

# SONIMIX 3030-Dil

# Dilution module

The SONIMIX 3030 is a modular calibration system, specially developed for the Air Pollution Monitoring Network.

The different modules of the SONIMIX 3030 family answer all to the following philosophy :

**1 gas → measured by 1 analyser → checked by 1 calibration module.**

With such family it is possible using the 5 appropriate modules to calibrate up to 5 Analysers (NO<sub>x</sub>, O<sub>3</sub>, SO<sub>2</sub>, CO et HC or BTX) at the same time.

Different technologies and method are used : dilution (by MFC or sonic Nozzles), permeation, ozone generation and GPT

The modularity of the SONIMIX 3030 able the user to cover all it's needs : from the simple one to the most complex one.

The SONIMIX 3030 has a RS 232 remote command, a key board and a 2x20 character VFD screen.

All used components (MFC, sonic Nozzles, pressure regulators, permeation oven and ozone generator) have been developed by LN INDUSTRIES SA.

Following features have been in the centre of the development :

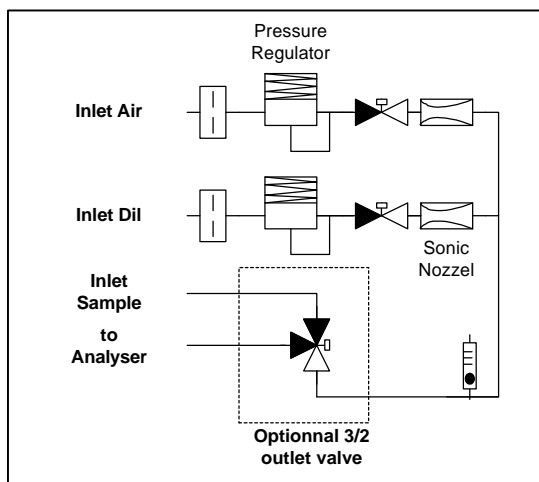
- High precision and stability
- Quick stabilisation time (by suppression of the dead volumes)
- Easy link to the national standards



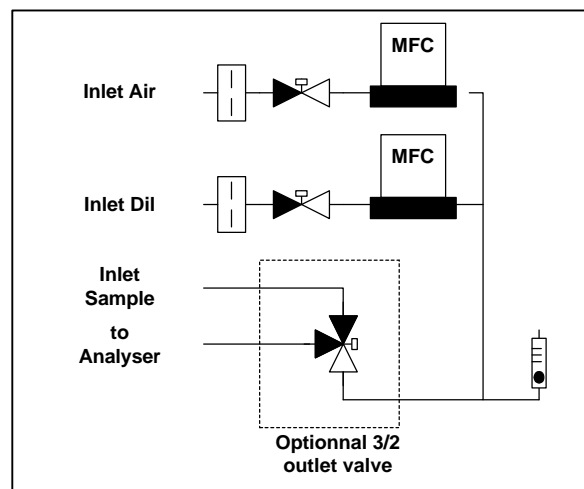
The **SONIMIX 3030-Dil-Mpts** and **SONIMIX 3030-Dil-1pts** modules can be used to dilute premixed cylinder gases such as NO, SO<sub>2</sub>, HC, CO. The use of high concentrated gas cylinders (ppm) in stead of low concentrated (ppb) give the user the best stability of the gas source, as well as lower functioning costs. The micro processor automatically calculate the final concentration in function of the premixed gases and the set dilution point.

## Fluidics

**SX 3030-Dil-1pt**



**SX 3030-Dil-Mpts**



## Technical datas

Inlet gases	
Diluted	: dry gases, low corrosive pure or premixed gases such as, CO,SO <sub>2</sub> ,NO, CL <sub>2</sub> ,H <sub>2</sub> S,...;
Air	: Dry Air
Concentrations	: SX 3030-1pt : 1 point + Zero : 1/150 (other values available) SX 3030-Mpts : MFC Air : 250 à 2500 Ncc/min MFC dil : 25 à 250 Ncc/min Dilution from 1/100 to 1/1000@2.5NL/min (other values available)
Maximum flow generated	: 2500 Nml/min of mixture, (equivalent N <sub>2</sub> ) (other values available)
Precision of the concentration	: SX 3030-1pt <b>better than 0.6% relative</b> SX 3030-Mpts <b>better than 1 % relative</b>
Repeatability	: SX 3030-1pt <b>better than 0.3% relative</b> SX 3030-Mpts <b>better than 0.5% relative</b>
Stabilisation time Of the mixture	: <b>&lt; 1 minute</b>
Inlet pressure	: from 2.2 to 3.5 bar relative
Maximal mixture pressure	: atmosphere
Alarms	: Inlet pressure, MFC voltage
Command	: electrical, local or remote
* local with screen + key board	: screen VFD 2x20 characters, key board 18 touches
* remote command	: RS-232, 1200 à 9600 baud, other parameters 100% adjustable
communication Protocol	: see options
Electrical consumption	: 25W 220VAC/50Hz
Leak test	: 316L < 10 <sup>-7</sup> mbar l/s, checked by He detector
Casing	: ½ 19", 3U, 500mm

## Options and accessoires :

### SX 3030-Dil-Mpt

Article Nr	Option	Description
670210000	SONIMIX 3030-Dil-Mpt	Multi-points calibration module by dilution with 2 MFC / casing ½ 19'
670210002	SONIMIX 3030-Dil-Mpt-OP1	Outlet 3/2 valve to select Cal / Sample
670210011	SONIMIX 3030-Dil-Mpt-OP9.1	Remote command RS 232 : Protocol ASCII
670210012	SONIMIX 3030-Dil-Mpt-OP9.2	Remote command RS 232: Protocol Breiffuss
670210013	SONIMIX 3030-Dil-Mpt-OP9.3	Remote command RS 232: Protocol Bayer-Hess
670210067	SONIMIX 3030-Dil-Mpt OP97	Voltage 230 VAC / 50 Hz
670210068	SONIMIX 3030-Dil-Mpt OP99	Voltage 117 VAC / 60 Hz

### SX 3030-Dil-1pt

Article Nr	Option	Description
670210500	SONIMIX 3030-Dil-1pt	1 Point + Zero calibration Module par dilution with sonic nozzles / casing ½ 19'
670210502	SONIMIX 3030-Dil-1pt -OP1	Outlet 3/2 valve to select Cal / Sample
670210511	SONIMIX 3030-Dil-1pt -OP9.1	Remote command RS 232 : Protocol ASCII
670210512	SONIMIX 3030-Dil-1pt -OP9.2	Remote command RS 232: Protocol Breiffuss
670210513	SONIMIX 3030-Dil-1pt -OP9.3	Remote command RS 232: Protocol Bayer-Hess
670210567	SONIMIX 3030-Dil-1pt OP97	Voltage 230 VAC / 50 Hz
670210568	SONIMIX 3030-Dil-1pt OP99	Voltage 117 VAC / 60 Hz



MD Scientific is authorized distributor in Denmark for LNI-Schmidlin  
www.md-scientific.dk - info@md-scientific.dk - Tel. 7027 8565

