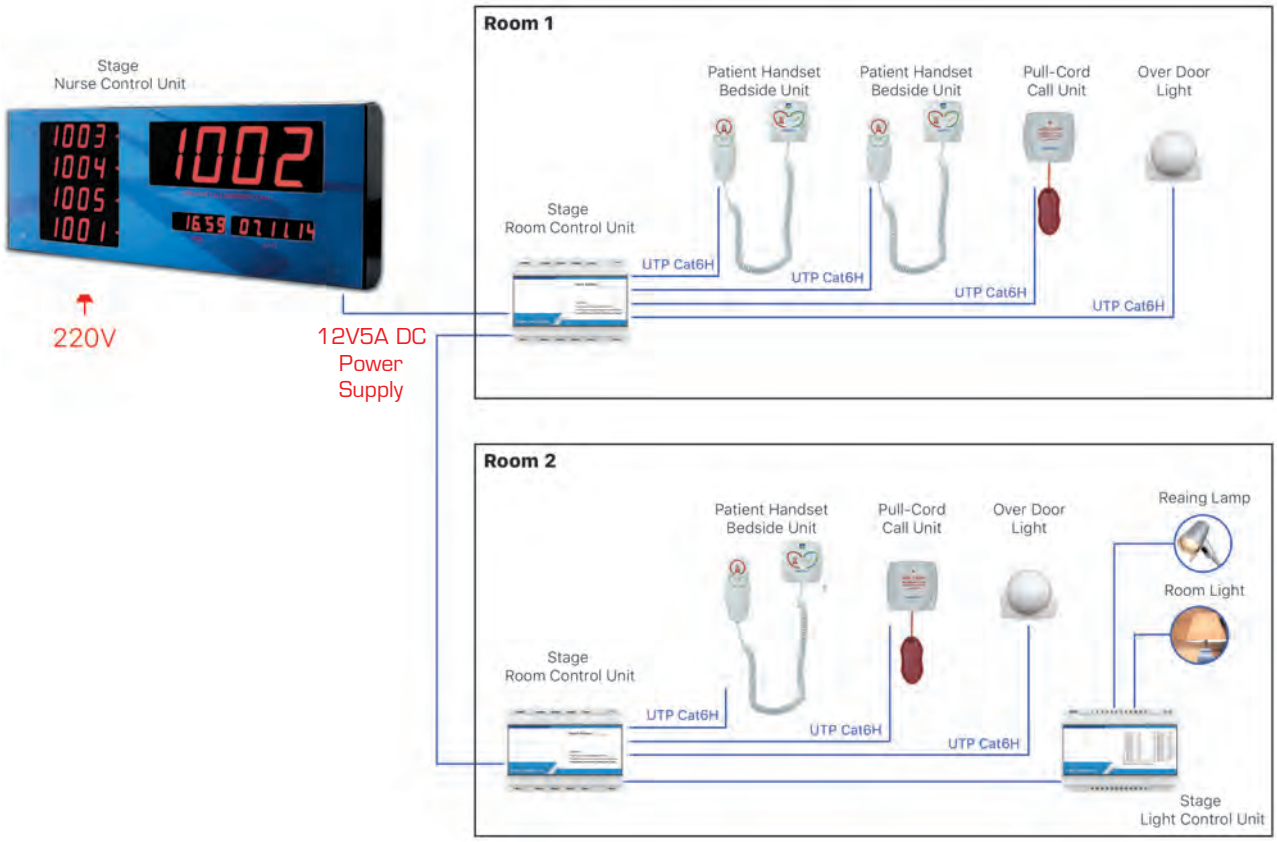
Model: GB22.75

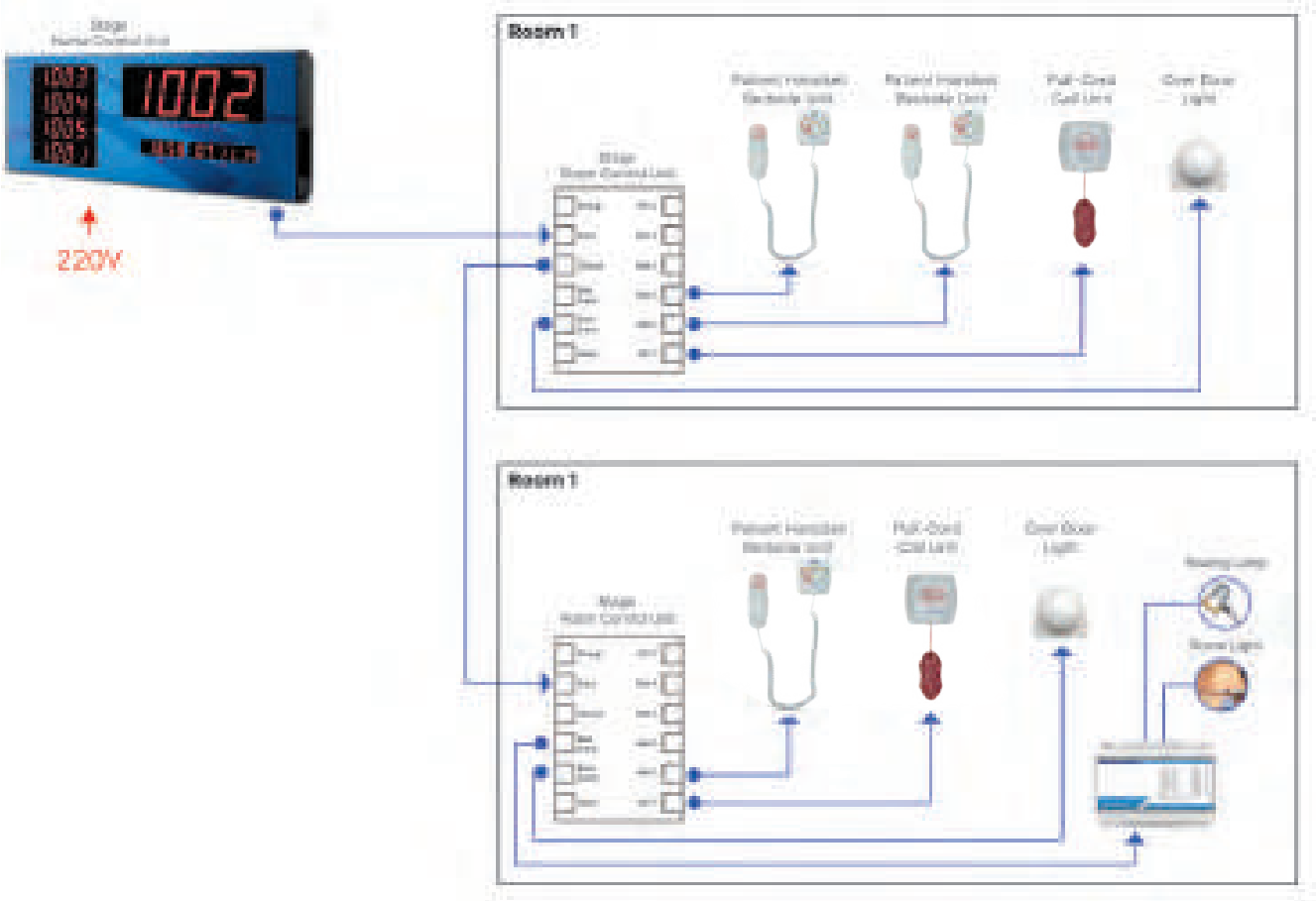
Light Control Unit

The Light Control Unit is a module that must be added to a system when control of room lighting/reading lamp through patient handsets is requested. This module supports up to 3 beds..

Model: GB22.82

Nurse Call System





IP System

Room Control Unit 4,3”

This unit ensures communication between the Nurse Control Panel and the call buttons in patient rooms. The Room Control Unit is suitable for both flush and shallow montage. It features a 4,3” touchscreen and a built-in Mifare card reader. Optionally a basic task list can be accessible from the onscreen menu.

Model: GB22.83

Nurse Control Panel

The statuses of all working Room Control Units connected to the panel can be monitored actively. All errors and notifications shall be displayed on the information panel. Emergency codes, WC calls, and normal calls may be monitored. All processes passing through the system are logged.

Model: GB22.84

Bedside Call Unit

The Bedside Call Unit is used patient rooms. There are backlit call and cancel buttons on the unit. In an emergency, a patient uses the call button to make an emergency call which appears as an alert on the Nurse Control Panel. Typical locations for this unit are on the walls of patient rooms and living areas as needed.

Model: GB22.76

Basic Handset

The Basic Handset allows the patient’s condition to be reported quickly to the hospital staff in an emergency situation. It is easy to use and reinforced with auxiliary visuals. The device works through connection to the Bedside Call Unit. Easy-to-understand images indicate the functions of the buttons. Thanks to LEDs on the unit, the product is easily noticeable in the dark. These LEDs vary according to the last call made.

Model: GB22.72

Over Door Light

The Over Door Light is located above the patient room door in the corridor. Its half-sphere shape makes it easily noticeable from any angle of view. If there is an emergency in the room, it can be seen clearly from the corridor. It can warn with three main colors, red, green,and blue, and combinations of these, depending on the call status of the room.

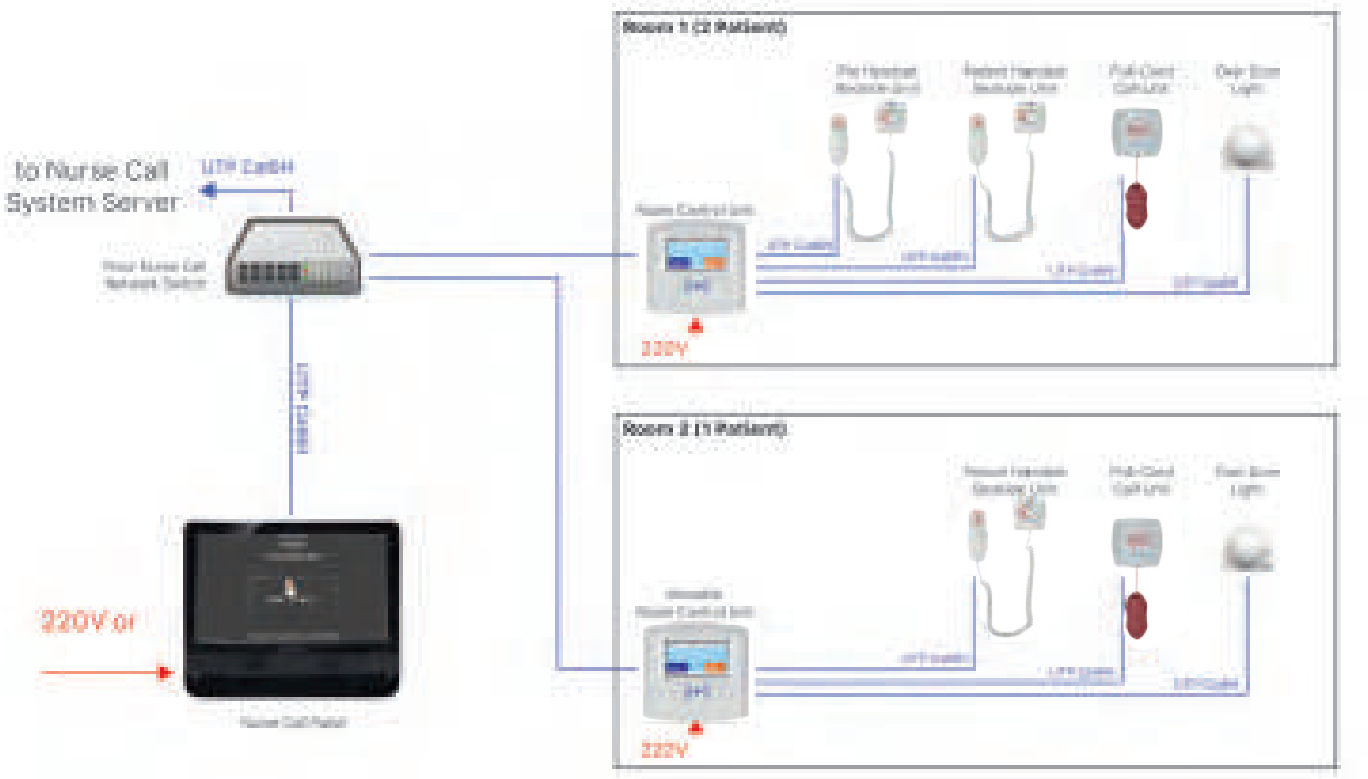
Model: GB22.81

Reporting and Management Server

This unit,without the need fort he operatör ,is inclusive of Nurse Call, Blue Code White Code and Consultant Doctor system over the local network, İt is the unit that can manage ,forward, keep records of all calls ,run the software programı that produces reporting and reporting and statistics. It worksin harmony with the harmony with the telephone Exchange and hospital information management system.Some of the presented reports are : Nurse Calis- Critcal Situations / Blue Code -Code Status Statistics -Graphical Reports-Performance Reports-Rerformance Report -Breakdown of Techninal Problems

Model: GB22.87

System
Block diagram



Wireless System

Dot Matrix Panel

- Displays 4 calls in order of priority (others wait in queue)
- Adjustable 5 digits can show floor, room, bed number, etc.
- Color LEDs indicate call type
- Supports up to 64 beds
- Audible alerts according to call type

Model: GB22.71

Signal Repeater

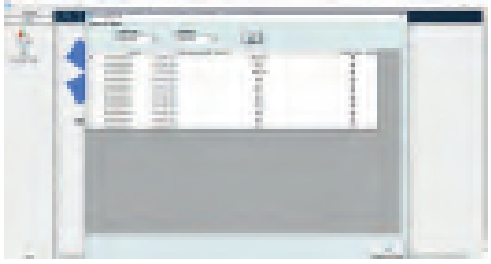
It is used with the purpose of expanding the coverage area if the distance between the patient call units and the nurse panel is excessive. There is no restriction on the number of repeaters to be used in the environment. Requires external 5V Supply.

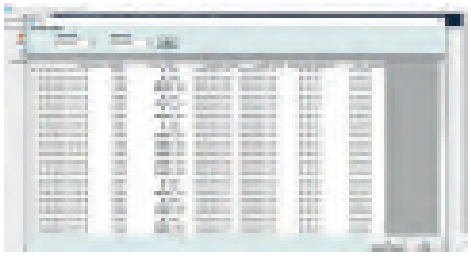
Model: GB22.74

INSPITAL Wireless Reporter Software

With the Reporter software, the calls made on system can be logged and reported. The software also doubles as a monitor for receving calls, displaying calls in priority order with icons and colors indicating the call type: Nurse Call, Nurse Presence, WC Call, and Code Blue

- The software can be muted and unmuted with a single button. It features a Night Service toggle to forward all calls received to another panel.
- There is also a feature to set custom reminder alarms.
- All of the call logs and reminder logs can be viewed and filtered.
- Pager and Forwarding Panel settings can be configured.
- The program also allows names to be given to specific call points so that that name will appear in the logs and the call receiving screen



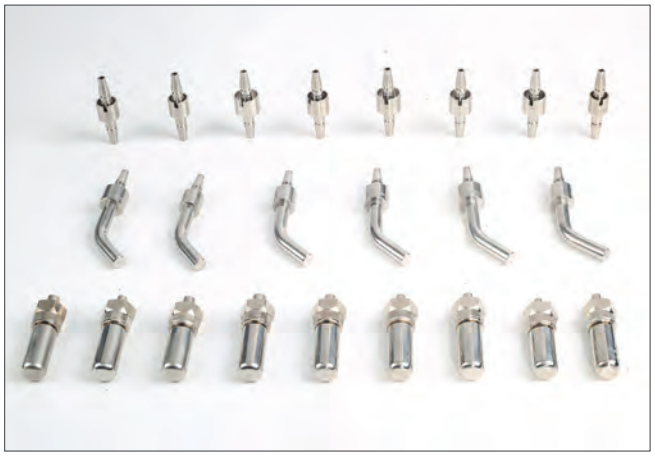


Medical Gas Test Kits

Medical Gas Test & Commissioning Kit

- A complete set all in one box to carry out Test & Commissioning
- Includes Digital Pressure & Flow, AGSS Test & Commissioning, Male Anti Confusion NIST, Anti Confusion Probes and Standard Purging test kits
- In compliance with HTM02-01 and relevant European Standards and all preceding standards.

Model:GZ75.01



Anti Confusion Probes

- Set of six stainless steel gas specific probes
- Gases include 02, 02/N20, N20, Air-4 Bar, Air-7 Bar, Vacuum
- Calibrated to BS 5682In compliance with HTM02-01 and relevant European Standards and all preceding standards

Model:GZ75.02

Anti Confusion NIST Probes

- Set of six or nine stainless steel gas specific NIST probes
- Gases include 02, 02/N20, N20, Air-4 Bar, Air-7 Bar, Vacuum
- Nine includes C02, N, HE02 (Carbon Dioxide,Nitrogen, Heliox)
- Calibrated and manufactured to current industry standards

Model:GZ75.03

Filter

Standard Particulate and Purging Kit

- 75/150Lpm flow rate jets
- Hydrophobic Membrane 47mm filter papers, 0.45(µm) pore size
- In compliance with HTM02-01 and relevant European q Standards and all preceding standards

Model:GZ75.04

Pressure Drop Test Gun

- Measures pressure losses at NIST or Outlet Point
- Lockable valve to prevent tampering
- Ideal to test at AVSU and Manifold points
- 20054D Digital Pressure Gauge or Conventional Analogue Gauge

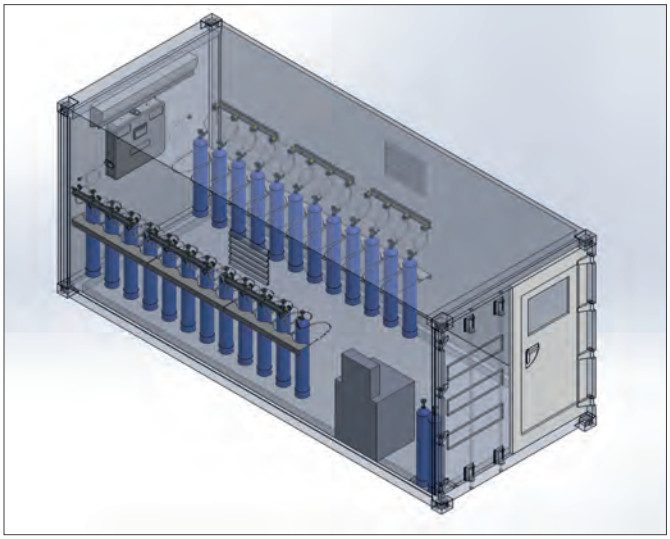
Model:GZ75.05

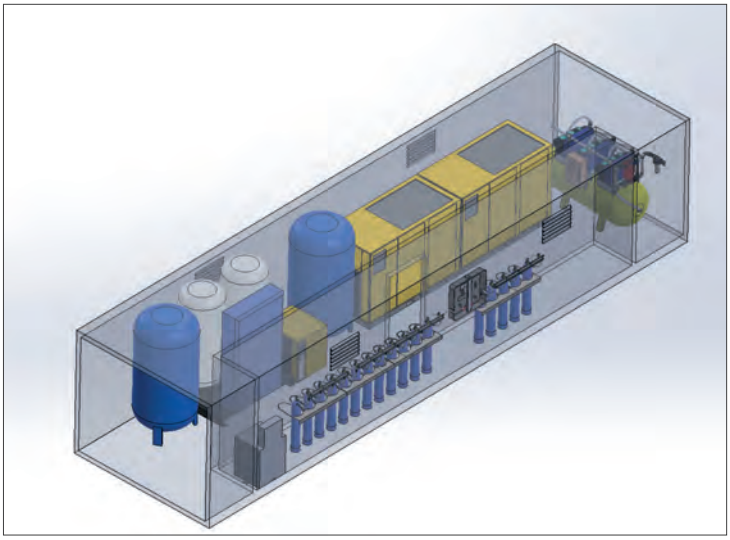
Medical Gas Container

Medical Gas Container

Medical gas container can consist of composite material or metal ISO 20 ft or 40 ft size containers.

- To provide the medical gas system regardless of the place.
- Suitable for harsh conditions and space saving
- Easy installation and time saving
- Different gas options that can be divided into different compartments
- Ready-to-use tested system
- Air conditioning and hot air extraction for air compressor





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Digital Catalog

INSPITAL

MEDICAL GAS SYSTEMS
2021

Central Gas Station for O2, N2O and CO2

INSPITAL central gas stations are designed to supply continuous medical gases like Oxygen, Nitrous Oxide, Entonox, medical air, carbon dioxide and nitrogen from the cylinders to hospital pipeline. Each station controls one primary and one back up cylinder racks.

- The two-stage regulation system, utilizing separate regulating units for each stage of pressure regulation, offers higher flow rates and smoother flow rate curve.
- Station switches to back up system automatically when the pressure of primary rack is dropped.
- Station is equipped with non-return valves in order to prevent discharge of the gas in the cylinders during the replacement or in case of leakage from the pipeline.

All pressure data and failure alarms are controlled by the digital control panel

Oxygen Station	**Model No**	GZ71.01	GZ71.02	GZ71.03	GZ71.04	GZ71.05	GZ71.06	GZ71.07
Nitrousoxide Station	**Model No**	GZ71.10	GZ71.11	GZ71.12	GZ71.13	GZ71.14	GZ71.15	GZ71.16
High pressure reducer 150 m³/h		-	-	1 pc	1 pc	1 pc	1 pc	1 pc
High pressure reducer 40 m³/h		1 pc	1 pc	-	-	-	-	-
Cylinder fixing chain, Triple		2 pcs	4 pcs	4 pcs	6 pcs	8 pcs	10 pcs	14 pcs
Tail Pipe&Flexible Hose		6 pcs	12 pcs	12 pcs	18 pcs	24 pcs	30 pcs	42 pcs
Flexible Connection		2 pcs	4 pcs	4 pcs	6 pcs	8 pcs	10 pcs	14 pcs
Ramp Triple			4 pcs	4 pcs	6 pcs	8 pcs	10 pcs	14 pcs
Discharge Valve		2 pcs						
Oxygen/Nitrousoxide Station Alarm Panel		Including the High-Pressure Regulators (1 pc)						
Cylinder Quantity on Station		2x3 pcs	2x6 pcs	2x6 pcs	2x9 pcs	2x12 pcs	2x15 pcs	2x21 pcs
Bed Quantity*		30	50	30-50	40-70	70-100	100-150	150-200
Total Operating Theatre No.* (N2O Central)		3	5	5-6	6-7	6-9	8-12	10-14
Total Station Weight (~)		35 kg	48 kg	58 kg	85 kg	90 kg	120 kg	150 kg

NTRON Gas Measurement

Microx

Oxygen Analyser

The Microx is a compact and robust oxygen analyser that utilises zirconia or electrochemical technology to give a reliable measurement of oxygen concentration.

The zirconia sensor offers fast response time and a long service life with virtually no drift, whilst the electrochemical sensor allows measurement in background gases containing hydrocarbons.

The minimum output range of 0 to 10ppm is ideal for nitrogen generation or glove box monitoring. The Microx analyser can also be supplied with measuring ranges up to 0 to 96% O_2 for oxygen concentrators.

The flexibiliy is further enhanced by different mounting options and multiple sensor types.

Applications

- Gas generation (oxygen / nitrogen)
- Additive manufacturing
- Glove box purge and leak detection
- Industrial gas applications

3 Relays

Features

- Zirconia or electrochemical sensor technology options
- Measurement range: 0-1000ppm, 0-10,000ppm, 0 to 25%, 0 to 96% O_2
- M16 Threaded connection, flowthrough housing, flowthrough with orifice, Drellum T-piece connection options
- Din rail / Panel / Wall mounting options
- 3 configurable alarm relays
- RS 232 modbus protocol
- LCD + 4 button HMI

A Company of PST PROCESS SENSING TECHNOLOGIES

Issue No. MCX01_V1_EN_0819

RECOGNIZED COMPONENT ETL Intertek 5013266 Conforms to UL Std.61010-1 Certified to CSA Std.C22.2 No. 61010-1

Microx

Oxygen Analyser

Proven sensor technology
With a choice of either zirconia or electrochemical sensor technology the Microx offers reliability, accuracy and flexibility. Both technologies have a broad measurement capability allowing the user to measure from selected ranges from 1ppm to 96% oxygen.

Zirconia sensor
The Ntron zirconia oxygen sensor is a non-depleting zirconia solid electrolyte sensor. A small capillary on the sensor controls the diffusion of oxygen into the sensor. When heated to over 400°C oxygen is electronically reduced causing current flow through the zirconia electrolyte. Zirconium-oxide allows the movement of oxygen ions through the substrate from a high to a low concentration. The measurement of oxygen is determined by the current flowing through the electrodes. The zirconia sensor has an unlimited shelf life without the loss of calibration and has an expected life in excess of 5 years. The zirconia sensor is not position sensitive and has low cross sensitivity to other gases and does not dry out.

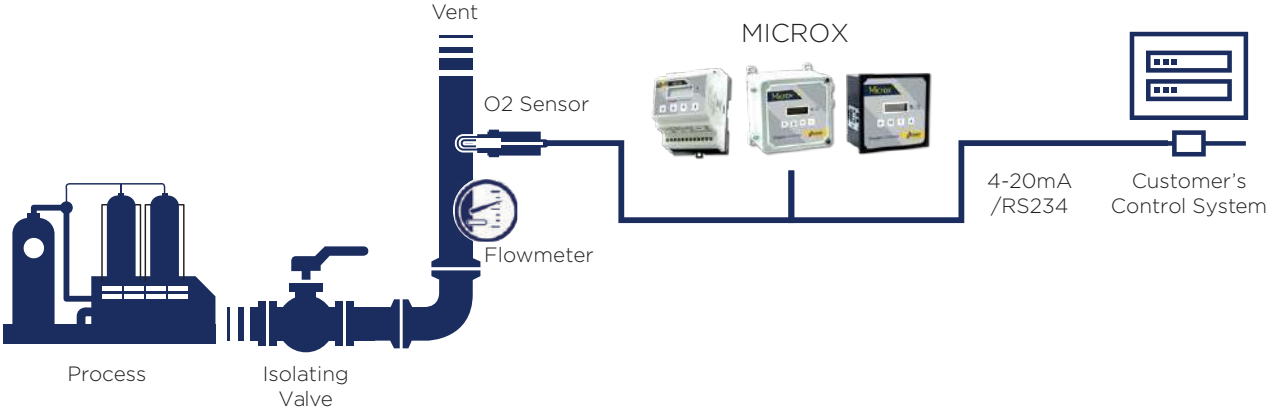
Low maintenance and cost of ownership
Due to the highly stable nature of the sensor, a calibration interval of once per year is required, allowing for significant cost savings. The construction of our zirconia oxygen sensor means that only 100 mL/min of sample gas is required, providing application flexibility and further potential cost savings.

Fast response time
Zirconia oxygen sensors respond very quickly to oxygen concentrations in both directions with a T90 of less than 10 seconds within a set range.

Electrochemical sensor
The key elements of the electrochemical sensors are a membrane, cathode, anode, electrolyte and measurement circuit. The sensing membrane (covering the cathode) is made of PTFE and is mounted over a metal perforated electrode. The space between the membrane and the electrode is filled either with an aqueous alkaline or an acid electrolyte. In normal operation, all portions of the anode and cathode are immersed in the electrolyte. As oxygen diffuses through the membrane into the electrolyte it causes a reaction between the cathode and anode generating an EMF. This current is proportional to the amount of oxygen present in the sample gas. In the absence of oxygen there is no output from the electrochemical sensor, meaning only one calibration is required.

Sensor contruction
The main body of the sensor is fabricated from high density PVDF. The supporting ring at the face of the sensor is constructed of stainless steel. This results in an oxygen sensor that is chemically resistant to most sampling atmospheres and can be used with trace solvents and hydrocarbons present in the sample gas, unlike zirconia (due to the high temperature of the sensor).

Application Setup



Microx

Oxygen Analyser

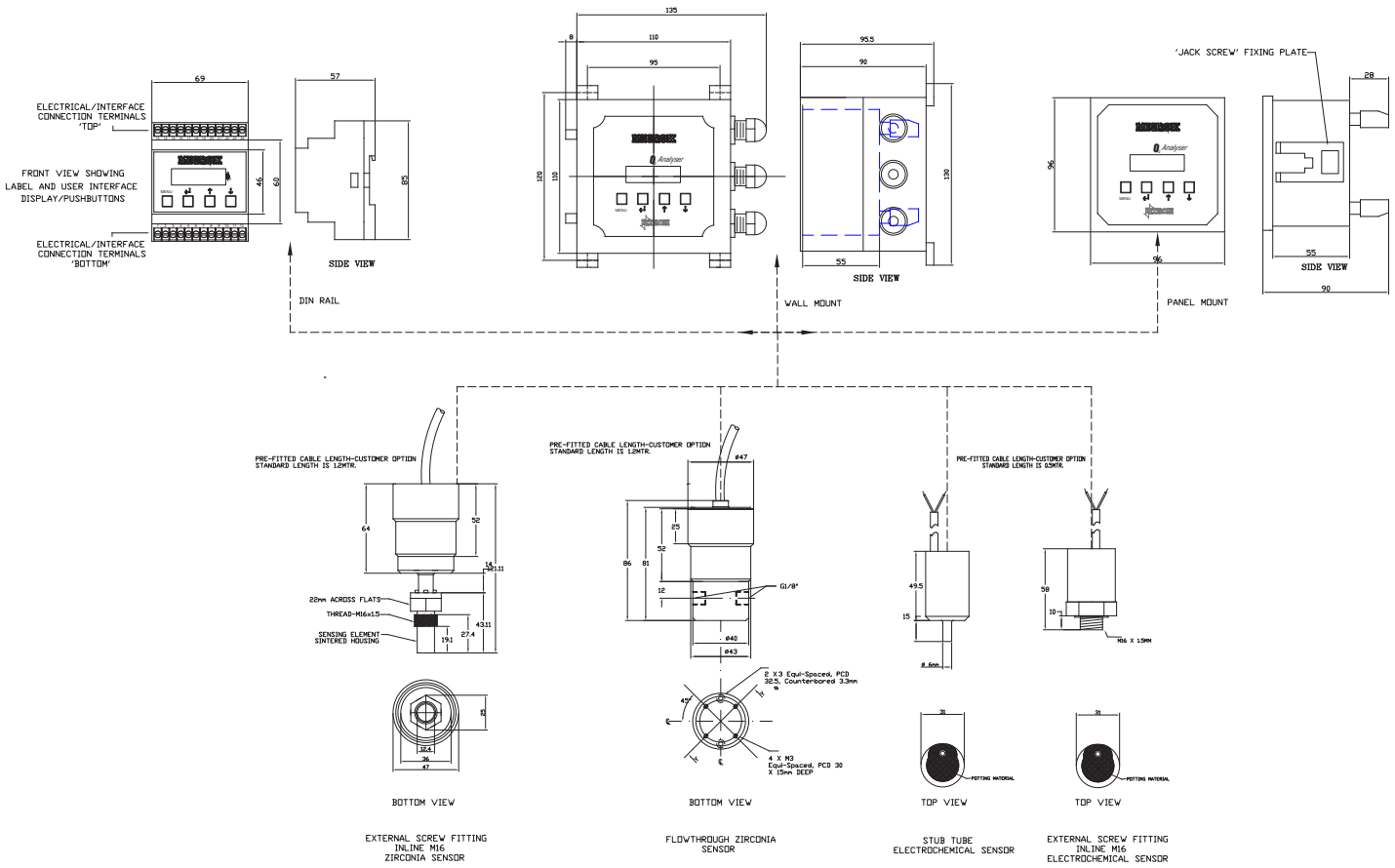
Technical Specifications

Performance		
Transmitter Model	**Microx**	
Measurement technology	Zirconia (ZR)	Electrochemical (EC)
Measurement range	0 to 1,000ppm / 0 to 10,000ppm / 0 to 25% / 0 to 96%	0 to 1,000ppm / 0 to 25% / 0 to 96%
Output resolution (for %)	0.01%	
Output resolution (for ppm)	1ppm	
Accuracy	+/-2% of reading (or 2ppm O2) @ calibrated temperature and pressure	
Response time (T90)	<10 seconds @ 25˚C (within selected range)	
LDL (Sensitivity)	0.01% (when measuring %) / 1ppm (when measuring ppm)	
Temperature range	-20˚C to +50˚C	0˚C to +45˚C
Pressure range	900 to 1100 $mBar_{abs}$	
Linearity	1% of range	
Life expectation	3-5 years	1 year
Humidity	0-95% RH non-condensing	
Shelf life	No shelf life	Up to 6 months
Electrical Input / Output		
Power supply	24VDC ±10% / (230VAC Panel & Wall mounted options only)	
Power consumption	Maximum 160mA @ 24VDC	
Signal output	4-20mA Output Linear & Logarithmic (User Configurable)	
Digital communications	RS232 bi-directional Modbus protocol.	
Digital output options	3 off relay, dry contact 5 Amp rated	
Display format	% O_2 / ppm O_2	
Display	100 x 33 dot graphics display module	
Mechanical Specifications		
Dimensions	Din Rail: 86mm (h) x 69mm (w) x 58mm (d) Wall Mount: 45mm (h) x 110mm (w) x 93mm (d) Panel mount: 96mm (h) x 96mm (w) x 83mm (d)	
Weight	<0.180kg	
Wetted materials	Aluminium, PTFE, Viton	
Process connection	M16 Threaded connection / Flowthrough Housing / Flowthrough with orifice / Drellum T Piece	
Mounting	Din Rail (M36) / Panel / Wall	
Ingress protection	IP20	
Housing material	ABS	
Certification		
Complies with EMC Directive 2004 / 108 / EC. UL/ETL Certification Number: UL-61010-1		

Microx

Oxygen Analyser

Technical Drawing



Related Products

SIL O2
SIL Rated Oxygen Analyser

SF82
Dew Point Transmitter

Minox i
ATEX Rated O_2 Transmitter

Gasenz
Ambient O_2 Monitor

Microx - OL
Online O_2 Analyser

Yellow Box
Portable O_2 Analyser

GazTrak
Portable oxygen & moisture measurement

A Company of PST PROCESS SENSING TECHNOLOGIES

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Issue No. MCX01_V1_EN_0819

On-site industrial gases

Nitrogen & oxygen generators

A secure supply of nitrogen and oxygen

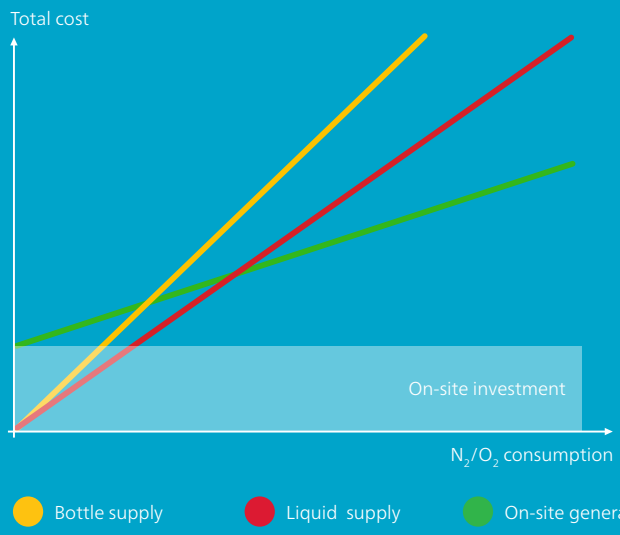
Whether your company is specialized in chemical manufacturing, electronics, laser cutting or food and beverage, a dependable supply of industrial gas is crucial. Compared to the on-demand delivery of gas bottles or tanks, on-site production of gas offers a wealth of advantages ranging from cost savings to continuous availability. Atlas Copco's advanced nitrogen and oxygen generators offer you the ultimate solution: flexible on-site production of industrial gas at the lowest possible cost.

On-site vs. liquid or bottled gas

- Your own independent supply of industrial gas.
- Non-stop availability: 24 hours a day, 7 days a week.
- Significant economies of scale and lower operational costs: no rental charges, transport expenses and bulk user evaporation losses.
- No safety hazards when handling high pressure cylinders.
- Easy integration within existing compressed air installations.

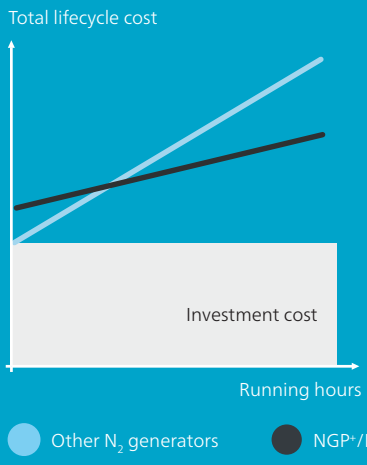
Liquid/bottled gas	On-site generation
Lease tank	Capital
N_2	Energy
Transport	Maintenance
0.1-0.8 EUR/m³(*)	**0.02-0.15 EUR/m³(**)**
N_2: 99.999%	N_2: 95-99.999%

(*) Industry average, other price settings might apply.
(**) Depending on purity and electricity cost.



High reliability

- Proven technology: simple, reliable and durable.
- The exact purity your application demands.
- Low operating costs for extra cost-efficiency.
- World-class expertise in a unique market offer from compressed air to gas.



With an air factor* of 1.8 (at 95%) to 5.5 (at 99.999%) and a special cycle time modulation algorithm, the running cost of the new NGP+ can be reduced by 50%, compared to other N_2 generators.

* The air factor is calculated by dividing the inlet air your system needs by the amount of N_2 it produces. The lower the air factor, the more efficient your nitrogen generation.

New generation membrane & PSA generators will change the market

Atlas Copco's latest membrane and PSA generators extend the advantages of the current range. Total lifecycle cost consists of the initial investment cost of the on-site installation, the service cost, and the energy cost. The NGP/NGM range has the lowest investment cost.
However, with increasing running time, you are better advised to switch to the NGP+/NGM+ range to reduce energy costs.

Wide range of applications

- Food & beverage (storage & packaging).
- Pharmaceutical applications.
- Plastic injection molding.
- Electronics.
- Laser cutting.
- Semiconductor manufacturing.
- Chemical applications.
- Metal heat treatment.
- Cable & optical fiber industries.
- Glass industries.
- Fire prevention.
- Aquaculture.

Membrane:
Compact all-in-one N_2 supply

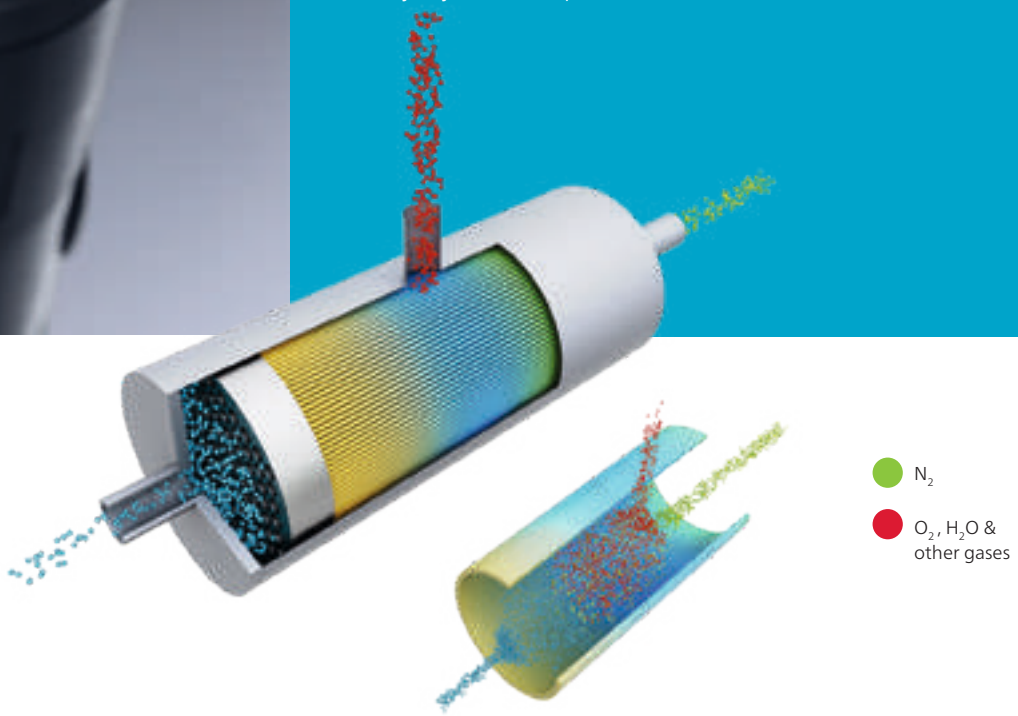
Atlas Copco NGM/NGM+/NGMs nitrogen generators utilize proprietary membrane separation technology. The membrane separates compressed air into two streams: one is 95-99.9% pure nitrogen, and the other is oxygen enriched with carbon dioxide and other gases.

Instant supply of nitrogen between 95% and 99.9%

The generator separates air into component gases by passing inexpensive compressed air through semi-permeable membranes consisting of bundles of individual hollow fibers.
Each fiber has a perfectly circular cross-section and a uniform bore through its center. Because the fibers are so small,
a large amount of fibers can be packed into a limited space, providing an extremely large membrane surface area that
can produce a relatively high volume product stream.

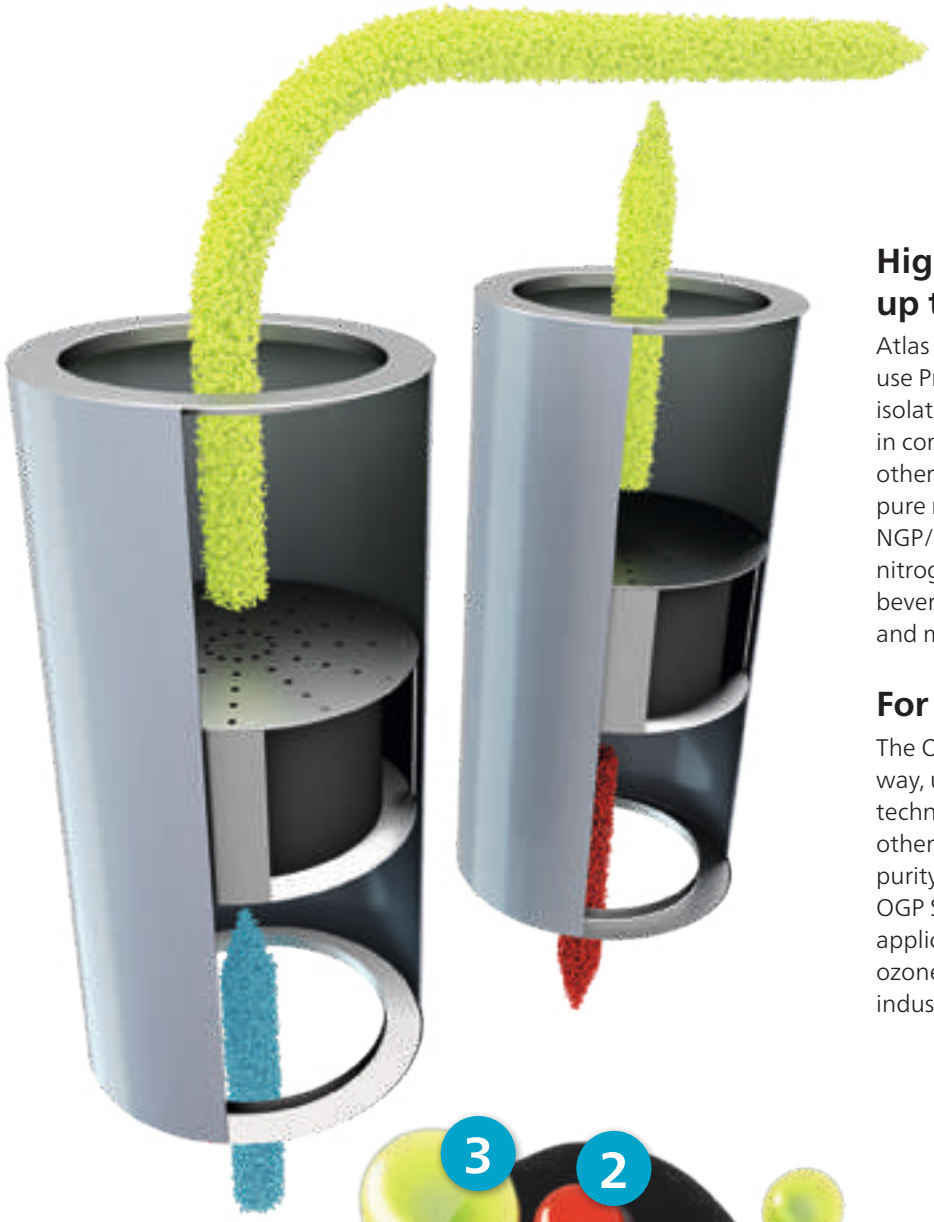
Outstandingly dry nitrogen

Compressed air is introduced into the center of the fibers at one end of the module and contacts the membrane as it flows through the fiber bores. Oxygen, water vapor and other trace gases easily permeate the membrane fiber and are discharged through a permeate port while the nitrogen is contained within the membrane and flows through the outlet port. Since water vapor permeates through the membrane as well, the nitrogen gas stream is very dry, with dewpoints as low as -50°C (-58°F).



PSA: Reliable and proven

Based on Pressure Swing Adsorption (PSA) technology, Atlas Copco's NGP/NGP+ nitrogen generators and OGP oxygen generators provide a continuous flow of nitrogen and oxygen at desired purity.



High purity nitrogen supply up to 99.999%

Atlas Copco's NGP/NGP+ nitrogen generators use Pressure Swing Adsorption technology to isolate nitrogen molecules from other molecules in compressed air. Oxygen, CO_2, water vapor and other gases are adsorbed. The result is virtually pure nitrogen at the outlet of the generator. The NGP/NGP+ Series is a very cost-efficient source of nitrogen used in various industries like food and beverage, metal processing, electronics, and many others.

For all your oxygen needs

The OGP oxygen generator works in a similar way, using Pressure Swing Adsorption technology to isolate oxygen molecules from other molecules in compressed air to leave high purity oxygen at the outlet of the generator. The OGP Series provides cost-efficient oxygen for applications such as waste water treatment, ozone production, health care, and the glass industry.

- Clean and dry compressed air (pressurized)
- Nitrogen gas (pressurized)
- Oxygen exhaust (depressurized)
- Adsorbent

1. Adsorbent
2. Nitrogen (or oxygen) molecules trapped in the adsorbent
3. Oxygen (or nitrogen) molecules passing through

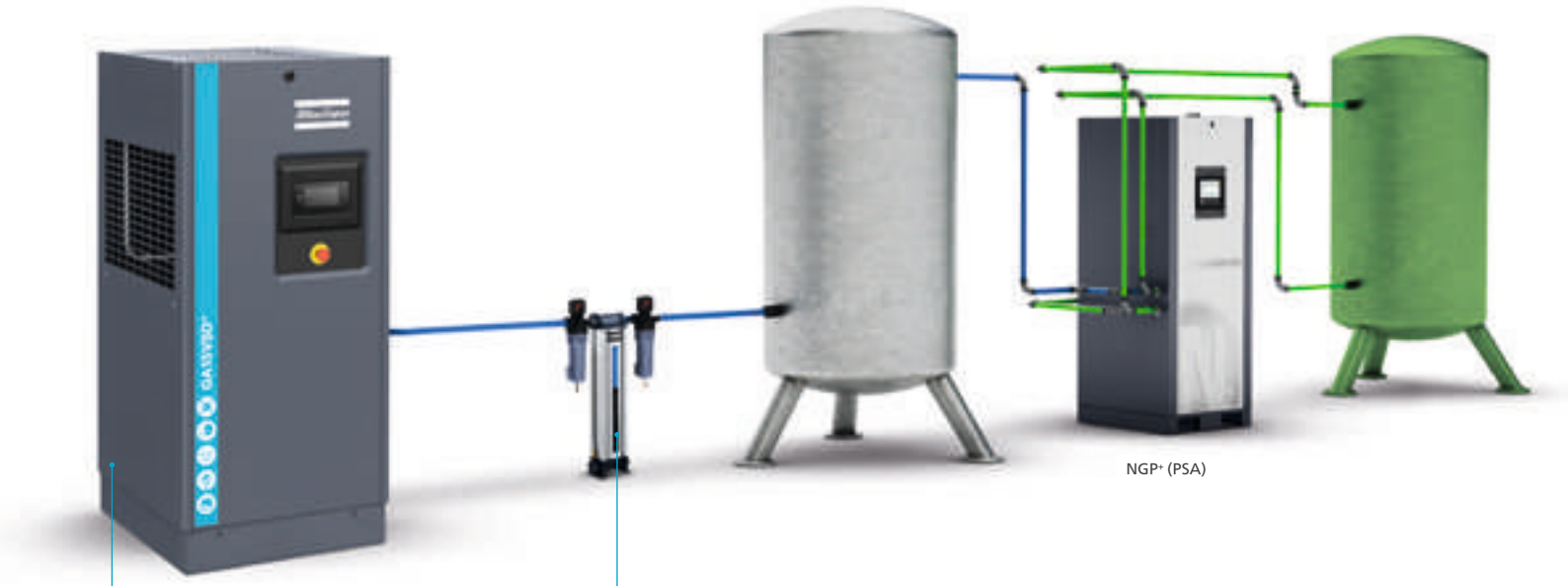
Total solutions from Atlas Copco

With a full range of nitrogen and oxygen generators to choose from, Atlas Copco brings you the right supply of nitrogen and oxygen to meet your specific needs and optimize your production process at the same time.

High quality compressed air

On-site nitrogen and oxygen generation requires the most reliable and efficient compressed air solution. Drawing on our vast experience, Atlas Copco has been leading the industry in compressed air technology for decades.

Typical installation: compressor with integrated dryer, pre-filter UD+, Active Carbon Tower QDT, dust filter, receiver, NGP+ nitrogen PSA generator, receiver.



NGP+ (PSA)

Oil-injected compressors

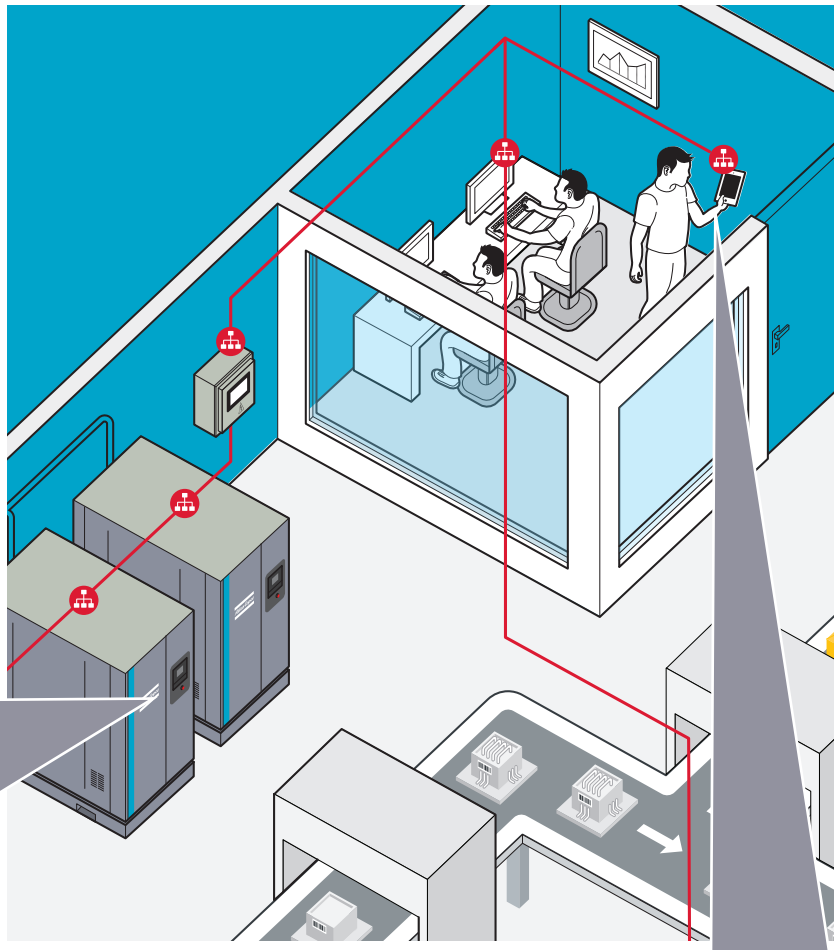
Integrated onto the production floor, Atlas Copco's oil-injected compressors provide a dependable flow of compressed air directly to the point of use. The GA range even comes with integrated dryer for high quality air. Built to perform in harsh environments, Atlas Copco compressors keep your production running smoothly and reliably: a very economical solution in combination with nitrogen and oxygen generators.

Air treatment

Atlas Copco has developed and improved air compression and drying techniques. Whatever your installation, application or quality requirements, Atlas Copco can offer the right air treatment solution, including dryers (desiccant, refrigerant, membrane) and filters (coalescing, particle, active carbon).

Advanced monitoring, control & connectivity

Do you operate a smart factory or Industry 4.0 production environment? Atlas Copco's nitrogen and oxygen generators will fit right in. Their advanced monitoring, control and connectivity features allow you to optimize performance and efficiency.



Control

The Elektronikon® operating system gives you numerous control and monitoring options to optimize compressor performance.

Connect

SMARTLINK*: Data Monitoring Program

- Remote monitoring system that helps you optimize your compressed air system and save energy and costs.
- Provides a complete insight in your compressed air network.
- Anticipates potential problems by warning you upfront.

* Please contact your local sales representative for more information.

Always at your service

Atlas Copco is a truly global organization with support available in more than 160 countries. As a result, one of our 4850 field service engineers is never far away. We pride ourselves on the swift assistance that keeps your Atlas Copco nitrogen and oxygen system performing reliably and efficiently.

Service plan

Our service plans keep your Atlas Copco nitrogen and oxygen system in excellent shape.

Stand-by solutions

Atlas Copco help is available 24/7. We keep spare parts in stock so you are up and running again as quickly as possible.

Rental

Our specialty rental services meet your temporary compressed air needs. With Customer Centers strategically located around the globe, Atlas Copco Rental can provide a solution for virtually any application.

Membrane nitrogen generators (NGM, NGM+, NGMs)

Based on innovative membrane technology, Atlas Copco's membrane nitrogen generators are flexible enough to adapt to your specific applications. And with low operating costs they offer an excellent return on investment.

Ready to use

- Requires only a supply of dry compressed air.
- No specialist installation or commissioning.
- Fitted with pre-filtration, pressure gauges and flow meter to ensure accurate system monitoring at all times.

Cost savings

- Low operating expenses.
- No additional costs such as order processing, refills and delivery charges.
- Limited maintenance costs.

Exceptional convenience

- Continuous availability (24 hours a day, 7 days a week).
- Risk of production breakdown due to gas running out is eliminated.

Desired purity

- Nitrogen supply according to your need: from 5% to 0.1% oxygen content.
- Very easy to set up the device for other purity levels.

All-in-one

- Fully integrated package.
- Filters and oxygen sensor as standard.

High flow capacity

Ideal for applications such as fire prevention, tire inflation, oil & gas, marine, packaging and many more.

Long lifetime

- No aging.
- No heater.
- Lasting performance.

NGMs: efficiency in low flow nitrogen generation

If you don't need a generator with a high nitrogen flow and purity, the NGMs is your perfect solution. It meets your specific requirements with Atlas Copco quality, high efficiency, little maintenance and zero operational costs.

PSA nitrogen and oxygen generators (NGP, NGP+, OGP)

Atlas Copco's NGP, NGP+ and OGP nitrogen and oxygen generators are easy to install and use. They offer the required purity with a high flow capacity, making them suitable for a range of applications.

High flow capacity

The wide product range and gas flows exceeding 3,000 Nm^3/h (NGP/NGP+) make these generators ideal for a variety of demanding applications.

Ready to use

- Only requires a supply of dry compressed air.
- Plug-and-play.
- No specialist installation or commissioning.
- Fully automated and monitored including oxygen sensor as standard.
- Service-friendly.

Desired purity

- NGP/NGP+: nitrogen concentrations from 95% to 99.999%.
- OGP: oxygen concentrations from 90% to 95%.

Exceptional reliability

- Robust design.
- Continuous availability (24 hours a day, 7 days a week).
- Potential risk of production breakdown due to gas running out is eliminated.

Cost savings

- Low operating expenses.
- No additional costs such as order processing, refills and delivery charges.
- Limited maintenance costs.

New generation NGP+ nitrogen generators

1

Self-protective monitoring of the feed air quality

- Temperature.
- Pressure.
- Pressure dewpoint.
- Automatic feed air blow-off in case of contamination.

2

Premium energy efficiency

Air factor (air-to-nitrogen ratio) from 1.8 (95% N_2)
to 5.5 (99.999% N_2).

3

Automatic start-up

- Minimum pressure valve with bypass nozzle for fast start-up.
- Eliminates risk of overflow and CMS damage.

4

Highest quality CMS

- High density due to packed bed technology.
- Top/bottom equalization.
- Protected by dedicated pressure sensor.

9

The most complete scope of supply

- Nitrogen flow meter as standard.
- Zirconia oxygen sensor with a long lifetime.
- Outlet pressure reducing valve.
- Nitrogen pressure dewpoint sensor available as an option.

8

Self-regulation and stable purity

- Automatically regulates to the requested nitrogen pressure and purity.
- Extremely easy to change purity.
- Off-spec nitrogen flushing.

7

Control and monitoring

- Remote start-stop.
- Modbus, Profibus and Ethernet.
- **SMART**LINK.

5

The ultimate energy saver

- Stand-by mode in case no nitrogen is consumed.
- Cycle time modulation algorithm = extended cycle time at low nitrogen demand = reduced air consumption at low nitrogen demand.

6

Back flow pressurization

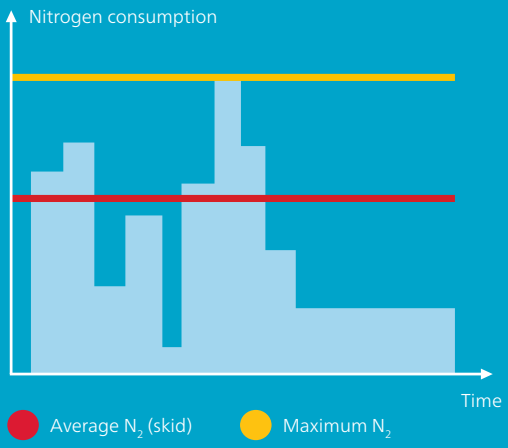
- In the pressurization phase nitrogen is used instead of air.
- No oxygen contamination of the CMS before adsorption phase starts.

All-in-one high pressure nitrogen skid

The latest addition to Atlas Copco's specially developed equipment is the all-in-one high pressure nitrogen skid, a true alternative for liquid nitrogen or bottles. Combining a small footprint, easy installation, high reliability and supreme energy efficiency, this unique nitrogen skid truly stands out.

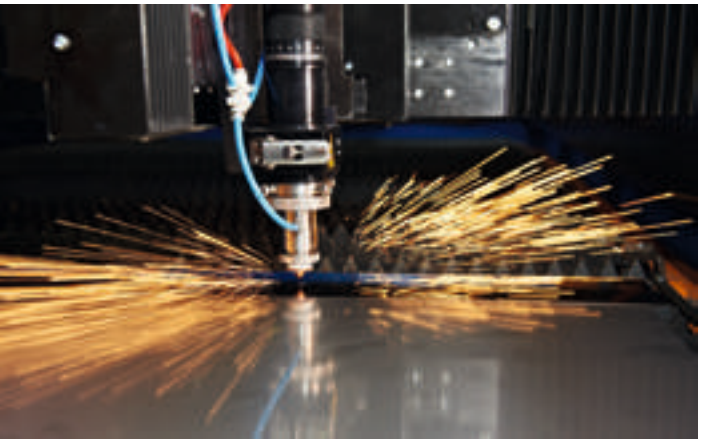
Ideal for a fluctuating nitrogen demand

This innovative nitrogen skid lets you store nitrogen at 40 bar for direct use or 300 bar for bottling. This allows you to base your production on your average nitrogen consumption rather than have your maximum capacity available at all times. This saves initial investment cost and drastically reduces your operating costs.



The all-in-one solution

All nitrogen skid components are built to Atlas Copco quality and efficiency standards. They are tested for optimal performance and reliability.



Laser cutting

Laser cutting requires a reliable supply of high pressure nitrogen. With its energy efficiency, ease of use and small footprint, the Atlas Copco 300-bar nitrogen skid is the ideal solution.

Technical specifications NGM series

TYPE		Nitrogen purity			Dimensions (W x D x H)		Weight	
		95%	96%	97%	mm	in	kg	lbs
NGMs 1	FND Nm^3/h	4.6	3.9	3.2	560 x 285 x 1150	22 x 11 x 45	56	123
	FND scfm	2.75	2.3	1.9				
	SCFH	165	140	115				
	Air factor	2	2.2	2.4				
NGMs 2	FND Nm^3/h	9.6	7.9	6.5	560 x 285 x 1150	22 x 11 x 45	59	130
	FND scfm	5.7	4.7	3.9				
	SCFH	345	284	233.5				
	Air factor	2	2.2	2.4				
NGMs 3	FND Nm^3/h	14	11.8	9.7	560 x 285 x 1150	22 x 11 x 45	62	136
	FND scfm	8.4	7.1	5.8				
	SCFH	503	424	348				
	Air factor	2	2.2	2.4				
NGM 1	FND Nm^3/h	11.9	9.7	7.6	820 x 772 x 2090	32.3 x 30.4 x 82.3	259	571
	FND scfm	6.9	5.7	4.4				
	Air factor	2.6	3	3.5				
NGM 2	FND Nm^3/h	24.1	19.4	15.1	820 x 772 x 2090	32.3 x 30.4 x 82.3	268	591
	FND scfm	14.1	11.3	8.8				
	Air factor	2.6	3	3.5				
NGM 3	FND Nm^3/h	42.1	34.6	27.4	820 x 772 x 2090	32.3 x 30.4 x 82.3	285	628
	FND scfm	24.6	20.2	16.0				
	Air factor	2.6	3	3.5				
NGM 4	FND Nm^3/h	83.9	69.5	54.7	820 x 1470 x 2090	32.3 x 57.9 x 82.3	445	981
	FND scfm	48.9	40.5	31.9				
	Air factor	2.6	3	3.5				
NGM 5	FND Nm^3/h	126.0	104.0	82.1	820 x 1470 x 2090	32.3 x 57.9 x 82.3	497	1096
	FND scfm	73.5	60.7	47.9				
	Air factor	2.6	3	3.5				
NGM 6	FND Nm^3/h	168.1	138.6	109.1	820 x 1470 x 2090	32.3 x 57.9 x 82.3	535	1179
	FND scfm	98.1	80.9	63.6				
	Air factor	2.6	3	3.5				
NGM 7	FND Nm^3/h	209.9	173.2	136.4	820 x 1470 x 2090	32.3 x 57.9 x 82.3	571	1259
	FND scfm	122.4	101.0	79.6				
	Air factor	2.6	3	3.5				

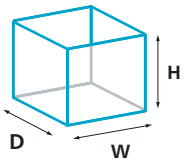
Technical specifications NGM$^+$ series

TYPE		Nitrogen purity			Dimensions (W x D x H)		Weight	
		95%	97%	99%	mm	in	kg	lbs
NGM 1$^+$	FND Nm^3/h	24.3	16.5	8.5	820 x 772 x 2090	32.3 x 30.4 x 82.3	259	571
	FND scfm	14.1	9.6	4.9				
	Air factor	2.2	2.7	4.2				
NGM 2$^+$	FND Nm^3/h	48.6	33.0	17.0	820 x 772 x 2090	32.3 x 30.4 x 82.3	268	591
	FND scfm	28.3	19.2	9.9				
	Air factor	2.2	2.7	4.2				
NGM 3$^+$	FND Nm^3/h	72.9	49.5	25.5	820 x 772 x 2090	32.3 x 30.4 x 82.3	285	628
	FND scfm	42.4	28.8	14.8				
	Air factor	2.2	2.7	4.2				
NGM 4$^+$	FND Nm^3/h	97.2	66.0	34.0	820 x 1470 x 2090	32.3 x 57.9 x 82.3	445	981
	FND scfm	56.5	38.4	19.8				
	Air factor	2.2	2.7	4.2				
NGM 5$^+$	FND Nm^3/h	145.8	99.0	51.0	820 x 1470 x 2090	32.3 x 57.9 x 82.3	497	1096
	FND scfm	84.8	57.6	29.7				
	Air factor	2.2	2.7	4.2				
NGM 6$^+$	FND Nm^3/h	194.4	132.0	68.0	820 x 1470 x 2090	32.3 x 57.9 x 82.3	535	1179
	FND scfm	113.0	76.7	39.5				
	Air factor	2.2	2.7	4.2				
NGM 7$^+$	FND Nm^3/h	243.0	165.0	85.0	820 x 1470 x 2090	32.3 x 57.9 x 82.3	571	1259
	FND scfm	141.3	65.9	49.4				
	Air factor	2.2	2.7	4.2				

FND: Free Nitrogen Delivery
Reference conditions
Compressed air effective inlet pressure: 8 bar(g)/116 psi(g).
Nitrogen outlet pressure: 6.5 bar(g)/94 psi(g).
Ambient air temperature: 20°C/68°F.
Pressure dewpoint inlet air: 3°C/37°F.
Pressure dewpoint nitrogen: -50°C/-58°F.
Minimum refrigerant dryer required to precondition inlet air.
Typical nitrogen quality 1.2.1 according to ISO 8573-1:2010.

Operating limits
Minimum ambient temperature: 5°C/41°F.
Maximum ambient temperature: 50°C/122°F.
Maximum compressed inlet air pressure 13 bar(g)/189 psi(g).

NGMs performance
is based on 20°C/7 bar at membrane (1000Mbar) +/-5%.

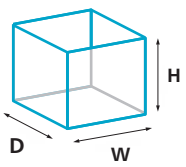


Technical specifications NGP+ series

TYPE		Nitrogen purity FND (Free Nitrogen Delivery)									Dimensions (W x D x H)		Weight	
		95%	97%	98%	99%	99.50%	99.90%	99.95%	99.99%	99.999%	mm	in	kg	lbs
NGP 8+	FND scfm	11	8.3	7.1	5.7	4.8	3.3	2.5	1.9	1.1	775 x 840 x 2015	30 x 33 x 79	276	609
	FND Nm³/h	18	14	12	9.6	8.1	5.7	4.3	3.1	1.9				
	Air factor	1.9	2.0	2.1	2.4	2.6	3.2	3.5	4.3	6.3				
NGP 10+	FND scfm	14	11	9.1	7.3	6.1	4.3	3.2	2.4	1.5	775 x 840 x 2015	30 x 33 x 79	289	637
	FND Nm³/h	23	18	15	12	10	7.3	5.5	4.0	2.5				
	Air factor	1.9	2.0	2.1	2.4	2.6	3.2	3.5	4.3	6.3				
NGP 12+	FND scfm	17	13	11	8.9	7.5	5.3	4.0	2.9	1.8	775 x 840 x 2015	30 x 33 x 79	312	688
	FND Nm³/h	29	22	19	15	13	8.9	6.7	4.9	3.0				
	Air factor	1.9	2.0	2.1	2.4	2.6	3.2	3.5	4.3	6.3				
NGP 15+	FND scfm	21	17	14	11	9.5	6.7	5.0	3.7	2.3	775 x 840 x 2015	30 x 33 x 79	335	739
	FND Nm³/h	36	28	24	19	16	11	8.5	6.3	3.8				
	Air factor	1.9	2.0	2.1	2.4	2.6	3.2	3.5	4.3	6.3				
NGP 20+	FND scfm	28	21	18	15	12	8.6	6.5	4.8	2.9	775 x 840 x 2015	30 x 33 x 79	367	809
	FND Nm³/h	47	36	31	25	21	15	11	8.1	4.9				
	Air factor	1.9	2.0	2.1	2.4	2.6	3.2	3.5	4.3	6.3				
NGP 25+	FND scfm	34	26	22	18	15	11	7.9	5.8	3.6	775 x 840 x 2015	30 x 33 x 79	410	904
	FND Nm³/h	57	44	38	30	25	18	13	9.9	6.0				
	Air factor	1.9	2.0	2.1	2.4	2.6	3.2	3.5	4.3	6.3				
NGP 30+	FND scfm	41	32	27	22	18	13	9.7	7.1	4.7	1400 x 840 x 2015	55 x 33 x 79	208	1341
	FND Nm³/h	70	54	46	37	31	22	16	12	8.0				
	Air factor	1.9	2.0	2.1	2.4	2.6	3.2	3.5	4.3	5.6				
NGP 35+	FND scfm	51	39	33	27	23	16	12	8.7	5.7	1400 x 840 x 2015	55 x 33 x 79	648	1429
	FND Nm³/h	86	66	57	46	38	27	20	15	9.7				
	Air factor	1.9	2.0	2.1	2.4	2.6	3.2	3.5	4.3	5.6				
NGP 40+	FND scfm	55	43	36	29	25	17	13	9.5	6.2	1400 x 840 x 2015	55 x 33 x 79	681	1502
	FND Nm³/h	94	72	62	50	42	29	22	16	11				
	Air factor	1.9	2.0	2.1	2.4	2.6	3.2	3.5	4.3	5.6				
NGP 50+	FND scfm	68	52	45	36	30	21	16	12	7.6	1400 x 840 x 2015	55 x 33 x 79	734	1618
	FND Nm³/h	115	89	76	61	51	36	27	20	13				
	Air factor	1.9	2.0	2.1	2.4	2.6	3.2	3.5	4.3	5.6				
NGP 60+	FND scfm	76	58	51	40	34	24	19	14	9.4	1400 x 970 x 2015	55 x 38 x 79	764	1685
	FND Nm³/h	129	99	86	68	57	41	33	24	16				
	Air factor	1.9	2.1	2.2	2.4	2.7	3.3	3.5	4.3	5.6				
NGP 70+	FND scfm	93	72	62	49	41	29	24	17	11	1400 x 970 x 2015	55 x 38 x 79	1039	2291
	FND Nm³/h	158	122	105	83	70	50	40	30	19				
	Air factor	1.9	2.1	2.2	2.4	2.7	3.3	3.5	4.3	5.6				
NGP 85+	FND scfm	-	91	72	59	51	36	29	21	13	1400 x 970 x 2015	55 x 38 x 79	1209	2666
	FND Nm³/h	-	154	122	100	87	62	49	36	23				
	Air factor	-	2.0	2.2	2.4	2.6	3.2	3.3	3.9	5.5				
NGP 100+	FND scfm	-	95	83	65	55	39	32	23	15	1400 x 970 x 2015	55 x 38 x 79	1209	2666
	FND Nm³/h	-	162	140	111	94	66	54	40	26				
	Air factor	-	2.1	2.2	2.4	2.7	3.3	3.5	4.3	5.6				
NGP 240+	FND scfm	306	248	215	176	149	106	81	62	40	2230 x 1800 x 2610	88 x 71 x 103	3200	7055
	FND Nm³/h	520	422	365	299	252	180	138	106	68				
	Air factor	1.8	2.0	2.1	2.3	2.6	3.1	3.3	4.0	5.3				
NGP 300+	FND scfm	394	320	277	227	192	137	105	80	51	2570 x 1800 x 2640	101 x 71 x 104	3800	8378
	FND Nm³/h	670	543	470	385	325	232	178	136	87				
	Air factor	1.8	2.0	2.1	2.3	2.6	3.1	3.3	4.0	5.3				
NGP 360+	FND scfm	479	388	336	275	233	166	127	97	63	2650 x 1800 x 2625	104 x 71 x 103	4800	10582
	FND Nm³/h	813	660	571	468	395	282	216	165	106				
	Air factor	1.8	2.0	2.1	2.3	2.6	3.1	3.3	4.0	5.3				
NGP 450+	FND scfm	564	458	396	324	274	196	150	115	74	2720 x 2300 x 3020	107 x 91 x 119	6400	14110
	FND Nm³/h	959	778	673	551	466	333	255	195	125				
	Air factor	1.8	2.0	2.1	2.3	2.6	3.1	3.3	4.0	5.3				
NGP 550+	FND scfm	694	563	487	399	337	241	184	141	91	2850 x 2300 x 3050	112 x 91 x 120	7000	15432
	FND Nm³/h	1178	956	827	677	572	409	313	240	154				
	Air factor	1.8	2.0	2.1	2.3	2.6	3.1	3.3	4.0	5.3				
NGP 650+	FND scfm	811	658	569	466	394	282	216	165	106	2900 x 2300 x 3040	114 x 91 x 120	7700	16976
	FND Nm³/h	1378	1118	967	792	670	478	366	280	180				
	Air factor	1.8	2.0	2.1	2.3	2.6	3.1	3.3	4.0	5.3				
NGP 800+	FND scfm	1048	850	735	602	509	364	278	213	137	3460 x 3120 x 3970	136 x 123 x 156	10300	22708
	FND Nm³/h	1780	1444	1249	1023	865	618	473	362	232				
	Air factor	1.8	2.0	2.2	2.4	2.6	3.2	3.4	4.1	5.4				
NGP 1000+	FND scfm	1329	1078	932	764	646	461	353	270	173	3660 x 3120 x 4175	144 x 123 x 164	12000	26455
	FND Nm³/h	2258	1831	1584	1298	1097	784	600	459	295				
	Air factor	1.8	2.0	2.2	2.4	2.6	3.2	3.4	4.1	5.4				
NGP 1300+	FND scfm	1690	1371	1186	971	821	586	449	344	221	3860 x 3120 x 4405	152 x 123 x 173	14200	31306
	FND Nm³/h	2871	2329	2014	1650	1395	996	762	584	375				
	Air factor	1.8	2.0	2.2	2.4	2.6	3.2	3.4	4.1	5.4				

FND: Free Nitrogen Delivery
Reference conditions
Compressed air effective inlet pressure: 7.5 bar(g)/108 psi(g) for NGP, 7 bar(g)/102 psi(g) for NGP+.
Nitrogen outlet pressure: 6 bar(g)/87 psi(g).
Ambient air temperature: 20°C/68°F.
Pressure dewpoint inlet air: 3°C/37°F.
Pressure dewpoint nitrogen: -50°C/-58°F.
Unit inlet air quality 1.4.1 according to ISO 8573-1:2010.
Minimum refrigerant dryer required to precondition inlet air.
Typical nitrogen quality 1.2.1 according to ISO 8573-1:2010.

Operating limits
Minimum ambient temperature: 5°C/41°F.
Maximum ambient temperature: 45°C/113°F for NGP, 60°C/140°F for NGP+.
Maximum compressed inlet air pressure 10 bar(g)/145 psi(g) for NGP, 13 bar/189 psi(g) for NGP+.



Technical specifications NGP series

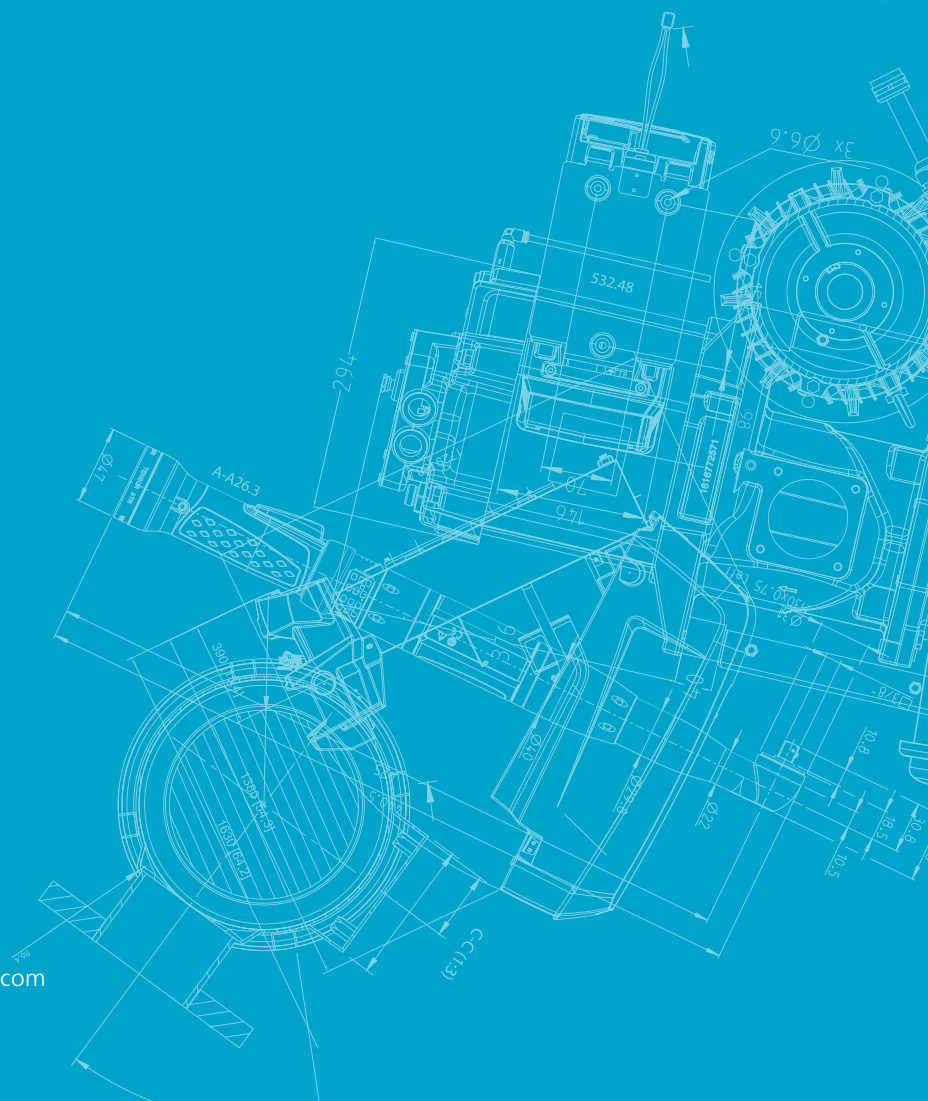
TYPE	Nitrogen purity FND (Free Nitrogen Delivery)									Dimensions (W x D x H)		Weight	
		95%	97%	98%	99%	99.50%	99.90%	99.95%	99.99%	99.999%	mm	in	kg	lbs
NGP 10	FND scfm	13.1	10.2	8.6	6.6	5.4	3.5	2.6	1.8	1.0	798 x 840 x 2022	31.4 x 33.1 x 79.6	244	538
	FND Nm^3/h	22.3	17.4	14.6	11.3	9.1	5.9	4.4	3.1	1.7				
NGP 12	FND scfm	16.9	13.2	11.1	8.5	6.9	4.5	3.4	2.3	1.3	798 x 840 x 2022	31.4 x 33.1 x 79.6	257	567
	FND Nm^3/h	28.8	22.4	18.8	14.5	11.7	7.6	5.7	3.9	2.2				
NGP 15	FND scfm	20.7	16.1	13.5	10.4	8.4	5.5	4.1	2.8	1.6	798 x 840 x 2022	31.4 x 33.1 x 79.6	270	595
	FND Nm^3/h	35.2	27.4	23.0	17.7	14.3	9.3	7.0	4.8	2.7				
NGP 20	FND scfm	26.3	20.5	17.2	13.2	10.7	6.9	5.2	3.6	2.0	798 x 840 x 2022	31.4 x 33.1 x 79.6	306	675
	FND Nm^3/h	44.7	34.9	29.3	22.5	18.2	11.8	8.9	6.1	3.4				
NGP 25	FND scfm	33.8	26.4	22.1	17.1	13.8	8.9	6.7	4.6	2.6	798 x 840 x 2022	31.4 x 33.1 x 79.6	339	747
	FND Nm^3/h	57.5	44.9	37.6	29.0	23.4	15.2	11.4	7.9	4.4				
NGP 30	FND scfm	41.3	32.3	27.0	20.9	16.8	10.9	8.2	5.7	3.1	798 x 840 x 2022	31.4 x 33.1 x 79.6	360	794
	FND Nm^3/h	70.3	54.9	46.0	35.5	28.6	18.6	14.0	9.7	5.3				
NGP 35	FND scfm	50.7	39.6	33.2	25.6	20.6	13.4	10.1	7.3	4.2	798 x 840 x 2022	31.4 x 33.1 x 79.6	599	1321
	FND Nm^3/h	86.3	67.3	56.5	43.5	35.1	22.8	17.1	12.4	7.1				
NGP 40	FND scfm	62.0	48.4	40.6	31.3	25.2	16.4	12.3	8.9	5.1	798 x 840 x 2022	31.4 x 33.1 x 79.6	627	1382
	FND Nm^3/h	105.5	82.3	69.1	53.2	42.9	27.9	20.9	15.2	8.7				
NGP 50	FND scfm	67.6	52.7	44.3	34.1	27.5	17.9	13.4	9.7	5.6	798 x 840 x 2022	31.4 x 33.1 x 79.6	663	1462
	FND Nm^3/h	115.0	89.7	75.3	58.0	46.8	30.4	22.8	16.5	9.5				
NGP 60	FND scfm	82.7	52.7	44.3	34.1	27.5	17.9	13.4	9.7	5.6	798 x 840 x 2022	31.4 x 33.1 x 79.6	716	1579
	FND Nm^3/h	140.7	109.8	92.1	70.9	57.2	37.2	27.9	20.2	11.6				
NGP 70	FND scfm	93.9	71.3	60.4	51.2	41.3	26.8	19.1	13.6	8.3	798 x 840 x 2022	31.4 x 33.1 x 79.6	805	1775
	FND Nm^3/h	159.7	121.2	102.7	87.0	70.2	45.6	32.5	23.1	14.2				
NGP 85	FND scfm	-	71.3	60.4	51.2	41.3	26.8	19.1	13.6	8.3	798 x 840 x 2022	31.4 x 33.1 x 79.6	1018	2244
	FND Nm^3/h	-	148.3	125.6	106.4	85.8	55.8	39.8	28.3	17.4				
NGP 100	FND scfm	-	-	73.9	62.6	50.5	32.8	23.4	16.6	10.2	798 x 840 x 2022	31.4 x 33.1 x 79.6	1191	2626
	FND Nm^3/h	-	-	138.1	108.8	91.2	59.1	46.5	34.0	20.5				
NGP 115	FND scfm	-	-	-	64.0	53.6	34.8	27.3	20.0	12.1	798 x 840 x 2022	31.4 x 33.1 x 79.6	1191	2626
	FND Nm^3/h	-	-	-	126.5	104.2	64.7	53.0	37.7	23.3				
NGP 420	FND scfm	580.5	454.9	371.1	311.3	251.4	167.5	122.6	83.9	36.4	1240 x 2520 x 3160	48.8 x 99.2 x 124.4	4200	9259
	FND Nm^3/h	986.8	773.2	630.8	529.0	427.3	284.9	254.3	142.2	62.1				
NGP 550	FND scfm	748.1	592.6	493.9	413.0	326.2	227.5	173.7	115.0	48.5	1420 x 2880 x 3330	55.9 x 113.4 x 131.1	4900	10803
	FND Nm^3/h	1271.7	1007.2	839.3	702.0	554.5	386.6	360.1	195.3	82.4				
NGP 900	FND scfm	1167.2	868.0	748.3	628.4	538.6	347.1	257.3	179.6	73.1	2480 x 2520 x 3160	97.6 x 99.2 x 124.4	8400	18519
	FND Nm^3/h	1983.9	1475.2	1271.7	1068.2	915.6	590.1	534.1	305.2	124.1				
NGP 1100	FND scfm	1556.3	1197.1	957.8	808.0	658.5	418.9	305.2	227.5	77.7	2840 x 2880 x 3330	111.8 x 113.4 x 131.1	9800	21605
	FND Nm^3/h	2645.1	2034.7	1627.8	1373.4	1119.1	712.2	632.8	386.6	132.3				

Technical specifications OGP series

TYPE	Oxygen purity FOD (Free Oxygen Delivery)				Dimensions (W x D x H)		Weight	
		90%	93%	95%	mm	in	kg	lbs
OGP 2	FOD Nm^3/h	2.1	1.6	1.5	600 x 600 x 1550	23.6 x 23.6 x 61.0	100	220
	FOD scfm	1.3	1.1	0.8				
OGP 3	FOD Nm^3/h	3.2	2.5	2.5	600 x 600 x 1600	23.6 x 23.6 x 63.0	150	331
	FOD scfm	1.9	1.5	1.5				
OGP 4	FOD Nm^3/h	4.0	3.6	3.2	600 x 600 x 1650	23.6 x 23.6 x 65.0	180	397
	FOD scfm	2.3	2.1	1.9				
OGP 5	FOD Nm^3/h	4.7	4.3	4.0	700 x 700 x 1900	27.6 x 27.6 x 74.8	230	507
	FOD scfm	2.8	2.5	2.3				
OPG 6	FOD Nm^3/h	6.5	5.8	5.4	800 x 900 x 1750	31.5 x 35.4 x 68.9	400	882
	FOD scfm	3.8	3.4	3.2				
OGP 8	FOD Nm^3/h	7.9	7.2	6.8	800 x 900 x 1750	31.5 x 35.4 x 68.9	700	1543
	FOD scfm	4.7	4.2	4.0				
OGP 10	FOD Nm^3/h	9.7	9.0	8.3	900 x 1200 x 2100	35.4 x 47.2 x 82.7	950	2094
	FOD scfm	5.7	5.3	4.9				
OGP 14	FOD Nm^3/h	14.4	13.3	12.2	900 x 1200 x 2100	35.4 x 47.2 x 82.7	950	2094
	FOD scfm	8.5	7.8	7.2				
OGP 18	FOD Nm^3/h	15.5	18.4	18.4	900 x 1300 x 2400	35.4 x 51.1 x 94.5	1150	2535
	FOD scfm	9.1	10.8	10.8				
OGP 20	FOD Nm^3/h	20.5	19.4	18.4	1000 x 1300 x 2400	39.4 x 51.1 x 94.5	1150	2535
	FOD scfm	12.1	11.4	10.8				
OGP 23	FOD Nm^3/h	23.4	21.2	20.5	1000 x 1300 x 3200	39.4 x 51.1 x 126.0	1350	2976
	FOD scfm	13.8	12.5	12.1				
OGP 29	FOD Nm^3/h	29.2	27.7	26.3	1000 x 2000 x 2500	39.4 x 78.7 x 98.4	1850	4079
	FOD scfm	17.2	16.3	15.5				
OGP 35	FOD Nm^3/h	35.3	33.1	31.7	1000 x 2000 x 2500	39.4 x 78.7 x 98.4	2150	4740
	FOD scfm	20.8	19.5	18.6				
OGP 45	FOD Nm^3/h	45.4	42.8	39.2	1000 x 2000 x 3400	39.4 x 78.7 x 134.0	3500	7716
	FOD scfm	26.7	25.2	23.1				
OGP 55	FOD Nm^3/h	55.8	51.8	49.0	1000 x 2000 x 3400	39.4 x 78.7 x 134.0	3500	7716
	FOD scfm	32.8	30.5	28.8				
OGP 65	FOD Nm^3/h	66.2	64.1	56.9	1000 x 2000 x 3400	39.4 x 78.7 x 134.0	3500	7716
	FOD scfm	39.0	37.7	33.5				
OGP 84	FOD Nm^3/h	85.3	79.2	74.2	2400 x 2200 x 3200	94.5 x 86.6 x 126.0	4200	9259
	FOD scfm	50.2	46.6	43.6				
OGP 105	FOD Nm^3/h	106.9	101.9	93.6	2400 x 2400 x 3300	94.5 x 94.5 x 130.0	4900	10803
	FOD scfm	62.9	59.9	55.1				
OGP 160	FOD Nm^3/h	157.7	154.8	143.6	4000 x 4000 x 3200	157.5 x 157.5 x 126.0	8000	17637
	FOD scfm	92.8	91.1	84.5				
OGP 200	FOD Nm^3/h	203.8	188.3	175.0	4000 x 4000 x 3300	157.5 x 157.5 x 130.0	9400	20723
	FOD scfm	119.9	110.8	102.9				

FOD: Free Oxygen Delivery
Reference conditions
Compressed air effective inlet pressure: 7.5 bar(g)/108 psi(g).
Oxygen outlet pressure: 5 bar(g)/72 psi(g).
Ambient air temperature: 20°C/68°F.
Pressure dewpoint inlet air: 3°C/37°F.
Pressure dewpoint oxygen: -50°C/-58°F.
Unit inlet air quality 1.4.1 according to ISO 8573-1:2010.
Minimum refrigerant dryer required to precondition inlet air.
Typical oxygen quality 1.2.1 according to ISO 8573-1:2010.

Operating limits
Minimum ambient temperature: 5°C/41°F.
Maximum ambient temperature: 45°C/113°F.
Maximum compressed inlet air pressure 10 bar(g)/145 psi(g).



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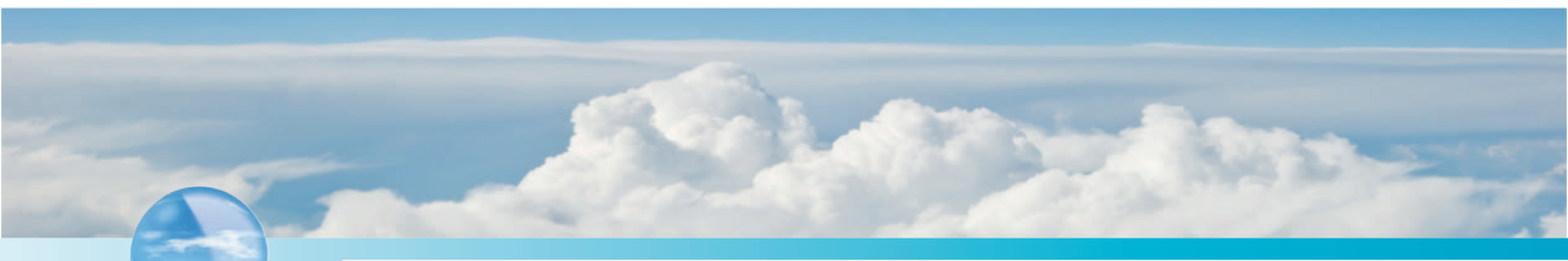
Установки для получения кислорода с технологией короткоцикловой адсорбции (PSA)

Серия OGP (производительность 0,6–56 л/с; расход 2–200 норм. м³/ч; чистота 90–95%)



В новых установках для получения кислорода от компании Atlas Copco используется технология короткоцикловой адсорбции (PSA) для отделения молекул кислорода от других молекул, содержащихся в сжатом воздухе. В результате, на выходе установки получается кислород высокой степени чистоты. Серия OGP представляет собой экономичный источник кислорода, используемый в таких отраслях промышленности, как очистка сточных вод, производство озона, здравоохранение, стекольная промышленность и пр.

Особенности и преимущества

Готовность к использованию

- Необходим только источник сухого сжатого воздуха
- «Подключи и работай»
- Не требуется специалистов по установке и вводу в эксплуатацию
- Полная автоматизация и контроль, включая наличие датчика кислорода в стандартной комплектации
- Гарантированные эксплуатационные характеристики, не зависящие от температуры

Снижение затрат

- Низкие затраты на установку и эксплуатацию – высокоэффективные технологии
- Отсутствие дополнительных расходов, например, на обработку заказа, заправку и поставку
- Отсутствие необходимости в обслуживании

Исключительное удобство

- Постоянная готовность к работе (24 часа в сутки, 7 дней в неделю)
- Исключен риск остановки производства из-за утечек газа

Требуемая степень чистоты

- Подача кислорода в соответствии с требованиями: степень чистоты от 90 до 95%
- Простота настройки устройства на различные степени чистоты

Высокая производительность

- Расширенная линейка и производство кислорода до 200 норм. м³/ч делают новую серию OGP идеальной для таких применений, как очистка сточных вод, производство озона, здравоохранение, стекольная промышленность и пр.

Технические характеристики

90,00%	Производительность кислорода*		Потребление воздуха	
	л/с	норм. м³/ч	л/с	норм. м³/ч
OGP 2	0,6	2,0	6,7	22,20
OGP 3	0,9	3,0	9,0	30,00
OGP 4	1,1	3,7	10,8	36,00
OGP 5	1,4	4,5	16,2	54,00
OGP 6	2,0	6,5	21,6	72,00
OGP 8	2,3	7,8	30,6	102,00
OGP 10	2,9	9,5	30,6	102,00
OGP 14	4,2	14,0	46,5	154,80
OGP 18	5,5	18,2	56,8	189,00
OGP 20	6,0	20,0	64,9	216,00
OGP 23	6,9	23,0	75,7	252,00
OGP 29	8,6	28,8	97,3	324,00
OGP 35	10,4	34,5	108,1	360,00
OGP 45	13,4	44,5	153,1	510,00
OGP 55	16,5	55,0	187,4	624,00
OGP 65	19,5	65,0	236,0	786,00
OGP 84	25,2	84,0	290,1	966,00
OGP 105	31,5	105,0	367,5	1224,00
OGP 160	46,5	155,0	551,3	1836,00
OGP 200	60,1	200,0	663,0	2208,00

* Производительность +/-5%.

Расчетные условия эксплуатации:

Температура окружающей среды	*20°C*
Давление окружающей среды	*1013 мбар*
Температура на входе устройства	*20°C*
Давление на входе	*7,5 бар (изб.)*
Чистота кислорода на выходе устройства	*90%*
Качество сжатого воздуха на входе	*ISO 8573-1, класс 1-4-1*

Выходные параметры:

Максимальная температура сжатого воздуха на входе	*45°C*
Максимальная температура окружающей среды	*45°C*
Минимальная температура сжатого воздуха на входе	*5°C*
Минимальная температура окружающей среды	*0°C*
Минимальное давление сжатого воздуха на входе	*4 бар (изб.)*
Максимальное давление сжатого воздуха на входе	*10 бар (изб.)*
Минимальная чистота кислорода	*90%*
Максимальная чистота кислорода	*95%*

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Atlas Copco

www.atlascopco.ru

Atlas Copco

On-site Industrial Gases
Nitrogen & Oxygen Generators

Sustainable Productivity

Atlas Copco

A secure supply of nitrogen and oxygen

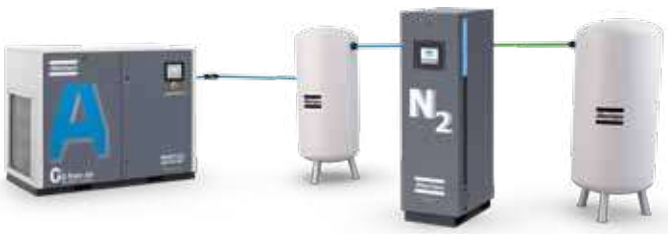
Whether your company is specialized in chemical manufacturing, electronics, laser cutting or food and beverage, a dependable supply of industrial gas is crucial. Compared to the on-demand delivery of gas bottles or tanks, on-site production of gas offers a wealth of advantages ranging from cost savings to continuous availability. This is exactly what Atlas Copco provides. Our advanced nitrogen and oxygen generators offer you the ultimate solution: flexible on-site production of industrial gas at the lowest possible cost.

BENEFITS OF ON-SITE NITROGEN AND OXYGEN

- Your own independent supply of industrial gas.
- Non-stop availability: 24 hours a day, 7 days a week.
- Significant economies of scale and lower operational costs: no rental charges, transport expenses and bulk user evaporation losses.
- No safety hazards when handling high-pressure cylinders.
- Easy integration within existing compressed air installations.

HIGH RELIABILITY

- Proven technology: simple, reliable and durable.
- The exact purity your application demands.
- Low operating costs for extra cost-efficiency.
- World-class expertise in a unique market offer from compressed air to gas.



MEETING ANY NEED

Atlas Copco's nitrogen and oxygen generators offer a cost-effective means for on-site gas generation. Including models sized for a wide range of flow rates and product purities, these generators are renowned for their exceptional versatility and efficiency. Generators based on both Pressure Swing Absorption (PSA) and membrane technologies are available.

WIDE RANGE OF APPLICATIONS

- Food & beverage (storage & packaging).
- Pharmaceutical applications.
- Plastic injection molding.
- Electronics.
- Laser cutting.
- Semiconductor manufacturing.
- Chemical applications.
- Metal heat treatment.
- Cable & optical fiber industries.
- Glass industries.
- Fire prevention.
- Aquaculture.

Membrane: Efficient all-in-one N_2 supply

Atlas Copco NGM Nitrogen Generators utilize proprietary membrane separation technology. The membrane separates compressed air into two streams: one is 95-99% pure nitrogen, and the other is oxygen enriched with carbon dioxide and other gases.

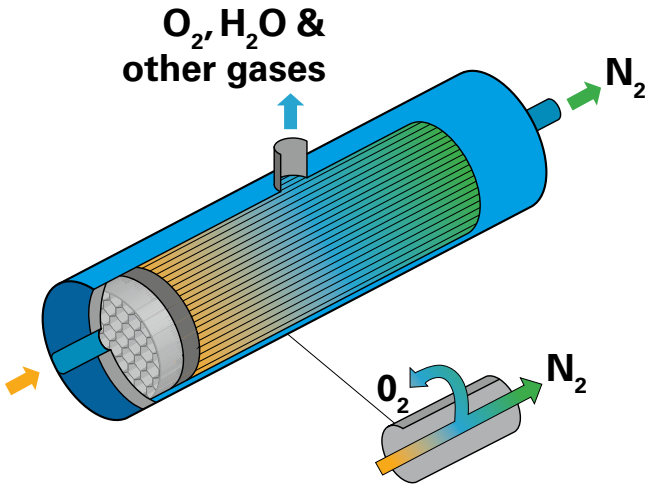
INSTANT SUPPLY OF NITROGEN BETWEEN 95% AND 99%

The generator separates air into component gases by passing inexpensive compressed air through semi-permeable membranes consisting of bundles of individual hollow fibers. Each fiber has a perfectly circular cross-section and a uniform bore through its center.

Because the fibers are so small, a great many can be packed into a limited space, providing an extremely large membrane surface area that can produce a relatively high volume product stream.

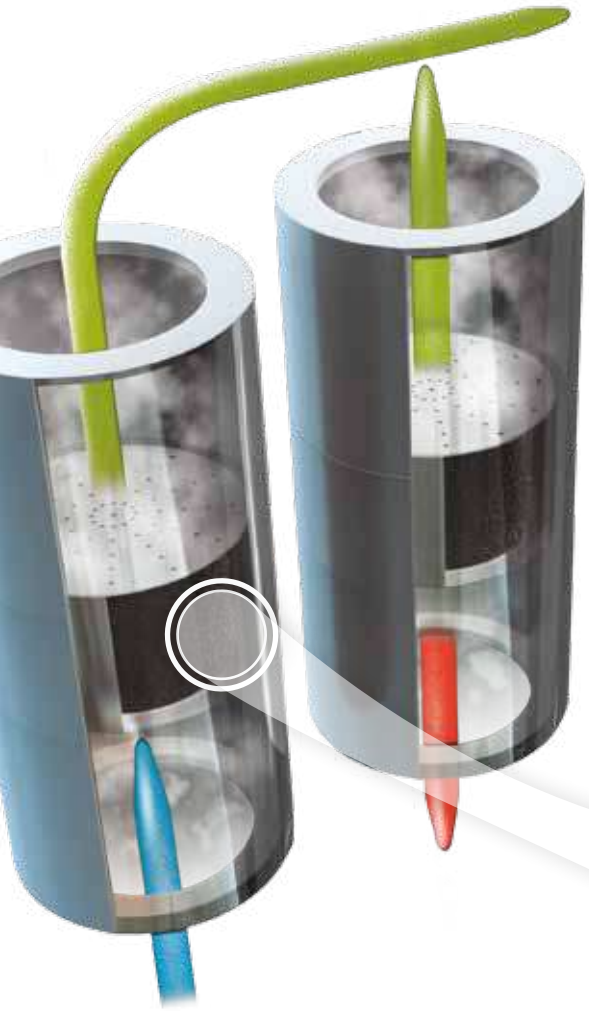
OUTSTANDINGLY DRY NITROGEN

Compressed air is introduced into the center of the fibers at one end of the module and contacts the membrane as it flows through the fiber bores. Oxygen, water vapor and other trace gases easily permeate the membrane fiber and are discharged through a permeate port while the nitrogen is contained within the membrane and flows through the outlet port. Since water vapor permeates through the membrane as well, the nitrogen gas stream is very dry, with dewpoints as low as -40°C (-40°F).



PSA: Reliable and proven

Based on Pressure Swing Adsorption (PSA) technology, Atlas Copco's NGP Nitrogen Generators and OGP Oxygen Generators provide a continuous flow of nitrogen and oxygen at desired purity.



HIGH PURITY NITROGEN SUPPLY UP TO 99.999%

Atlas Copco's NGP Nitrogen Generators use Pressure Swing Adsorption technology to isolate nitrogen molecules from other molecules in compressed air. Oxygen, CO_2, water vapor and other gases are adsorbed. The result is virtually pure nitrogen at the outlet of the generator. The NGP Series is a very cost-efficient source of nitrogen used in various industries like food and beverage, metal processing, electronics, and many others.

Clean and dry compressed air (pressurized)

Nitrogen gas (pressurized)

Oxygen exhaust (depressurized)

Adsorbent

1. Adsorbent.
2. Nitrogen (or oxygen) molecules trapped in the adsorbent.
3. Oxygen (or nitrogen) molecules passing through.

FOR ALL YOUR OXYGEN NEEDS

The OGP Oxygen Generator works in a similar way, using Pressure Swing Adsorption technology to isolate oxygen molecules from other molecules in compressed air to leave high purity oxygen at the outlet of the generator. The OGP Series provides cost-efficient oxygen for applications such as waste water treatment, ozone production, health care, and the glass industry.

Total solutions from Atlas Copco

With a full range of nitrogen and oxygen generators to choose from, Atlas Copco brings you the right supply of nitrogen and oxygen to meet your specific needs and optimize your production process at the same time.

A UNIQUE OFFER

On-site nitrogen and oxygen generation requires the most reliable and efficient compressed air solution. Drawing on vast experience, Atlas Copco has been leading the industry in compressed air technology for decades. From advanced compressors and quality air solutions over a complete range of nitrogen and oxygen generators to aftermarket and financing services, Atlas Copco brings you its world-class expertise in a unique offer.

Typical installation: compressor with integrated dryer, receiver, NGM nitrogen generator, receiver.

NGM (Membrane)

OIL-FREE COMPRESSORS

Atlas Copco, pioneer in the development of oil-free air technology, offers a full range of premium compressors delivering 100% oil-free, clean air to protect the membrane or absorbent in nitrogen generators. There is no need for extra filtration, making sure the pressure drop is kept to a minimum.

OIL-INJECTED COMPRESSORS

Integrated onto the production floor, Atlas Copco's oil-injected compressors provide a dependable flow of compressed air directly to the point of use. Built to perform in harsh environments, Atlas Copco compressors keep your production running smoothly and reliably: a very economical solution in combination with nitrogen and oxygen generators.

AIR TREATMENT

Atlas Copco has innovatively developed and improved air compression and drying techniques. Whatever your installation, application or quality requirements, Atlas Copco can offer the right air treatment solution, such as dryers (desiccant, refridgerant, membrane) and filters (coalescing, particle, active carbon).

NGP (PSA)

Typical installation: compressor with integrated dryer, pre-filters, Active Carbon Tower QDT, receiver, NGP nitrogen PSA generator, after-filter, receiver.

NGM nitrogen generators

Based on innovative membrane technology, Atlas Copco's NGM Nitrogen Generators are flexible enough to adapt to your specific applications. And with low operating costs they offer an excellent return on investment.

Ready to use

- Robust design.
- No specialist installation or commissioning.
- Fitted with pre-filtration, pressure gauges and flow meter to ensure accurate system monitoring at all times.

Cost savings

- Low operating expenses.
- No additional costs such as order processing, refills and delivery charges.
- Limited maintenance costs.

Exceptional convenience

- Continuous availability (24 hours a day, 7 days a week).
- Risk of production breakdown due to gas running out is eliminated.

All-in-one

- Fully integrated package.
- Filters and oxygen sensor as standard.

High flow capacity

Ideal for applications such as fire prevention, tire inflation, oil & gas, marine, packaging and many more.

NGP (nitrogen) & OGP (oxygen)

Atlas Copco's NGP and OGP nitrogen and oxygen generators are easy to install and use. They offer the required purity with a high flow capacity, making them suitable for a range of applications.

High flow capacity

The wide product range and gas flows exceeding 2,000 Nm^3/h (NGP) make these generators ideal for a variety of demanding applications.

Exceptional reliability

- Robust design.
- Continuous availability (24 hours a day, 7 days a week).
- Potential risk of production breakdown due to gas running out is eliminated.

Desired purity

- NGP: nitrogen concentrations from 95% to 99.999%.
- OGP: oxygen concentrations from 90% to 95%.

Ready to use

- Only requires a supply of dry compressed air.
- Plug-and-play.
- No specialist installation or commissioning.
- Fully automated and monitored including oxygen sensor as standard.
- Service-friendly.

Cost savings

- Low operating expenses.
- No additional costs such as order processing, refills and delivery charges.
- Limited maintenance costs.

Superior monitoring and control

You can rely on Atlas Copco's nitrogen and oxygen generators to perform efficiently day in, day out. To guarantee maximum uptime, continuous surveillance is a must.

PEACE OF MIND

By properly monitoring your nitrogen/oxygen system you cannot only decrease downtime but also save energy and reduce maintenance. The nitrogen and oxygen generators come with the following advanced control unit:

- 3.5-inch high-definition color display with clear pictograms and extra 4th LED indicator for service.
- 2 analogue parameters (Purity & Pressure), with the opportunity to expand with more analogue components.
- Increased reliability: user-friendly, multilingual user interface and durable keyboard.
- Graphical indication Serviceplan.
- Password protected operation parameters.
- Graphic log view on analogue parameters.
- Process illustration with valve cycle indication, graph showing pressure and current operation values.
- Remote control and connectivity functions.

Your one-stop shop for O_2 and N_2

From custom designed equipment to rental contracts, and from financing solutions to service kits, Atlas Copco is your one-stop global shop for all your compressed air, nitrogen and oxygen requirements.

CUSTOM*Design*

Atlas Copco's Custom*Design* provides bespoke compressors and systems to operate, often in remote locations, at extreme temperatures or in harsh environments. These teams draw on over 100 years of compressor development geared to creating efficient, innovative and value-packed products.

RENT YOUR EQUIPMENT

Atlas Copco Specialty Rental offers the largest fleet of 100% oil-free diesel and electric compressors in the world. In addition you can rent a wide range of generators as well as nitrogen and oxygen equipment to meet your requirements.

SINGLE SOURCE SPARE PARTS

From now on you can rely on one single source for all your spare parts. When installed by an Atlas Copco technician, his experience and training will keep downtime to the minimum and ensure your equipment is kept in top condition.

CUSTOMER FINANCING SOLUTION

Offering a one-stop solution, Atlas Copco Customer Finance makes it easier for you to complete your investment in Atlas Copco equipment. We provide competitive rates and the possibility to choose from flexible solutions to suit your needs.

IDEAL FOR A WIDE RANGE OF APPLICATIONS

- Marine
- Oil and gas
- Power generation
- Food

Options

Some applications may require or benefit from additional options and more refined control and nitrogen/oxygen treatment systems. To meet these needs, Atlas Copco has developed options and easily integrated compatible equipment providing the lowest cost nitrogen and oxygen generation.

NGM SERIES

- Permeate vent kit.
- Oil indicator.
- PDP sensor.
- Flow sensor.

NGP SERIES

- N_2 flow meter.
- Inlet PDP measurement/alarm.

OGP SERIES

- O_2 flow meter.
- Inlet PDP measurement/alarm.

NGM Series: Technical Specifications

NGM TYPE	Nitrogen purity				Dimensions (W x D x H)		Weight	
		95%	96%	97%	mm	in	kg	lbs
NGM 1	FND l/s	0.9	0.8	0.6	820 x 772 x 2090	32.3 x 30.4 x 82.3	259	571
	FND m³/h	3.3	2.7	2.1				
	FND cfm	1.9	1.7	1.3				
NGM 2	FND l/s	1.9	1.5	1.2	820 x 772 x 2090	32.3 x 30.4 x 82.3	268	591
	FND m³/h	6.7	5.4	4.2				
	FND cfm	4	3.2	2.5				
NGM 3	FND l/s	3.3	2.7	2.1	820 x 772 x 2090	32.3 x 30.4 x 82.3	285	628
	FND m³/h	11.7	9.6	7.6				
	FND cfm	7.0	5.7	4.4				
NGM 4	FND l/s	6.5	5.4	4.2	820 x 1470 x 2090	32.3 x 57.9 x 82.3	445	981
	FND m³/h	23.3	19.3	15.2				
	FND cfm	13.8	11.4	8.9				
NGM 5	FND l/s	9.7	8.0	6.3	820 x 1470 x 2090	32.3 x 57.9 x 82.3	497	1096
	FND m³/h	35.0	28.9	22.8				
	FND cfm	20.5	16.9	13.3				
NGM 6	FND l/s	13.0	10.7	8.4	820 x 1470 x 2090	32.3 x 57.9 x 82.3	535	1179
	FND m³/h	46.7	38.5	30.3				
	FND cfm	27.5	22.7	17.8				
NGM 7	FND l/s	16.2	13.3	10.5	820 x 1470 x 2090	32.3 x 57.9 x 82.3	571	1259
	FND m³/h	58.3	48.1	37.9				
	FND cfm	34.3	28.2	22.2				

FND: Free Nitrogen Delivery
Reference conditions:
Compressed air effective inlet pressure: 8 bar(g)/116 psi(g).
Nitrogen outlet pressure: 6.5 bar(g)/94 psi(g).
Ambient air temperature: 20°C/68°F
Pressure dewpoint inlet air: 3°C/37°F.
Pressure dewpoint nitrogen: -40°C/-40°F.
Unit inlet air quality 1.4.1 according to ISO 8573-1:2010.
Minimum refrigerant dryer required to precondition inlet air.
Typical nitrogen quality 1.2.1 according to ISO 8573-1:2010.

Operating limits:
Minimum ambient temperature: 5°C/41°F.
Maximum ambient temperature: 50°C/122°F.
Maximum compressed inlet air pressure 13 bar(g)/189 psi(g).

NGM 1-7

Please check the table above for detailed dimensions.

NGP Series: Technical Specifications

NGP TYPE		Nitrogen purity FND (Free Nitrogen Delivery)									Dimensions (W x D x H)		Weight	
		95%	97%	98%	99%	99.50%	99.90%	99.95%	99.99%	99.999%	mm	in	kg	lbs
NGP 4	FND l/s	2.8	2.2	1.8	1.4	1.2	0.8	0.5	0.5	0.2	720 x 600 x 1530	28.3 x 26.6 x 60.2	100	220
	FND m³/h	10.0	7.9	6.6	5.0	4.3	2.7	2.3	2.3	0.7				
	FND cfm	5.9	4.7	3.8	3.0	2.5	1.7	1.1	1.1	0.4				
NGP 9	FND l/s	5.8	4.4	4.0	2.8	2.5	1.7	1.1	0.8	0.5	720 x 600 x 1530	28.3 x 26.6 x 60.2	140	308
	FND m³/h	20.9	15.8	14.2	10.2	9.2	6.1	5.0	3.1	1.6				
	FND cfm	12.3	9.3	8.5	5.9	5.3	3.6	2.3	1.7	1.1				
NGP 11	FND l/s	7.9	6.2	5.7	4.2	3.2	2.4	1.4	1.3	0.7	720 x 600 x 1550	28.3 x 26.6 x 61.0	160	353
	FND m³/h	28.5	22.4	20.3	15.3	11.4	8.6	6.2	4.7	2.5				
	FND cfm	16.7	13.1	12.1	8.9	6.8	5.1	3.0	2.8	1.5				
NGP 15	FND l/s	8.8	7.1	6.4	4.8	4.2	2.5	2.0	1.6	0.8	750 x 750 x 1811	28.3 x 28.3 x 71.3	230	507
	FND m³/h	31.5	25.4	22.9	17.3	15.3	9.2	8.7	5.6	3.1				
	FND cfm	18.6	15.0	13.6	10.2	8.9	5.3	4.2	3.4	1.7				
NGP 21	FND l/s	12.7	10.2	9.0	7.1	5.9	3.5	2.5	1.7	1.0	750 x 750 x 1811	28.3 x 28.3 x 71.3	230	507
	FND m³/h	45.8	36.6	32.6	25.4	21.4	12.7	11.2	7.4	4.3				
	FND cfm	26.9	21.6	19.1	15.0	12.5	7.4	5.3	3.6	2.1				
NGP 30	FND l/s	20.4	16.7	14.3	11.0	8.5	5.5	4.0	2.4	1.2	800 x 850 x 1620	31.5 x 33.5 x 63.8	400	882
	FND m³/h	73.3	59,0	51.4	39.7	30.5	19.8	17.5	8.6	4.3				
	FND cfm	43.2	35.4	30.3	23.3	18.0	11.6	8.5	5.1	2.5				
NGP 40	FND l/s	25.4	20.6	17.9	13.9	11.3	6.9	5.1	3.4	1.7	800 x 850 x 2105	31.5 x 33.5 x 82.9	440	970
	FND m³/h	91.6	74.1	64.3	50.1	40.7	24.8	22.4	12.2	6.1				
	FND cfm	53.8	43.6	37.9	29.4	23.9	14.6	10.8	7.2	3.6				
NGP 47	FND l/s	29.7	23.5	20.6	16.1	13.3	8.2	5.9	3.7	1.9	800 x 1120 x 2000	31.5 x 44.1 x 78.7	750	1653
	FND m³/h	106.8	84.4	74.3	58.0	47.8	29.5	26.0	13.2	6.9				
	FND cfm	62.9	49.8	43.6	34.1	28.2	17.4	12.5	7.8	4.0				
NGP 62	FND l/s	36.7	31.1	26.9	20.9	17.5	10.5	7.6	4.8	2.1	800 x 1120 x 2000	31.5 x 44.1 x 78.7	750	1653
	FND m³/h	132.3	111.9	96.6	75.3	63.1	37.6	33.5	17.3	7.6				
	FND cfm	77.7	65.9	57.0	44.3	37.1	22.2	16.1	10.2	4.4				
NGP 73	FND l/s	43.8	36.2	31.4	24.6	20.6	12.2	9.0	5.7	3.1	860 x 1190 x 2299	33.9 x 46.9 x 90.5	900	1984
	FND m³/h	157.7	130.2	112.9	88.5	74.3	43.7	39.7	20.3	11.2				
	FND cfm	92.8	76.7	66.5	52.1	43.6	25.8	19.1	12.1	6.6				
NGP 92	FND l/s	56.5	47.2	41.0	32.5	26.0	15.5	11.3	7.1	4.0	860 x 1330 x 2299	33.9 x 52.4 x 90.5	1150	2535
	FND m³/h	203.5	169.9	147.5	117.0	93.6	56,0	49.6	31.0	17.3				
	FND cfm	119.7	100.0	86.8	68.8	55.1	32.8	23.9	15.0	8.5				
NGP 112	FND l/s	67.8	55.1	48.0	37.9	31.7	18.7	14.1	9.9	5.7	1000 x 1640 x 2480	39.4 x 64.6 x 97.6	1850	4079
	FND m³/h	244.2	198.4	173.0	136.3	113.9	67.1	62.1	35.6	20.3				
	FND cfm	143.6	116.7	101.7	80.3	67.1	39.6	29.9	21.0	12.1				
NGP 185	FND l/s	113.0	90.4	79.1	61.6	52.3	36.7	31.1	19.2	8.5	1000 x 1765 x 2530	39.4 x 69.5 x 99.6	2150	4740
	FND m³/h	406.9	325.6	284.9	221.8	188.2	132.3	136.3	69.2	30.5				
	FND cfm	239.3	191.5	167.5	130.5	110.8	77.7	65.9	40.7	18.0				
NGP 250	FND l/s	161.1	127.2	102.0	86.2	70.7	48.0	35.3	24.0	10.2	1000 x 1965 x 2970	39.4 x 77.4 x 117.0	3200	7055
	FND m³/h	579.9	457.8	367.3	310.3	254.3	173,0	155.7	86.5	36.6				
	FND cfm	341.2	269.4	216.0	182.6	149.7	101.7	74.8	50.8	21.6				
NGP 420	FND l/s	274.1	214.8	175.2	147.0	118.7	79.1	57.9	39.6	17.2	1240 x 2520 x 3160	48.8 x 99.2 x 124.4	4200	9259
	FND m³/h	986.8	773.2	630.8	529.0	427.3	284.9	254.3	142.2	62.1				
	FND cfm	580.5	454.9	371.1	311.3	251.4	167.5	122.6	83.9	36.4				
NGP 550	FND l/s	353.2	279.8	233.2	195.0	154.0	107.4	82.0	54.3	22.9	1420 x 2880 x 3330	55.9 x 113.4 x 131.1	4900	10803
	FND m³/h	1271.7	1007.2	839.3	702.0	554.5	386.6	360.1	195.3	82.4				
	FND cfm	748.1	592.6	493.9	413.0	326.2	227.5	173.7	115.0	48.5				
NGP 900	FND l/s	551.1	409.8	353.3	296.7	254.3	163.9	121.5	84.8	34.5	2480 x 2520 x 3160	97.6 x 99.2 x 124.4	8400	18519
	FND m³/h	1983.9	1475.2	1271.7	1068.2	915.6	590.1	534.1	305.2	124.1				
	FND cfm	1167.2	868.0	748.3	628.4	538.6	347.1	257.3	179.6	73.1				
NGP 1100	FND l/s	734.8	565.2	452.2	381.5	310.9	197.8	144.1	107.4	36.7	2840 x 2880 x 3330	111.8 x 113.4 x 131.1	9800	21605
	FND m³/h	2645.1	2034.7	1627.8	1373.4	1119.1	712.2	632.8	386.6	132.3				
	FND cfm	1556.3	1197.1	957.8	808.0	658.5	418.9	305.2	227.5	77.7				

FND: Free Nitrogen Delivery
Reference conditions:
Compressed air effective inlet pressure: 7.5 bar(g)/108 psi(g).
Nitrogen outlet pressure: 6 bar(g)/87 psi(g).
Ambient air temperature: 20°C/68°F.
Pressure dewpoint inlet air: 3°C/37°F.
Pressure dewpoint nitrogen: -50°C/-58°F.
Unit inlet air quality 1.4.1 according to ISO 8573-1:2010.
Minimum refrigerant dryer required to precondition inlet air.
Typical nitrogen quality 1.2.1 according to ISO 8573-1:2010.

Operating limits:
Minimum ambient temperature: 5°C/41°F.
Maximum ambient temperature: 45°C/113°F.
Maximum compressed inlet air pressure 10 bar(g)/145 psi(g).

NGP 4-1100

Please check the table above for detailed dimensions.

OGP Series: Technical Specifications

OGP TYPE	Oxygen purity FOD (Free Oxygen Delivery)				Dimensions (W x D x H)		Weight	
		90%	93%	95%	mm	in	kg	lbs
OGP 2	FOD. l/s	0.6	0.5	0.4	600 x 600 x 1550	23.6 x 23.6 x 61.0	100	220
	FOD. m³/h	2.1	1.6	1.5				
	FOD cfm	1.3	1.1	0.8				
OGP 3	FOD. l/s	0.9	0.7	0.7	600 x 600 x 1600	23.6 x 23.6 x 63.0	150	331
	FOD. m³/h	3.2	2.5	2.5				
	FOD cfm	1.9	1.5	1.5				
OGP 4	FOD. l/s	1.1	1,0	0.9	600 x 600 x 1650	23.6 x 23.6 x 65.0	180	397
	FOD. m³/h	4,0	3.6	3.2				
	FOD cfm	2.3	2.1	1.9				
OGP 5	FOD. l/s	1.3	1.2	1.1	700 x 700 x 1900	27.6 x 27.6 x 74.8	230	507
	FOD. m³/h	4.7	4.3	4,0				
	FOD cfm	2.8	2.5	2.3				
OGP 6	FOD. l/s	1.8	1.6	1.5	800 x 900 x 1750	31.5 x 35.4 x 68.9	400	882
	FOD. m³/h	6.5	5.8	5.4				
	FOD cfm	3.8	3.4	3.2				
OGP 8	FOD. l/s	2.2	2,0	1.9	800 x 900 x 1750	31.5 x 35.4 x 68.9	700	1543
	FOD. m³/h	7.9	7.2	6.8				
	FOD cfm	4.7	4.2	4.0				
OGP 10	FOD. l/s	2.7	2.5	2.3	900 x 1200 x 2100	35.4 x 47.2 x 82.7	950	2094
	FOD. m³/h	9.7	9,0	8.3				
	FOD cfm	5.7	5.3	4.9				
OGP 14	FOD. l/s	4,0	3.7	3.4	900 x 1200 x 2100	35.4 x 47.2 x 82.7	950	2094
	FOD. m³/h	14.4	13.3	12.2				
	FOD cfm	8.5	7.8	7.2				
OGP 18	FOD. l/s	4.3	5.1	5.1	900 x 1300 x 2400	35.4 x 51.1 x 94.5	1150	2535
	FOD. m³/h	15.5	18.4	18.4				
	FOD cfm	9.1	10.8	10.8				
OGP 20	FOD. l/s	5.7	5.4	5.1	1000 x 1300 x 2400	39.4 x 51.1 x 94.5	1150	2535
	FOD. m³/h	20.5	19.4	18.4				
	FOD cfm	12.1	11.4	10.8				
OGP 23	FOD. l/s	6.5	5.9	5.7	1000 x 1300 x 3200	39.4 x 51.1 x 126.0	1350	2976
	FOD. m³/h	23.4	21.2	20.5				
	FOD cfm	13.8	12.5	12.1				
OGP 29	FOD. l/s	8.1	7.7	7.3	1000 x 2000 x 2500	39.4 x 78.7 x 98.4	1850	4079
	FOD. m³/h	29.2	27.7	26.3				
	FOD cfm	17.2	16.3	15.5				
OGP 35	FOD. l/s	9.8	9.2	8.8	1000 x 2000 x 2500	39.4 x 78.7 x 98.4	2150	4740
	FOD. m³/h	35.3	33.1	31.7				
	FOD cfm	20.8	19.5	18.6				
OGP 45	FOD. l/s	12.6	11.9	10.9	1000 x 2000 x 3400	39.4 x 78.7 x 134.0	3500	7716
	FOD. m³/h	45.4	42.8	39.2				
	FOD cfm	26.7	25.2	23.1				
OGP 55	FOD. l/s	15.5	14.4	13.6	1000 x 2000 x 3400	39.4 x 78.7 x 134.0	3500	7716
	FOD. m³/h	55.8	51.8	49,0				
	FOD cfm	32.8	30.5	28.8				
OGP 65	FOD. l/s	18.4	17.8	15.8	1000 x 2000 x 3400	39.4 x 78.7 x 134.0	3500	7716
	FOD. m³/h	66.2	64.1	56.9				
	FOD cfm	39.0	37.7	33.5				
OGP 84	FOD. l/s	23.7	22.0	20.6	2400 x 2200 x 3200	94.5 x 86.6 x 126.0	4200	9259
	FOD. m³/h	85.3	79.2	74.2				
	FOD cfm	50.2	46.6	43.6				
OGP 105	FOD. l/s	29.7	28.3	26,0	2400 x 2400 x 3300	94.5 x 94.5 x 130.0	4900	10803
	FOD. m³/h	106.9	101.9	93.6				
	FOD cfm	62.9	59.9	55.1				
OGP 160	FOD. l/s	43.8	43.0	39.9	4000 x 4000 x 3200	157.5 x 157.5 x 126.0	8000	17637
	FOD. m³/h	157.7	154.8	143.6				
	FOD cfm	92.8	91.1	84.5				
OGP 200	FOD. l/s	56.6	52.3	48.6	4000 x 4000 x 3300	157.5 x 157.5 x 130.0	9400	20723
	FOD. m³/h	203.8	188.3	175.0				
	FOD cfm	119.9	110.8	102.9				

FOD: Free Oxygen Delivery
Reference conditions:
Compressed air effective inlet pressure: 7.5 bar(g)/108 psi(g).
Oxygen outlet pressure: 5 bar(g)/72 psi(g).
Ambient air temperature: 20°C/68°F.
Pressure dewpoint inlet air: 3°C/37°F.
Pressure dewpoint oxygen -50°C/-58°F.
Unit inlet air quality 1.4.1 according to ISO 8573-1:2010.
Minimum refrigerant dryer required to precondition inlet air.
Typical oxygen quality 1.2.1 according to ISO 8573-1:2010.

Operating limits:
Minimum ambient temperature: 5°C/41°F.
Maximum ambient temperature: 45°C/113°F.
Maximum compressed inlet air pressure 10 bar(g)/145 psi(g).

OGP 2-200
Please check the table above for detailed dimensions.

Driven by innovation

With more than 140 years of innovation and experience, Atlas Copco will deliver the products and services to help maximize your company's efficiency and productivity. As an industry leader, we are dedicated to offering high air quality at the lowest possible cost of ownership. Through continuous innovation, we strive to safeguard your bottom line and bring you peace of mind.

Building on interaction

As part of our long-term relationship with our customers, we have accumulated extensive knowledge of a wide diversity of processes, needs and objectives. This gives us the flexibility to adapt and efficiently produce customized compressed air solutions that meet and exceed your expectations.

A committed business partner

With a presence in over 180 countries, we will deliver high-quality customer service anywhere, anytime. Our highly skilled technicians are available 24/7 and are supported by an efficient logistics organization, ensuring fast delivery of genuine spare parts when you need them. We are committed to providing the best possible know-how and technology to help your company produce, grow, and succeed. With Atlas Copco you can rest assured that your superior productivity is our first concern!

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www.atlascopco.com/industrialgases

WALKER FILTRATION

OXYGEN FILTERS

Guaranteed safe and reliable filtration.

Oxygen Generation & The Need For Specialist Filtration



Oxygen is one of the basic and abundant chemical elements, making up 21% of the earth's atmosphere, and is vital for most life forms on earth. At standard pressure and temperature, oxygen is a colorless, odorless, and tasteless gas with the molecular formula O_2.

Over one hundred million ton of O_2 is extracted from the air every year for use in medical and industrial applications; Oxygen is an essential medicine required at all levels of the health care system for resuscitation, surgery and for various therapies. Only high quality medical grade oxygen should be given to patients, and international standards for the production of medical oxygen should be followed for patient protection.

On-site Oxygen Generation

Oxygen generators offer a cost-effective, reliable, and safe method of producing gaseous oxygen from compressed air on-site. There are several different methods used to produce oxygen on-site and, whether this is through Pressure Swing Absorption (PSA), Vacuum Swing Absorption (VSA), Cryogenic Distillation, or any other method, it is vital that purity standards are met.

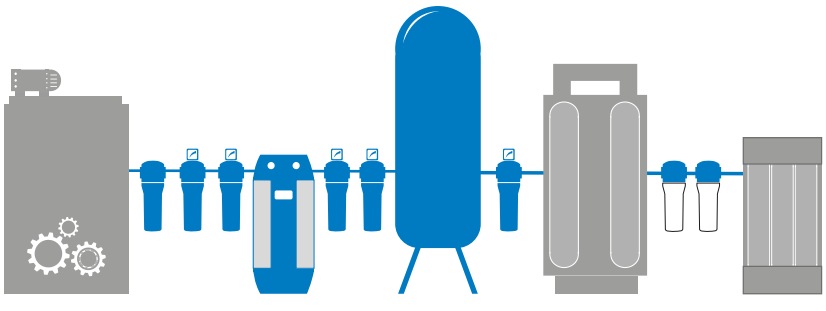
The Importance of Specialist Filtration in Oxygen Generation

High quality filtration for oxygen gas generation is essential, not only to ensure the delivery of reliable compressed air and gas in line with the purity standards required for your end application, but also to protect the integrity and safety of your gas generation systems. Walker Filtration can offer the right compressed air and gas treatment solution with coalescing, particulate, and medical sterile filters, providing high quality inlet air prior to entering an oxygen generator, as well as the required filtration after the generation process.

Hazards & Risks of Concentrated Oxygen

Oxygen enrichment of the atmosphere, even by a few percent, considerably increases the risk of combustion. Because oxygen enriched air is highly reactive, it is imperative all apparatus used in the manufacture, distribution and utilization of oxygen complies with applicable regulations, and does not contain or introduce materials that could be combustible when in contact with the gas. This includes the filtration used within an oxygen generation system. Walker Filtration's Oxygen Filters are manufactured using a state of the art environmentally clean controlled area. This ensures no contamination can be introduced into the oxygen application.

Walker Filtration provides complete a safe and reliable filtration solution, cleaned in accordance with ASTM G93/ G93M.



The above schematic represents a typical oxygen generation flow path including oxygen service/non-oxygen service filter installations, pre and post oxygen generator.
Please contact Walker Filtration Sales Department to discuss your specific requirements and for guidance on recommended grades of filtration to achieve optimized air/gas purity.

To discuss your specific application requirements please contact **+1 814 836 2900**

Medical Oxygen

Medical oxygen is recognized as an essential medicine in the field of healthcare and has been used medically for over 100 years. It is crucial to treatments for critically ill patients, especially those with respiratory symptoms and low levels of oxygen in the bloodstream.

When generating medical oxygen onsite in Europe, it is necessary to comply with the specifications given in the European Pharmacopoeia monographs for "Oxygen 93 Percent". Oxygen 93 Percent is a medicinal gas produced from compressed air, containing no less than 90% percent, and no more than 96% percent of O_2.

Worldwide demand for medical oxygen has seen a significant and ongoing increase in recent years, with the prevalence of respiratory illnesses and diseases, and viruses that cause respiratory symptoms becoming more and more common. Because of this, the requirement to provide a reliable and limitless supply of oxygen on-site that can adjust according to requirements has also seen an increase in demand.

Medical Sterile Grade Filtration

It is essential that standards to produce medical oxygen are followed and quality components, including filtration, are used in the generation process.

When it comes to patient care, quality and reliability are paramount.

Walker Filtration Medical Sterile Oxygen Filters meet the required cleanliness, material, and filtration standards for medical oxygen, providing safe filtration to ensure that gas purity standards are met.

Delivering clean air and oxygen where it matters most.

Our Medical Sterile Filters are designed to exceed the requirements of HTM 02-01 medical gas pipeline systems and are cleaned for oxygen service in accordance with ASTM G93/G93M.

Industrial Oxygen



Oxygen generation is essential to many industrial applications where it is necessary to have consistent, dependable, secure supplies of high-purity oxygen. In most industrial applications, the level of oxygen purity required is above 95%. Industrial applications include but are not limited to:

Metallurgy
Modern steelmaking relies heavily on the use of oxygen to enrich air and increase combustion temperatures in furnaces, as well as to replace coke with other combustible materials. Used with fuel gases in gas welding and gas cutting, oxygen must be of high quality to ensure a high cutting speed and a clean cut. Large quantities of oxygen are also used to make other metals, such as copper, lead, and zinc.

Food & Beverage
The concentration of ambient air into oxygen and ozone is key to the environmental and sustainable production in the food & beverage industry, including sanitization of process equipment, food storage, and water bottling. Walker Filtration Alpha Series Oxygen Filters are produced from high quality, non-toxic, naturally inert raw materials and constituents, in accordance with FDA requirements for food contact as per Code of Federal Regulation (CFR), Title 21.

Aquaculture
High purity oxygen is crucial to modern day fish farming. Correctly dosed pure oxygen is essential to livestock yields, growth potential and their overall health.

Glass and Ceramics Production
Oxygen is used instead of air to optimize combustion and elevate flame temperatures in glass melting tanks. This results in better control of heating patterns, lower fuel consumption, and reduction in particulate and NOx emissions.

Semiconductors
Oxygen is used for the oxidation of silicon, one of the most critical processes in all of semiconductor manufacturing.

Pulp & Paper
In the manufacture of high-quality bleached pulp, oxygen is used in the bleaching process. New processes using oxygen, rather than chlorine, reduce water pollution and lowers costs.

Wastewater Treatment
In industrial and municipal wastewater treatment plants, oxygen is injected during the treatment process. Also known as the activated sludge process, pumping oxygen into the wastewater tank encourages the growth of bacteria and speeds up the bio-degradation process which breaks down organic matter.








To discuss your specific application requirements please contact +1 814 836 2900

The Solution

Walker Filtration's Oxygen Filters are cleaned for oxygen service in accordance with ASTM G93/G93M, delivering reliable filtration in line with the purity standards required for your end application.

Walker Filtration's Alpha Oxygen Filters are designed specifically for use in the oxygen generation process. They offer reliable and energy efficient filtration in accordance with the ASTM G93/G93M Standard Guide for Cleanliness Levels and Cleaning Methods for Materials and Equipment Used in Oxygen-Enriched Environments.

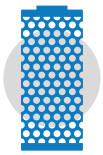
Providing high quality air pre and post oxygen generator, our oxygen filters are available in both Coalescing and Particulate (dust) filtration grades from 5 – 0.01 micron, as well as Medical Sterile.

They combine market leading Alpha filtration technology to ensure energy efficiency and superior filtration performance, with a specialized manufacturing process and strict cleaning methods to guarantee they do not contain or introduce materials that could be combustible when in contact with concentrated oxygen.

With flexible pipe sizes and flow rates to suit specific customer requirements, whatever your oxygen generator setup – we have a filtration solution for you.

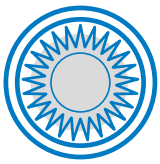
Flow-Optimized Design

- Improved air flow characteristics
- Reduced energy consumption
- Reduced cost of ownership



Increased Performance

- Significantly reduced differential pressure < 1.8 psi (125 mbar)
- Up to 300 psig (20.7 barg) maximum working pressure
- Exceptional oil aerosol and particulate removal



Filtration Technology

- Deep pleated media
- Housing design for flexible installation and simplified serviceability

Alpha Oxygen Range - Features & Benefits

Available in 1/8" to 3" threaded NPT, Rp (BSP Parallel) or Rc (BSP Taper) port sizes, with flow rates of 6 – 1500 scfm (10 – 2550 Nm^3/hr), Walker Filtration Oxygen Filters are suitable for worldwide installation. With a maximum temperature of 248°F (120°C) and a maximum operating pressure of up to 300 psig (20.7 barg).

Tested and validated in accordance with ISO 12500-1 & ISO 8573-1: 2010, Walker Filtration Oxygen filter housings and elements are manufactured using only the highest quality materials that have been specifically chosen to ensure they do not contain or introduce materials that could be combustible when in contact with oxygen gas and deliver the optimum filtration performance.

Product Safety In Mind

Single-start thread and fixed thread engagement stop guarantees safe housing closure and prevents over tightening. Lock indication arrows ensure effective sealing.

Robust Design and EP Corrosion Protection

Featuring a durable and hard wearing electrophoretic coating on both internal and external faces, followed by a tough polyester powder coating, Alpha range filters offer corrosion resistance and have been salt spray tested to ISO 9227:2012.

Simplified Serviceability

Designed with servicing and maintenance in mind, the new profiled bowl design and hexagonal spanner locator coupled with the internal unique push fit element ensures a simple, quick and reliable servicing process.

To discuss your specific application requirements please contact +1 814 836 2900

Modular Filter

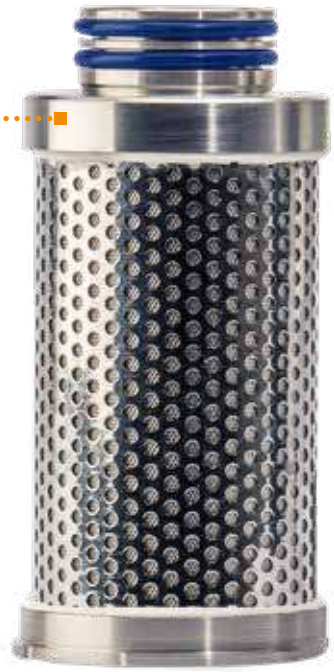
Low cost connecting kits and new filter head design enables easy close coupling assembly and minimizes space requirements.

Market Leading Performance

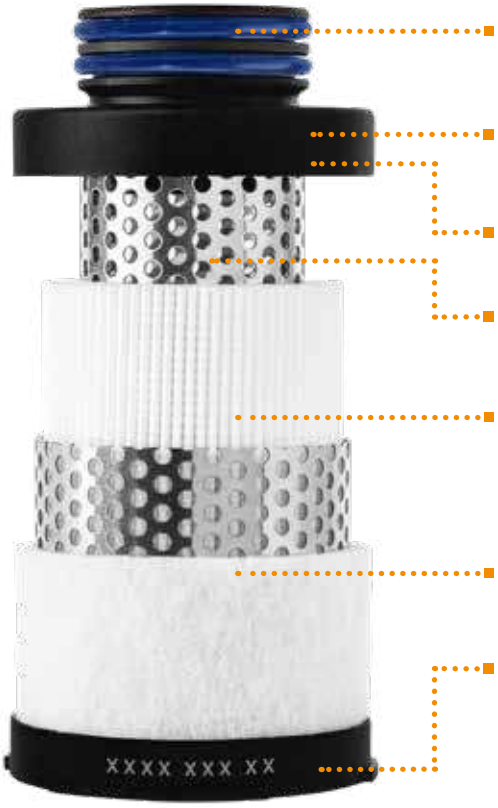
With three coalescing and particulate filtration grades available: 5 micron, 1 micron, and 0.01 micron, Alpha elements are energy efficient and provide class leading performance. An advanced filter design, combined with deep pleated custom engineered filtration media on general purpose and high efficiency grades, and a unique anti re-entrainment layer for exceptional oil coalescence, significantly reduces differential pressure ensuring low total cost of ownership.

Medical Sterile Grade Filtration

Designed to exceed the requirements of HTM 02-01 medical gas pipeline systems, the Walker Filtration Oxygen range also includes Medical Sterile 0.01 micron filters. Manufactured from cast aluminum alloy for enhanced strength and protection, Medical Sterile elements are guaranteed for a minimum of 100 sterilizations at 248ºF (120ºC) - ensuring your oxygen pipeline is free from bacteria and other sub-micron particles.



Features & Benefits



Blue Viton O-rings, for easy identification of Oxygen Filter Elements that are suitable for use in oxygen enriched air flow

Push Fit Walker Filtration Elements ensure perfect sealing within the filter housing and assist with easy removal

Corrosion resistant end caps injection molded from glass filled nylon for added durability

High quality stainless steel cylinders provide corrosion resistance and deliver strength and stability to the element

Custom engineered Hydrophobic & Oleophobic Borosilicate media specifically developed to deliver consistently low pressure drop, pleated element construction for high dirt holding capacity and an increased surface area is used on general purpose and high efficiency filtration grades

Custom outer drainage layer prevents oil carryover and improves coalescence performance

Full traceability and easy identification Laser etched marking enables easy grade and part number identification, branding, and batch code traceability in line with our ISO9001 manufacturing process

Performance Assured

Walker Filtration is known for creating high quality, well-engineered, filtration solutions that offer market leading performance for an international marketplace. Alpha Series filter housings are approved to international standards and are available in a complete range of contaminant removal grades designed to meet the compressed air and gas purity requirements throughout industry.

Filter Housing Design

- 1000 hour neutral salt spray test for corrosion to ISO 9227: 2006
- Burst pressure tested in excess of 1450 psig (100 barg) for a 5:1 safety factor
- Housings are pressure decay tested before despatch. Fine filters are 100% aerosol integrity tested

Element Technology

- **ISO 8573-1: 2010** – Compressed air purity standard
- **ISO 12500 Series** – International standard for compressed air filter testing

Independent Validation

- **Pressure Equipment Directive – 2014/68/EU**
  Lloyd's Register EMEA – Notified Body No. 0038 71 Fenchurch Street, London, EC3M 4BS
- **ISO 9001 Quality Systems – LRQ0930553**
  Lloyd's Register Deutschland GmbH, Überseeallee 10, 20457 Hamburg, Germany - Notified Body No 0525.
- **CRN Approved – CRN0E22360** – For use within Canada

To discuss your specific application requirements please contact +1 814 836 2900

Make It Yours:
Custom Branded Products to Fit Your Portfolio

For over 35 years the Walker Filtration team has specialized in OEM solutions.

We understand the importance of reinforcing and enhancing a customers brand, and ensuring that aftermarket sales are effectively captured.

Branding Solutions

We can customize filters so they seamlessly integrate into your gas generation systems, ensuring brand consistency and helping to capture aftermarket sales.

Every OEM solution developed by our team is unique. We take care of brand management, custom packaging, language support, unique part numbers, logistical details, and are dedicated to reducing the amount of time it takes to get your product to market.

Expert Technical And Transitional Support

Our fully trained sales and technical teams have extensive knowledge and experience in helping our customers launch new products and transition product vendors. They will work with you to create unique part numbers, provide technical and sales training, marketing support, and so much more.

We also offer an extensive aftermarket element portfolio to ensure you can still service any current filtration products you have in the field.

Walker Filtration Product Ranges

Walker Filtration offer a comprehensive range of compressed air filtration and drying products:


Water Separators


Dryers


Medical Vacuum


Duplex Filters


Flanged Filters


Alternative Elements


Medical Sterile

For our full product range and further information please visit: www.walkerfiltration.com or contact your nearest Walker Filtration sales department.

Coalescing and Particulate Filters

Technical Specification

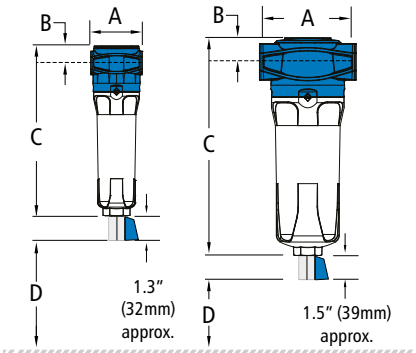
Coalescing and Particulate Filter Model	Pipe size inches	Inlet flow rate*		Dimensions inches (mm)				Weight		Element model
		SCFM	Nm³/hr	A	B	C	D	lbs	Kg	
O20006 (grade)	⅛	5.7	9.5	1.97 (50)	0.67 (17)	6.18 (157)	2.36 (60)	0.6	0.3	EO20306 (grade)
O20015 (grade)	¼	14.3	23.8	1.97 (50)	0.67 (17)	6.18 (157)	2.36 (60)	0.6	0.3	EO20306 (grade)
O20025 (grade)	¼	23.8	39.9	2.76 (70)	0.91 (23)	9.09 (231)	2.76 (70)	1.3	0.6	EO20408 (grade)
O20032 (grade)	⅜	30.4	51.3	2.76 (70)	0.91 (23)	9.09 (231)	2.76 (70)	1.3	0.6	EO20408 (grade)
O20050 (grade)	½	47.5	80.8	2.76 (70)	0.91 (23)	9.09 (231)	2.76 (70)	1.3	0.6	EO20412 (grade)
O20070 (grade)	½	66.5	113.1	5.00 (127)	1.26 (32)	11.22 (285)	3.15 (80)	3.7	1.7	EO20612 (grade)
O20085 (grade)	¾	80.8	136.8	5.00 (127)	1.26 (32)	11.22 (285)	3.15 (80)	3.7	1.7	EO20612 (grade)
O20105 (grade)	1	99.8	169.1	5.00 (127)	1.26 (32)	11.22 (285)	3.15 (80)	3.7	1.7	EO20612 (grade)
O20125 (grade)	¾	118.8	201.4	5.00 (127)	1.26 (32)	14.57 (370)	3.15 (80)	4.4	2.0	EO20621 (grade)
O20175 (grade)	1	166.3	282.2	5.00 (127)	1.26 (32)	14.57 (370)	3.15 (80)	4.4	2.0	EO20621 (grade)
O20280 (grade)	1¼	266.0	452.2	5.51 (140)	1.61 (41)	18.74 (476)	3.35 (85)	6.6	3.0	EO20731 (grade)
O20320 (grade)	1½	304.0	516.8	5.51 (140)	1.61 (41)	18.74 (476)	3.35 (85)	6.6	3.0	EO20731 (grade)
O20400 (grade)	1½	380.0	646.0	6.69 (170)	2.08 (53)	20.00 (508)	3.94 (100)	10.8	4.9	EO20831 (grade)
O20450 (grade)	2	427.5	726.8	6.69 (170)	2.08 (53)	20.00 (508)	3.94 (100)	10.8	4.9	EO20831 (grade)
O20700 (grade)	2	665.0	1129.6	6.69 (170)	2.08 (53)	27.87 (708)	3.94 (100)	12.1	5.5	EO20850 (grade)
O20850 (grade)	2½	807.5	1371.8	8.66 (220)	2.75 (70)	28.97 (736)	3.94 (100)	23.1	10.5	EO21140 (grade)
O20900 (grade)	3	855.0	1452.6	8.66 (220)	2.75 (70)	28.97 (736)	3.94 (100)	23.1	10.5	EO21140 (grade)
O21250 (grade)	3	1187.5	2018.8	8.66 (220)	2.75 (70)	33.74 (857)	3.94 (100)	25.4	11.5	EO21160 (grade)
O21500 (grade)	3	1425.0	2422.5	8.66 (220)	2.75 (70)	39.56 (1005)	3.94 (100)	27.6	12.5	EO21175 (grade)

*Rated flow at 100 psig (7 barg), reference conditions at 14.7 psi(a) (1.014 bar(a)) 68°F (20°C), calculated using 0.95 Gas Density Factor based on 93% oxygen saturation

Grade	X5 / RX5		X1 / RX1		XA / RXA	
Particle removal	5 micron		1 micron		0.01 micron	
Max particle size class**	4		3		1	
Max oil content**	4		3		1	
Max oil carryover at 68°F (20°C)	5ppm	5 mg/m³	0.3 ppm	0.3 mg/m³	0.01ppm	0.01 mg/m³
Pressure loss - clean & dry	0.6 psi	40 mbar	0.8 psi	55 mbar	1.2 psi	85 mbar
Pressure loss - saturated	1.1 psi	75 mbar	1.8 psi	125 mbar	1.8 psi	125 mbar
Pressure loss - element change	12 mths	8000 hrs	12 mths	8000 hrs	12 mths	8000 hrs
Max temperature	248°F	120°C	248°F	120°C	248°F	120°C
Max working pressure	300 psig	20.7 barg	300 psig	20.7 barg	300 psig	20.7 barg
Max autoclave temperature	N/A	N/A	N/A	N/A	N/A	N/A
Element end cap color	Black					

**to ISO 8573-1: 2010

Pressure correction factors	for maximum flow rate, multiply model flow rate by the correction factor corresponding to the minimum operating pressure									
Operating pressure psig (barg)	58 (4)	72 (5)	87 (6)	100 (7)	115 (8)	145 (10)	174 (12)	203 (14)	232 (16)	300 (20.7)
100 psig - correction factor	0.76	0.84	0.92	1.00	1.07	1.19	1.31	1.41	1.51	1.73



O20006 to O20050 | O20070 to O21500

Technical Notes

1. Direction of flow is inside to out through the filter element for coalescing grades (X5, X1and XA), and outside to in for particulate grades (RX5, RX1 and RXA)
2. All Oxygen Filters are fitted as standard with Manual Drain Valves, VMDV25 on models O20006 to O20050, VMDVE25B on models O20070 to O20700, and VMDVE25M on models O20850 to O21500. Standard filters can operate at 300 psig (20.7 barg) range at 248°F (120°C).
3. Alpha Oxygen Filters are manufactured from cast aluminum alloy and are PED 2014/68/EU compliant for group 1 and group 2 gases.
4. Threaded connections are NPT to ANSI/ASME B1.20 as standard. RP (BSP Parallel) to ISO 7-1 and RC (BSP Taper) to ISO 7-1 are also available up on request
5. Filters are suitable for use with mineral and synthetic oils plus oil-free compressed air applications.
6. Filter elements should be changed every 12 months / 8000 hours (whichever comes first).
7. Walker Filtration genuine spare and aftermarket parts must be used, failure to do so will void product warranty. Walker Filtration shall not be held liable for damages suffered by the customer if Walker Filtration genuine oxygen rated spare and aftermarket parts are not used.
8. All Walker Filtration Alpha Oxygen Filters are produced from high quality, non-toxic, naturally inert raw materials and constituents, in accordance with FDA requirements for food contact as per Code of Federal Regulation (CFR), Title 21.
9. Other filtration grades are available. Please contact sales for specific requests.

To discuss your specific application requirements please contact +1 814 836 2900

Medical Sterile Filters

Technical Specification

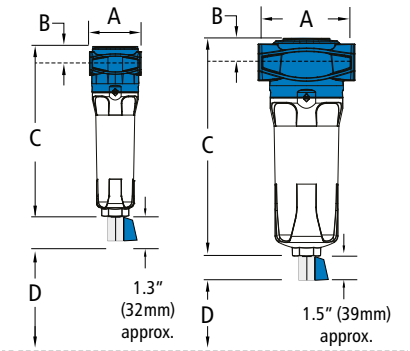
Coalescing and Particulate Filter Model	Pipe size inches	Inlet flow rate*		Dimensions inches (mm)				Weight		Element model
		SCFM	Nm³/hr	A	B	C	D	lbs	Kg	
O20006MS	1/8	5.7	9.5	1.97 (50)	0.67 (17)	6.18 (157)	2.36 (60)	0.6	0.3	EO20306SR
O20015MS	1/4	14.3	23.8	1.97 (50)	0.67 (17)	6.18 (157)	2.36 (60)	0.6	0.3	EO20306SR
O20025MS	1/4	23.8	39.9	2.76 (70)	0.91 (23)	9.09 (231)	2.76 (70)	1.3	0.6	EO20408SR
O20032MS	3/8	30.4	51.3	2.76 (70)	0.91 (23)	9.09 (231)	2.76 (70)	1.3	0.6	EO20408SR
O20050MS	1/2	47.5	80.8	2.76 (70)	0.91 (23)	9.09 (231)	2.76 (70)	1.3	0.6	EO20412SR
O20070MS	1/2	66.5	113.1	5.00 (127)	1.26 (32)	11.22 (285)	3.15 (80)	3.7	1.7	EO20612SR
O20085MS	3/4	80.8	136.8	5.00 (127)	1.26 (32)	11.22 (285)	3.15 (80)	3.7	1.7	EO20612SR
O20105MS	1	99.8	169.1	5.00 (127)	1.26 (32)	11.22 (285)	3.15 (80)	3.7	1.7	EO20612SR
O20125MS	3/4	118.8	201.4	5.00 (127)	1.26 (32)	14.57 (370)	3.15 (80)	4.4	2.0	EO20621SR
O20175MS	1	166.3	282.2	5.00 (127)	1.26 (32)	14.57 (370)	3.15 (80)	4.4	2.0	EO20621SR
O20280MS	1 1/4	266.0	452.2	5.51 (140)	1.61 (41)	18.74 (476)	3.35 (85)	6.6	3.0	EO20731SR
O20320MS	1 1/2	304.0	516.8	5.51 (140)	1.61 (41)	18.74 (476)	3.35 (85)	6.6	3.0	EO20731SR
O20400MS	1 1/2	380.0	646.0	6.69 (170)	2.08 (53)	20.00 (508)	3.94 (100)	10.8	4.9	EO20831SR
O20450MS	2	427.5	726.8	6.69 (170)	2.08 (53)	20.00 (508)	3.94 (100)	10.8	4.9	EO20831SR
O20700MS	2	665.0	1129.6	6.69 (170)	2.08 (53)	27.87 (708)	3.94 (100)	12.1	5.5	EO20850SR
O20850MS	2 1/2	807.5	1371.8	8.66 (220)	2.75 (70)	28.97 (736)	3.94 (100)	23.1	10.5	EO21140SR
O20900MS	3	855.0	1452.6	8.66 (220)	2.75 (70)	28.97 (736)	3.94 (100)	23.1	10.5	EO21140SR
O21250MS	3	1187.5	2018.8	8.66 (220)	2.75 (70)	33.74 (857)	3.94 (100)	25.4	11.5	EO21160SR
O21500MS	3	1425.0	2422.5	8.66 (220)	2.75 (70)	39.56 (1005)	3.94 (100)	27.6	12.5	EO21175SR

*Rated flow at 100 psig (7 barg), reference conditions at 14.7 psi(a) (1.014 bar(a)) 68°F (20°C), calculated using 0.95 Gas Density Factor based on 93% oxygen saturation

Grade	SR	
DOP efficiency**	>99.9999%	
Particle removal	0.01 micron	
Maximum operating temperature	248°F	120°C
Recommended operating temperature	122°F	50°C
Maximum autoclave temperature	273°F	134°C
Pressure Loss - clean & dry	1.5 psi	100 mbar
Maximum working pressure	300 psig	20.7 barg
Element end cap material	Stainless steel	

**As specified in HTM 02-01 medical gas pipeline systems

Pressure correction factors	for maximum flow rate, multiply model flow rate by the correction factor corresponding to the minimum operating pressure									
Operating pressure psig (barg)	58 (4)	72 (5)	87 (6)	100 (7)	115 (8)	145 (10)	174 (12)	203 (14)	232 (16)	300 (20.7)
100 psig - correction factor	0.76	0.84	0.92	1.00	1.07	1.19	1.31	1.41	1.51	1.73



O20015MS to O20050MS

O20070MS to O21500MS

Technical Notes

1. Direction of air flow is inside to out through the filter element. Filter element end caps are stainless steel.
2. All Oxygen Filters are fitted as standard with Manual Drain Valves, VMDV25 on models O20006 to O20050, VMDVE25B on models O20070 to O20700, and VMDVE25M on models O20850 to O21500. Standard filters can operate at 20.7 barg (300 psig) range at 120°C (248°F).
3. Alpha Oxygen Filters are manufactured from cast aluminum alloy and are PED 2014/68/EU compliant for group 1 and group 2 gases.
4. Threaded connections are NPT to ANSI/ASME B1.20.1. as standard. RP (BSP Parallel) to ISO 7-1 and RC (BSP Taper) to ISO 7-1 are also available upon request.
5. Pre-filtration should be used in conjunction with 0.01 micron sterile filters.
6. Medical Sterile Filter elements must not operate in water or oil saturated conditions and should be changed at least every 6 months.
7. Maximum steam sterilizing autoclave temperature refers to the filter element ONLY. Oxygen grade SR filter elements can be steam sterilized 100 times. Each element must be autoclaved before commencement of duty.
8. Each element is supplied with an Air Sterilization Certificate to guarantee the highest quality to our customers.
9. Oxygen SR grade filters are suitable for use in dry air conditions only, as any liquids passings through the filter could carry bacteria and compromise sterility.
10. Walker Filtration genuine spare and aftermarket parts must be used, failure to do so will void product warranty. Walker Filtration shall not be held liable for damages suffered by the customer if Walker Filtration genuine oxygen rated spare and aftermarket parts are not used.
11. All Walker Filtration Alpha Oxygen Filters are produced from high quality, non-toxic, naturally inert raw materials and constituents, in accordance with FDA requirements for food contact as per Code of Federal Regulation (CFR), Title 21.

WALKER FILTRATION

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THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2016

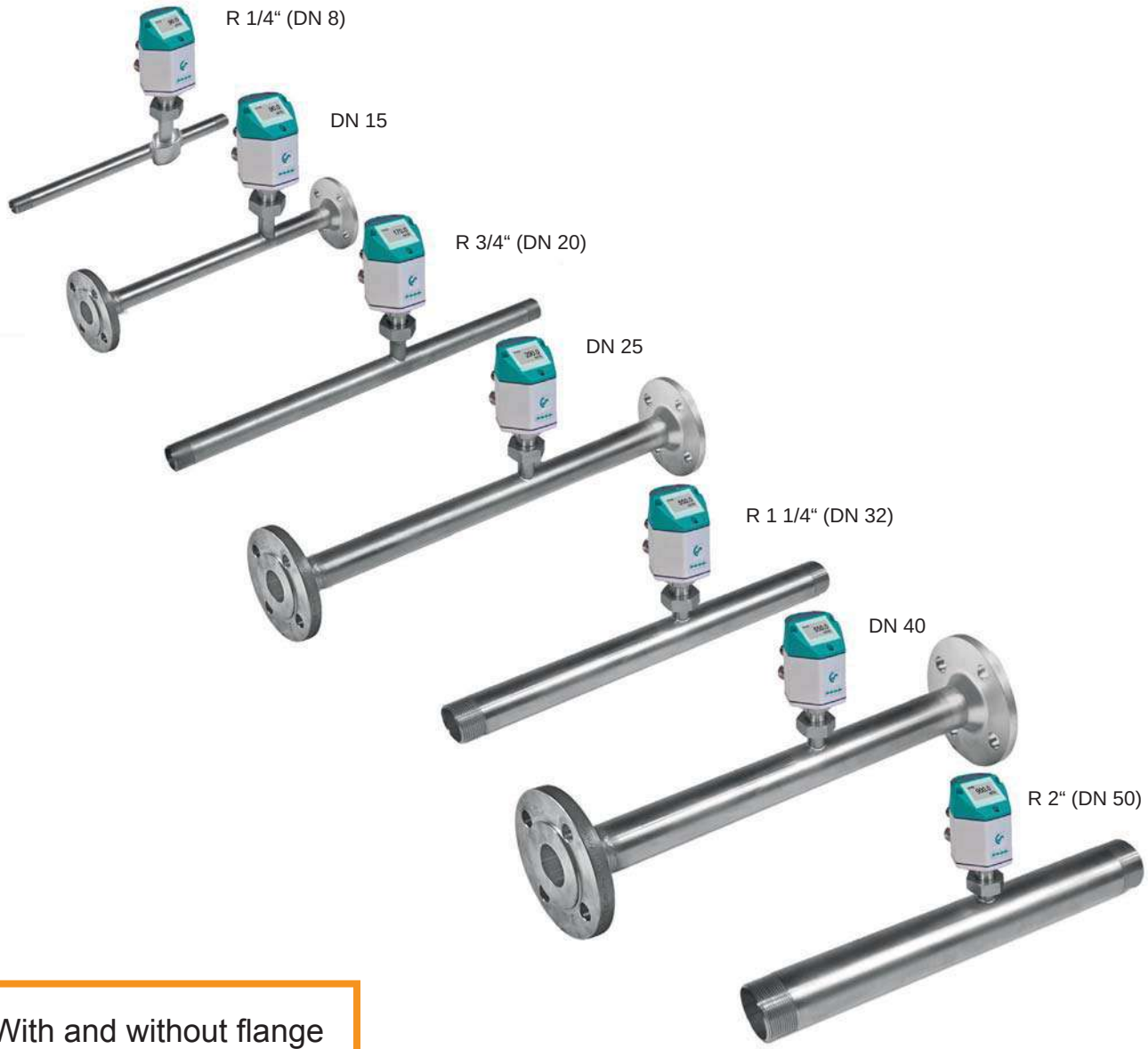
bcas BRITISH COMPRESSED AIR SOCIETY LIMITED

MEMBER OF CAGI Compressed Air & Gas Institute

CERTIFIED ISO 9001 UKAS 001

WFI1085 Rev-B-US 1121

VA 420
The affordable flow meter for compressed air and gases



With and without flange

Intelligent solutions for accurate flow measurement for compressed air and gases

The new affordable flow meters VA 420 work according to the approved calorimetric measuring principle. In this process a heated sensor is cooled down by the gas circulating around it. The flow dependent cooling-down is used as a measuring effect while the degree of cooling-down is directly depending on the passing air resp. gas mass. Therefore, an additional pressure and temperature compensation is not necessary.

Due to its compact design it is possible to monitor all compressed air systems from the compressor to the smallest compressed air tool (1/4“ to 2 inch) with the affordable flow meter VA 420. VA 400 flow sensors are available for larger pipe diameters from DN 50 to DN 300. Apart from compressed air also other gases like e.g. nitrogen, oxygen and CO2 can be measured.

The installation of the compressed air flow meter VA 420 can be done easily and quickly. A special advantage is the removable measuring device. The measuring device can be demounted quickly and easily for calibration or cleaning purposes without removing the complete measuring section.

Removal of the measuring device without complete dismounting of the measuring section

In most cases the compressed air in not free from oil, condensate, dirt and particles. In the course of time this leads to a soiling of the flow meters which may cause errors in measurement or even a total breakdown. The flow meters which have been on the market up to now generally cannot be cleaned and will be exchanged if they are soiled. In case of compressed air meters with integrated measuring section the „measuring device“ cannot be removed. For this reason an expensive bypass line is necessary.
The design of **VA 420** enables the removal and cleaning of the „measuring device“ with e.g. soap water without any dismounting of the measuring section. A closing cap grants a continuous use of the line for the duration of the cleaning. A bypass line is not necessary. The alignment pin grants an accurate installation of the measuring device.

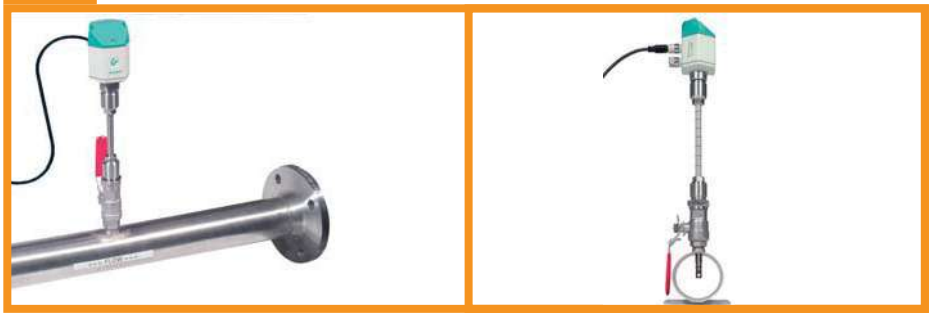
2 Stationary use

For stationary use there are the following outputs available for the data transfer to a building management system or PLC:
4...20 mA for actual flow.
Pulse output (galvanically separated) for the total consumption.

3 Mobile use

By means of quick couplings the flow meter can be integrated quickly into the feed hose of a machine. During the shutdown of the machine it is possible to determine the leak rate, the actual flow can be obtained when the machine is running. The power supply is effected via the power socket by means of the mains unit. For data recording over a longer period of time we recommend to use the compressed air analyzer DS 400 mobile

4 Solution for large pipe diameters



The approved flow sensor VA 400 is available for pipe diameters of 2“ to DN 300. Its constructively sophisticated design enables the installation into pipes with nominal diameters up to DN 300 even under pressure. The installation is effected by means of standard 1/2“ ball valve.

VA 420 - The advantages at a glance

Display twistable by 180 °

4...20 mA output for actual flow

Pulse output for total flow (counter reading)

Display shows 2 values:
Actual flow in m³/h, l/min,...
Total consumption (counter reading) in m³, l

Values indicated in the display turnable by 180 °, e.g. in case of overhead installation

Measuring device removable:
Dismounting of the whole measuring section is not necessary, no bypass required

Screw-in thread:
Easy installation into the existing pipeline due to integrated measuring section (suitable for 1/4“, 1/2“, 3/4“, 1“, 1 1/4“, 1 1/2“ or 2“ lines)

High measuring accuracy due to defined measuring section (inlet and outlet section)

At the touch of a button:

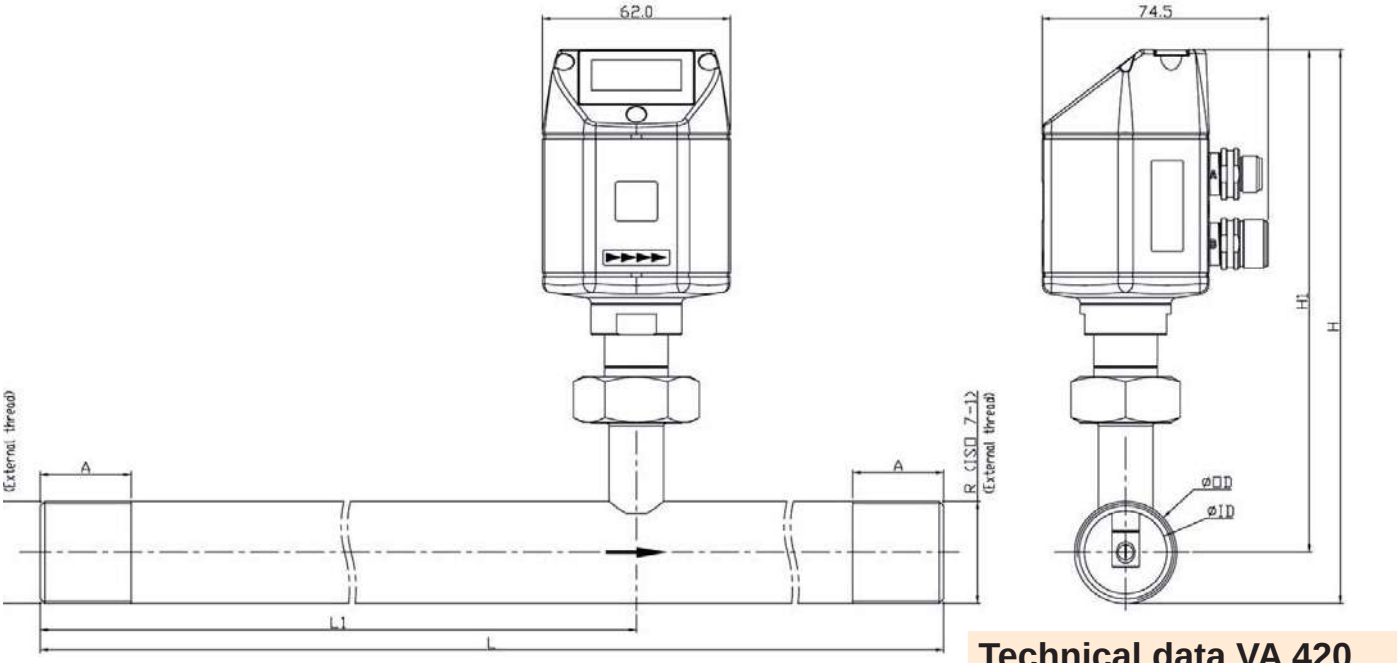
- reset of counter reading
- selection of units

Application-technological features of the flow meters VA 420:

- Easy and affordable installation
- Units freely selectable via keypad m³/h, m³/min, l/min, l/s, kg/h, kg/min, kg/s, cfm
- Compressed air counter up to 1,999,999,999 m³, Resetable to „zero“ via keypad
- Analogue output 4...20 mA, pulse output (galvanically separated)
- High measuring accuracy also in the lower measuring range (ideal for leakage measurement)
- Negligibly small loss of pressure
- Calorimetric measuring principle, no additional pressure and temperature measurement necessary, no mechanically moved parts
- Gas types adjustable via software (nitrogen, oxygen, CO2, nitrous oxide, argon)

Application range of VA 420:

- Compressed air balancing, compressed air consumption measurement
- Leckage air / leak rate determination
- Mobile compressed air measurement in front of single machines / plants
- Flow measurement of process gases like e.g. nitrogen, CO2, oxygen, argon, nitrous oxide
- Flow measurement at nitrogen generators



Flow measuring ranges VA 420 for compressed air (ISO 1217:1000 mbar, 20 °C)

Connection thread	Outer pipe dia. mm	Inner pipe dia. mm	Measuring range from	to	L mm	L1 mm	H mm	H1 mm	A mm
R 1/4“	13.7	8.9	0.8	90 l/min	194	137	174.7	165.7	15
R 1/2“	21.3	16.1	0.2	90 m³/h	300	210	176.4	165.7	20
R 3/4“	26.9	21.7	0.3	170 m³/h	475	275	179.2	165.7	20
R 1“	33.7	27.3	0.5	290 m³/h	475	275	182.6	165.7	25
R 1 1/4“	42.4	36.0	0.7	480 m³/h	475	275	186.9	165.7	25
R 1 1/2“	48.3	41.9	1.0	550 m³/h	475*	275	186.9	165.7	25
R 2“	60.3	53.1	2.0	900 m³/h	475*	275	195.9	165.7	30

*Attention: Shortened inlet section! Please observe the recommended minimum inlet section (length = 10 x inner diameter) on site

Description	Order No. Stainless steel 1.4404	Order No. Stainless steel 1.4301
VA 420 flow meter with integrated 1/4“ measuring section	0695 1420	0695 0420
VA 420 flow meter with integrated 1/2“ measuring section	0695 1421	0695 0421
VA 420 flow meter with integrated 3/4“ measuring section	0695 1422	0695 0422
VA 420 flow meter with integrated 1“ measuring section	0695 1423	0695 0423
VA 420 flow meter with integrated 1 1/4“ measuring section	0695 1426	0695 0426
VA 420 flow meter with integrated 1 1/2“ measuring section	0695 1424	0695 0424
VA 420 flow meter with integrated 2“ measuring section	0695 1425	0695 0425
Option High-pressure version PN 40		Z695 0411
Special measuring range VA 420 according to customer`s requirements		Z695 4006
Connection cables:		
Connection cable 5 m (power supply, analogue output)		0553 0104
Connection cable 10 m (power supply, analogue output)		0553 0105
Pulse cable for flow sensors with M12 plug, length 5 m		0553 0106
Pulse cable for flow sensors with M12 plug, length 10 m		0553 0107
Further accessories:		
Closing cap for meas. section VA 420 (Material: Aluminium)		0190 0001
Closing cap for meas. section VA 420 (Material: Stainless steel 1.4404)		0190 0002
CS Service Software for FA/VA 400 sensors incl. PC connection set, USB interface and interface adapter to the sensor		0554 2005
Mains unit in wall housing 100-240 V, 10 VA, 50-60 Hz/24 VDC, 0.35 A		0554 0108
Mains unit 100-240 VAC / 24 VDC, 0.35 A for VA/FA 400 Series, 2 m cable		0554 0107
5 point precision calibration with ISO certificate		3200 0001

Technical data VA 420

Parameters:	m³/h, l/min (1000 mbar, 20°C) in case of compressed air resp. Nm³/h, Nl/min (1013 mbar, 0°C) in case of gases
Adjustable via keypad:	m³/h, m³/min, l/min, l/s, ft/min, cfm, m/s, kg/h, kg/min
Meas. principle:	calorimetric measurement
Sensor:	2 x silicium chip
Meas. medium:	air, gases
Gas types adjustable via software:	air, nitrogen, argon, nitrous oxide, CO2, oxygen
Meas. range:	see table at the left
Accuracy:	± 1.5% of m.v., ± 0.05% of f.s. On request: Special calibration via 5 point ISO calibration certificate
Operating temp.:	-30...80 °C
Operating press.:	up to 16 bar Optional up to PN 40
Analogue output:	4...20 mA for m³/h resp. l/min
Pulse output:	1 pulse per m³ resp. per liter galvanically separated
PC connection:	SDI interface
Power supply:	24 VDC smoothed ± 15 %
Burden:	< 500 Ω
Housing:	polycarbonate
Meas. section:	stainless steel, 1.4301 or 1.4404
Mounting thread meas. section:	R 1/4“, R 1/2“, R 3/4“, R 1“, R 1 1/4“, R 1 1/2“, R 2“ external thread

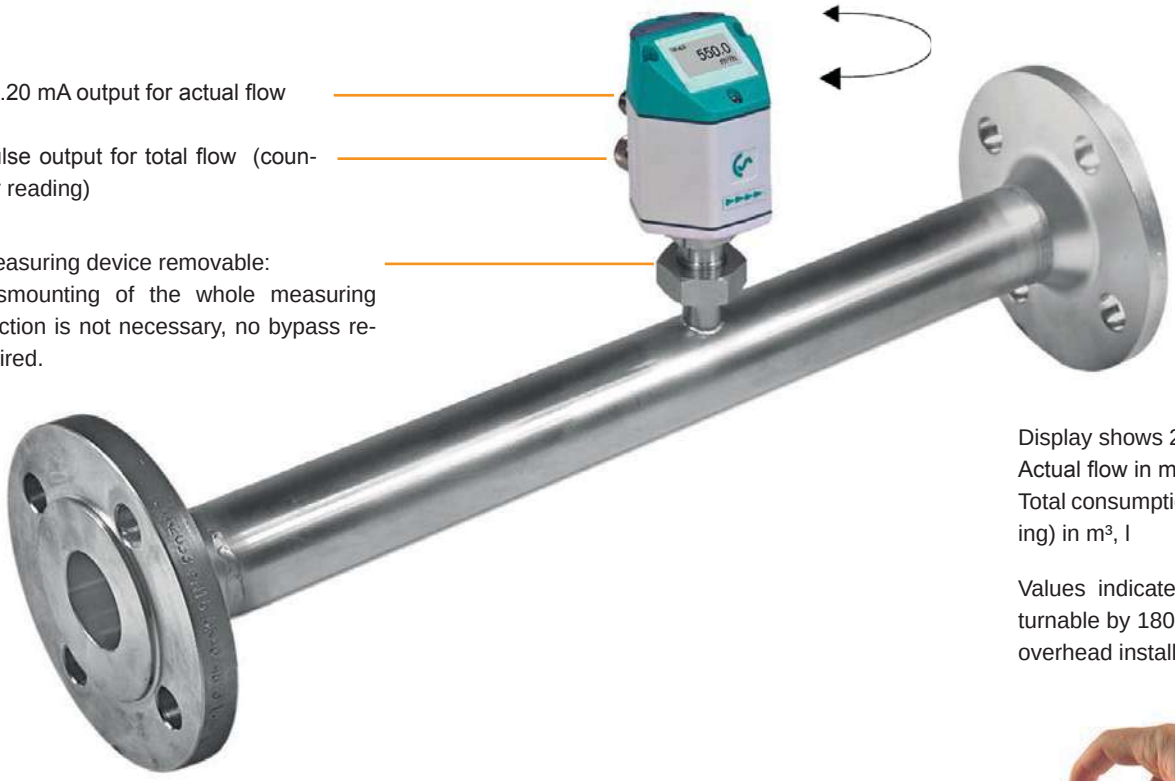
VA 420 - The advantages at a glance

Display twistable by 180°

4...20 mA output for actual flow

Pulse output for total flow (counter reading)

Measuring device removable: Dismounting of the whole measuring section is not necessary, no bypass required.



Display shows 2 values:
Actual flow in m³/h, l/min,...
Total consumption (counter reading) in m³, l

Values indicated in the display turnable by 180 °, e.g. in case of overhead installation

At the touch of a button:

- reset of counter reading
- selection of units

Easy installation into the existing pipeline due to integrated measuring section and weld neck flange
(according to EN 1092-1 PN 40)

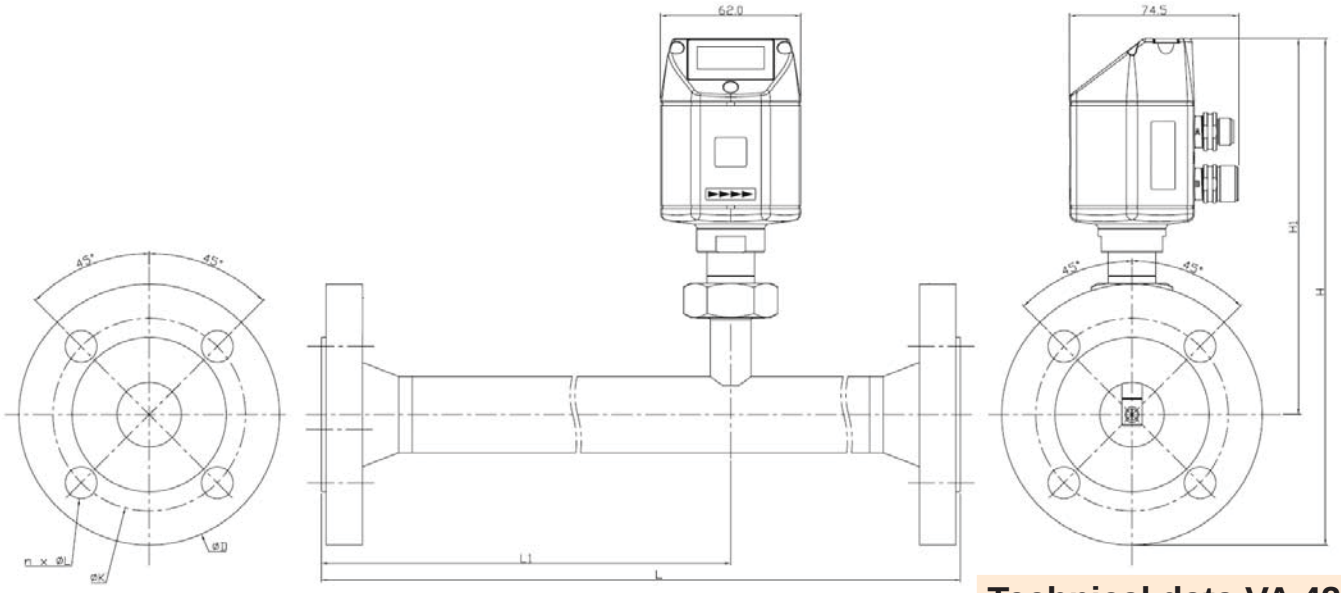
High measuring accuracy due to defined measuring section (inlet and outlet section)

Application-technological features of the flow meters VA 420:

- Easy and affordable installation
- Units freely selectable via keypad m³/h, m³/min, l/min, l/s, kg/h, kg/min, kg/s, cfm
- Compressed air counter up to 1,999,999,999 m³, Resettable to „zero“ via keypad
- Analogue output 4...20 mA, pulse output (galvanically separated)
- High measuring accuracy also in the lower measuring range (ideal for leakage measurement)
- Negligibly small loss of pressure
- Calorimetric measuring principle, no additional pressure and temperature measurement necessary, no mechanically moved parts
- Gas types adjustable via software (nitrogen, oxygen, CO2, nitrous oxide, argon)

Application range of VA 420:

- Compressed air balancing, compressed air consumption measurement
- Leckage air / leak rate determination
- Flow measurement of process gases like e.g. nitrogen, CO2, oxygen, argon, nitrous oxide
- Flow measurement at nitrogen generators

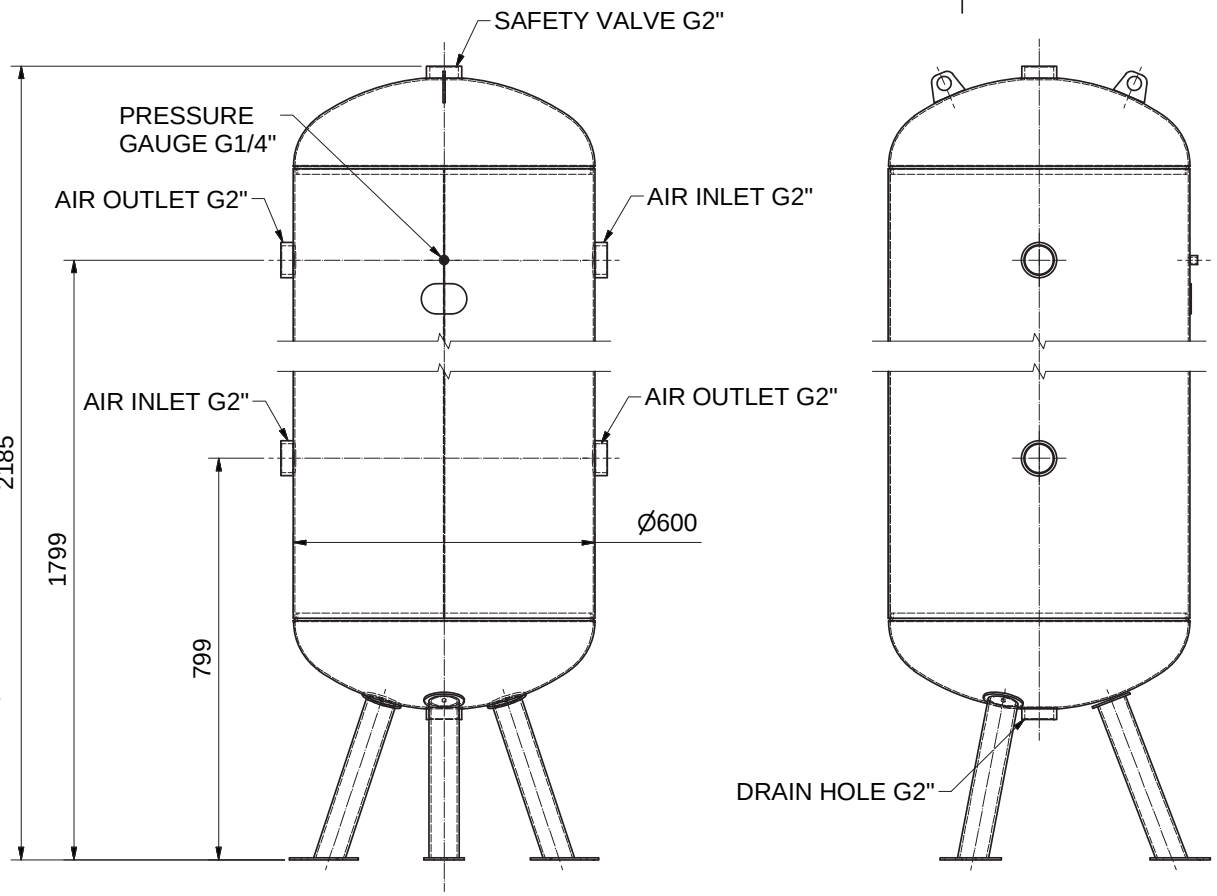


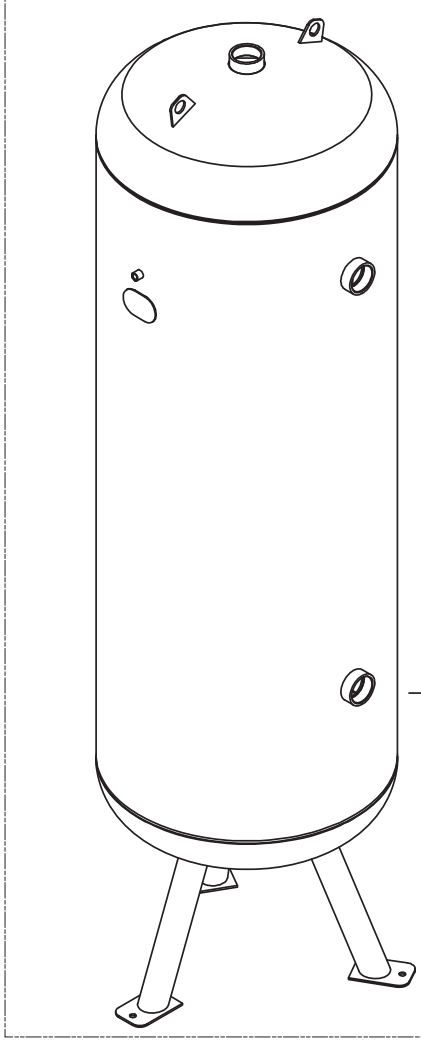
Flow measuring ranges VA 420 for compressed air (ISO 1217:1000 mbar, 20 °C)									Flange DIN EN 1092-1		
Measu-ring section	Outer pipe dia. mm	Inner pipe dia. mm	Measuring range from	to	L mm	L1 mm	H mm	H1 mm	ØD	ØK	n x ØL
DN 15	21.3	16.1	0.2	90 m³/h	300	210	213.2	165.7	95	65	4 x 14
DN 20	26.9	21.7	0.3	170 m³/h	475	275	218.2	165.7	105	75	4 x 14
DN 25	33.7	27.3	0.5	290 m³/h	475	275	223.2	165.7	115	85	4 x 14
DN 32	42.4	36.0	0.7	480 m³/h	475	275	235.7	165.7	140	100	4 x 18
DN 40	48.3	41.9	1.0	550 m³/h	475*	275	240.7	165.7	150	110	4 x 18
DN 50	60.3	53.1	2.0	900 m³/h	475*	275	248.2	165.7	165	125	4 x 18
*Attention: Shortened inlet section! Please observe the recommended minimum inlet section (length=10xinner diameter) on site											

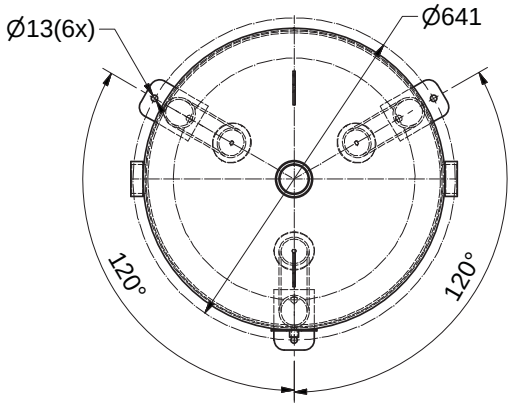
Description	Order No.
VA 420 flow meter with integrated DN 15 measuring section with weld neck flange	0695 2421
VA 420 flow meter with integrated DN 20 measuring section with weld neck flange	0695 2422
VA 420 flow meter with integrated DN 25 measuring section with weld neck flange	0695 2423
VA 420 flow meter with integrated DN 32 measuring section with weld neck flange	0695 2426
VA 420 flow meter with integrated DN 40 measuring section with weld neck flange	0695 2424
VA 420 flow meter with integrated DN 50 measuring section with weld neck flange	0695 2425
Option High-pressure version PN 40	Z695 0411
Special measuring range VA 420 according to customer`s requirements	Z695 4006
Connection cables:	
Connection cable 5 m (power supply, analogue output)	0553 0104
Connection cable 10 m (power supply, analogue output)	0553 0105
Pulse cable for flow sensors with M12 plug, length 5 m	0553 0106
Pulse cable for flow sensors with M12 plug, length 10 m	0553 0107
Further accessories:	
Closing cap for meas. section VA 420 (Material: Aluminium)	0190 0001
Closing cap for meas. section VA 420 (Material: Stainless steel 1.4404)	0190 0002
CS Service Software for FA/VA 400 sensors incl. PC connection set, USB interface and interface adapter to the sensor	0554 2005
Mains unit in wall housing 100-240 V, 10 VA, 50-60 Hz/24 VDC, 0.35 A	0554 0108
Mains unit 100-240 VAC / 24 VDC, 0.35 A for VA/FA 400 Series, 2 m cable	0554 0107
5 point precision calibration with ISO certificate	3200 0001

Technical data VA 420

Parameters:	m³/h, l/min (1000 mbar, 20°C) in case of compressed air resp. Nm³/h, Nl/min (1013 mbar, 0°C) in case of gases
Adjustable via keypad:	m³/h, m³/min, l/min, l/s, ft/min, cfm, m/s, kg/h, kg/min
Meas. principle:	calorimetric measu-rement
Sensor:	2 x silicium chip
Meas. medium:	air, gases
Gas types adjustable via software:	air, nitrogen, argon, nitrous oxide, CO2, oxygen
Meas. range:	see table at the left
Accuracy:	± 1.5% of m.v., ± 0.05% of f.s. On request: Special calib-ration via 5 point ISO calibration certificate
Operating temp.:	-30...80 °C
Operating press.:	up to 16 bar Optional up to PN 40
Analogue output:	4...20 mA for m³/h resp. l/min
Pulse output:	1 pulse per m³ resp. per liter galvanically separated
PC connection:	SDI interface
Power supply:	24 VDC smoothed ± 15 %
Burden:	< 500 Ω
Housing:	polycarbonate
Meas. section:	stainless steel, 1.4301 or 1.4404
Flanges:	Weld neck flange according to DIN EN 1092-1, Groove-faced and tongue-faced on request







Type Name	Product Nr	Pressure	Vessel Set
LV511	8101 0180 60	11 bar	8101 0188 47
LV516	8101 0181 51	16 bar	8101 0188 62

Tolerances, if not indicated, according to:

ATLAS COPCO STANDARD CLASS

Name: PRESSURE VESSEL DIMENSION DRWG — LV500

Material: Not Applicable

Treatment: Not Applicable

Confidentiality Class acc. to 1102 K: Confidential

INV

Atlas Copco

Scale 1 : 10 | Family | Compare | Drawing owner: API

Drawn by INEjim | Blank nr. | Replaces

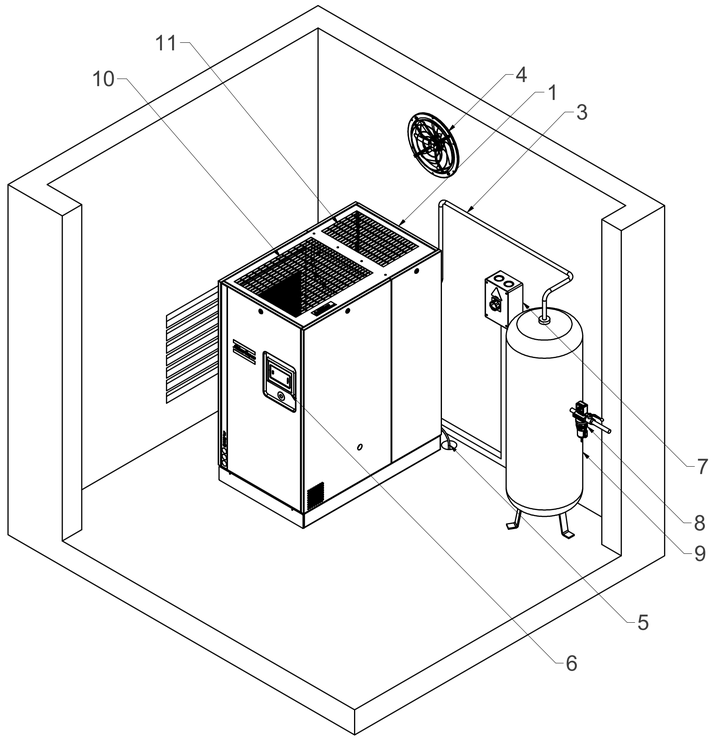
Drawing format A3 | Blank wt Kg | Fini wt. N/A | Designation | Sheet 1 / 1

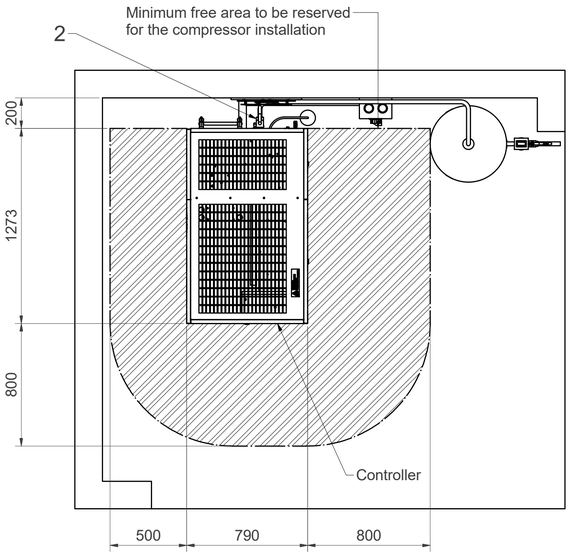
STATUS: Approved

Des checked. | Prod checked. | Approved. | Date 19/11/2015

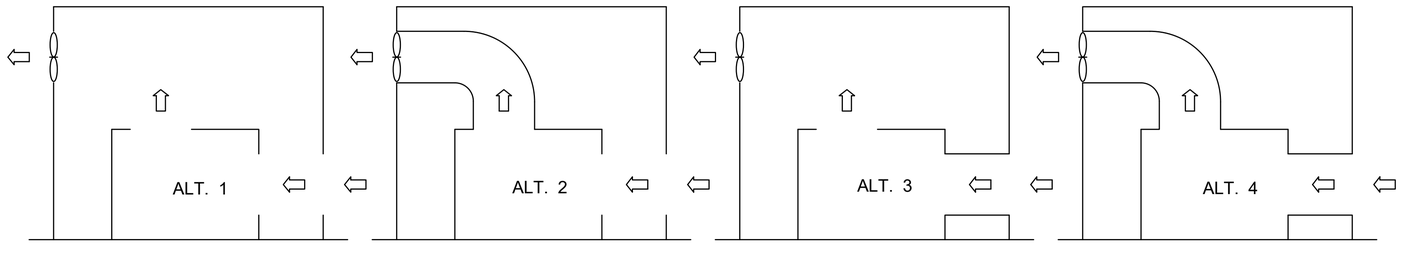
9820920002

Ed	Position	Modified from	Date	Intr./Appd.	Parent 3D model	Edition 3D
00			25/03/2016		1629007611	-





VENTILATION PROPOSALS



MAIN COMPONENTS

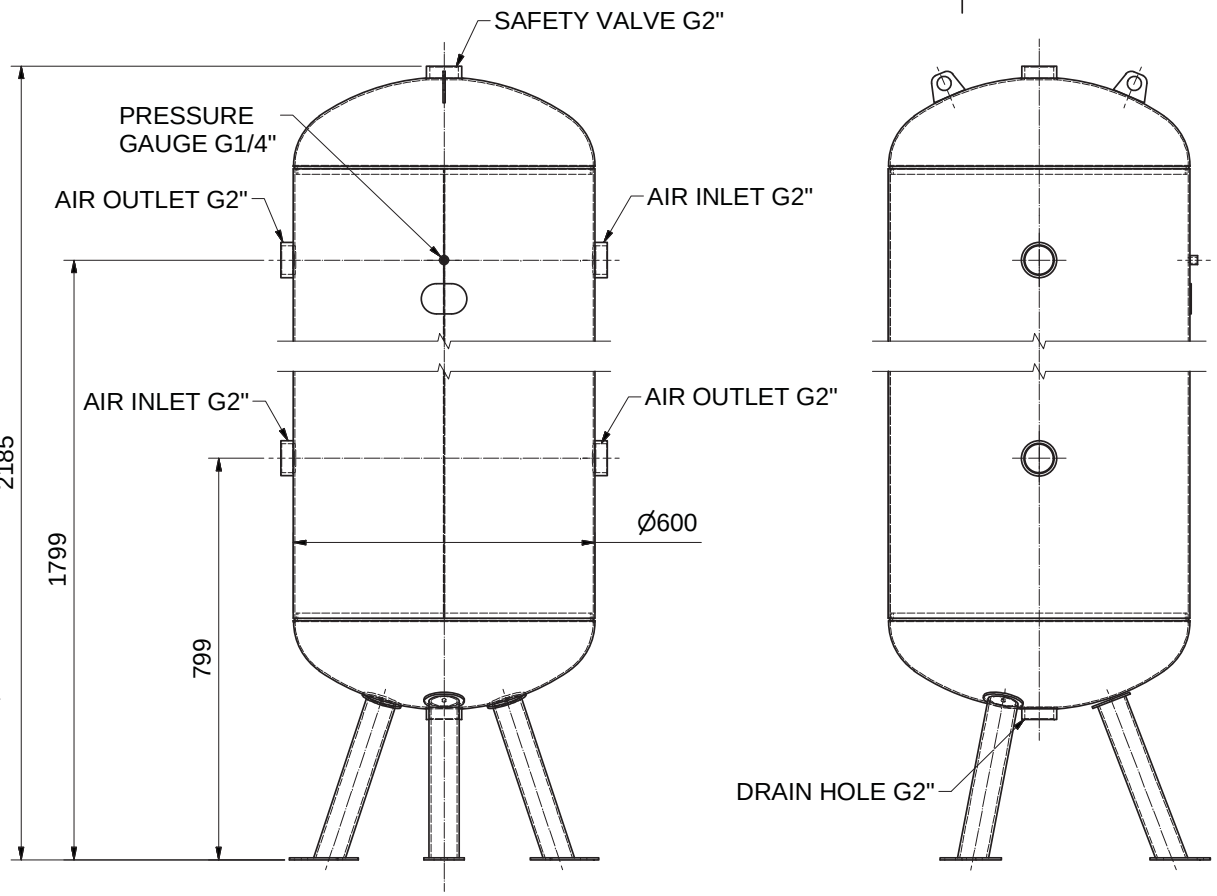
1. Compressor unit : The unit should be installed on a level floor capable of taking the weight of the compressor.
2. Compressed air outlet valve.
3. Delivery pipe :
   The max . total pipe length can be calculated from $L = \frac{\Delta P \times d^5 \times P}{450 \times Qc^{1.85}}$
   L = Length of the pipe (m)
   ΔP = Max. allowable pressure drop (recommended 0.1 bar = 1.5psi)
   d = Inner diameter of the pipe (mm)
   P = Absolute pressure at compressor outlet (bar)
   Qc = Free air delivery of the compressor (l/s)
4. Ventilation :
   The inlet grid(s) and ventilation fan should be installed in such a way that any recirculation of cooling air to the inlet grating of the compressor/ dryer is avoided. The air velocity to the grid(s) has to be limited to 5m/s (16.5 ft/s). The maximum air temperature at compressor intake opening is 46 °C (115°F), min 0 °C (32°F).
   Alternative 1 and 3 :
   The required ventilation to limit compressor room temperature can be calculated from :
   Qv = 1.29 N / ΔT (for FF unit)
   Qv = 1.24 N / ΔT (for Pack unit)
   Qv = Required cooling air flow (m³/s)
   N = Nominal motor power (kW)
   ΔT = Temperature increase in the compressor room. (°C)
   Alternative 2 and 4 :
   The cooling air ducting of the AIR/OIL coolers ("10") should be separated from the cooling air ducting of the dryer ("11") .
   The required cooling air flow for the AIR/OIL cooler can be calculated from:
   Qv = 1.24 N / ΔT
   The required cooling air flow for the dryer can be calculated from:
   Qv = 0.05 N / ΔT
   The max. pressuredrop over additional AIR/OIL coolers ("10") ducting should be limited to 10 Pa for standard fans.
5. Drain pipes to drain collector must not dip into the water. For draining of pure condensate water, install an oil / water seperator. Consult Atlas Copco.
6. Control cubicle with monitoring panel.
7. Power supply cable to be sized and installed by a qualified electrician. In case of IT network, consult Atlas Copco.
   To preserve the protection degree of the electric cubicle and to protect its components from dust from the environment, it is absolutely necessary to use a proper cable gland when connecting the supply cable to the compressor.
8. Filter type DD for general purpose filtration (particle removal down to 1 micron with a maximum oil carry over of 0.5 ppm).
   A high efficiency PD filter may be installed downstream the DD filter (particle removal down to 0.01 micron and max. oil carry over of 0.01ppm)
   Should oil vapours and odours be undesirable, a QD active carbon filter should be installed after the PD filter.
   It is recommended to install by-pass pipes over each filter together with ball valves in order to isolate the filters during service operations, without interrupting the compressed air delivery.
9. Air receiver: A safety valve need to be foreseen on the air receiver.
10. Cooling air outlet grating of AIR/OIL coolers.
11. Cooling air outlet grating of dryer.

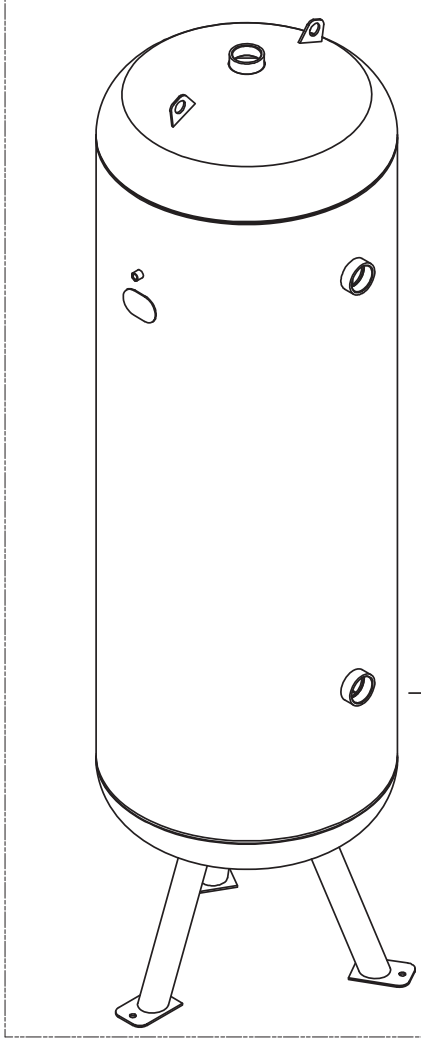
Notes :
- All pipes should be installed STRESS FREE to the compressor unit.
- For more information concerning air nets, cooling systems, etc refer to the compressor installation manual.
- For dimensions and air flow directions refer to the AIB dimension drawings.

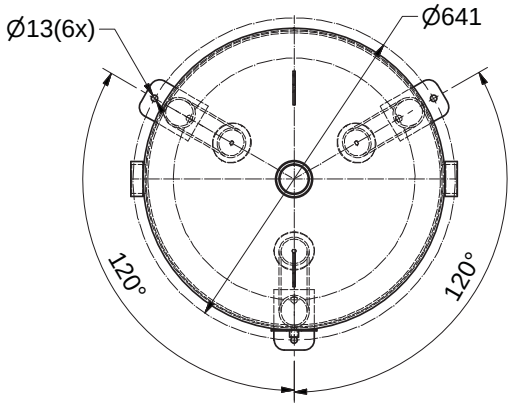
Ed	Position	Modified from	Date	Intr./Appd.
00				

Tolerances, if not indicated, according to:					
ATLAS COPCO STANDARD CLASS					
Name	DIMENS. INSTALL.		GA11+-30 (2018)	Confidentiality Class acc. to 1102 K	
Material	Not Applicable			Confidential	
Treatment	Not Applicable			INV	
Atlas Copco	Scale 1:20	Family	Compare	Drawing Owner	Transferred from
	Drawn by INEdir	Blank nr.	Replaces	API	
STATUS	Drawing format A1	Blank wt 0 Kg	Fini wt. N/A	Designation	Sheet 1 / 1
Approved	Des checked.	Prod checked.	Approved.	Date 6/07/2018	9828532332

9828532332		
Parent 3D model	Ed . Version 3D	







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LV516	8101 0181 51	16 bar	8101 0188 62

Tolerances, if not indicated, according to:

ATLAS COPCO STANDARD CLASS

Name: PRESSURE VESSEL DIMENSION DRWG — LV500

Material: Not Applicable

Treatment: Not Applicable

Confidentiality Class acc. to 1102 K: Confidential

INV

Atlas Copco

Scale 1 : 10 | Family | Compare | Drawing owner: API

Drawn by INEjim | Blank nr. | Replaces

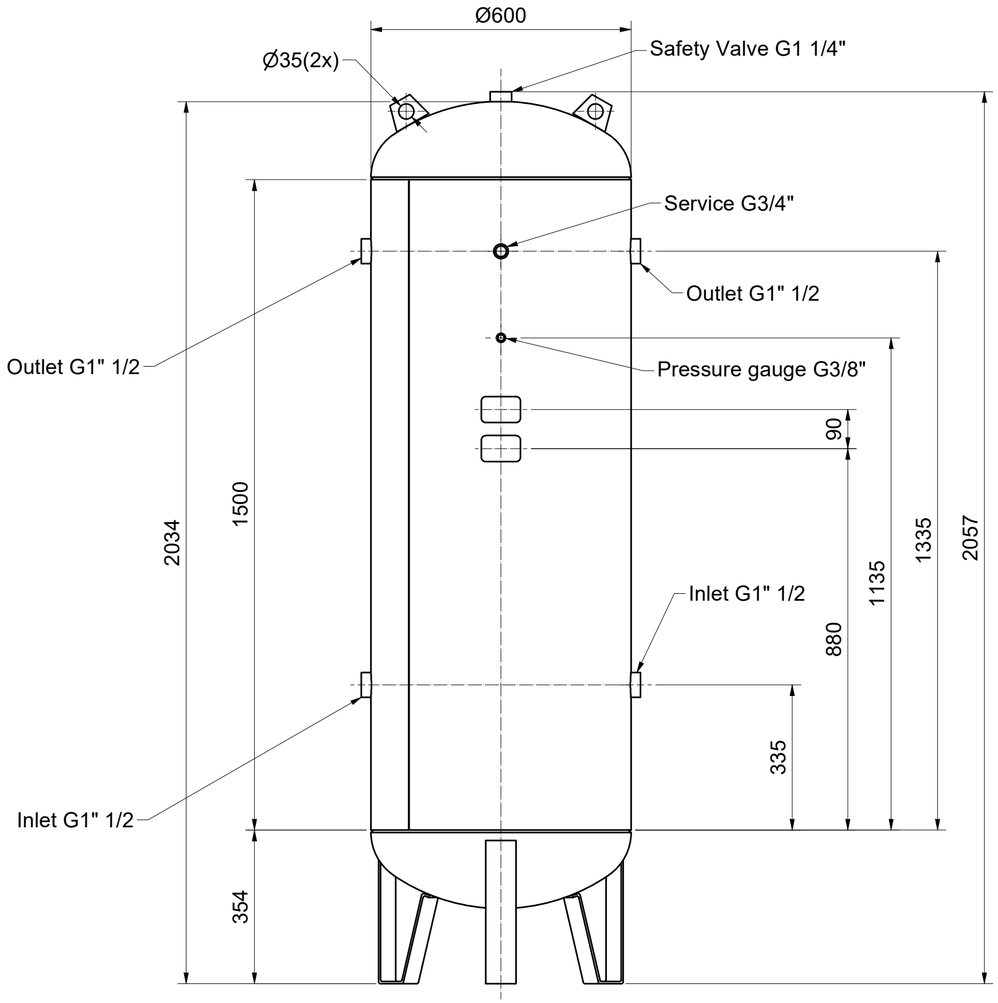
Drawing format A3 | Blank wt Kg | Fini wt. N/A | Designation | Sheet 1 / 1

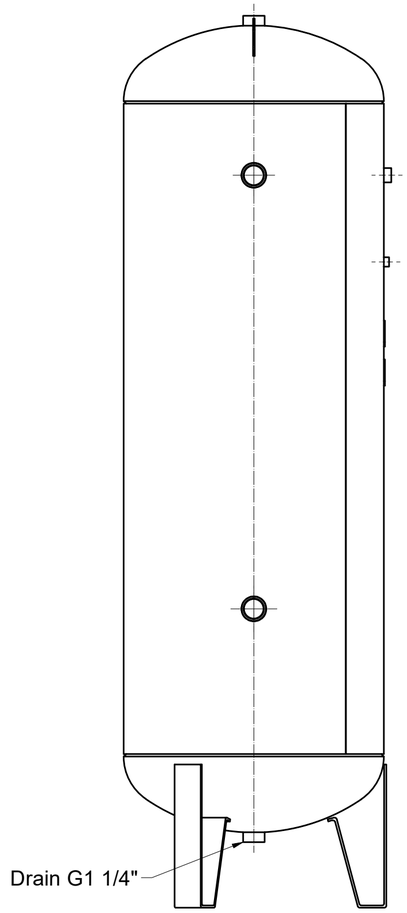
STATUS: Approved

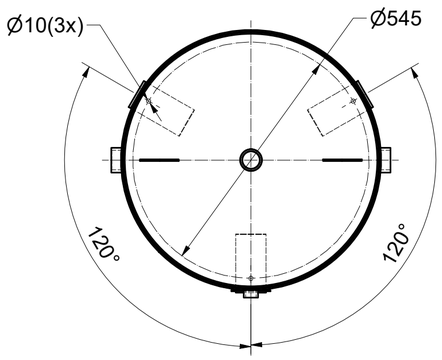
Des checked. | Prod checked. | Approved. | Date 19/11/2015

9820920002

Ed	Position	Modified from	Date	Intr./Appd.	Parent 3D model	Edition 3D
00			25/03/2016		1629007611	-







Notes:-
- Suited for oxygen use according to specification 9828 5303 00.
- External treatment: painted RAL 7047.
- Internal treatment: VITROFLEX coating.
- Weight : 130 kg.

Designed, built, tested, certified and marked according European Directive: 2014/68/EU:	CAT IV
Medium	OXYGEN
Design pressure	11 bar
Min. Design temperature	-10 °C
Max. Design temperature	120 °C
Nominal Diameter (DN)	600
Volume	500 L
Test pressure	16.5 bar
Testing according SQA plan:	Sample test: / 100% test: X

Tolerances, if not indicated, according to: ATLAS COPCO STANDARD CLASS

Name: DIMENS. DRWG LV500 OXYGEN
Material: See Drawing
Treatment: See Drawing
Confidentiality Class acc. to 1102 K: Confidential
INV

Atlas Copco
STATUS: Pending

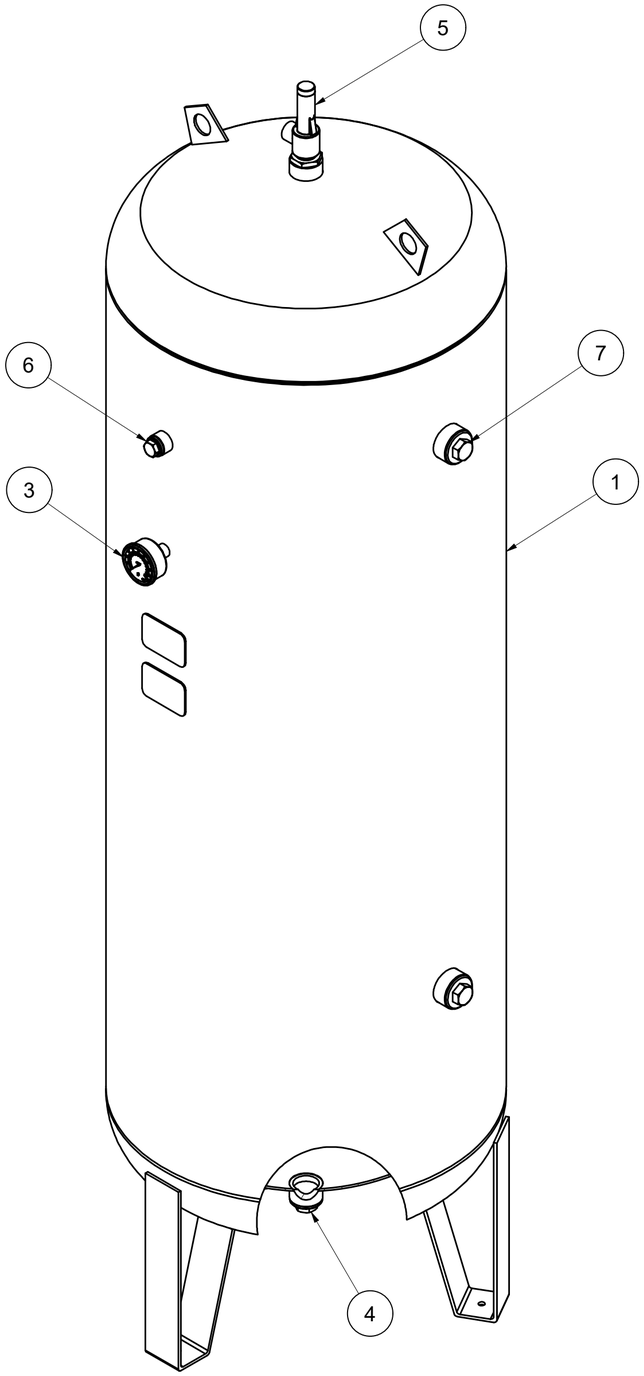
Scale 1 : 10 | Family | A2 | Compare | Drawing owner: API
Drawn by INEEXTVIP | Blank nr. | Replaces
Version Drwg | Blank wt | Kg | Fini wt. 130.000 kg | Designation | Sheet 1 / 1
Des checked. | Prod checked. | Approved. | Date 17/06/2021

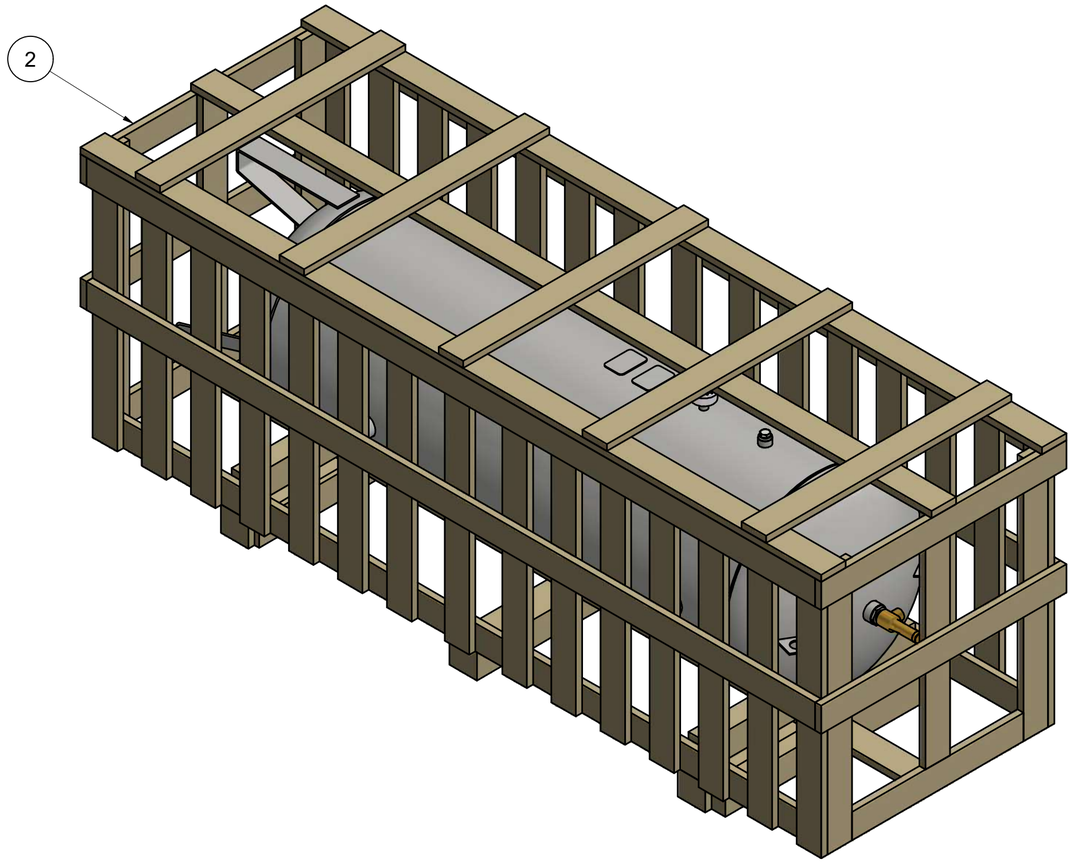
1629240201-01

Ed	Posi-tion	Modified from	Date	Intr./Appd.
1				

1629240201-M1	1
Parent 3D model	Ed . Version 3D

All materials supplied are in compliance with the requirements of the List of Prohibited Substances





Notes:-
- Suited for oxygen use according to specification 9828 5303 00.
- Shipping weight : 169 kg.
- Metal plugs to seal vessel from contamination during transport.

Parts List						
Pos	Qty	Partnumber	R/S	Name	Material	Description
1	1	1629240201	R	VESSEL AIR	See Drawing	LV500 OXYGEN
2	1	1629240221	R	PACKAGING	See Drawing	LV270 OXYGEN
3	1	0872100132	S	GAUGE PRESS	See Standards	PRESSURE GAUGE
4	1	0686420900	S	PLUG	See Standards	
5	1	0832100273	S	SAFETY VALVE	See Standards	
6	1	0686371662	S	PLUG	SEE STANDARDS	
7	4	0686421000	S	PLUG	See Standards	

Tolerances, if not indicated, according to:
ATLAS COPCO STANDARD CLASS

Name VESSEL AIR — LV500 OXYGEN ASSEMBLY
Material See Drawing
Treatment Not Applicable
Confidentiality Class acc. to 1102 K: Confidential
INV

Atlas Copco
STATUS: Pending

Scale 1 : 5 | Family | A2 | Compare | Drawing owner: API
Drawn by INEEXTVIP | Blank nr. | Replaces
Version Drwg | Blank wt Kg | Fini wt. 169.000 kg | Designation | Sheet 1 / 1
Des checked. | Prod checked. | Approved. | Date 17/06/2021
1629240211-01

Ed	Posi-tion	Modified from	Date	Intr./Appd.
1				

Parent 3D model	Ed . Version 3D
1629240211-M1	1