



Cinel Strumenti Scientifici was founded in Padua in the 70's with a technical partnership of INFN LNL Legnaro Laboratory on particle accelerator projects and since then has been involved in some of the most challenging projects all over Europe.

Nowadays, CINEL has reached a long experience on mechanical design and manufacture of apparatuses in several scientific and research fields such as Synchrotron Light Sources (monochromators, fully integrated front ends and beam lines, experimental chambers), as well as accelerator components (vacuum chambers, accelerating cavities, radiofrequency quadrupole cavities) and accessories for analytical instruments such us laboratory gas generators

Cinel has acquired skilled experience in the field of cryogenics, superconductivity, astrophysics and bio-mechanics collaborating with well-known institutions as a qualified partner in the mechanical, thermal and control system design and it can now propose turnkey solutions with high level standardization

CAD-CAM environment and CNC machines allow Cinel to fully develop whole technical projects, from the design phase to the product certification taking care of all the electro-mechanical, pneumatic and hydraulic aspects.

Cinel in an ISO 9001 qualified company.

The first premises, the head quarter of the company, is 2000 m². It is arranged in order to separate the workshop area from the welding and from the mounting and testing areas. It is now operative a second premises of 500 m² for final assembly and testing. Both premises are based in Vigonza (Pd) Italy.

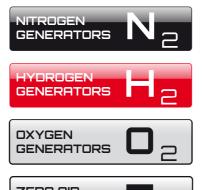


nda con sistema di qualità certificato ISO 9001:2008

ITALIAN PATENT Number 0001397254

EUROPEAN PATENT Application Number EP10814714.1







Visit our websites: www.cinel-gas.com www.cinel.com



CINEL Strumenti Scientifici s.r.l. via dell'Artigianato, 14-14/A 35010 Vigonza (Padova) - Italy tel. +39 049 725022 fax +39 049 8931881 e-Mail info@cinel-gas.com P.IVA 00857140289

DESIGN AND PRODUCTION OF / VAL LABORATORY GAS GENERATORS WF 16X N₂ H₂ O₂ ZERO AIR MAX -MIN-The constant and completely

autonomous supply of hydrogen flux







AD & RC series

AD series

RC series

Description

Strumenti Scientifici CINEL s.r.l. has developed a new high purity hydrogen generator (>99,99999%) that is perfect for laboratory use since it allows to eliminate the safety problems caused by traditional bottles.

This new system uses PEM technology for the production of very pure hydrogen which is based on the innovative conception of the electrolytic cell that Cinel has developed together with the University of Padua's Chemical Science Department and for which has received the ITALIAN PATENT N. 0001397254 and the EUROPEAN PATENT Application Number EP10814714.1.

This device, in comparison with the current electrolysis cells on the market, reduces energy consumption, is safer to use and is mechanically more resistant.

The new AD series (Automatic Dryer System) hydrogen generator does not need maintenance because the gas purifying system regenerates cyclically, any maintenance of desiccant cartridge is not required.

The standard maintenance operations only include the periodical filling of the internal tank with deionized water. The tank's high capacity of 10 I greatly reduces the frequency of this operation.

The efficiency of the system is one of the best in the world for this kind of technology.

The new RC series (Regenerable Cartridge) hydrogen generator combines high performance with competitive price. The RC series has double desiccant cartridge columns with huge capacity that limit the frequency of the operations for the maintenance of the desiccant cartridge. A programmed alarm advises the user for the intervention. The cartridge can be also replaced by a new one immediately without any waste of working time.

Applications

Ionization flame detector (FID) Carrier gas for GC and GC-MS Collisions on ICP-MS

Technical data

OUTLET PRESSURE
STANDARD PURITY
AVAILABLE FLOW RATES RANGE
TANK CAPACITY
WATER LEVEL
INPUT VOLTAGE
WEIGHT
POWER CONSUMPTION
FUSE
PRESSURE ACCURACY
PRESSURE ACCURACY MICROPROCESSOR CONTROLLED DISPLAY
MICROPROCESSOR CONTROLLED DISPLAY
MICROPROCESSOR CONTROLLED DISPLAY INDEX OF PROTECTION
MICROPROCESSOR CONTROLLED DISPLAY INDEX OF PROTECTION TEMPERATURE

from 1 to 11.0 bar (14 psi to 160 psi) >99,999% 100-600 cc/min 5 liters Showed by graphic display and visible 110 V / 60 Hz - 230 V / 50 Hz 25 - 35 kg 80 - 225 Watt N.2 5x20 mm, 6.3 A, type T 0.1 bar (± 0.5 %) Graphic display, 128 x 64 px IP2x +10°C to +40°C 0-80%, non condensing 1/8 width 25 cm, height 42 cm, length 35 cm



Technical data

OUTLET PRESSURE STANDARD PURITY AVAILABLE FLOW RATES RANGE TANK CAPACITY WATER LEVEL INPUT VOLTAGE WEIGHT POWER CONSUMPTION FUSE PRESSURE ACCURACY MICROPROCESSOR CONTROLLED DISPLAY INDEX OF PROTECTION TEMPERATURE **RELATIVE HUMIDITY** OUTPUT PORT CASE DIMENSIONS