

- SION H300 -

HYDROGEN GENERATOR

 *Sion* TECHNOLOGY
MAKE IT POSSIBLE



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THE FIRST HYDROGEN GENERATOR DESIGNED AND MANUFACTURED IN ISRAEL TO PROVIDE LABORATORY NEEDS FOR THE SUPPLY OF HYDROGEN TO ANALYTIC INSTRUMENTATION, SUCH AS AN FID AND NPD DETECTOR IN GAS CHROMATOGRAPH INSTRUMENTS.

THIS GENERATOR IS CAPABLE OF SUPPLYING HYDROGEN TO A GREAT NUMBER OF DETECTORS IN VARIOUS FLOWS AT THE SAME TIME AND ALSO SERVES AS AN IDEAL SOLUTION TO LABORATORIES WITH MANY INSTRUMENTS WORKING CONTINUOUSLY AND/OR ALTERNATIVELY.

THE GENERATOR'S OPERATING PRINCIPLE IS BASED ON PROTON EXCHANGE VIA A UNIQUE MEMBRANE IN DISTILLED WATER AND DOES NOT NEED DANGEROUS ACIDS OR BASES.

ANODE => $2 \text{H}_2\text{O} - 4\text{e} = \text{O}_2 + 4 \text{H}^+$

HYDROGEN CLEAN FOR USE =>
CATHODE => $4 \text{H}^+ + 4\text{e} = 2\text{H}_2$

IN THE SECOND PHASE THE HYDROGEN UNDERGOES DRYING FROM THE WATER BY MEANS OF PASSIVE AND ACTIVE TRAPS TO REACH THE MAXIMUM PURITY.

THE HYDROGEN GENERATOR IS EQUIPPED WITH SMART, MODERN CONTROLS AND SAFEGUARDS TO PRODUCE A SAFE INSTRUMENT FOR LABORATORIES.

THE GENERATOR IS EQUIPPED WITH UNIQUE PROTECTORS INCLUDING:

PROTECTION AGAINST INTERNAL AND/OR EXTERNAL LIQUID HYDROGEN LEAKS IN THE LINE

PROTECTION AGAINST TEMPERATURE RISES IN THE GENERATOR AND/OR LABORATORY

PROTECTION AGAINST A SHORTAGE AND/OR EXCESS OF WATER IN THE TANK

PROTECTION AGAINST EXCESS PRESSURE IN THE SYSTEM.

THIS GENERATOR GIVES THE USER FULL PROTECTION AND PEACE OF MIND FOR RELIABLE, CONTINUOUS, SECURE, PRECISE, CLEAN, AND TROUBLE-FREE WORK FOR AN EXTENDED PERIOD WITHOUT THE NEED FOR DANGEROUS HYDROGEN CYLINDERS.



MAIN DATA

- ★ PURITY OF THE GAS AT THE GENERATOR OUTLET 99.9995% HYDROGEN.
- ★ CAPACITY OF UP TO 300 ML PER MINUTE UNDER PRESSURE OF UP TO 75 PSI (5 BAR).
- ★ SOPHISTICATED LEAK TESTING, INTERNALLY AND EXTERNALLY, CONDUCTED CONTINUOUSLY FROM THE MOMENT THE GENERATOR IS TURNED ON.
- ★ REGULAR MAINTENANCE IS CHEAP AND EASY TO DO.
- ★ ACTIVATION OR STOP TIME IS SHORTEST.
- ★ HYDROGEN IS PRODUCED ONLY WHEN NEEDED AND IMMEDIATELY.
- ★ COLOR TOUCH SCREEN SHOWS ALL THE INSTRUMENT DATA IN REAL TIME.
- ★ EMERGENCY SHUT-OFF TO STOP HYDROGEN PRODUCTION IF NECESSARY.
- ★ WARNING SIREN IN CASE OF PROBLEM.
- ★ PUSHBUTTON SIREN SWITCH-OFF IN CASE OF PROBLEM WITH BLINKING DISPLAY.
- ★ CLEAR PROBLEM DESCRIPTION ON THE COLOR TOUCH SCREEN.
- ★ SEVERAL SPECTACULAR SCREEN-SAVERS WITH THE GENERATOR'S SITUATION DISPLAY AND FULL CONTROL.
- ★ MADE IN ISRAEL – SION CO. LTD.



THE GENERATOR'S INNOVATIVE DESIGN HAS A DISPLAY AUTOMATICALLY CHANGING TO SEVERAL COLOR SCREEN-SAVERS, SPECTACULAR IN THEIR BEAUTY. THIS IS TOGETHER WITH ITS FULL FUNCTIONING AND THE COMPLETE FUNCTIONING OF ITS DEFENSES.



THE GENERATOR IS EQUIPPED WITH A MODERN COLOR TOUCH SCREEN ON WHICH ONE MAY SEE ALL OF THE GENERATOR VARIABLES AND DATA CLEARLY AND EASILY, IN REAL TIME.

TECHNICAL DATA

MAXIMUM HYDROGEN FLOW	300 ML. PER MINUTE
MAXIMUM HYDROGEN PRESSURE AT OUTLET	5 BAR / 75 PSI
HYDROGEN PURITY AT OUTLET	99.9995%
EXIT CONNECTOR FOR HYDROGEN	1/8 INCH OR 1/4 INCH
PURITY OF WATER REQUIRED	LESS THAN 1.0 MICRO SIEMENS
WORK TEMPERATURE RANGE	15°~ 45°C
WATER CONSUMPTION IN FULL ACTION	TO 400 ML/DAY
INSTRUMENT OPERATING VOLTAGE	220-240 VOLTS
MAXIMUM CURRENT CONSUMPTION	TO 400 WATTS
EXTERNAL DIMENSION OF INSTRUMENT	WIDTH 45 CM X HEIGHT 51 CM X DEPTH 61 CM
INSTRUMENT'S OVERALL WEIGHT	ABOUT 29 KG
VOLUME OF THE INTERNAL WATER TANK	4 LITERS



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