

Design and Development of Autoclaves

Autoclaves are used to manufacture airworthy composite components under suitable settings of pressure, vacuum and temperature. CSIR-NAL now has the capability in building large computer controlled autoclaves with the associated subsystems. MoU has been signed with a private industry for manufacturing and marketing of autoclaves.



India's largest 4.4m x 9m autoclave was commissioned at NAL in 2009. A high temperature, high pressure autoclave capable of reaching 350°C and 15 bar(g) was also commissioned in 2010.

Specifications:

Dia. of working space	: 4,400 mm	Operating weight	: 90,000 kg
Length of working space	: 9,000 mm	Maximum charge	: \approx 12,000 kg of steel
Working pressure	: 7.14 kg/cm ²	Temp. uniformity	: \pm 2°C
Working temperature	: 250° C	Rate of heating	: 0-5° C/min
Working capacity	: 2,14,000 litres	Rate of cooling	: 0-3° C/min
Control system	: Dual computer, Recorder, PLC and PID controller based, in-house developed software.		



Contact:

The Director, CSIR-National Aerospace Laboratories
PB 1779, Bangalore 560 017, India. www.nal.res.in
Tel: 080-25270584, 25265579 director@nal.res.in

