Central fabrication facility

IIT Madras

A platform for Product development and prototypes

Central **F**abrication **F**acility (CFF) started in January 2011 and has successfully completed fabrication works and many research projects of faculty members of various departments. The facility has minimized the travails of research scholars and project staff who have hitherto been seeking such services outside the campus.

CFF is engaged in core sectors of manufacturing and our integrated capabilities span the entire spectrum of design to deliver. Apart from manufacturing CFF supports consultancy, outsourcing, and purchase assistance with local operations. With over five years of a strong customer focused approach and a continuous quest for quality, CFF proves to be an important resource for research projects.

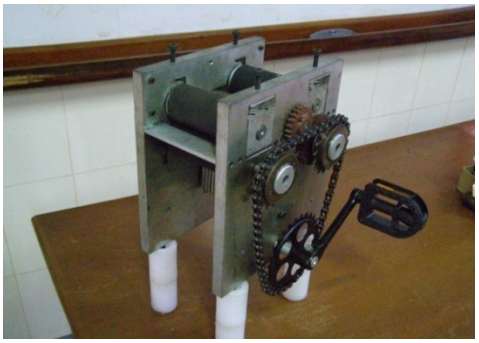
CFF experiments ideas with many innovation and is backed by a highly driven and dedicated team of technical staff and project technicians.

Backed by CWS and ICSR, CFF manufacturing foot print extends across all departments, centers of IIT Madras, Research park and extends to outsourcing for special facilities.

Every aspect of CFF activities is characterized by professionalism and high standards of administrative governance. Sustainability is embedded in to our long term growth and we are making efforts to continuously improve from the feedback received from our customers.

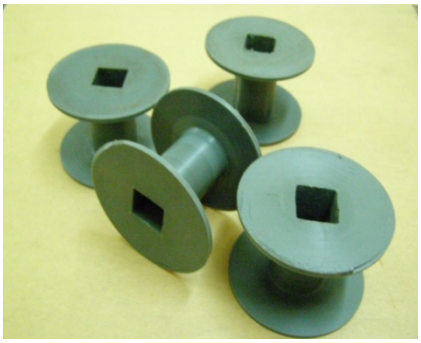
Few of our contributions are listed below.

1. **Stress cracker tank** for Civil Engineering under Dr.Dallinaidu
2. **SS Condenser Vessel** for Mechanical Engineering under Dr.S K Das
3. **Sensors mount stand** for Ocean Engineering under Dr.P Shanmugam
4. **Hydro Turbine** for Electrical Engineering under Dr.Ashok Junjunwala
5. **SPAR** for Ocean Engineering under Dr.Nallayarasu
6. **Optical fiber holders** for Electrical Engineering under Dr.Pramitha
7. **Two stage Gun** for Aerospace Engineering under Dr.Rajesh
8. **Car simulator set up** for Engineering Design under Dr.Venkatesh Balasubramaniam
9. **Micro channels** for Chemical Engineering under Dr.Pushpavanam
10. **Combustion Chamber** for Mechanical Engineering under Dr.TNC Anandh
11. **Test specimens** for Metallurgy under Dr.Janakiram
12. **Annular flume** for Civil Engineering under Dr.Venuchandra
13. **SS Tables** For Electrical Engineering under Dr.Nandhitha Das Guptha
14. **MS and FRP dust bins** for IIT Madras
15. **Electrodes** for Physics under Dr.Aravindh
16. **Aerofoil** for Mechanical Engineering under Dr.BVSS Prasadh
17. **SS Test section** for Aerospace under Dr.S R Chackravarthy
18. **Reflectors** for Physics under Dr.A R Ganesan
19. **Palm leaf cutter** for RUTAG under Dr.Devendra Jalihal
20. **Scrubber** for Civil Engineering under Dr Shiva Nagendra



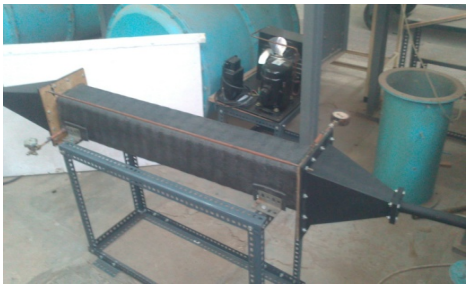
Palm leaf cutter, RUTAG

Test cell, EE



Nylon spool, RUTAG

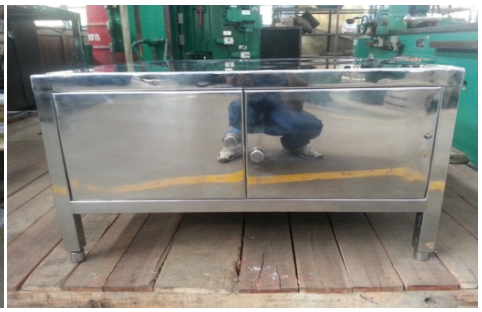
Manipulator, ED



Flow channel, ME

Car simulator, ED

SS condenser vessel, ME



SS Tables, EE

Dust bins, IIT Madras

Hydro turbine under construction

Fuel chamber, AM

3D Apparatus AE

SPAR, OE

Stress cracker tank, CE

Heater assembly under construction

SS Condenser vessel, ME

Multiflow chamber, ME

SPAR, OE

Two stage gun can with stand 60 bar pressure successfully tested in AE

Combustion chamber outsourced by CFF for ME

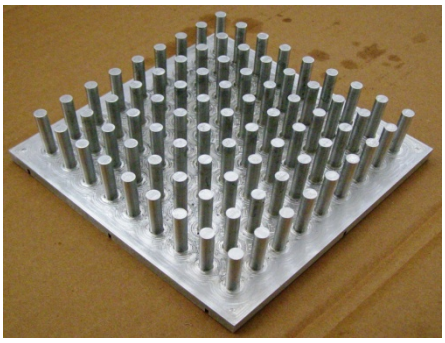
Control panel fabrication

Projectiles for AE

SS Test section, AE

Heater Assembly, ME

Aero profile, ME



Pin array, ME

Optical fiber holder, EE

Optical fiber holder, EE

Tiny moulds, ED

Tiny moulds, ED

Tiny moulds, ED

Tiny moulds, ED

Tiny moulds, ED

Tiny moulds, ED

Tiny moulds, ED

Tiny moulds, ED

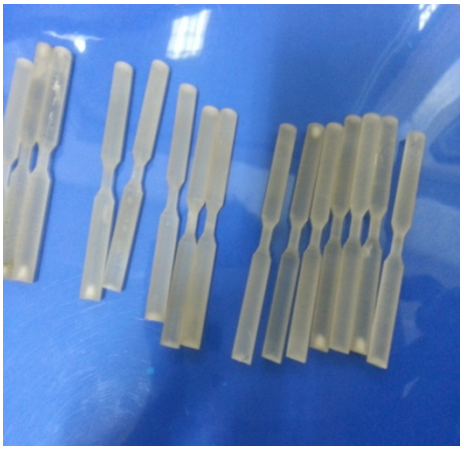
Tiny moulds, ED

Calibrator gauge, Physics

FRP dust bins, IIT Madras

Propeller modification< OE

Sensors mount, Physics

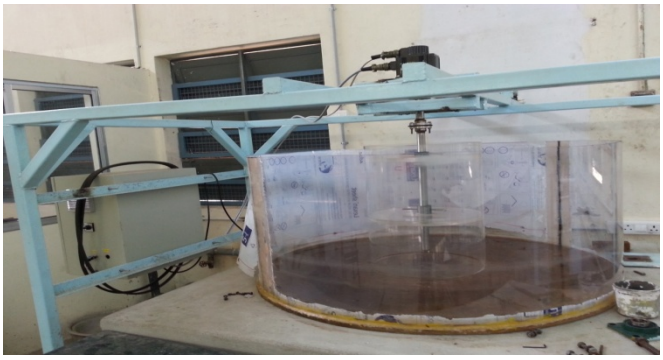


Tensile specimen, AM

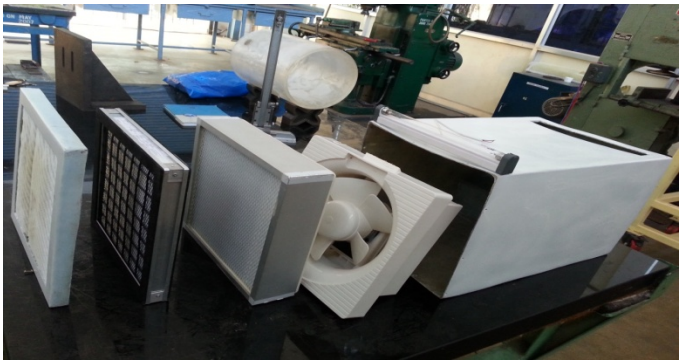
SPAR, OE

Robot platform, CFI

Sensors stand to mount on boats, OE



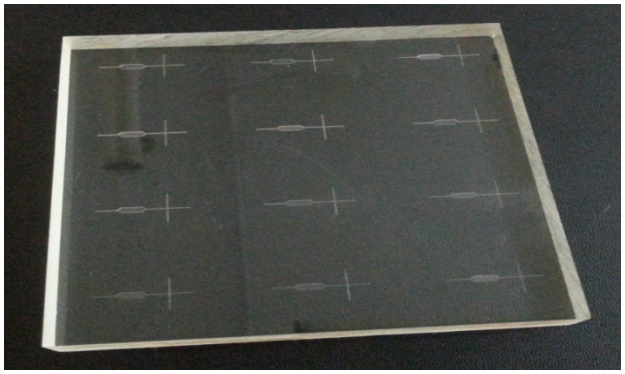
Annular flume, CE



Indoor air purifier, CE

Granulator, Chemical Engg

Indoor Air purifier, CE



Micro channels, Chemical Engg

Electrode assembly, Physics

Dust bins for IIT Madras

Micro channel, ME

Scrubber under progress

Scrubber, CE

Central Fabrication Facility (CFF)

Project coordinator
Dr N.Rameshbabu

Committee members
Dr A.Ramesh
Dr S.R.Chackravarthy
Dr G.Balaganesan

Staff coordinator
N.T.Sasikumar
4967/9444429029
sashi@iitm.ac.in


Flow Modifier, Dept of Mechanical Engineering. Non standard acrylic and FRP blades.


Structural set up for Flow modifier, Mechanical Engineering.


Compression Test structure, Department of Civil Engineering.


Creep testing structure, Department of Civil Engineering.


Impact testing of Honey comb structure for ISRO, Mechanical Engineering.


Dust Feeder, Department of Applied Mechanics.


Simulation chamber, Department of Civil Engineering.


Monkey proof Dust bins, Bhadhra Hostel.

Heat Chamber, Department of Mechanical Engineering.

Cable Tension testing machine, Department of Electrical Engineering.

Breathe easy: IIT-M develops low-cost air purifier for houses

U.Tejonmayam
@timesgroup.com

Chennai: With rising pollution levels, the time is not far off when an air purifier becomes an essential home appliance. And a team of researchers at IIT Madras are ready with an affordable one.

The team has developed a sensor-based indoor air purifier that promises to reduce the pollutant load including microbes in the air. Some companies have been marketing air purifiers that cost ₹15,000 upwards for a small room. Made out of commonly available low-cost materials like activated charcoal and ultra-violet light, the product from the IIT stable promises an affordable alternative.

Chennai, which has an air quality index of around 55, is among the 'good' cities in terms of pollution; Delhi, with an index of 313, falls under the 'very poor' category.

Air OK Technologies, a faculty startup launched under the IIT-M incubation cell will soon commercialise the device.

HALE & HEALTHY

The sensor-based indoor air purifier is portable and has been made using a cost-effective 3-layer technology

LAYER 1 | It's a bag made of muslin. It acts **as pre-filter to remove large particles**

LAYER 2 | Contains **charcoal made from burnt wood.** It absorbs finer particles

LAYER 3 | It has ultra-violet light that **kills microbes**

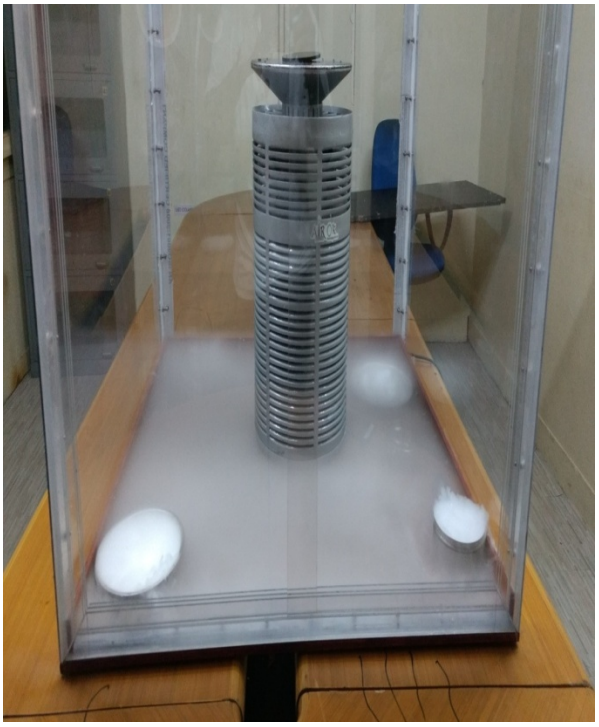
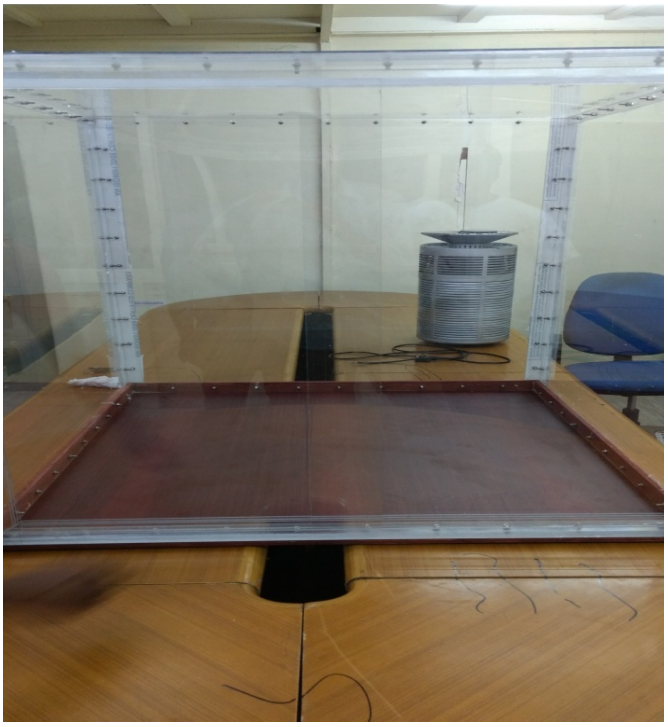
Among the first domestic buyers could be people with asthma and such respiratory diseases. It is also designed to fit in any place that needs a sterilised environment such as a hospital or highly polluted areas like basement parking lots, buildings facing roads and dusty localities.

The purifier works on a simple three-layer technology similar to that of a water purifier.

▶ Vehicular emissions, P 17

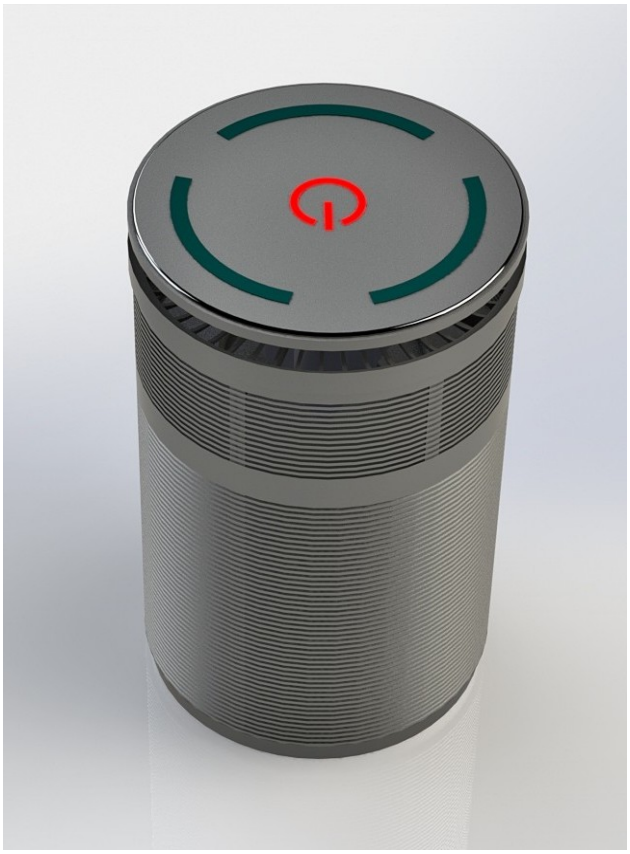
Prototype of Air purifier for Department of Civil Engineering.

Working model of Air Purifier for Research Park.

Smoke chamber for Air ok Technologies, Research park


Commercial model prototype and Filter for Air ok Technologies , Research Park.




Air Purifier Virtual and Prototype developed in CFF


Nano Air purifier for Air Ok technologies, Research Park.


Expendable Shelter 16 ft x 12 ft structure for Research Park


Fiber spinning mill for Fibsol Technologies, Research Park.

Dust bins for Owzone

Carbon fibre 3D printing machine accessories for Fab heads in Research Park.

Central Fabrication Facility

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Few of our Research park existing start up clients

Airok Technologies pvt ltd

Fibsol technologies pvt ltd

Fabheads pvt ltd

Axon technologies pvt ltd