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ANCO CAFS300 (Mini CAFS)

What is CAFS?

CAFS is an acronym used for **C**ompressed **A**ir **F**oam **S**ystem and is a system used in fire-fighting to deliver fire retardant foam onto a fire. A Compressed Air Foam System uses a Class A foam concentrate, combined with water and compressed air to form a fire extinguishing foam that has greater fire fighting ability than the sum of its parts. The overall result is a fire-fighting solution with greatly reduced surface tension (compared to that of water), which enables the solution to penetrate combustible fuels (carbon based fuels) much faster and more efficiently.

When used as a fire-fighting agent, a steady stream of Compressed Air Foam has a very high heat absorption quality (almost ten times that of water) that will suppress a fire in a fraction of the time when compared to conventional fire-fighting tactics, using plain water only. This is due to the fact that CAFS attacks and works on all three elements of the fire-triangle: **Fuel / Oxygen / Heat**. CAFS is one of the most effective methods to suppress fires and has been in use for many years in fighting virtually all types of fires and is considered an excellent force multiplier in fire-fighting situations.

Benefits of CAFS:

- Very low water consumption (compared to conventional water methods)
- Excellent knock-down capabilities. CAFS has more than 7 times the fire extinguishing properties compared to water
- Water expansion – effectively expands water capacity up to 10 times (foam concentrate and dilution dependant)
- Compact design – equipment occupies less space on fire fighting vehicles due to compact designs
- Due to significant reduction in weight (foam is much lighter than water) hoses are easier to handle reducing fatigue and excursion on fire-fighters
- Virtually no friction loss through hoses (foam bubbles moves easier through a hose compared to water) allows longer hose lengths to be used compared to conventional water-based systems.
- Increased ability to put down a highly visible, longer lasting protection barrier for protecting vegetation and structures
- CAFS significantly reduces water damage in fire-fighting operations

What is ANCO CAFS?

ANCO Manufacturing has been developing and producing world-class fire fighting equipment for many years. The need for a lower cost, South African produced and supported Mini-CAFS system lead to the development of a 100% local version of this popular fire-fighting apparatus. All components used in the ANCO CAFS system are from reputable manufacturers that has been tried and tested in fire-fighting operations.

Benefits of ANCO CAFS:

- 100% South African designed and produced using international and locally sourced fire-fighting components of highest quality
- Extensive local testing has resulted in a good understanding of the basic CAFS principles and how to apply these to local conditions.
- Local design and manufacture allows ANCO Manufacturing to provide back-up and after-sales support resulting in less down-time and lower cost

- Optimised pump / engine / air flow combination for maximum efficiency. Primary objective remains lower water consumption with maximum foam capability (using the least amount of water to make the maximum amount of foam)

What is ANCO CAFS 300?

The ANCO CAFS 300 is a compact Mini-CAFS unit designed to be used in forestry -, industrial -, municipal - and structural fire-fighting applications. The ANCO CAFS 300 can be utilized as a self-contained slip-on design that will fit onto the load bin of any standard single cab Bakkie / Pick-up (in skid-unit format) or could be built into the super-structure of a fire truck. Retro-installations are also possible.



ANCO CAFS 300 Specifications:

Design:

The ANCO CAFS300 has been designed as a self-contained slip-on / slip-in CAFS unit. All components and equipment are contained inside a fully enclosed cabinet, mounted onto on a sturdy base frame. A rear facing control panel contains all the control elements for engine start-up, pressure monitoring, foam activation and foam selection. All service parts are accessible through bolt-off inspection panels.

Primary Water pump:

The system uses the tried and tested Davey Twin-Standard 40mm centrifugal water-pump driven via a belt-drive off the engine crank-shaft pulley.

Foam Discharge:

Estimated foam discharge 375 – 400 LPM at 7 bar pressure (using 25mm lay-flat discharge hose and a smooth bore discharge nozzle)

Foam induction:

The ANCO CAFS300 uses the Scotty 4171 Through-pump induction system with turn-dial concentrate selection from 0.05% up to 3.75%. The Scotty 4171 is a simple and robust venturi-type induction system that allows for precise foam concentrate calibration and is suitable for use with most Class A foam concentrates. Using the Scotty 4171 foam Eductor eliminates the need for electronic foam induction resulting in a simpler, more robust design.

Foam / Flow selection

A calibrated adjustable foam selection valve is used to adjust foam for selection of Wet or Dry Foam.

Water discharge / flow rate:

Selectable water discharge from 25 LPM (Dry foam) up to 150 LPM (Wet-foam) is possible. The unit can also be used as a water pump only.

Foam storage:

Eliminating a separate, dedicated foam storage tank on the ANCO CAFS300 allows for the most compact design. The ANCO CAFS300 unit is supplied with a 2m x 13mm flexible pick-up line with strainer for insertion into a loose 25L foam concentrate container.

Engine:

The unit is equipped with a Honda GX690 electric start, 22 HP 4-stroke petrol engine with hour-meter. The Honda GX690 uses a carburettor type fuel system with manual choke. Engine is air cooled.

Fuel capacity:

22L (fuel tank included) Estimated run-time = 3.5 hrs @ max RPM

Compressor:

Piston type (Italian made), 40CFM (1080LPM) @ 7 bar, belt driven with centrifugal clutch mechanism. An auxiliary electric fan is supplied to assist with cooling of the compressor head.

Dimensions:

1 220mm wide x 800mm High x 900mm deep (Excludes optional slip-on frame, water tank and foam concentrate container)

Total weight:

190kg (complete unit excluding water tank and other auxiliary equipment)

Base plate material:

Mild-steel, galvanized. Anti-Vibration mounting rubbers included

Structure material:

Aluminium frame with polished Aluminium cover plates.

Foam outlet:

1 x 38mm foam outlet - BIC

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