

High Pressure FRP Fans for the Pharmaceutical Industry

Details	
Market	Pharmaceutical
Application	Reactor Vent to Thermal Oxidizer
Exhaust Volume	200-800 ACFM
Exhaust Temperature	100°F
Static Pressure	10 to 35" W.C.
Contaminants	Chlorinated VOC's
Materials of Construction	FRP
Special Features	±14.5 psi design +99.9% sealing Variable Flow Variable Pressure Spark-Proof < 85 dBA

A large pharmaceutical company needed to vent a number of batch reactors. The reactor system vented chlorinated hydrocarbons and other corrosive chloride compounds to a thermal oxidizer system. The application required a chemical and spark resistant fan capable of achieving high static pressure at variable volume with a housing design suitable for upset pressures up to ± 14.5 psi. Ceilcote APC solved this problem by providing a custom designed [FRP fan](#) with a conductive graphite coating. Special shaft seals were provided to limit any shaft leakage in order to maintain the thermal oxidizer design flows. In addition, the system also required variable flow and pressure capabilities based on the number of reactors in service at any one time. This was accomplished using by providing a direct drive arrangement for use with a VFD. The final customer requirement was an operating sound level below 85 dBA. To meet this sound level, the fan housings were covered with 2" polyurethane foam and overlaid with FRP.



**Direct Drive
Model CHP-6 FRP Fan**

Product Literature:

- [Bulletin 11-1](#)
- [Bulletin 11-7](#)