CARBON 22 - CARBON 42 - CARBON 52 - CARBON OCTOPUS

⚠ WARNING

This pamphlet is an integral part of the Mares regulator user's manual and should be stored with it.

CE CERTIFICATION

The Mares regulators described in this manual have been tested and certified by Registered Test Centre No. 0426 - Italcert - Viale Sarca 336, Milan - I, in compliance with EC directive 89/686/EEC of 21 December 1989. The test procedures were conducted according to the EN 250: 2000 standard, in conformity with the aforesaid directive, which sets out the conditions for marketing and essential safety requirements for Category III Personal Protective Equipment (PPE).
The certification testing results are as follows:

Model	Warm water (Temp. = > 10°C/50°F)	Cold Water (Temp. < 10°C/50°F)	Marking	Position
Carbon 22	approved	approved	CE 0426	on the first stage
Carbon 42	approved	approved	CE 0426	on the first stage
Carbon 52	approved	approved	CE 0426	on the first stage
Carbon Octopus	approved	approved	CE 0426	on the second stage

The CE markings indicate that the product is compliant with the essential health and safety requirements (Att. (DE 89/686/EEC Annex II). The suffix 0426 after the letters "CE" indicates the Italcert Registered Test Center in charge of monitoring the production under Art. 11B DE 89/686/EEC.

MR22^{T} FIRST STAGE

New first stage with nickel- and chrome-plated forged brass that stands out from previous versions because of its lower weight. This was made possible thanks to innovative technical solutions that still maintain the same internal components. Diaphragm technology with the DFC system and replaceable high-pressure seat connector. The high-pressure valve is made of "Tri-material" allowing for superior safety and duration. It is equipped with a preferential intermediate-pressure DFC port with a ½" UNF connector for the principal second stage hose, and 3 other LP service ports with 3/8" UNF threading and two high pressure (HP) ports with 7/16" UNF threading. The latter are inclined at a 45° angle to allow for a more intuitive layout of hoses or of the transmitting unit of the integrated dive computers.

MR42^{T} FIRST STAGE

New first stage with forged brass, nickel- and chrome-plated body that sets itself apart immediately thanks to its size and extremely low weight. This was made possible by simple but innovative technical solutions, which is why today the MR42^{T} can be called the smallest and best-performing diaphragm first stage on the market. The general technical characteristics are those of the best Mares first stages with diaphragm operation and the DFC system.
The high-pressure valve is made of "Tri-material" allowing for superior safety and duration. The low and high pressure ports are positioned to offer the most sensible arrangement of the hoses, ensuring maximum comfort for the user.

MR52^{T} FIRST STAGE

Unique performance from this compact, balanced diaphragm first stage.
Made of nickel- and chrome-plated brass with protections and shockproof caps, the MR52 features all the general characteristics of the best latest-generation Mares diaphragm first stages, introducing innovative technical solutions.
The two DFC ports deliver a constant flow of air when breathing from the main second stage or from the octopus.
The NCC system, combined with the special water recirculation system built corresponding to the diaphragm, makes it possible to achieve the very best performance in cold water.
The "Tri-Material" high pressure valve is made of three different materials, helping it last longer and offer maximum reliability.

The four pre-oriented low pressure ports make it possible to arrange the hoses perfectly, in any configuration. The two high pressure ports are for connecting the pressure gauge or console and the transmitter of an integrated computer, when used.

DUAL DFC

All the characteristics of the DFC system are now available in the port intended for the second stage octopus!
The dual DFC ensures a constant flow of air when breathing through the main second stage as well as the octopus, even when diving deep!

CARBON SECOND STAGE

Second stage with V.A.D. system made of Carbon with brand-new patented SMC technology. This material offers a number of benefits: Absolute ruggedness Thinner walls make for a more compact size without the need to resort to a smaller diaphragm, resulting in less drag in the water. Anti-freeze function, which is enhanced by the "radiator action" of the carbon.
More natural breathing: The carbon walls of the second stage "capture" the humidity contained in the air breathed, and return it during the inhalation phase, thus limiting the common "dry mouth" phenomenon that is caused by breathing overly dry air.
The lid features the "Mesh Grid" system to optimize the incoming and out-going flows of water, offering an additional improvement in performance.
The mouthpiece is made of soft hypoallergenic silicone, limiting jaw fatigue and offering a secure fit even after very long dives.

CARBON OCTOPUS

The second stage of the Octopus version is equipped with a hose of considerable length (100 cm (39 in)).
It is yellow, making it immediately identifiable in any situation.

Technical characteristics **FIRST STAGE**

	MR22T	MR42T	MR52T
Operation	- Balanced diaphragm design - DFC system - "Tri-material" Valve	- Balanced diaphragm design - DFC system - "Tri-material" Valve	- Balanced diaphragm design - DFC system - "Tri-material" Valve
Materials			
Metal parts	- High-resistance, nickel- and chrome-plated moulded brass - Stainless steel	- High-resistance, nickel- and chrome-plated moulded brass - Stainless steel	- High-resistance, nickel- and chrome-plated moulded brass - Stainless steel
Non-metal parts	- High impact technopolymers	- High impact technopolymers	- High impact technopolymers
Seals and membranes	- Nitryl rubbers - Silicone rubbers	- Nitryl rubbers - Silicone rubbers	- Nitryl rubbers - Silicone rubbers
Capacity (pressure 180 bar)	- 4800 l/min	- 4800 l/min	- 4800 l/min
Intermediate pressure			
Inlet pressure 200 bar	- from 9.8 to 10.2 bar	- from 9.8 to 10.2 bar	- from 9.8 to 10.2 bar
Inlet pressure 30 bar	- from 9.8 to 10.2 bar	- from 9.8 to 10.2 bar	- from 9.8 to 10.2 bar
First stage ports			
High pressure	- 2 7/16" UNF	- 2 7/16" UNF	- 2 7/16" UNF
DFC	- 1 1/2" UNF (primary)	- 1 3/8" UNF (primary)	- 2 3/8" UNF (main and octopus)
Intermediate pressure	- 3 3/8" UNF	- 3 3/8" UNF	- 2 3/8" UNF
Weight			
INT	- 803 g	- 652 g	- 687 g
DIN	- 615 g	- 452 g	- 513 g

Technical characteristics **SECOND STAGE**

	CARBON	CARBON OCTOPUS
Operation	- VAD system - Mesh Grid cover	- VAD system - Mesh Grid cover
Materials		
Metal parts	- Nickel-plated, chromeplated brass - Stainless steel	- Nickel-plated, chromeplated brass - Stainless steel
Non-metal parts	- Carbon (SMC) - High impact technopolymers	- Carbon (SMC) - High impact technopolymers
Seals and membranes	- Nitryl rubbers - Silicone rubbers	- Nitryl rubbers - Silicone rubbers
Capacity (pressure 180 bar)	- 2400 l/min	- 2400 l/min
Hose Type		
Standard	- Super flex 1/2" UNF - 3/8" UNF	- Super flex 3/8" UNF
Hose length		
Standard	- 75 cm	- 100 cm
Weight (without hose)	- 198 g	- 198 g

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