

# FLOTEC INC

Web Site: <http://www.floteco2.com>

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The FLOTEC helium ( $\leq 80\%$ ) / oxygen mix, "Heliox" Ingage regulator is designed to provide a constant flow of helium at approximately 50 PSI. In addition, the FLOTEC Ingage regulator can simultaneously deliver a measured flow through the twelve-position selector. The FLOTEC regulator is preset to deliver approximately 50 PSI through the optional DISS check valve(s) or the flow selector outlet that can be either a hose barb or a DISS fitting. Every FLOTEC Ingage regulator design has an internal safety relief valve to prevent over pressurization of the regulator. The three main connections available are the CGA 890 unibody yoke, the CGA 280 nut and nipple, and the female pipe port. FLOTEC products contain no latex or latex byproducts.

## SPECIFICATIONS:

Operating Pressure: 250-3000 PSI

Outlet Pressure: Nominal 20 PSI, 30 PSI, or 50 PSI

Flow Capacity: Minimum: 20cc Maximum: 60 LPM  
thru the 12 position selector

100 LPM thru optional DISS-1180  
check valve(s)

Inlet Configuration: CGA 890 Yoke  
CGA 280 Nut and Nipple

Outlet Configuration: Hose Barb  
DISS-1180 fitting  
DISS-1180 check valve

## REPLACEMENT PARTS:

Tee Handle or Dome Handle for CGA 890

DISS-1180 Fitting

DISS-1180 Check Valve

Hose Barb

Piston/Manifold sub-assembly

O-ring for CGA 890  
O-ring for CGA 280

Flowmeter Assembly

**INSTALLATION: CGA 890 Connector:** Never replace factory-installed dynamic seals with plastic yoke washer seals. When connecting the CGA 890 connection do not use a tool to tighten the Tee handle or Dome handle. Doing so may damage the regulator. If leakage occurs between the regulator and cylinder after the Tee handle or Dome handle has been tightened by hand, inspect and replace the yoke washer if necessary. **WARNING:** This device is intended to be used only with **FLOTEC** installed yoke washer seals. DO NOT use alternate seals.

**INSTALLATION: CGA 280 Connector:** Mount the regulator to a CGA 280 cylinder valve. Be careful to avoid cross-threading the connection. To achieve a proper seal for threaded cylinder connections, which use a gasket, or O-Ring be sure the gasket or O-Ring is properly positioned before attaching the regulator to the valve.

**INSTALLATION: Pipe Connector:** Use only Teflon tape on the threads as a sealant.

**INSTALLATION:** The Flotec Ingage regulator has an internal safety valve to prevent over pressurization of the regulator. Point of installation, local and state regulations may require venting of the relief valve to outside of the use/storage area. The regulator can be placed in an enclosed, ventilated closet, or manned by an operator who can shut off the tank if necessary.

**PREVENTIVE MAINTENANCE:** All regulators should be tested and cleaned periodically to insure proper performance. The frequency of testing should be established according to usage, but it should be performed at least once per year to evaluate for damage, contamination, wear and performance.

**LEAK TEST:** Attach the regulator to an appropriate cylinder, plug all outlets, turn the flow selector to "OFF" and slowly open the cylinder valve. Apply a compatible leak test solution to all outlets, fittings, and the junction of the gauge and regulator body to check for bubbles. Tighten fittings as required to eliminate all external leaks. DO NOT over tighten threaded connections. Replace yoke washer if required. Close cylinder valve.

**WARNING:** If the internal safety relief valve should open because of a malfunction, large quantities of gas can be released. Some Medical gases can be dangerous. Large quantities of some medical gases can push the oxygen out of a room which can cause a person to faint and/or asphyxiate. Consult CGA standard # G-8.1 for other cautions.

**WARNING:** Disassembly, assembly, and testing of regulators should be performed only by trained personnel. The work area must be free of hydrocarbon contaminants and residues and residues because of the danger of spontaneous combustion when residues are exposed to gaseous helium( $\leq 80\%$ )/oxygen, "Heliox".

### SAFETY WARNINGS:

1. The use of FLOTEC helium ( $\leq 80\%$ )/oxygen, "Heliox" Ingage regulators for gases other than compressed helium ( $\leq 80\%$ )/oxygen, "Heliox" of up to 3000 psi is expressly prohibited by FLOTEC and the user must assume all liabilities.
2. Use no oil or grease.
3. Never administer oxidizing gases when smoking or when near an open flame.
4. Never use medical gases from a cylinder without reducing the pressure through a suitable regulator intended for that gas.
5. Make sure that the threaded fittings on regulators or the indexing pins on yokes are properly mated for the gas intended. Never attempt to force an incompatible connection.
6. Never permit compressed medical gases to enter a regulator suddenly. Always open the cylinder valve slowly.
7. Fully open the cylinder valve when a regulator is attached and in use.
8. Never leave a cylinder valve open with regulator attached when regulator is not in use.
9. Before a regulator is removed from a cylinder, fully close the cylinder valve and release all gas from the regulator.
10. Never interchange regulators, hoses, or other equipment with similar equipment intended for use with other gases. Pressure regulators and related fittings should never be handled with oily or greasy hands or gloves. Never hold hand over the outlet(s) to test for the presence of pressure.
11. Never use helium ( $\leq 80\%$ )/oxygen, "Heliox" as a pressure medium to purge obstructed pipelines or equipment, to operate pneumatic tools, or to build up pressure in any tanks.
12. Do not stand in front of a regulator outlet when opening the cylinder valve in case foreign particles are present which could cause a hazardous malfunction of the regulator.
13. Helium ( $\leq 80\%$ )/oxygen, "Heliox" therapy may be critical treatment. The application of the regulator should be made in strict accordance with the prescription and instructions of a physician.
14. Secure cylinders to wall, stand, or cart in accordance with local fire codes.
15. The regulator is equipped with an internal safety, which is designed to protect the regulator. Downstream equipment used in conjunction with the regulator should be equipped with suitable safety valves to prevent over pressurization and damage.
16. "Heliox" is not flammable. However, the presence of "Heliox" will increase the rate and severity of combustion. Oil and/or grease in the presence of "Heliox" become highly combustible. "Heliox" must never be allowed to contact oil, grease or other petroleum-based substances. Therefore, do not use oil or grease on "Heliox" regulators, cylinders valves or other related equipment. Do not use or store "Heliox" equipment near excessive heat ( $>125$  F or  $51.5$  C) or open flame.
17. CAUTION: Do not use organic-based threaded sealants on any portion of the regulator. Use only Teflon threaded-sealing tape or helium ( $\leq 80\%$ )/oxygen, "Heliox" service thread compound.
18. **DANGER: Never install a regulator to a post-type valve with more than one yoke washer between the valve and the regulator inlet. The use of plastic yoke washer seals on Flotec regulators is prohibited.**
19. Never leave an Ingage Regulator pressurized with helium ( $\leq 80\%$ )/oxygen mixed gases. Always purge any residual gases from regulator when not in use.
20. The regulator must be tight to prevent O-ring extrusion. (When using CGA 280 Nipple with O-ring).
21. The regulator must be tight to prevent leaking around the CGA 280 Nipple and those using a tip seal or face washer.
22. The regulator must NOT be twisted or turned when it is tight on the cylinder valve and/or under pressure to

Flotec Patent #'s: 4909476, 5785050, 6026854, 6082396, 6328280, 7089956, 4982760, 6148841, 7255127

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## Declaration of Conformity

### Product identification

Product name : Regulators & Flow meters, Regulators with Flow meter.  
Brand : Flotec  
Cat. Number : RXXXX-XXXXX, FXXX-XXXXX, MXXXX-XXXXX, DXXXX-XXXXX  
Batch/Serial Nr. : Numbered Sequentially

### Manufacturer

Name : Flotec  
Address : 7625 West New York Street  
Indianapolis, IN 46214-4911  
Country : USA  
Representative : Brian Davidson  
Tel : +1 317-273-6960  
Fax : +1 317-273-6979

### Authorized Representative in Europe

Name : Emergo Europe  
Address : Molenstraat 15  
2513 BH  
The Hague  
Country : The Netherlands  
Tel : (31) (0) 70 345-8570  
Fax : (31) (0) 70 346-7299

### Notified Body

Name : UL International (UK) Ltd  
Address : Womersh House, The Guildway  
Old Portsmouth Road  
Country : UK-Guildford, Surrey, GU3 1LR  
I.D. Number : CE 0843

### Means of conformity

Flotec Inc. declares that the product listed has been classified as Class IIb - Annex IX, Rule 11 and is in conformity with the essential requirements and provisions of Council Directive: 93/42/EEC

### Signature

Place and date : Flotec Inc 9-22-03

Signature :



Name : Brian Davidson  
[Name and Signature of authorized person within organization]

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## Authorized Representative

Name : Emergo Europe  
Address : Molenstraat 15  
2513 BH The Hague  
Country : The Netherlands  
Tel : (31) (0) 70 345-8570

## Symbols

### Symbols

### Definition

PSI  
KG/CM<sup>2</sup>  
BAR  
MPA  
HP  
LPM  
SN

POUNDS PER SQUARE INCH  
KILOGRAMS PER SQUARE CENTIMETER  
KILOGRAMS PER SQUARE CENTIMETER  
MEGA PASCAL  
HIGH PRESSURE PORT  
LITERS PER MINUTE  
SERIAL NUMBER



USE NO OIL



CONSULT INSTRUCTIONS FOR USE



AUTHORISED REPRESENTATIVE IN THE EUROPEAN COMMUNITY