CAFSystems™

ECLIPSE™ GEN 2.0

When it comes to compressed air foam systems, nothing can match the ease of use of the ECLIPSE™ GEN 2.0 CAFSystem. ECLIPSE™ GEN 2.0 incorporates a powerful integrated air compressor system and Waterous engineered FOAMULATORS™ to provide a reproducible homogenous, micro-cellular, continuous bubble stream. A characteristic of each ECLIPSE™ GEN 2.0 is the pre-set flow rate and pre-set pressure for water and air. The operator does not have to adjust flows and pressures during operation.

WATEROUS SPLIT-SHAFT PUMP

The ECLIPSE™ CAFSystem is currently available on Waterous CS, CSU, CX and CMU midship pumps with split-shaft transmissions.

CS Flow Specs:
750, 1000 and 1250 GPM @ 150 psi
(3000, 4000, 5000 l/min @ 10 bar)

CMU Flow Specs:
1250 to 2250 GPM @ 150 psi
(5000 to 9000 l/min @ 10 bar)

CSU Flow Specs:
1250 to 2250 GPM @ 150 psi
(4732 to 8517 l/min @ 10 bar)

CX Flow Specs:
750 to 1500 GPM @ 150 psi
(2839 to 5678 l/min @ 10 bar)

150 CFM RAND AIR COMPRESSOR

- Quiet, efficient and dependable rotary screw compressor
- 150 SCFM (4.25 m³/min)
- Toothed-belt drive requires no lubrication or maintenance

AQUIS™ 3.0 FOAM PROPORTIONER

- 12 or 24V, electric motor
- Rated at 3.0 GPM @ 150 PSI (11.35 l/min @ 10 bar)
- Non-corroding Brass Pump
- Sensors detect water temperature and flow
- Foam control provided by TELLURUS™ Panel

WATEROUS FOAMULATORS™

A characteristic of each FOAMULATOR™ is the pre-set flow rate and pre-set pressure of water and air. The operator does not have to adjust flows and pressures during operation. ECLIPSE™ GEN 2.0 uses a stand-alone FOAMULATOR™ for each simultaneously operated discharge outlet. Two or three 2" FOAMULATORS™ are available. These are specially developed devices in which the ECLIPSE™ GEN 2.0 extinguishing agent will be generated. The FOAMULATORS™ include all necessary elements to create Wet Foam, Dry Foam, Foam only, Water only or Air only (Air only not available in Europe per EN Standards).

- Solution Pressure set to 8.3 bar (120 PSI)
- Air pressure set to 3.40 m³/min (125 CFM)
- Non-return valves for water and air
- Mixing station
- Wet Flow using 1-3/4" Hose - 246 l/min (65 GPM)
- Wet Flow using 2-1/2" Hose - 322 l/min (85 GPM)

- HI-RISE Option (Requires third Foamulator)
  Third Foamulator operates at Higher Pressure
- HI-FLOW Option (Requires third Foamulator)
  Third Foamulator operates at Higher Capacity.

TELLURUS™ DIGITAL CONTROL SYSTEM

- 8" Screen Size
- 1500 NITS Brightness
- 13:1 HACR (High Ambient Contrast Ratio) for easy daytime sunlight readabillity
- Sealed to IP-69K Standards
- Entire Screen Assembly meets or exceeds IP-67 Standards
- Capable of gloved-operation in a water spray environment

SPECIFICATIONS: ECLIPSE GEN 2.0 CAFSYSTEM

Mixing Pressure Control Valve

The **ECLIPSE™ GEN 2.0** uses an independent, pressure regulation, which keeps constant mixing pressure in the mixing station of the **FOAMULATORS™.** This pressure regulation allows a variation of pump discharge pressure above the minimum working pressure of the **ECLIPSE™ GEN 2.0** without disrupting the function of the **ECLIPSE™ GEN 2.0** systems or changing the consistency of the extinguishing agent.

Air Compressor

Air end with tapered roller bearings and triple lip shaft seal, oil-flooded, rotary screw type, sized to supply 150 scfm (4.25 m^3/min) at a minimum of 125 P.S.I.G (8.6 bar).

Pneumatic Modulating Inlet Valve

The air compressor is controlled by the pneumatic modulation inlet valve mounted on the air end. The pneumatic modulating inlet valve controls air delivery while maintaining constant pressure.

Fixed Air Pressure Operation

The compressor supplies a fixed air pressure supply to the foam generators at 125 PSI (8.6 Bar). Pressure balancing systems are not used or required.

- Fixed - Air pressure defaults to manual setting on compressor mounted control valve.
- Unload - Air pressure reduced to 40 P.S.I.G. (2.75 bar) for standby operations or when water only from the pump is required

Air Compressor Drive

The compressor is driven off the back of a standard Waterous pump transmission. The compressor drive is direct. The compressor shall be run in unload mode for pump testing and high-pressure pump use. Power is transferred via a synchronous drive “toothed belt” with an adjustable tensioner. The system is designated to operate the air end at rated capacity when the fire pump is developing 130 to 140 P.S.I.G. (9 to 9.7 bar) in a “no flow” state.

Air Compressor Oil System

A spin-on, full-flow oil filter unit is part of the system to control oil flow to the cooler. All oil lines are routed in braided hose conforming to SAE 100R1 standards for hydraulic hose.

Modular Air/Oil Separator Unit

Replacement elements for the oil filter and separator are available.

Air Compressor Cooling System

The air compressor is cooled by the Waterous fire pump, utilizing an all copper and brass shell and tube heat exchanger. When the fire pump is operating, water flows through the heat exchanger while an in-line removable strainer, on the water inlet side, prevents clogging. The system maintains oil temperature within 160° to 225°F (71° to 107° C).

Foam Concentrate Piping

All concentrate piping is stainless steel, brass or high-pressure wire braid reinforced hose with stainless steel or brass fittings.

Foam Manifolds

Foam manifolds are constructed of cast iron. The manifold is a fully integrated assembly with foam injector port, flow meter mount and high-flow, low-loss, spring-assisted brass swing check valve to prevent back-flow of foam concentrate or foam solution into the pump.

Foam Management System – Aquis™ 3.0

Microprocessor Controller

AQUIS™ is equipped with a 16-bit, mixed-signal microcontroller with a 60kB flash memory, 2 kB RAM and 12-bit analog to digital converter. This allows the AQUIS™ to receive input from the flowmeter and temperature sensor, controlling the foam pump motor to provide accurate injection into the foam manifold.

Remote Activation

The system can be activated from an external 12 or 24-volt electrical source, such as a pump-in-gear circuit or engine ignition power which can eliminate one step in the operational sequence. An optional remote start/stop control and cable is available.

Flowmeter

A paddlewheel-type flowmeter, installed in the process manifold upstream of the foam injection point, connects to the microcontroller.

A flowmeter tee, constructed of stainless steel or brass with Victaulic groove outer connections and threaded NPT inner connections at each end of the tee, is provided for connection to the apparatus plumbing. Flowmeter tees are available as follows:

- Standard - 2” ID (400 GPM / 1500 L/min)
- Optional – 2.5” ID (750 GPM / 2800 L/min)

Specifications Subject to Change Without Notice.