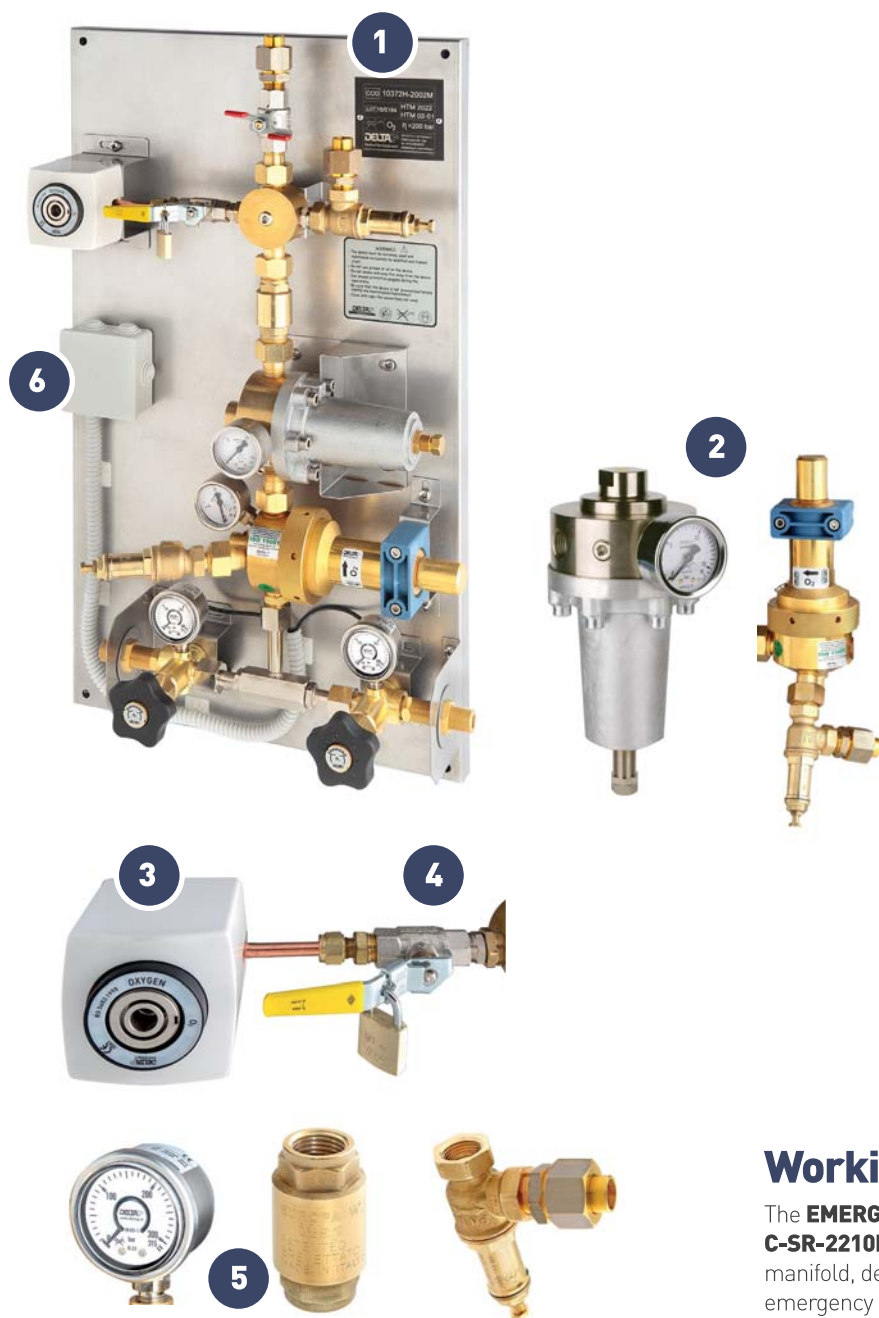


# Emergency reserve supply unit

C-SR-2210M-2251M/S-HTM  
**HTM 2022 / 02-01**



## Emergency reserve supply unit C-SR-2210M-2251M/S-HTM HTM 2022 / 02-01

### Key features

- 1 Mounted on a wall mounting stainless steel support panel
- 2 Two stage regulation system complying to **ISO 10524-2** standard
- 3 Equipped with test point terminal unit complying to BS5682 standard
- 4 Lockable ball valve with padlock for connection of test point to the output of supply unit
- 5 The manifold is supplied fully equipped with pressure gauges, not return valve and pressure relief valves
- 6 Equipped with pre-wired electrical contact pressure switches for connection to an external alarm system

**Pressure regulators are CE marked as medical devices in accordance to 93/42 EEC directive**

**Degreased in accordance with ISO 15001**

**All the components of the system subjected to cylinder pressure or to single fault condition have successfully withstood the adiabatic compression test in accordance with ISO 10524-2 and ISO 15001**

### Working principles

The **EMERGENCY RESERVE SUPPLY UNIT**

**C-SR-2210M-2251M/S** is a high capacity secondary supply's manifold, designed to form a secondary source of supply, for emergency use, or to permit servicing or repair.

There are two separated stages of regulation: **First stage** and **Second stage**.

The First stage ensures a regulation from 200 bar to 10-12 bar.

The Second stage ensures a regulation from 10-12 bar to 5 bar.

First stage regulators are protected from over-pressure by relief valves. A non return-valve is provided after the second stage, to avoid the gas flowing back. There is a pressure-safety valve.

There is a test point, complying to **BS5682** standard, connected to the manifold by means of a lockable ball valve.

Two pressure gauges on the cylinders can be connected to the alarm system, by means of the alarm connection box mounted on the panel, to monitoring the reserve status.

When cylinders are empty, a yellow flashing signal ("RESERVE LOW") is activated on the central alarm system (separately supplied)

### General Description

The emergency reserve supply unit **C-SR-2210M-2251M/S** complies to **HTM 02-01**, **HTM 2022**, **ISO 7396-1** and **ISO 10524-2** standards.

The emergency reserve manifold is designed to supply the pipeline in case of a primary supply failure.

The manifold is designed according to the primary supply's specific requirements as indicated in **HTM 2022 / 02-01** standards.

It is provided with possibility of connection to central alarm system, placed on primary supply's manifold.

The emergency reserve manifold is mounted on a stainless steel panel. The system is supplied fully assembled and tested

# Emergency reserve supply unit C-SR-2210M-2251M/S-HTM **HTM 2022 / 02-01**

## Technical Data

### FULLY AUTOMATIC MANIFOLD CONTROL PANEL

**COMPLYING TO:** HTM02-01, HTM 2022, ISO 7396-1 standards

**SUITABLE FOR FOLLOWING GASES:** O<sub>2</sub>, N<sub>2</sub>O, CO<sub>2</sub>, AIR, N<sub>2</sub>

**MAX FLOW RATE:** 120 Nm<sup>3</sup>/h

**OUTPUT PRESSURE:** 5 bar (adjustable)

**MAX INPUT PRESSURE:** 200 bar

**STORAGE TEMPERATURE:** -20° C ÷ +60° C

**WORKING TEMPERATURE:** +10° C ÷ +40° C

**PRESSURE RELIEF VALVES CONNECTION:** Soldering coupler Ø16mm pipe

**HIGH PRESSURE INPUT CONNECTION:** See Gas Table

**OUTPUT CONNECTION:** G 1/2" M

## DIMENSIONS

Mounted on a stainless steel support panel 732x425 mm

TWO STAGE REGULATION SYSTEM COMPLYING TO **ISO 10524-2 STANDARDS**

TEST POINT COMPLYING TO **BS5682 STANDARD** AND CONNECTED TO THE MANIFOLD BY MEANS OF A LOCKABLE VALVE

### DEGREASED IN ACCORDANCE WITH ISO 15001

ALL THE COMPONENTS OF THE SYSTEM SUBJECTED TO CYLINDER PRESSURE OR TO SINGLE FAULT CONDITION HAVE SUCCESSFULLY WITHSTOOD THE ADIABATIC COMPRESSION TEST IN ACCORDANCE WITH **ISO 10524-2** AND **ISO 15001**

Gas Table	GAS	GAS SYMBOL	CYLINDER COLOR	HIGH PRESSURE CONNECTION
	Oxygen	O <sub>2</sub>	White	UNI 11144 (W 21,7 M x 1/14")
	Medical Air	AIR	White / Black	UNI 11144 (W 30 M x 1/14")
	Nitrous Oxide	N <sub>2</sub> O	Blue	UNI 11144 (G 3/8" M)
	Carbon Dioxide	CO <sub>2</sub>	Grey	ISO 5145 (W 27 x 2 M)
	Nitrogen	N <sub>2</sub>	Black	UNI 11144 (W 21,7 F x 1/14")

## Product Codes

### EMERGENCY RESERVE C-SR 2210M-2251M/S HTM

<b>10372H-2002M</b>	EMERGENCY RESERVE SUPPLY UNIT C-SR-2210M-2251M/S <b>O<sub>2</sub></b> HTM
<b>10430H-2002M</b>	EMERGENCY RESERVE SUPPLY UNIT C-SR-2210M-2251M/S <b>Air</b> HTM
<b>10431H-2002M</b>	EMERGENCY RESERVE SUPPLY UNIT C-SR-2210M-2251M/S <b>N<sub>2</sub>O</b> HTM
<b>10432H-2002M</b>	EMERGENCY RESERVE SUPPLY UNIT C-SR-2210M-2251M/S <b>CO<sub>2</sub></b> HTM
<b>10433H-2002M</b>	EMERGENCY RESERVE SUPPLY UNIT C-SR-2210M-2251M/S <b>N<sub>2</sub></b> HTM

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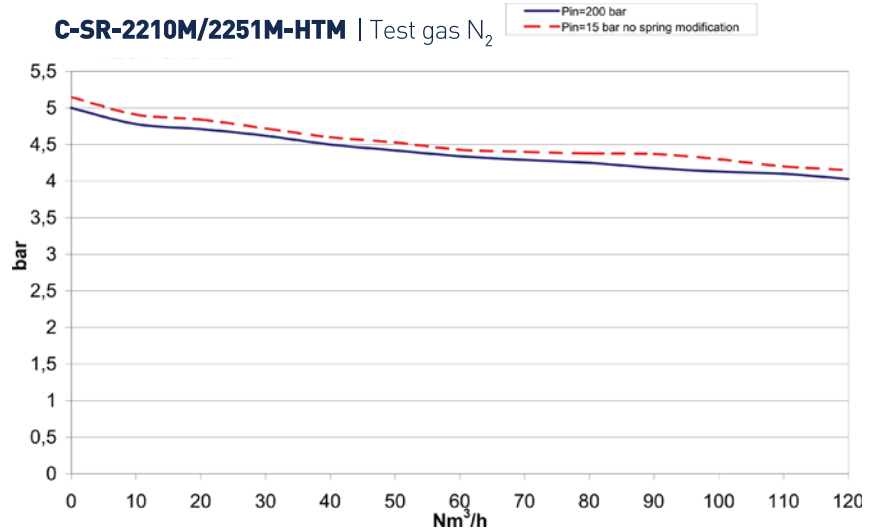
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### Flow rate diagram

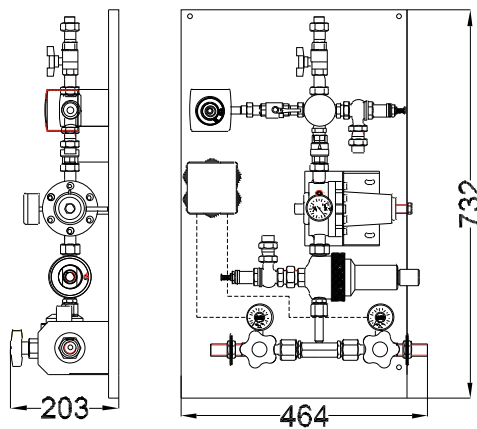
**Test gas** Nitrogen  
**Inlet pressure** see diagram (Pin)  
**Test temperature** 21 °C  
**Conversion factors** To find the flow of a different gas from the test gas, multiply the value read on the curve for the coefficient shown in the following table:

Air	0.98
Oxygen	0.93
Carbon dioxide	0.79
Nitrous oxide	0.79

**C-SR-2210M/2251M-HTM** | Test gas N<sub>2</sub>



### EMERGENCY RESERVE SUPPLY UNIT C-SR-2210M-2251M/S HTM



### EMERGENCY RESERVE SUPPLY UNIT C-SR-2210M-2251M/S HTM - Typical scheme of installation

