

## NITROGEN GENERATORS

### MINI WHISPER & MINI WHISPER Hybrid

The Mini-Whisper Nitrogen Generator has been developed to meet flow, purity, and pressure requirements for light scattering detectors and LCMS interfaces.

The **Mini Whisper Hybrid** is the solution for LC-MS that also requires filtered and dried air. The simple, high efficiency membrane technology separates nitrogen from the other components of a compressed air supply. The low pressure drop means that the Mini-Whisper can share a dry, oil-free compressed air source already in the lab



#### BENEFITS

##### ✓ BETTER RESULTS FROM ANALYTICAL INSTRUMENTS

The constant purity of the nitrogen improves system stability and ensures reproducible results.

##### ✓ LAB SAFETY

Nitrogen produced at low pressure and room temperature eliminates the risks associated with high pressure gas bottles and the handling of liquid nitrogen.

##### ✓ COST SAVING

The equipment cost is normally recovered in less than a year. In addition, no pipeline is required to carry gas from the storeroom to the lab

##### ✓ SIMPLE INSTALLATION

The Mini-Whisper nitrogen generator is very easy to install in the lab. No power connection is required. It can sit on the bench top or be wall-mounted to save bench space

#### MINI WHISPER FEATURES

- ✓ Flow rate 8/12 l/min
- ✓ Output Pressure up to 7 bar (101 psig)
- ✓ Nitrogen purity >99%
- ✓ Minimal maintenance

#### OPERATING..PRINCIPLE

Compressed air is forced through hollow fibre membranes. The air components permeate outside the membrane, depending on their rate of diffusion.

Oxygen, carbon dioxide, water vapor, and traces of rare gases have diffusion rate higher than nitrogen.

Nitrogen diffuses through the membrane slower than the other components, so it remains inside the hollow membrane and it is discharged at the membranes end ready for use.

## Specification MINI WHISPER

| Model                            | N2-Mini-Whisper                                     | N2-Mini-Whisper Hybrid     |
|----------------------------------|---|----------------------------|
| Out max flow                     | 12 L/min  | N2 12 L/min - Air 10 L/min |
| Purity                           | 99%   | 99% at max flow rate       |
| Dew Point                        | -50°C   | -40°C                      |
| Inlet Air requirement            | 25 Lt/min   | 96 Lt/min                  |
| Inlet pressure                   | 8,5 to 10 bar                                       | 8,5 to 10 bar              |
| Pressure drop                    | 1.5 bar   | 1.5 bar                    |
| Recommended compressor air inlet | 120 Lt/min  | 190 Lt/min                 |
| Air inlet quality                | Clean dry compressed air ISO8573-1:2010 Class 3.2.2 |                            |
| Technology                       | Membrane  |                            |
| Warm up time                     | None  |                            |
| Electrical supply                | None  |                            |
| Noise level                      | None  |                            |
| Operating temperature range      | from 15 to 35 °C                                    |                            |
| Connections IN/OUT               | 3/8" gas / 1/4" compression                         |                            |
| Product dimensions (mm)          | 735H x 348W x 350D Weight 8 Kg                      |                            |
| Shipping dimension (mm)          | 890W x 445H x 530D Wheight 14 Kg                    |                            |
| Certification                    | CE  |                            |