



Datasheet 20140905

ROC Rapid Oven Cooler

Description

The LNI SCHMIDLIN SA **ROC** system (Rapid Oven Cooler) is able to quickly cool down the GC oven temperatures. Starting from the 400°C the ROC will help the GC oven to reach the 30°C in less than 6 minutes and 20°C in less than 10 minutes, without using CO2 or liquid nitrogen. This makes the ROC a must that will help each laboratory **to increase the number of measurements per day** and have a **higher profitability and return of investments**. The benefits of the ROC are :

- Better results from analytical instruments
- Better lab efficiency
- Cost saving and simple installation

Functioning principle:

The appliance includes a mechanical structure, a cooling system, and an intelligent electronic system for circulating the process air. Hot air is removed from the gas chromatograph oven through a heat exchanger (cold) placed in direct contact with the process air (hot); the heat exchanger is kept at a low temperature by an direct expansion refrigeration system with air cooled condenser.

Heat exchange takes place in an environment that is thermally insulated. The constantly low temperature of the heat exchanger isensured by a thermal storage system, consisting of a mass of ice that forms during the quiescent phase (process air OFF) and meltswhen absorbing heat (process air ON).

Applications



As shown in the Table, highlighting the comparison on one of the gas chromatographs tested, an oven temperature of 30°C can be reached in less than 6 minutes, starting from a 350°C isotherm and with an ambient temperature of around 24°CAn oven temperature of 20°C can be reached in less than 10 minutes, without having to use expensive and complex CO2 or liquid nitrogen cooling systems.

The ROC can also reach sub-ambient temperatures between 12 and 15°C, so as to allow specific EPA method analysis for determining volatile organic compounds, noble gases or for simulated distillation. The Rapid Oven Cooler can be installed on any GC and does not require any special maintenance by the user.

The table shows the efficiency of the ROC system when it is installed on a GC at an ambient temperature of 24°C.



Specifications

Rated current :	0.8 A
Electrical insulation :	class 1
Index of protection :	IP20
Cooling capacity	280W
Refrigerant type and content :	R134a - 89g
Water storage tank :	3 liters
Operating conditions :	Temperature: 5/35°C, Humidity: 10/90%
Storage conditions :	Temperature: -20/55°C, Humidity: 5/95%
Sound level :	< 54 dbA
Fittings :	connectable to the most common GC
Power requirements :	230V/50Hz or 100V/60Hz
Power consumption :	500 Watt
Included compressor :	1
Net weight :	35 Kg
Shipping weight :	40 Kg
Dimentions WxDxH :	30x63x57 cm
Shipping dim WxDxH :	38x70x84 cm

Options – Accessories – Spare parts

Models :

6900 21 670	ROC 230V/50Hz
6900 21 672	ROC 115V/60Hz

Interface :

6900 21 679.5	Interface for Agilent models 6890 - 7890
6900 21 679.6	Interface for Varian CP3800 and series 400
6900 21 679.7	Interface for Thermofisher Trace
6900 21 679.8	Interface for Perkin Elmer 400-500
6900 21 679.9	Interface for Dani Master
6900 21 679.10	Interface for Shimadzu



