

Lamiflow®

AIR-TO-AIR HEAT EXCHANGER

Extracting heat from the exhaust of dryers of coating, laminating, printing and other machines and using it to pre-heat the inlet fresh air is another green initiative from AxisValence business unit of A.T.E. Enterprises (P) Ltd. . The Lamiflow® saves heat energy and provides operational savings with attractive pay back periods.

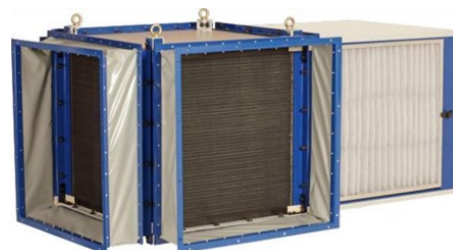
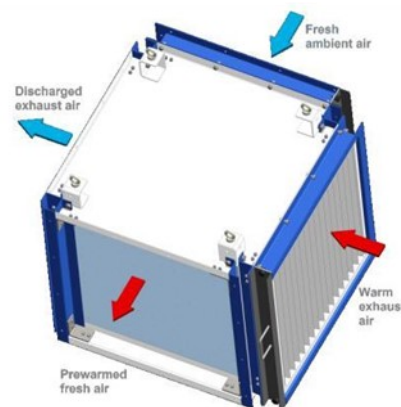
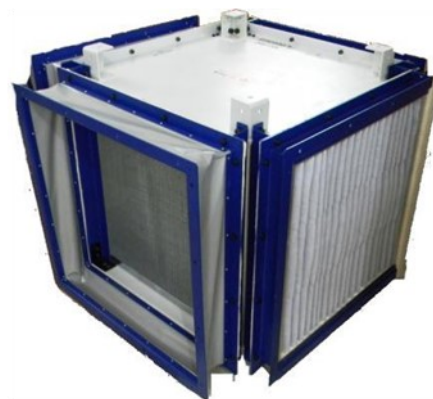
The Lamiflow® is a flat plate type heat exchanger, wherein the exhaust and fresh air streams cross, without coming in contact with each other. The heat exchanger comprises multiple, thin-walled, separated plates with large surface areas that allow air to flow for effective heat transfer, with minimal pressure drop.

Sensible energy from the warm exhaust air is thus transferred to the relatively cooler inlet air, without any mixing of the two air streams.

Thermal energy which was hitherto waste is recovered, which reduces the overall cost of heating inlet air that it required for the process.

The benefits of working with AxisValence, an A.T.E. group company, begin with our distinctive position in the market. We understand your application by ascertaining air flow rates, temperature, allowable pressure drops, dimensional constraints, etc.

We then apply our knowledge and experience to offer you a suitable solution without affecting the process. This is in the form of a tailor made system solution that includes, apart from the Lamiflow, filters, air flow duct transition pieces, temperature sensors, indicators and related accessories.



A.T.E. ENTERPRISES PRIVATE LIMITED

(Business Unit: AxisValence)

Survey no. 241 Sarkhej Bavla Highway (NH 8A), Village Sari

Taluk: Sanand, Ahmedabad 382220. Gujarat - India

W: <https://www.ategroup.com/axisvalence/>

T: +91 2717 699610 —17 E: contact@axisvalence.com

CIN U51503MH2001PTC132921



AxisValence delivers cost saving solution to a leading convertor in western India

An attractive Investment: Reduce heating costs by recovering heat from hot exhaust air of the drying process

Industry:
Specialty coatings

About the company :

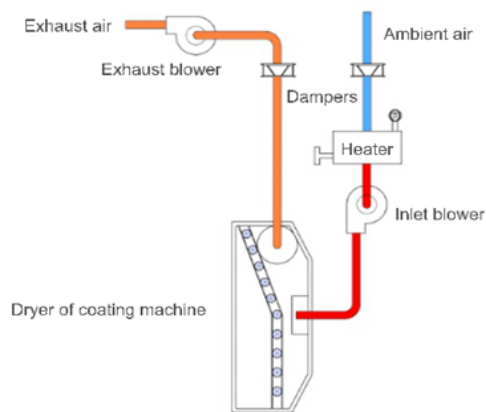
A leading convertor in western India has a state of the art specialty coating line where they process polyester (PET) films 10 - 350 micron thickness.

Conventional drying process :

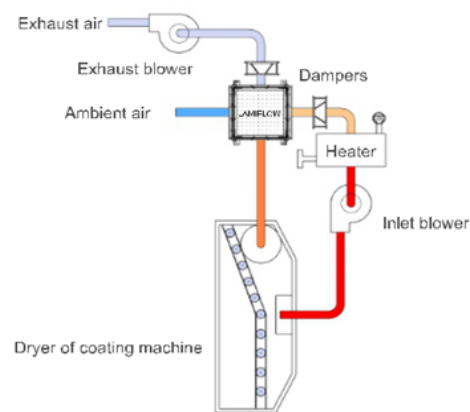
The convertor coats films with a uniform thickness of a special solvent based material. The coated film is then passed through a drying chamber where thermic fluid is used for heating. Waste hot air that is used for drying is exhausted from the dryer at 155°C.

New Drying Process :

AxisValence approached the convertor and suggested they evaluate the feasibility of energy recovery devices to reduce heating costs. The AxisValence team observed that 80% of the energy of hot air was being wasted through the exhaust. To extract a good part of the heat, Valence proposed the Lamiflow® heat recovery system which is a cross flow, air-to-air heat exchanger. It comprises multiple, thin, slightly separated plates that provide large surface area for effective heat transfer with low pressure drop.



Conventional drying process without heat recovery



New drying process with Lamiflow heat recovery

The Lamiflow® heat recovery system is installed in a way that the two air streams- ambient air and hot air (exiting dryer) - cross each other without mixing. The heat extracted from the exhaust air is effectively used to preheat the fresh air before it enters the heater. Thermal energy costs are thus reduced by decreasing load on the heater.

Soon a happy customer :

The customer is very happy with the cost savings and the resultant pay back of 11 months. They are now exploring other areas for waste heat recovery through AxisValence.