

Turbex Water Turbine High Expansion Generator



Angus HI-COMBAT Turbex High Expansion Foam generators are designed to produce large capacities of high expansion foam, up to 7,000 cu. ft. (200 cu. m.) per minute for fast and effective flooding of large and inaccessible spaces with minimal water consumption and subsequently minimal water damage.

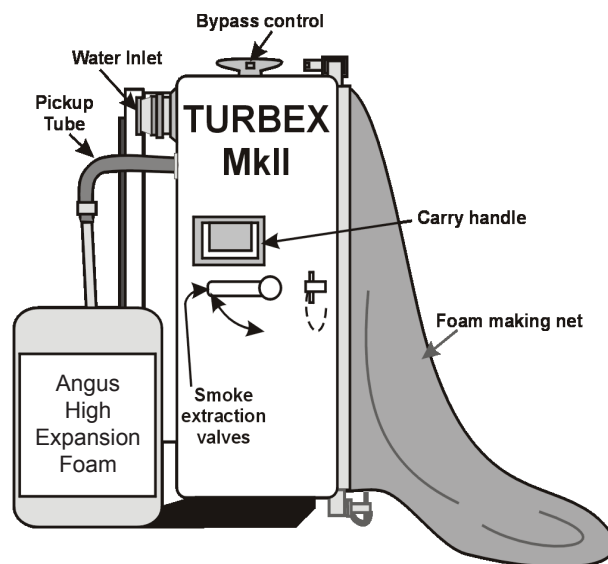
The unit is also capable of rapid smoke extraction (SX), positive pressure ventilation and removal of foam once the fire is extinguished.

HI-COMBAT Turbex generators are ideally suited to a wide range of applications. These typically include filling enclosed areas with foam where Class A materials and flammable liquids may be stored, such as basements, cellars, tunnels, roof voids, cable ducts, warehouses and mines. Large quantities of smoke can be extracted at the rate of 10,00 cu. ft. (285 cu. m.) per minute by the Turbex at 102 PSI (7 Bar) inlet pressure with the special smoke extraction ducting. This facility can also be used for the removal of foam bubbles once the incident is over.

Each HI-COMBAT Turbex utilizes forced air technology and is powered by an enclosed maintenance free water turbine driving an aerofoil fan, so that only a pressurised water supply is required for operation with Angus Expandol High Expansion Foam concentrate, consumed at typically 1.2 GPM (4.5 LPM). A special built-in filter system protects the turbine and eductor from blockage due to solid particles in the water supply.

A unique by-pass system allows performance to be maintained when working against high back pressures. Under suitable conditions foam can be produced to heights of around 26-33 ft. (8-10 m) with the by-pass open.

By control of both inlet pressure and by-pass valve, the type of foam produced can be varied in the range of 500-1100:1 expansion ratio. 500:1 is recommended for any fires involving flammable liquids and general purpose applications, while 1000-1100:1 is suggested only for back pressure and Class A material applications like packaging plants where minimal wetting is required.





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FOAM PERFORMANCE DATA (Typical)

	Inlet Pressure PSI (Bar)	Total Water Flow GPM (LPM)	By-Pass Flow GPM (LPM)	Water for Foam Production# GPM (LPM)	Expanded Foam Produced*		Expansion Ratio**
					Cu.Ft./Min	Cu.M./Min	
By-Pass Closed	58 (4)	48 (180)	Nothing	48 (180)	3000	85	500 to 700
By-Pass Closed	87 (6)	59 (225)	Nothing	59 (225)	4050	115	500 to 700
By-Pass Closed	102 (7)	65 (245)	Nothing	65 (245)	4750	135	500 to 700
By-Pass Closed	116 (8)	71 (270)	Nothing	71 (270)	5300	150	500 to 700
By-Pass Closed	145 (10)	77 (290)	Nothing	77 (290)	6700	190	500 to 700
By-Pass Fully Open	58 (4)	52 (195)	18 (70)	33 (125)	3350	95	800 to 1100
By-Pass Fully Open	87 (6)	65 (245)	24 (90)	41 (155)	4750	135	800 to 1100
By-Pass Fully Open	102 (7)	71 (270)	26 (100)	45 (170)	5450	155	800 to 1100
By-Pass Fully Open	116 (7)	77 (290)	28 (105)	49 (185)	6150	175	800 to 1100
By-Pass Fully Open	145 (10)	83 (315)	30 (115)	53 (200)	7050	200	800 to 1100
Smoke Extraction Mode	58 (4)	38 (145)					
Smoke Extraction Mode	102 (7)	49 (186)					
Smoke Extraction Mode	145 (10)	60 (227)					

Operating pressure range 4-10 bar g. Std. in/outlet couplings are 21/2" BS Instantaneous, but other connections are available.

Conversion factor to US Galls/min = l/min x 0.264; to IMP Galls/min = l/min x 0.22.

* Conversion factor to cu ft/min = m3/min x 35.64 Performances may vary with ambient temperature.

** Expansion ratio is dependent on operating conditions.

GENERAL MATERIAL SPECIFICATION

Body	Yellow Chemical Resistant UV Stabilized GRP Resin
Aerofoil Fan and Net Retainer	Black Thermoplastic Coated Aluminium Alloy
Water Turbine and Inductor	Natural Gunmetal
Piping	Black Thermoplastic Coated Copper
Ball Valves and Nozzles	Black Thermoplastic Coated brass
Handles and Fan Guard	Black Thermoplastic Coated Mild Steel
Foam Making Net	Woven Nylon and Polyester Ribbon
Optional Extras:	
Expendable Foam Ducting (AE00767)	Polythene in 100 Ft (30 M) Length
Smoke Extraction Ducting (AE01003)	Nylon Re-Inforced Polythene in 25 Ft (7.6 M) Length
Wheeled Turbex Version Available	

DIMENSIONS

Approximate Dimensions In (mm)	35W x 36H x 19D (902W x 927H x 495D)	Net Wt.: 121 Lb. (55Kg.)
Typical Shipping Specification In (mm)	39 x 40 x 24 (991 x 1016 x 610) 1 Case	Gross Wt.: 161 Lb. (73 Kg.)

EMERGENCY FOAM SERVICE Call +1 610-363-1400 – 24 hours a day, every day

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