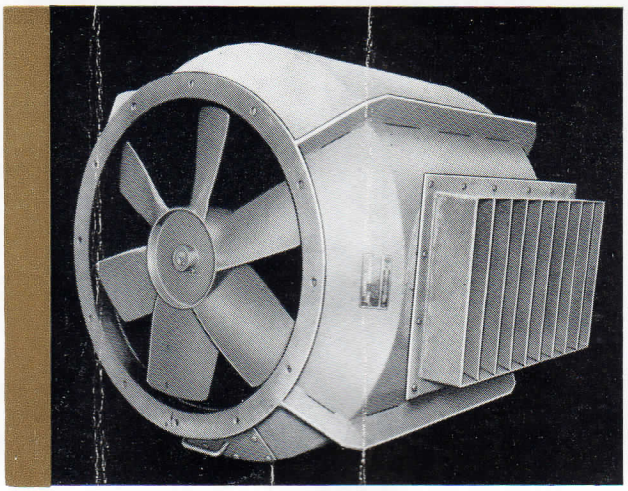
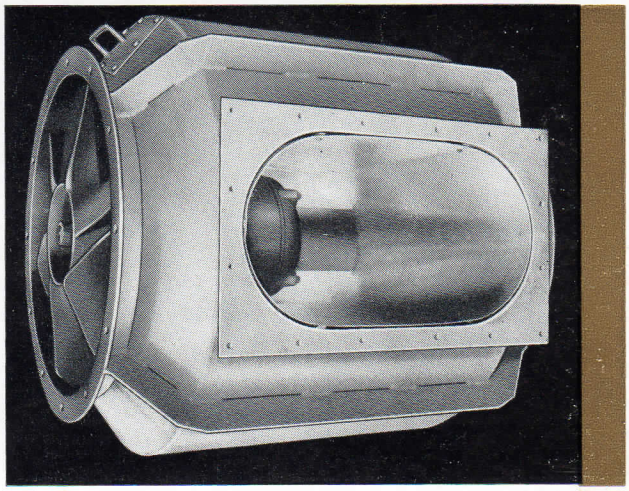
SHELDON BIFURCATORS





Bifurcators have weatherproof louvres on both sides of the motor chamber, allowing free access of uncontaminated air. The illustration with this louvre removed shows the aluminum lining and the complete isolation of the motor from exhaust gases.

The Sheldon bifurcator is a tubeaxial fan with a specially designed housing. This housing finds its application in the handling of high temperature gases, dust-laden atmospheres and in the exhaust of corrosive fumes. It is used by chemical industries, foundries and steel mills, and may be used as an induced draft fan for moderate pressures.

The performance curves of a bifurcator have the same typical shape as other axial flow fans. Therefore, if they are to be operated in parallel they should be carefully selected in order that operation on the stable portion of the performance curve is assured.

Any of the Sheldon standard tubeaxial wheels—design 62 (2-blade), 74 (4-blade), 86 (6-blade), or 78 (8-blade) may be used. The bifurcator consists of one of these standard wheels mounted in a split housing. This allows the motor to be mounted in a cooler, uncontaminated atmosphere having no contact with exhaust gases.

The wheel and housing may be fabricated of steel, stainless steel, Monel metal or any other metal which will resist the chemical action of the fumes. Any of the listed coatings may be used within the peripheral speed at which the material will slip. Lead and rubber coatings are limited to a tip speed of 12,000 feet per minute.

Applications encountered in the chemical industry or industries using chemical processes indicate the use of acid-resistant fans to handle air with fumes, vapors and gases of varying concentrations.

MATERIALS AND LININGS FOR EXHAUST FANS, DUCTS AND HOODS

	Acetic Acid	Alkaline Cleaning (Degreasing)	Anodizing (Oxalic Acid)	Chromic Acid	Decarbonizing Agents	Hydrochloric Acid	Hydroflouric Acid	Nitric Acid	Phosphoric Acid	Sulphurous Acid	Sulphuric Acid
Aluminum	G	F	G	F							
Galv. Steel		E			E						
Cast Iron		E				G		G			G
Monel	F		E			F	F			G	
Lead				G						G	G
Everdur	E	E			E	G	G		G	G	G
Stainless	G	G		G				G	F	G	F
Silicon Iron						F		G	G		G
Hard Rubber			E			E					E
Neoprene		E		G		E		E			E
Natural Rubber	G			G		E	E			G	
Saran Rubber	G	G		G		E	G	F	E	G	G
Koroseal		G	E			E	G	G	G	G	G

E: Excellent G: Good F: Fair

NOTE: Chemical resistance decreases with a rise in temperature. For high temperatures and high acidic content, please ask for recommendations. Polyester resins, reinforced with glass cloth make an excellent protective coating against acid fumes. When applied to fan blades they have a very strong bond, and can be run at higher tip speeds than rubber coatings. For shipboard use, wheels of Monel metal or hot galvanized with zinc chromate paint are recommended.