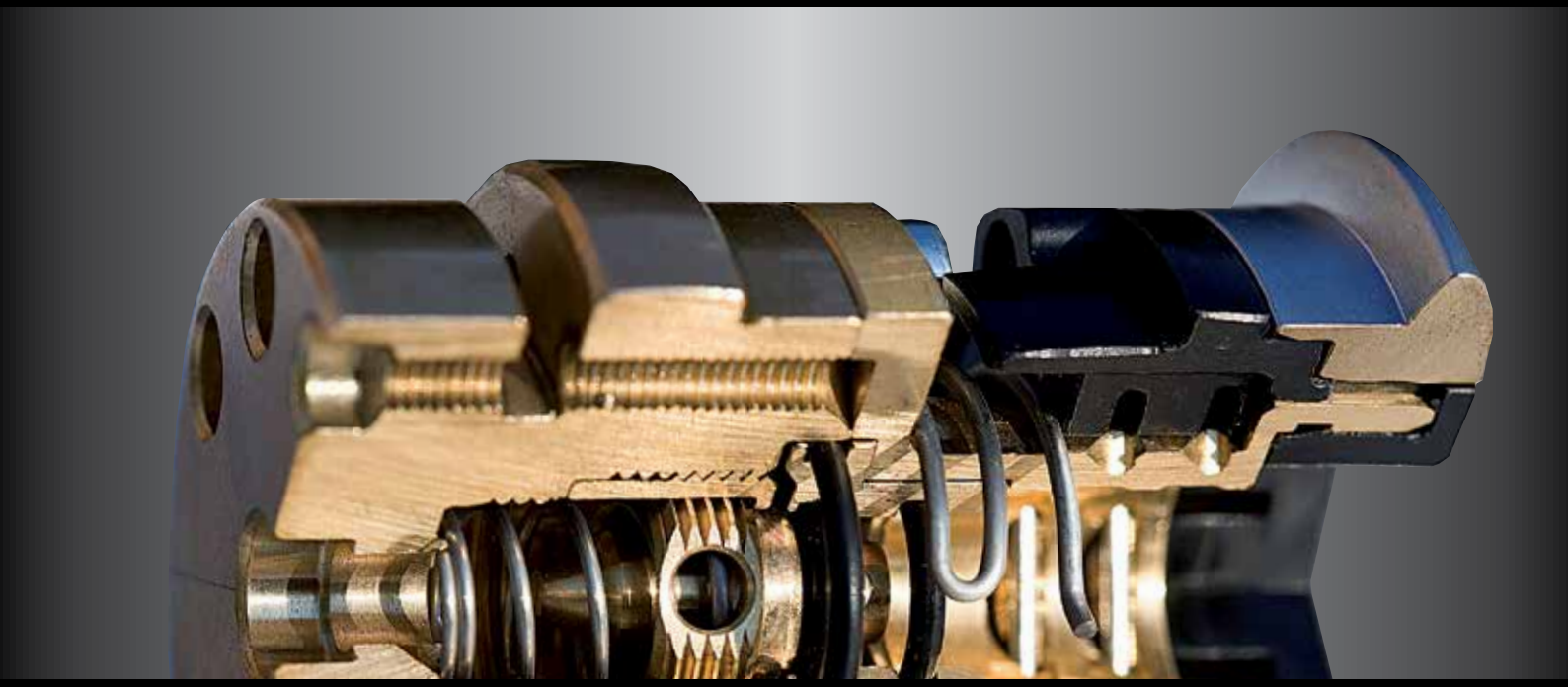
CEGA SYSTEMS
BY GREGGERSEN



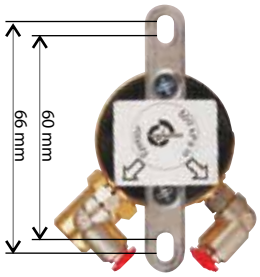
ALL IN ONE CATALOG
CENTRAL GAS SUPPLY SYSTEMS

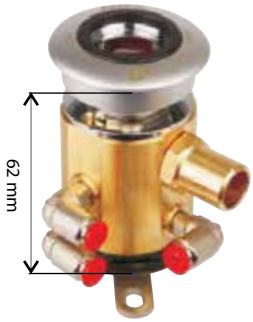
there is no substitute

GREGGERSEN

Forano AGSS

ANAESTHETIC GAS SCAVENGING SYSTEM





USAGE

System for safe disposal of excess anaesthetic gases and anaesthetic vapours from the clinical environment.

All-metal construction, symbols for monitoring operation, with external ejector for vacuum generation. Suction adjustable; single-handed operation when connecting and disconnecting, unlocking via the connector receptacle. Fully mounted in a stainless steel casing, with stainless steel front panel (for concealed or hollow wall installation). Design complies with the requirements of EN ISO 9170-2.

TECHNICAL DATA

Dimensions:	145 x 120 x 65 mm (WxHxD)
Material:	brass; casing and front panel stainless steel
Capacity:	min. 50 L at 500 kPa
Input:	copper pipe 8 mm
Output:	copper pipe 15 mm
Marking:	colour coding in line with ISO 32 standard magenta

FORANO AGSS

Forano AGSS, concealed / hollow wall	902.073
Forano AGSS, ceiling pendants, with external ejector	902.074
Forano AGSS, bed-head units	902.075
Forano AGSS, surface mounting	902.076

surface version 130 x 205 x 70 mm

concealed version 175 x 175 mm

Forano Airmotor

FOR DRIVING COMPRESSED AIR-OPERATED TOOLS IN ENCLOSED SPACES

USAGE

Terminal unit for supplying and disposing of air used to operate surgical tools. A combination of an outlet assembly (for supply) and an inlet assembly (for disposal), which is connected to a supply and disposal system. A non-return valve in the disposal system prevents return flow of consumed air.

TECHNICAL DATA

Dimensions:	145 x 120 x 65 mm (WxHxD)
Material:	brass, chrome-plated; casing and front panel stainless steel
Capacity:	min. 350 L at 800 kPa
Input:	copper pipe 8 mm
Output:	copper pipe 15 mm
Marking:	colour coding in line with ISO 32 standard magenta
Operating pressure:	800 – 1000 kPa

FORANO AIR-MOTOR

Forano Air-Motor for concealed / hollow wall installation	902.090
Forano Air-Motor for ceiling pendants	902.091
Forano Air-Motor for bed-head units	902.092
Forano Air-Motor for surface mounting	902.093

concealed version 175 x 175 mm

surface version 130 x 205 x 70 mm

CEGA FORANO

Forano BS

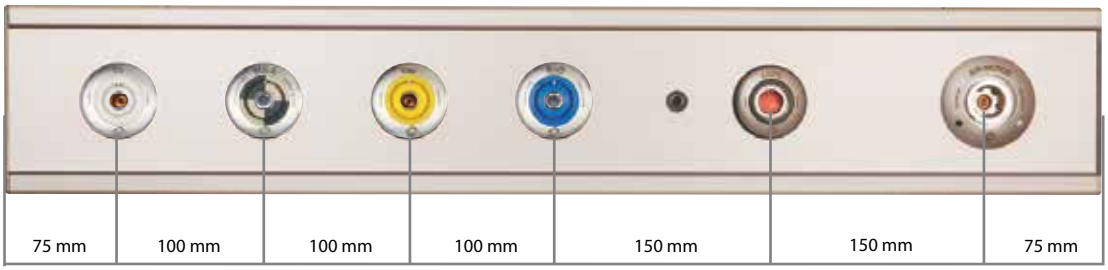
IN TEHALIT WALL DUCT

USAGE

Wall duct for surface mounting, fully fitted with various terminal units, Air-Motor and/or Anaesthetic Gas Scavenging System (AGSS in line with EN ISO 9170-2 with integrated ejector) in the aluminium duct.
The length of the duct can be customised to suit requirements. The terminal units are ready-installed with piping laid. The feed pipe can come from the left, right, above, below or behind.

TECHNICAL DATA

Input:	8 mm (1 terminal unit per gas)
	12 mm (2-3 terminal units per gas)
Output:	Forano terminal unit in accordance with BS 5682
Colour coding:	in line with ISO32



TEHALIT WALL DUCT (Please specify gas type for each outlet)

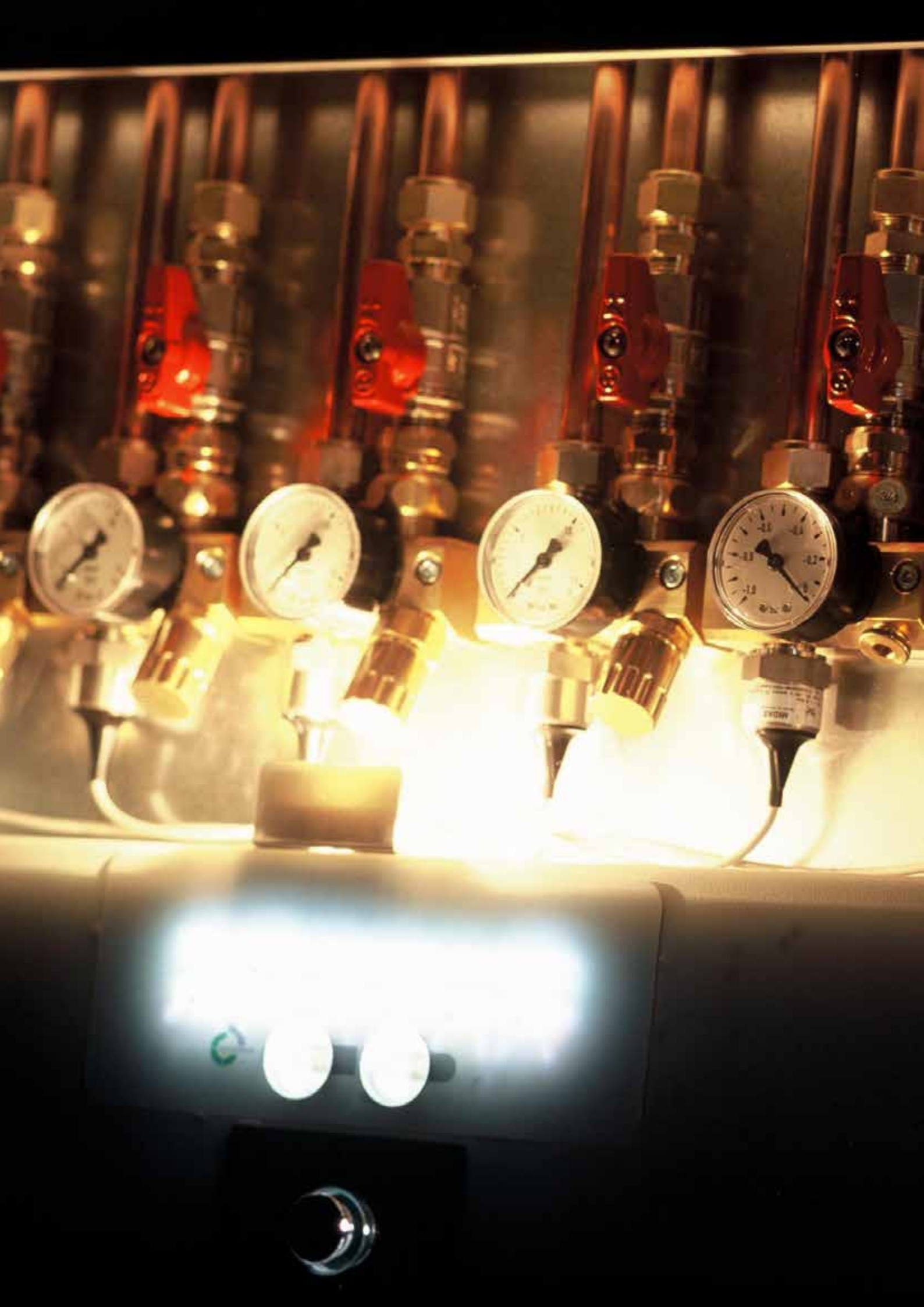
Wall Duct Tehalit Forano, 2 outlets	903.400
Wall Duct Tehalit Forano, 3 outlets	903.401
Wall Duct Tehalit Forano, 4 outlets	903.402
Wall Duct Tehalit Forano, 5 outlets	903.403
Wall Duct Tehalit Forano, each additional outlet	903.404
Wall Duct Tehalit Forano, add-on 1 x AGSS	903.405
Wall Duct Tehalit Forano, add-on 1 x Air-Motor	903.406
Wall Duct Tehalit, meterage	903.040

Forano

INTERNATIONAL STANDARDS AND OTHER VARIANTS

GERMAN STANDARD, SCANDINAVIAN STANDARD (AGA), NORME FRANÇAISE, etc.

The Forano terminal unit system is available in several other international standards beside the BS variant. Please contact us directly about the version you require. More information can be found on our website: www.greggersen.com/index.php/terminal-units.html



Ventus shut-off valve systems

GENERAL INFORMATION

ELECTRONICS DESIGN

- High level of safety due to redundant microprocessors (if one processor fails,the second processor will assume all functions)
- Clinical operational alarm: Visual (red and green LEDs) and an acoustic signal in the presence of rising or falling pressure (according to DIN EN: ISO 7396-1)
- Reset key for alarm suppression or confirmation (time-dependent alarm repetition every 12 min); test key for a functional test
- The board contains an integrated connection to the central instrumentation and control systems, i.e. possibility of transmitting the alarm via potential-free relay contacts
- Possibility of retrofitting additional electronics or connection to a network system
- RS485 interface for maintenance / service on the electronics
- Display panel for the media designation

HARDWARE DESIGN

For each type of gas, the shut-off unit consists of the following components:

- Zone shut-off valve and manometer
- Physical separation of the pipe system
- Emergency intake option via NIST coupling
- Pressure sensor

TECHNICAL DATA ELECTRONICS

Voltage supply:	12-24 V AC / 50 Hz
Power consumption:	6 W
Protection rating:	IP41
Acoustic signal generator:	60 dB at 1m distance
Suppression:	12 minutes
Inputs:	max. 6 media monitored
Outputs:	max. 6 items potential-free
Sensors:	Vacuum /compressed gas: -100 to +600 kPa Compressed gas: 0 to 1600 kPa Supply voltage: 10-30 V DC Signal: 4-20 mA
Display:	Operation LED green, fault LED red (2x)

Ventus 22mm

1 TO 6 VALVES

22mm Version: Door made of steel, powder coated (RAL 9016), opening > 90° via a lateral hinge.

Valve-box with integrated emergency alarm panel 1-3 or 1-6 Media. According DIN EN ISO 7396-1 or HTM 02-01. For specifically close individual stations or functional units of the central gas supply system.
Complete metal version, fully installed in the box, to be embedded or installed on dry walls, sealing door with integrated emergency opening and imperative ventilation. Casing made up of sheet steel , front plated in RAL 9016. Infinitely variable plaster compensation up to 30mm. Spatial separation of the electronic device and gas units. Window to read out the pressure gauges and the valve position.

DESIGN

The valve unit of the compressed gases or vacuum consists of the following components:
- medical ball-valve DN 20 and pressure gauge per gas type.
- valve group consists of valve block,
  shut-off valve and visible physical isolation for service.
- quick access by special lock and push in window
- diameter connection pipe 22mm available.
- emergency supply inlet NIST-Coupling (HTM two NIST connections optional)
- pressure transmitter for each gas type.

The pressure transmitter converts the current pressure to the alarm panel. The alarm panel system is programmed to ensure a warning signal in case of any increase or decrease of the pressure.

TECHNICAL DATA

Front frame (1-3 fold):	390 x 530 x 16 mm (WxHxD)
Base frame dimensions (1-3 fold):	330 x 470 x 77 mm (WxHxD)
Front frame (4-6 fold):	630 x 530 x 16 mm (WxHxD)
Base frame dimensions (4-6 fold)	570 x 470 x 77 mm (WxHxD)
Compressed gases connection:	22 mm CU-pipe sleeves
Vacuum connection:	22 mm (sniff CU-pipe 8mm optional) sleeves
Max. pressure for compressed gases:	0 to 10 bar
Max. pressure for vacuum:	-1 to 0 bar
Pressure gauges:	50 mm o D.
Pressure transmitter:	4–20 mA / +12-24 V AC/DC
Color standard:	RAL 9016 fine structure

VENTUS 22MM COMPONENTS

Ventus 22mm 1 valve, for flush mounting	900.877
Ventus 22mm 2 valves, for flush mounting	900.878
Ventus 22mm 3 valves, for flush mounting	900.879
Ventus 22mm 4 valves, for flush mounting	900.880
Ventus 22mm 5 valves, for flush mounting	900.881
Ventus 22mm 6 valves, for flush mounting	900.882

FRAMES FOR SURFACE MOUNTING

Ventus 22mm surface frame 1 to 3 valves	900.874
Ventus 22mm surface frame 4 to 6 valves	900.875

ADVANTAGES

- Unique design
- Compact and light
- Powerful
- Modular construction and individual accessories
- Capacity up to 165 m^3/h
- Simple access to all components for servicing and maintenance
- EC conformity declaration - the entire system meets DIN EN ISO 7396-1 and HTM 02-01 specifications and is classified as a class II b medical device.
- Overview of the complete system status from the illuminated display
- Supply reliability from three sources
- Display languages German, English and Dutch
- Logbook function
- Network connectivity

GREGGERSEN SYSTEM PHILOSOPHY

If all the parts of a system are carefully coordinated, the functionality multiplies and a loose collection of instrumental soloists becomes a harmonious orchestra.

This principle not only applies to music, but also in technology. So Greggersen does not restrict itself to manufacturing high quality components and systems, but offers a flexible system for planning, realising, optimising and maintaining highly complex central gas supply systems (CEGA). Using intelligent components and clearly defined processes, functionality can be guaranteed on a top level at all times.

This is also evident from our rapid innovation and ensures that we renew ourselves at ever shorter intervals - technologically and always with a view to customer benefit. Greggersen offers everything from a single source, full service from planning through to service. The systems are continuously developed further, but always stay backwards compatible - today and of course tomorrow too.

Aeolus

POSSIBLE COMBINATIONS

THE AEOLUS GAS SUPPLY SYSTEM

The Aeolus central gas supply system guarantees a continuous supply of medical gases (oxygen, nitrous oxide, compressed air, carbon dioxide etc.).

All components for operating Aeolus:

- AEOLUS manifold
- Measurement line mains system pressure
- Emergency feed point
- Pressure reducer panel for tank or reserve supply
- Aeolus header sytem

further there are pipe connections made of high quality copper for medical applications, holder systems for gas cylinders and installation material.

Depending on usage, the modules can be combined in different ways (e.g. as a reserve supply or for tank supply).

CLASSIFICATION

- DIN EN ISO 7396-1 & HTM 02-01
- 93/42/EEC: class II b

FUNCTION

The pressure reducer panel lowers the tank supply pressure (or reserve supply) to the mains system pressure. The gas from the cylinder bank flows through the header system to the manifold. The high pressure from the cylinders is reduced in two stages within the switchover system:

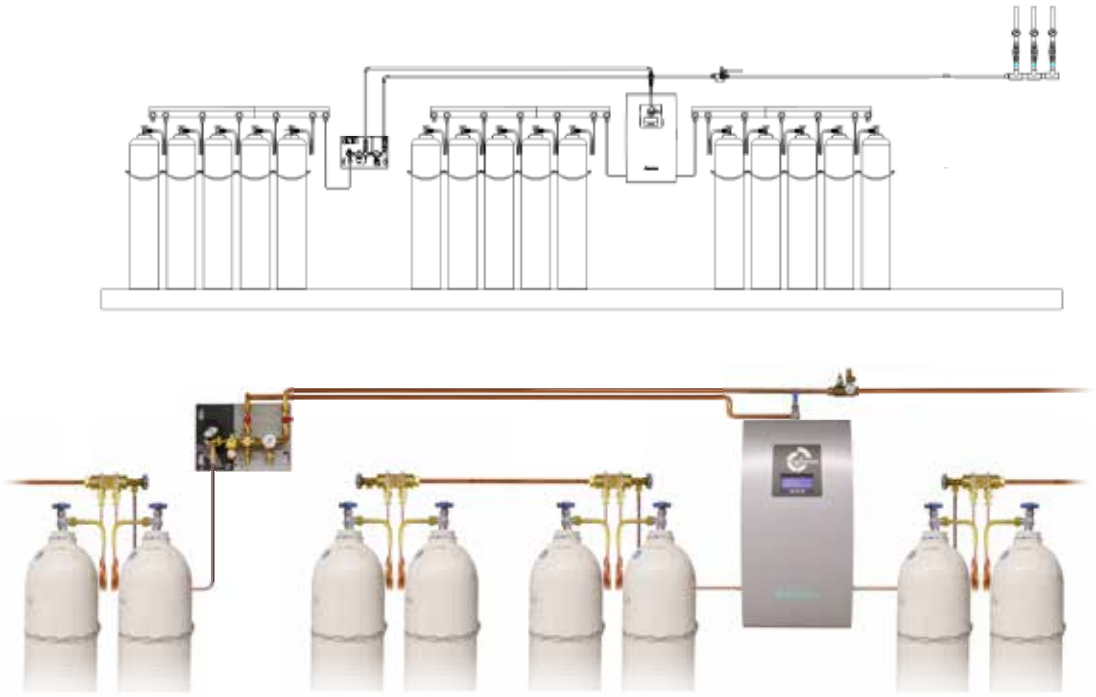
- The two reducer units from the first stage reduce the pressure from the cylinder bank to between 10 bars and 12 bars.
- The two second stage pressure reducers then finally reduce the pressure to the required mains system pressure.

Depending on the intended use and configuration of the plant, a primary source is defined in the electronic control, with which the sequence of access to the different sources is defined:

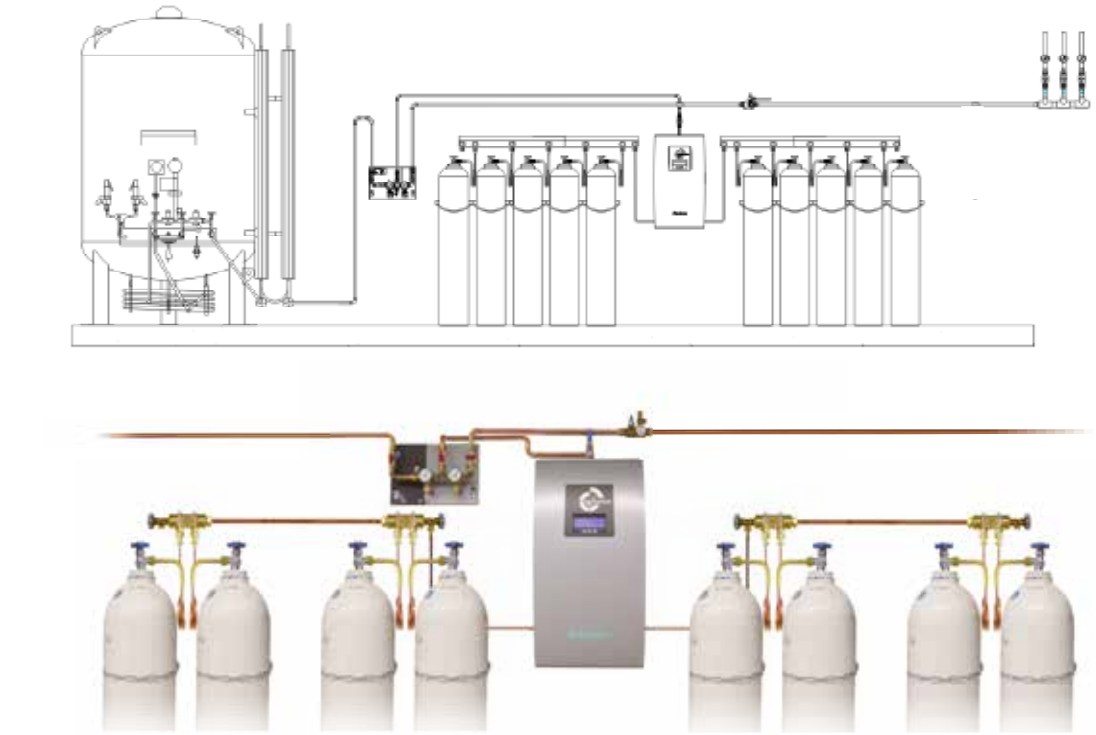
In a plant with tank supply the tank is used as the primary supply. Only once the pressure from this source drops below a certain value are the cylinder batteries accessed.

In case of a plant with reserve supply, the two cylinder batteries are used as the primary source. Only if the pressure drop below the minimum operating pressure does the plant revert to the reserve battery.

AEOLUS E SERIES WITH TWO SOURCES + RESERVE SUPPLY



AEOLUS E SERIES WITH TWO SOURCES + TANK SUPPLY



Bed head units & Ceiling pendants

NORMAL CARE / INTENSIVE CARE

Upon request Greggersen offers a wide range of bed head units and ceiling pendants for different purposes:

Intensive care, Normal care, Surgery, Monitoring, Endoscopy and Anesthesia

CEGA ACCESSORIES















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O2
O2