O/E LAND INC.
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[**OEFBG-HLS-200/300**]

Hydrogen Loading System

Features:

- Compac size
- For pressure up to 3000 psi
- Large loading capacity up to 500 m fiber
- Easy operation
- Chamber isolation
- Uniformity

Applications:

- To achieve UV-photosensitivity in conventional fibers
- Fiber Bragg Gratings inscription

Product description:

The hydrogen loading process is a critical technique for achieving ultrahigh UV-photosensitivity in conventional Germanium-doped telecommunication fibers. This process involves penetration of the hydrogen gas molecules into the fiber core, which is possible at a high pressure. This is a key step in the process of Fiber Bragg Gratings inscription, when using affordable telecommunication fibers.

To facilitate this process, O/E LAND Inc. has developed the OEFBG-HLS-200/300 Hydrogen Loading System. This compact model features a single fiber loading chamber that can hold up to 500 meters of fiber. The OEFBG-HLS-200/300 is designed to make the fabrication of Fiber Bragg Gratings more cost-effective by using affordable telecommunication fibers, instead of higher-priced photosensitive fibers.

The Hydrogen loading chamber is fixed on a large 24x12-inch base plate. There are inlet and outlet manifolds, terminated with ¼-NPT tube fittings. Each manifold has a separate ON/OFF valve. A measuring gauge is installed on the input manifold, which allows the operator to always monitor the pressure in the chamber, including during the filling up procedure.

The access of the internal volume of the chamber is from its back side. There is a round lid, which is mounted on the chamber body with nuts. To remove the lid, simply replace the nuts, and pull the lid backward, until it is released from the threaded studs.

The internal volume of the chamber is designed to fit with the provided fiber spools. The fiber to be loaded in the chamber must be first placed on one of the spools, and then the spool must be inserted into the chamber. One or several fiber spools can be used at a time, with same or different fiber types and lengths.

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Product specifications:

Parameter	Unit	Hydrogen Loading System	
Model	-	**OEFBG-HLS-200**	**OEFBG-HLS-300**
Operating pressure (max)	psi	1500	3000
Overall dimensions (assembled) (LxWxH)	in	17x6x7.5	17x7.5x9
Chamber body dimensions (LxD)	in	12x3.6	12x4.5
Inside chamber volume (LxD)	in	10.75x2.44	10.8x2.7
Operating Temperature	°C	10 to 30	
Fiber loading capacity**	m	~ 500	
For use with*		Hydrogen	
Tube connectivity (input line, output line)	-	1/4-NPT Tube Fitting	
Connecting metal hose (input line, output line)	-	Yes, length: 36” (2 pcs)	
Pressure monitoring gauge	-	Yes	
ON/OFF Valve (input line, output line)	-	Yes	
Spools for loading fiber	-	Included	

* Requires external gas supply.
** Fiber length capacity depends on the fiber diameter and on the spools used.

Ordering number:

OEFBG-HLS-	200	300
Operating pressure:	1500 psi	3000 psi
Example:	OEFBG-HLS-200	