



### Fixed Turbex Systems

#### FT1-500P/LNG & FT2-500P/LNG Cryogenic Applications

High expansion foam systems represent the most effective protection for such specialised and severe cryogenic risks as LNG (Liquified Natural Gas) and LPG (Liquified Petroleum Gases).

Any foam generators designed for standard industrial applications will not have the performance requirements necessary to meet these risks, so Angus Fire have developed a special LNG Fixed Turbex System to meet this extremely demanding application.

- Reliable
- Minimal maintenance
- Rugged construction



# ANGUS FIRE

Engineered to the highest standards for exceptional reliability and minimal maintenance, the FT1-500P/LNG and FT2-500P/LNG Fixed Turbex Systems have many special features.

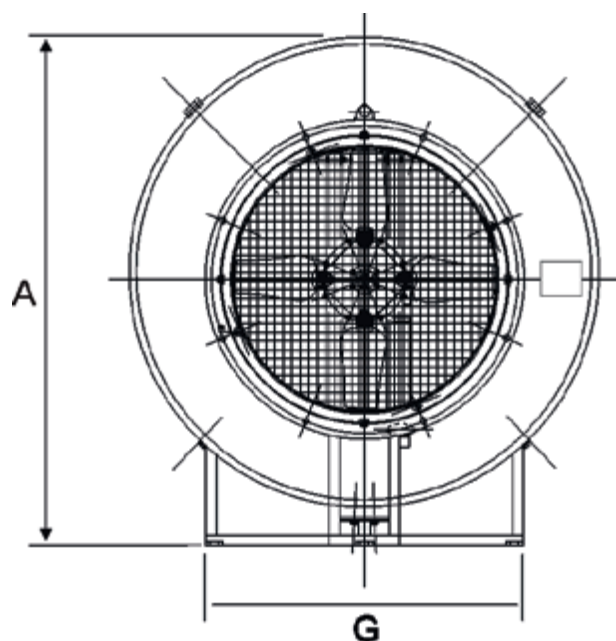
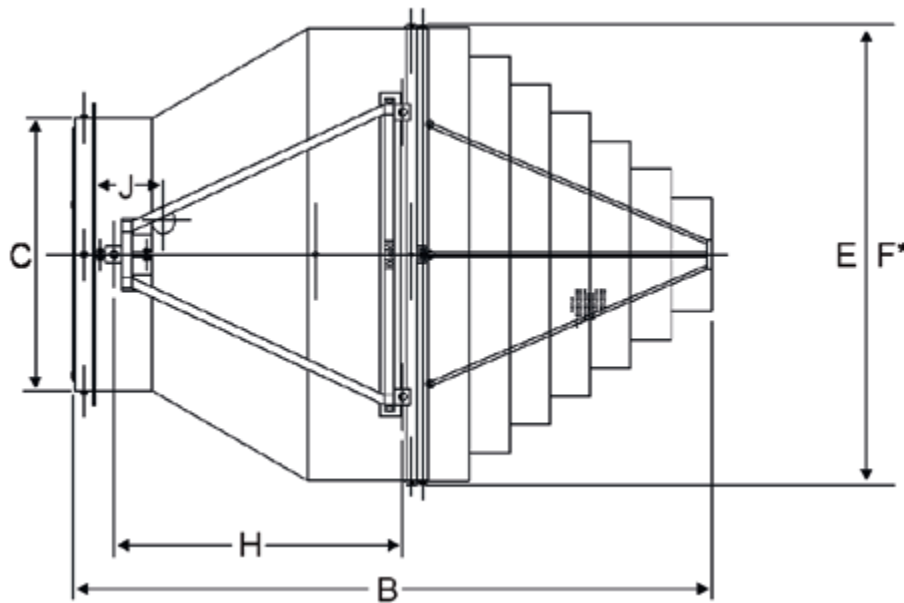
The body, foam making net and fan all benefit from a special boiler grade of stainless steel designed to withstand continuous high temperatures without a reduction in material strength or risk of intergranular corrosion. The complex structure of the foam making net is specially supported to avoid distortion and the tubular support frame has holes drilled to prevent moisture buildup and relieve air expansion when heated. Special glass rope lagging insulates the water turbine and three lifting lugs are provided to assist with site installation.

Rugged construction and careful choice of materials provides exceptional corrosion resistance against highly saline, humid and high temperature environments.

The high efficiency design of the Angus LNG Fixed Turbex System has enabled these units to exceed the severe requirements of the National Fire Protection Association NFPA 11A Fire Exposure Test. Performance is unaffected even after exposure to temperatures up to 1000°C during the 5 minute preburn period of this test.

Optional stainless steel ducting can be provided to channel a supply of fresh air to these units and also direct the foam generated down into the bunded area or containment pit, whether for vapour suppression or fire control purposes. Both LNG Fixed Turbex Systems must be fed with a premix solution of Expandol foam to produce bubbles of nominal expansion 500:1 which has been shown to be highly effective in controlling such cryogenic risks.

System design expertise from Angus Fire is also available to meet these exceptionally severe risks.



Performance (typical at 18°C)									
	FT1-500P/LNG (Premix)					FT2-500P/LNG (Premix)			
	Inlet Pressure	Flow L/min	Exp. Foam Output m3/min#	Exp. Ratio	K Factor §	Flow L/min	Exp. Foam Output m3/min#	Exp. Ratio	K Factor §
	3 bar.g	138	82	600:1	80	304	155	510:1	176
Inlet Pressure	5 bar.g	179	100	560:1	80	393	196	500:1	176
	7 bar.g	211	114	540:1	80	465	214	460:1	176

§ Flow (l/min) =  $K\sqrt{P}$  where P = inlet pressure (bar.g.)

• Conversion factor to US galls/min = l/min x 0.264

# Conversion factor to cu ft/min = m3/min x 35.64

Specification		FT1-500P/LNG	FT2-500P/LNG
Dimensions	A (mm)	942	1193
	B (mm)	1240	1580
	C (mm)	690	690
	D* (mm)	1118	1118
	E (mm)	884	1138
	F* (mm)	1118	1372
	G (mm)	500	704
	H (mm)	575	715
	I (mm)	119.5	119.5
	J (mm)	85	85
Inlet Connection	11/4" BSP Taper Male		
Materials	Body	Stainless steel to BS970 316L	
	Foam Making Net	Stainless steel to BS970 316L	
	Turbine	Gunmetal LG2	
	Nozzle	Gunmetal LG2	
	Fan	Stainless Steel to BS970 316L	
	Screws, Nuts, Fasteners	Stainless steel A2	
Insulation	Glass Rope Lagging		
Recommended Induction rate	Expandol at 3%		

\* Minimum diameter requirements when ducting is used (inlet D, outlet F).