

# CEGA SYSTEMS FROM GREGGERSEN



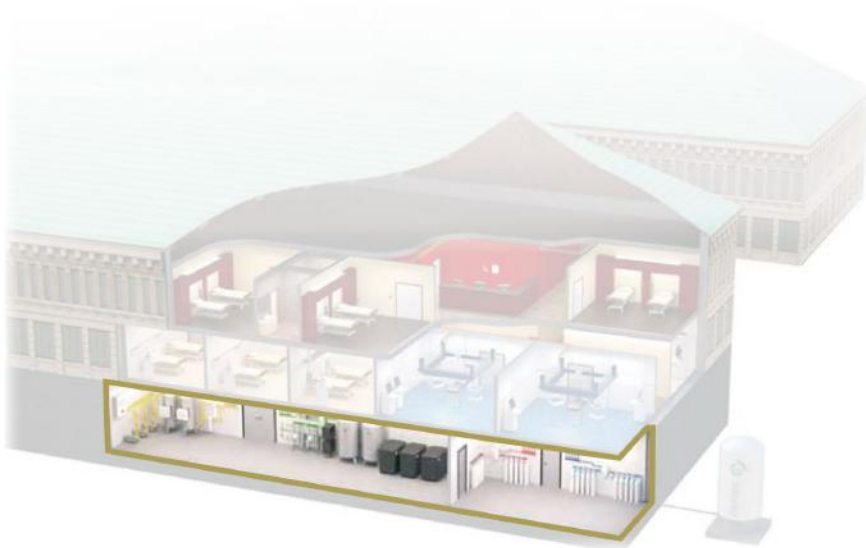
## PRODUCT CATALOG SWITCHOVER SYSTEMS

## MediControl switchover system

### INTRODUCTION

Care and caution are advised when handling compressed medical gases (oxygen, nitrous oxide, carbon dioxide). Specialists and reliable hardware are necessary for a gas supply system that serves for distribution in medical facilities.

The Greggersen switchover systems cover a wide spectrum of capacities (10 m<sup>3</sup>/h to 200 m<sup>3</sup>/h) and also ensure a high degree of operational safety and reliability.



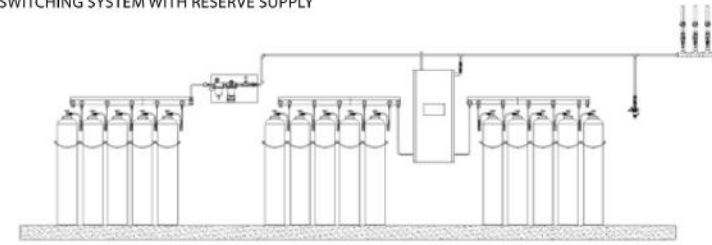
### SPECIAL FEATURES OF THE GREGGERSEN CEGA SYSTEMS:

- Every gas supply source is protected with its own pressure reducing valve.
- In the event of a power failure, all valves open by means of an intelligent pressure control system that switches one source after the other.
- Pressure sensors and innovative control and display electronics ensure an optimal level of monitoring, information and control
- System 10 / 25 m<sup>3</sup>/h entirely pneumatic, 25 / 50 / 100 m<sup>3</sup>/h electronic and special solutions
- We have already successfully installed systems with up to 200 m<sup>3</sup>/h throughput and control of two physically separated cylinder batteries.

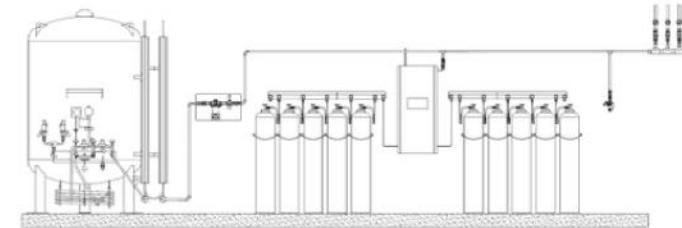
## Overview

### APPLICATION EXAMPLES

#### SWITCHING SYSTEM WITH RESERVE SUPPLY



#### SWITCHING SYSTEM WITH TANK SUPPLY



## Electronically controlled switching system

MC 2025 E/ 2050 E/ 2100 E

### USAGE

The MediControl central gas supply system guarantees a continuous supply of medical gases. Monitoring and control of the three supply sources is ensured with the Aeolus electronic switchover system. Extensive information is available on a large graphic display that shows both the operating state and messages in plain text.

All pressure reducing valves are duplicated, such that the supply is safeguarded even during maintenance. Adherence with the recognised rules of engineering is just as important as the durable and dependable design of all individual parts.

High flexibility in system design: Whether the main supply is via a cryogenic vessel and the system ensures a secondary and reserve supply, or is configured as a primary and secondary supply with permanently connected reserve supply - the switchover system can be easily matched to the requirements set.

### DESIGN

- Microprocessor-controlled gas supply system
- LCD display specifying the operating state and service messages in plain text
- Sensor pressure monitoring
- 2-stage pressure reduction; 2nd stage duplicated
- Pneumatic priority switching in the event of power supply failure
- Protection of the system by means of a hood with viewing window

### TECHNICAL DATA

Dimensions:	MC 2025: 380 x 840 x 300 mm (WxHxD) MC 2050: 480 x 1100 x 330 mm (WxHxD) MC 2100: 480 x 1100 x 330 mm (WxHxD)
Inlet pressure max.:	20,000 kPa
Outlet pressure:	100-800 kPa (500 kPa standard)
Throughput:	MC 2025: 25 m <sup>3</sup> /h   MC 2050: 50 m <sup>3</sup> /h   MC 2100: 100 m <sup>3</sup> /h
Inlet:	G ¾"
Outlet:	copper pipe Ø 22 mm
Weight:	MC 2025: 35 kg   MC 2050: 45 kg   MC 2100: 48 kg
Operating temperature:	+10° to +40°C
Supply voltage:	100-240V AC, 50-60Hz

MC 2025E, electronic, 2 cylinder batteries	326.025
MC 2025E, electronic, 2 cylinder batteries	326.050
MC 2100E, electronic, 2 cylinder batteries	326.100
MC 2025R, electronic, 3 cylinder batteries	326.026
MC 2050R, electronic, 3 cylinder batteries	326.052
MC 2100R, electronic, 3 cylinder batteries	326.102
MC 2050T, electronic, 2 cylinder batteries, incl. tank panel	326.051
MC 2100T, electronic, 2 cylinder batteries, incl. tank panel	326.101

## Pneumatically operated switching system

MC 2025P / HU 10

### USAGE

These entirely pneumatic switchover systems have been especially developed for smaller facilities. A pressure difference in the first pressure stage ensures that firstly one supply source is consumed and then the second source. The pressure reducing valve are duplicated, such that the supply is safeguarded even during maintenance. Adherence with the recognised rules of engineering is just as important as the durable and dependable design of all individual parts.

### DESIGN

- Pneumatically controlled gas supply system
- Pressure monitoring via pickups
- 2-stage pressure reduction; 2nd stage duplicated
- Protection of the system by means of a hood with viewing window

### TECHNICAL DATA

Dimensions:	MC 2025P: 360 x 780 x 300 mm (WxHxD) HU 10: 330 x 480 x 300 mm (WxHxD)
Inlet pressure max.:	20,000 kPa
Outlet pressure:	100-800 kPa (500 kPa standard)
Throughput:	HU 10: 10 m <sup>3</sup> /h   MC 2025P: 25 m <sup>3</sup> /h
Inlet:	G ¾"
Outlet:	copper pipe Ø 22 mm
Weight:	HU 10: 20 kg   MC 2025P: 25 kg
Operating temperature:	+10° to +40° C

MC 2025P, pneumatic, 2 cylinder batteries	327.025
HU 10, pneumatically controlled switchover system	325.104

## Operating signal

FOR PNEUMATIC SYSTEMS

### USAGE

Operating signals have to be provided in accordance with DIN EN ISO 7396-1. The operational alarm monitors the primary, secondary and reserve supply and indicates the "Empty message" on an optical display. The distribution network pressure is monitored (operational emergency alarm) at the same time.

### DESIGN

- Optical displays of the operational states in the supply centre
- Forwarding via potential-free contacts to the building/central control system

### TECHNICAL DATA

Supply voltage: 100-240V AC, 50-60Hz

Operating signal for pneumatic systems (main warning)	903.682
---	---------



## HD - manifold

1 - 10-FOLD

### USAGE

To connect one or more individual gas cylinders to a cylinder battery. Every individual connection is equipped with a non-return valve, which prevents a return flow or running dry. A main shut-off valve allows separation of the entire side from the supply and the manifold can be depressurised via a bleed valve.

All components are high-pressure resistant (BAM tested) and thus withstand the operating pressure of 20,000 kPa (200 bar). Two cylinders in each case are connected as single or double versions via a distribution bend to the manifold.

### DESIGN

- High pressure manifold 1 to 10-fold
- Individual valves per connection
- Main shut-off valve for the entire manifold
- Bleed valve with solder connection

### TECHNICAL DATA

Inlet pressure max.: 20,000 kPa  
Operating temperature: +10° to +40°C  
Separation between cylinders: 300 mm



HD - manifold, 1-fold, complete	327.301
HD - manifold, 2-fold, complete	900.522
HD - manifold, 3-fold, complete	900.523
HD - manifold, 4-fold, complete	900.524
HD - manifold, 5-fold, complete	900.525
HD - manifold, 6-fold, complete	900.526
HD - manifold, 7-fold, complete	900.527
HD - manifold, 8-fold, complete	900.528
HD - manifold, 9-fold, complete	900.529
HD - manifold, 10-fold, complete	900.530

## HD - distribution bend

MANIFOLD ACCESSORIES

### USAGE

For the high pressure connection between the cylinder valve and manifold. Version with compensating spiral, as manual connection or hexagonal nut, in a single or double version.

### TECHNICAL DATA

Operating pressure max.: 20,000 kPa  
Inlet: gas-specific  
Outlet: gas-specific



HD - distribution bend, manual connection, O <sub>2</sub> , single	325.414
HD - distribution bend, manual connection, O <sub>2</sub> , double	324.414
HD - distribution bend, manual connection, AIR, single	325.524
HD - distribution bend, manual connection, AIR, double	324.514
HD - distribution bend, manual connection, N <sub>2</sub> O, single	325.415
HD - distribution bend, manual connection, CO <sub>2</sub> , single	325.426
Other gases, connections and norms	on request

## HD - connecting pipe

MANIFOLD ACCESSORIES

### USAGE

To connect the manifold with the switchover system.

### TECHNICAL DATA

Operating pressure max.: 20,000 kPa (200 bar)  
Inlet: G 3/4"  
Outlet: G 3/4"



HD - connecting pipe for 2x manifold	327.304
HD - connecting pipe, manifold with MC 2025 E / P	324.010
HD - connecting pipe, manifold with MC 2100 / 2050 E / P	324.001
HD - connecting pipe, manifold 1-fold with MC 2025 E / P	324.015
HD - connecting pipe, manifold with reserve panel	324.013
HD - connecting pipe, manifold 1-fold with HU 10	325.732
HD - connecting pipe, manifold with HU 10	325.733
HD - connecting pipe, manifold 1-fold with reserve panel	324.018

## Pressure reducer panel tank supply

SINGLE/DOUBLE PRESSURE REDUCER PANEL



### USAGE

The main supply tank (cryogenic liquid gas system), as the third source, is permanently connected to the central gas supply system.

### DESIGN

- Pressure monitoring of the vaporiser
- Main shut-off valve at the inlet to separate the tank supply from the network
- Safety valve and manometer for mains system pressure display
- Emergency feed point (NIST)
- Fully fitted on a mounting plate

### TECHNICAL DATA

Dimensions (single):	575 x 260 x 200 mm (WxHxD)
Dimensions (double):	880 x 500 x 200 mm (WxHxD)
Inlet pressure max.:	1600 kPa
Outlet pressure:	100-800 kPa (500 kPa standard)
Throughput (single):	150 m <sup>3</sup> /h
Throughput (double):	300 m <sup>3</sup> /h
Weight (single):	20 kg
Weight (double):	30 kg
Inlet:	G ¾"
Outlet:	½" on copper pipe Ø 22 mm

## Pressure reducer panel reserve supply

SIZE 1 / SIZE 2



### USAGE

The reserve supply, as the third source, is permanently connected to the MediControl central gas supply system.

### DESIGN

- Pressure monitoring for high pressure area with a pressure sensor
- Main shut-off valve at the inlet to separate the reserve supply
- Constant outlet pressure through two-stage pressure reduction
- Safety valve and manometer for mains system pressure display
- Emergency feed point (NIST)
- Fully fitted on a mounting plate

### TECHNICAL DATA

Dimensions size 1	575 x 260 x 200 mm (WxHxD)
Dimensions size 2	940 x 380 x 300 mm (WxHxD)
Inlet pressure max.:	20,000 kPa
Outlet pressure:	100-800 kPa (500 kPa standard)
Throughput size 1:	50 m <sup>3</sup> /h
Throughput size 2:	100 m <sup>3</sup> /h
Weight size 1:	20 kg
Weight size 2:	30 kg
Inlet:	G ¾"
Outlet:	½" on copper pipe Ø 22 mm

Single - reducer panel for tank supply, with sensor	327.800
Double - reducer panel for tank supply, with sensor	505.359

Reducer panel for reserve supply size 1, 50 m <sup>3</sup> /h, with sensor	327.900
Reducer panel for reserve supply size 2, 100 m <sup>3</sup> /h, with sensor	505.367

## Reducer panel compressed air

SIZE 1 / SIZE 2 2



### USAGE

To reduce the compression in a central compressed air system from approx. 10 - 15 bar to the required mains system pressure of 5 or 8 bar.

### DESIGN

- Pressure monitoring for mains system pressure via pickups
- Safety valve and manometer for mains system pressure display
- Redundant design
- Fully fitted on mounting plate



### TECHNICAL DATA

Dimensions:	880 x 500 x 200 mm (WxHxD)
Inlet pressure max:	1600 kPa
Outlet pressure:	100-800 kPa
Throughput size 1:	50 m <sup>3</sup> /h
Throughput size 2:	300 m <sup>3</sup> /h
Inlet / outlet size 1:	Solder connection Ø 22 mm
Inlet / outlet size 2:	Solder connection Ø 28 mm
Weight size 1:	20 kg
Weight size 2:	30 kg

Reducer panel for compressed air systems, size 1 / 50 m <sup>3</sup> /h	325.810
Reducer panel for compressed air systems, size 2 / 300 m <sup>3</sup> /h	325.815

## Filter unit

COMPRESSED AIR / VACUUM

### USAGE

For processing compressed air Parallel connection of the filters allows replacement without interrupting operation.

### DESIGN

- Pre-filter
- Active carbon filter
- Bacteria filter

### TECHNICAL DATA

Dimensions:	1100 x 120 x 120 mm (WxHxD)
Inlet pressure max.:	1600 kPa
Outlet pressure:	100-800 kPa
Throughput size 1	50 m <sup>3</sup> /h
Throughput size 2	100 m <sup>3</sup> /h
Inlet / outlet size 1	Solder connection Ø 22 mm
Inlet / outlet size 2	Solder connection Ø 22 mm
Weight size 1	12 kg
Weight size 2	16 kg

Filter unit size 1 / 50 m <sup>3</sup> /h compressed air	903.520
Filter unit size 2 / 100 m <sup>3</sup> /h compressed air	903.521

### USAGE

To protect the vacuum vessel and the pumps against contamination with microorganisms and particles.

### DESIGN

- Bacteria filter

### TECHNICAL DATA

Dimensions size 1 / size 2	1000 x 120 x 150 mm (WxHxD)
Dimensions size 3	1000 x 600 x 1100 mm (WxHxD)
Throughput size 1	50 m <sup>3</sup> /h
Throughput size 2	75 m <sup>3</sup> /h
Throughput size 3	140 m <sup>3</sup> /h
Inlet / outlet size 1	Solder connection Ø 28 mm
Inlet / outlet size 2	Solder connection Ø 35 mm
Inlet / outlet size 3	Solder connection Ø 54 mm
Weight size 1	16 kg
Weight size 2	19 kg
Weight size 3	40 kg

Filter unit size 1 / 25 - 63 m <sup>3</sup> /h vacuum	903.510
Filter unit size 2 / 70 - 160 m <sup>3</sup> /h vacuum	903.511
Filter unit size 3 / 160 - 300 m <sup>3</sup> /h vacuum	903.512



## Distribution panel

2-6-FOLD



### USAGE

To supply up to six independent line networks from the central system to the periphery (e.g. ascending pipe or building distributor).

### DESIGN

- One shut-off valve and manometer in each case
- Fully fitted on mounting plate

### TECHNICAL DATA

Inlet size 1:	copper pipe Ø 22 mm
Outlet size 1:	copper pipe Ø 15 mm
Inlet size 2:	copper pipe Ø 28 mm
Outlet size 2:	copper pipe Ø 22 mm
Inlet size 3:	copper pipe Ø 35 mm
Outlet size 3:	copper pipe Ø 28 mm

### DISTRIBUTION PANEL SIZE 1

Distribution panel 2-fold (please specify gas type)	324.002
Distribution panel 3-fold (please specify gas type)	324.003
Distribution panel 4-fold (please specify gas type)	324.104
Distribution panel 5-fold (please specify gas type)	324.105
Distribution panel 6-fold (please specify gas type)	324.106

### DISTRIBUTION PANEL SIZE 2

Distribution panel 2-fold (please specify gas type)	324.006
Distribution panel 3-fold (please specify gas type)	324.007
Distribution panel 4-fold (please specify gas type)	324.107
Distribution panel 5-fold (please specify gas type)	324.108
Distribution panel 6-fold (please specify gas type)	324.109

### DISTRIBUTION PANEL SIZE 3

Distribution panel 2-fold (please specify gas type)	324.008
Distribution panel 3-fold (please specify gas type)	324.009
Distribution panel 4-fold (please specify gas type)	324.110
Distribution panel 5-fold (please specify gas type)	324.111
Distribution panel 6-fold (please specify gas type)	324.112

## Secretion trap

VACUUM SYSTEM PROTECTION

### USAGE

To protect the vacuum system from contamination (e.g. secretion) that inadvertently enters the piping system.

### DESIGN

Fully pre-assembled unit for wall mounting with quick-clamp mechanism to hold the secretion glass, 2 ball valves for inlet and outlet, ball valve as bypass valve, bleed valve, 5 L secretion glass, vacuum meter 0 to -1 bar.

### TECHNICAL DATA

Dimensions:	570 x 360 x 70 mm (WxHxD)
Container volume:	5 L
Inlet:	Solder connection Ø 35 mm
Outlet:	Solder connection Ø 35 mm
Weight:	10 kg



Secretion trap

903.500

## Small laboratory plant

INDUSTRIAL GAS / GAS PURITY UP TO 5.0

### APPLICATION

For stationary gas supply of laboratories and small CEGA plants with connection option for a cylinder.

### DESIGN

- Distribution bend
- Gas non-return valve
- Mounting bracket
- HD - shut-off valve
- Pressure reducer

### TECHNICAL DATA

Dimensions:	200 x 500 x 100 mm (WxHxD)
Inlet pressure max:	20,000 kPa
Throughput:	50 m <sup>3</sup> /h
Inlet:	gas-specific
Outlet:	G ½" solder connection
Weight:	5 kg

Small laboratory plant for industrial gas

325.050

Small laboratory plant for for gas purity up to 5.0

325.052



## Ball valves

MEDICAL BALL VALVES

### USAGE

Shut-off units are frequently used in medical piping: A shut-off valve is inserted wherever sections of the piping system are to be separated for maintenance, repair or planned future expansions. The type 33 ball valve can be used for all medical gases (except vacuum). The winged tap clearly shows the opened and closed positions. The winged tap is locked in its position, so inadvertent opening or closing is ruled out.

### DESIGN

- Nickel-plated brass housing with chrome-plated ball
- Ball seal made of PTFE
- Steel tap with plastic coating
- Lockable hand lever
- Oil and grease-free version

### TECHNICAL DATA

DN 6 - LW 8 / PN 65 - G ¼"	for 8 x 1 mm Cu pipe
DN 10 / PN 65 - G ⅜"	for 12 x 1 mm Cu pipe
DN 15 / PN 65 - G ½"	for 15 x 1 mm Cu pipe
DN 20 / PN 40 - G ¾"	for 22 x 1 mm Cu pipe
DN 25 / PN 40 - G 1"	for 28 x 1 mm Cu pipe
DN 32 / PN 30 - G 1¼"	for 35 x 1.5 mm Cu pipe
DN 40 / PN 30 - G 1½"	for 42 x 1.5 mm Cu pipe
DN 50 / PN 30 - G 2"	for 54 x 2 mm Cu pipe



### BALL VALVES WITH SCREWED CONNECTIONS

Brass ball valve type 33, 1/4"- DN 6 - 8 x 1 with screw connection	102.418
Brass ball valve type 33, 3/8"- DN 10 - 12 x 1 with screw connection	102.419
Brass ball valve type 33, 1/2"- DN 15 - 15 x 1 with screw connection	102.420
Brass ball valve type 33, 3/4"- DN 20 - 22 x 1 with screw connection	102.421
Brass ball valve type 33, 1"- DN 25 - 28 x 1.5 with screw connection	102.422
Brass ball valve type 33, 1¼"- DN 32 - 35 x 1.5 with screw connection	102.423
Brass ball valve type 33, 1½"- DN 40 - 42 x 1.5 with screw connection	102.424
Brass ball valve type 33, 2"- DN 50 - 54 x 2 with screw connection	102.425

### BALL VALVES WITHOUT SCREWED CONNECTIONS

Brass ball valve type 33, 1/4"- DN 6 - 8 x 1 without screw connection	102.305
Brass ball valve type 33, 3/8"- DN 10 - 12 x 1 without screw connection	102.395
Brass ball valve type 33, 1/2"- DN 15 - 15 x 1 without screw connection	102.414
Brass ball valve type 33, 3/4"- DN 20 - 22 x 1 without screw connection	102.145
Brass ball valve type 33, 1"- DN 25 - 28 x 1.5 without screw connection	102.416
Brass ball valve type 33, 1¼"- DN 32 - 35 x 1.5 without screw connection	102.377
Brass ball valve type 33, 1½"- DN 40 - 42 x 1.5 without screw connection	102.417
Brass ball valve type 33, 2"- DN 50 - 54 x 2 without screw connection	102.426

## Service portfolio

GREGGERSEN AT A GLANCE

GREGGERSEN GASESTECHNIK GMBH  
Quality products "made in Germany"

Our manufacturing facility at our Hamburg site guarantees the best possible quality and allows flexibility for customer-specific requirements.

Tel: +49 (0) 40-739357-0  
Fax: +49 (0) 40-739357-39  
E-mail: [info@greggersen.de](mailto:info@greggersen.de)



GREGGERSEN CONSULTING GMBH  
Individual advisory service and system planning

Advisory service creates assurance. Greggersen Consulting GmbH advises you competently and individually on your requirements.

Tel: +49 (0) 40-739357-26  
Fax: +49 (0) 40-739357-47  
E-mail: [info@greggersen-consulting.de](mailto:info@greggersen-consulting.de)



GREGGERSEN SERVICE GMBH  
Plant engineering and maintenance

Greggersen Service GmbH installs and maintain our systems and components professionally and promptly.

Tel: +49 (0) 40-1804424-70  
Fax: +49 (0) 40-1804424-99  
E-mail: [info@greggersen-service.de](mailto:info@greggersen-service.de)

