

FLOTEC INC

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

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The FLOPAC INGAGE□ Series Helium ($\leq 80\%$) / Oxygen Mix "Heliox" regulator is designed to provide a constant flow of Helium ($\leq 80\%$) / Oxygen Mix "Heliox" at approximately 50 PSI from attached aluminum or steel cylinders. Aluminum cylinder sizes: "CC", "CD", "CE", and steel cylinder sizes: "CLD" and "CLE".

In addition, the FLOPAC regulator can simultaneously deliver a measured flow through the twelve-position selector. The FLOPAC 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 FLOPAC regulator design has an integral safety burst disk to prevent over-pressurization of the regulator. FLOTEC products contain no latex or latex byproducts.

SPECIFICATIONS:

Operating Pressure: 250-3000 PSIG

Outlet Pressure: 50 PSIG

Flow Capacity: Minimum: 20CC
Maximum: 60 LPM
100 LPM thru optional DISS-1180
check valve(s)

Fill port Configuration: CGA 280 Check Valve

Outlet Configuration: Hose Barb
DISS-1180 Fitting
DISS-1180 Check-Valve

REPLACEMENT PARTS:

Vinyl Coated Stainless Steel Handle-Flange Assembly

Manual Shut-Off Valve Knob w/ Cap Screw Nut and
Lock-washer.

Hose Barb Outlet

DISS-1180 Outlet
DISS-1180 Check Valve Outlet
CGA-280 Check-Valve Fill Port Assembly

INSTALLATION OF FLOPAC REGULATOR: See special Instructions: "FLOPAC INSTALLATION INSTRUCTIONS"

TRANSFILLING OF FLOPAC REGULATOR: See special Instructions: "FLOPAC TRANSFILLING INSTRUCTIONS".

PREVENTIVE MAINTENANCE: All FLOPAC 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 FOR FLOPAC REGULATOR: Ensure Flow Selector Knob is set to "0". Slowly open Manual ON-OFF Valve Knob by rotating counterclockwise at least 10 degrees. Apply compatible leak test solution to CGA-280 Fill-Port Check-Valve, Burst Disk, all outlets and fittings as well as to the junction between the pressure gauge body, ON-OFF Valve connector body, and above and below flange between connector body and cylinder.

Turn Manual ON-OFF Valve Knob to the "OFF" position by rotating clockwise until tight. Rotate Flow Selector Knob to maximum flow position. After residual pressure escapes regulator (1 to 3 seconds), no additional flow should occur.

If leakage is detected, turn ON-OFF Valve Knob to maximum open position (full counterclockwise), rotate flow meter to maximum available flow and allow all Helox to be released from unit.

PRESSURE GAUGE TEST: With cylinder filled to 2000 PSI, and Flow meter set to zero ("0") flow. Slowly turn On-Off knob to ON position. Pressure gauge should read 2000 PSI, now turn On-Off knob to OFF position, and turn Flow meter knob to 1 LPM flow setting. Gauge should now move slowly to the zero ("0") reading as the pressure is released out of the Flopac Unit. If the pressure **gauge fails either one of these test** the Flopac unit **must not be used** and should be **returned to Flotec for service.**

WARNING: Some Medical gases can be dangerous. Large quantities of some medical gases can displace the oxygen within a room and can cause a person to faint and / or asphyxiate. Consult CGA standard # G-8.1 for other cautions.

WARNING: Only trained personnel should perform disassembly, assembly, and testing of FLOPAC regulators. The work area must be free of hydrocarbon contaminants and residues because of the danger of spontaneous combustion when residues are exposed to gaseous oxygen.

SAFETY WARNINGS:

FLOPAC Heliox regulators are intended for pressures up to 3000psig. Use of FLOPAC Heliox regulators with gases other than compressed Heliox or pressures greater than 3000psig is prohibited by Flotec and the user must assume all liabilities.

Use no oil or grease.

Never administer oxidizing gases when smoking or when near an open flame.

Never use Heliox from a cylinder without reducing the pressure through a suitable regulator intended for that gas.

Make sure that the threaded fittings on regulators are properly mated for the gas intended. Never attempt to force an incompatible connection.

Never permit compressed Heliox to enter a regulator suddenly. Always open FLOPAC "ON-OFF valve" slowly.

Fully open FLOPAC "ON-OFF valve" when a FLOPAC regulator is attached and in use.

Never leave FLOPAC "ON-OFF valve" open when FLOPAC regulator is not in use.

Before attempting to unvalve a FLOPAC regulator from a cylinder, ensure that all pressure has been released from both cylinder and regulator by fully opening the Manual ON-OFF Valve and Flow Selector Knob. Confirm depletion by depressing both CGA-280 Fill Port Check-Valve Poppet and DISS-1180 Check-Valve Poppet (if equipped).

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 attempt to restrict flow thru Hose Barb or DISS fitting as a test for the presence of pressure.

Never use Heliox as a pressure medium to purge obstructed pipelines or equipment, to operate pneumatic tools, or to build up pressure in any tanks.

Position flow outlets away from you when opening ON-OFF Valve or Flow Selector Knob in case foreign particles are present which could cause a hazardous malfunction of the regulator.

Heliox therapy may be critical treatment. The use of the FLOPAC regulator should only be allowed in strict accordance with the prescription and instructions of a physician.

Secure cylinders to wall, stand, or cart in accordance with local fire codes.

The FLOPAC regulator is equipped with an integral safety burst disk, which is designed to protect the regulator. Downstream equipment used in conjunction with the regulator should be equipped with burst disk or suitable safety relief valve to prevent over-pressurization, damage and potential injury.

Heliox mix 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.

CAUTION: Do not use organic-based threaded sealants on any portion of FLOPAC regulator. Use only Teflon threaded-sealing tape or oxygen service compound.

Never leave Heliox pressurized within a Flopac. Always evacuate residual pressure by closing Manual ON-OFF Valve and set Flow Selector Knob to Maximum flow position momentarily until flow ceases. Then return both to their respective "0" and "OFF" positions.

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

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Declaration of Conformity

Product identification

Product name : Regulator and Flow meter and Post Valve
Brand : Flotec
Cat. Number : FPX-XXX-XXX-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 : Womersley 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 |

| <u>Symbols</u> | <u>Symbols</u> | <u>Definition</u> | | |
|---|----------------|---------------------------------|---|---|
| PSI | | POUNDS PER SQUARE INCH | | |
| KG/CM2 | | KILOGRAMS PER SQUARE CENTIMETER | | |
| BAR | | KILOGRAMS PER SQUARE CENTIMETER | | |
| MPA | | MEGA PASCAL | | |
| HP | | HIGH PRESSURE PORT | | |
| LPM | | LITERS PER MINUTE | | |
| SN | | SERIAL NUMBER | | |
|  | | USE NO OIL | | |
|  | - | CONSULT INSTRUCTIONS FOR USE | | |
| <table border="1"><tr><td>EC</td><td>REP</td></tr></table> | EC | REP | - | AUTHORISED REPRESENTATIVE IN THE EUROPEAN COMMUNITY |
| EC | REP | | | |