



FOAM SYSTEMS

CAFSystems™

FIRE PUMPS

CAFSystem MODULAR SLIDE-IN

# 90-45-DS

Our slide-in, modular compressed air foam system is designed and constructed to simultaneously discharge water, foam solution or compressed air foam. The system also features compressed air for pneumatic tools and can pump water or air independently.



## BENEFITS OF COMPRESSED AIR FOAM

- 80% of water content in the foam is effectively used for fire fighting
- Improved firefighting safety  
Faster knockdown time
- Less property damage
- Less water used

## SPECIFICATIONS

- Kubota 23.5 HP (17.5 kW) diesel-fueled engine
- Hypro Pump
- Rand 45 CFM compressor
- Steel Frame
- AQUIS™ 1.5 Foam Proportioner
- Rotary Dial Foam Proportioning Rate Panel
- Optional Operator Interface Terminal (OIT) for selecting foam proportioning rates

## PERFORMANCE

- 90 GPM @ 100 PSI
- 340 l/min @ 6.9 bar
- 45 SCFM @ 100 PSI
- 1.2 M<sup>3</sup>/min @ 6.9 bar

# SPECIFICATIONS – SLIDE-IN CAFSYSTEM: 90-45-DS

## A Medium Sized Slide-In with Extra Large Performance

90-45-DS Performance							
	FLOW			PRESSURE			
	GPM	l/min	l/sec	PSI	bar	kPa	MPa
Water Performance	90	340	5.67	100	6.9	690	0.69
	50	189	3.1	150	10	1000	1.0
	CFM	M <sup>3</sup> /Min		PSI	bar	kPa	MPa
Air Performance	45	1.2		100	6.9	690	0.69
SIMULTANEOUS FLOWS							
90 GPM and 45 CFM @ 100 PSI (340 l/min and 1.2 M <sup>3</sup> /Min @ 6.9 bar)							
40 GPM and 20 CFM @ 125 PSI (300 l/min and .56 M <sup>3</sup> /Min @ 8.6 bar)							

### CAFSsystem Components

- Rand 45 sCFM (1.2m<sup>3</sup>/min)
- Aquis™ 1.5 Foam Proportioner
- Electric Auto-Sync Balancing System

### Pump / Transmission Specifications

- Hypro 9203 Centrifugal water pump, iron case, nylon impeller, stainless steel shaft and maintenance-free mechanical seal.
- 1.5-inch NPT Intake
- 1-1/4-inch NPT Discharge
- Venturi Primer w/electric activation switch
- “Poly Chain” drive transmission with an automatic tensioner and 8mm pitch sprockets.

### Engine Specifications

- Kubota, Model D902, three-cylinder, liquid-cooled, delivering a maximum of 23.5 HP (17.5 kW), four-cycle, diesel fueled. Two (2) year manufacturer’s warranty.
- The engine uses a pulse fuel pump (fuel tank not supplied).
- Pressure lube system with spin-on oil filter. An extension hose is installed on the engine oil drain with a valve located at the oil pan and a plug installed in the end of the hose to facilitate oil changes.
- 12-volt electric with 60A alternator, electric ignition and start switch. (24-volt available)
- Spark Arrestor Muffler

### Pump Operator's Panel:

- Auto Sync™
- Engine controls start/stop and throttle
- Air compressor, foam proportioner controls
- Water pressure and air pressure gauges
- Chrome-plated discharge connection
- Venturi priming system w/push to prime activation
- Auxiliary compressed air outlet and valve control
- LED Lighting
- I/C Push-Pull valve actuators

### Frame:

High-strength, steel frame

### Warranty

Waterous Seven-Year Limited Warranty

### Conditions of Sales

For details on Waterous Conditions of Sales, refer to F-2190, *Conditions of Sales* located on the Waterous web site at [www.waterousco.com](http://www.waterousco.com) or by contacting Waterous.

### Air Compressor:

The air compressor is an oil-flooded, rotary screw type, sized to supply a minimum of 45 scfm (1.2 m<sup>3</sup>/min) of usable air.

### Pneumatic Modulating Inlet Valve:

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

### Auto Sync Balancing System:

Automatically maintains the air pressure within +/- 5% of the water pump pressure throughout the pressure range. The Auto Sync Balancing System is located on the operator's panel and allows for the following modes:

- Automatic - Air pressure matched to water pressure
- Fixed - Air pressure defaults to manual setting on compressor mounted control valve.
- Unload - Air pressure reduced to 40 psig (2.8 bar) for standby operations

### 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 lines are routed in braided hose conforming to SAE 100R1 standards for hydraulic hose.

### Modular Air/Oil Separator:

Replacement elements for the oil filter and separator are available.

### Air Compressor Cooling System:

The air compressor is cooled by a shell and tube type cooler. The system maintains recommended operating temperatures throughout the full operational range in ambient temperatures up to 115°F (46.1° C).

### Options:

- On-Site Delivery Instruction - Contact factory for pricing.
- Threads on panel intake and discharges HN/NST, NPSH, BSP or STORZ
- Direct tank fill 2” valve w/2.5” panel connection
- 1.5” discharge for front turret
- 1” discharge w/panel control, water/foam
- Top and Side Enclosures

### Air Lines:

All air lines are rated to a minimum of 250 psig (17.2 bar). Air line fittings are constructed of brass, bronze or steel. Stainless steel or brass check valves are provided at all air injection points to prevent water back-flow into the air lines. All hoses shall be secured to the frame with insulating clamps and located away from any heat sources.

### Plumbing:

#### Inlet:

Inlet piping is 2” stainless steel pipe with a 2” tank to pump valve controlled at the pump panel. An inline strainer is also provided. A 2” valve is provided behind the pump panel for overboard pump inlet with a 1.5” M-NST connection. Victaulic-type couplings are utilized in the pump inlet for flexibility and improved serviceability.

#### Discharge:

Plumbing to two panel mounted 1.5” discharge outlets incorporate a stainless-steel manifold, welded stainless steel pipe and/or high-pressure hydraulic hose with stainless steel fittings. A 1” tank fill provision with 1” valve is provided. Victaulic-type couplings are utilized in the discharge plumbing for flexibility and serviceability. All discharge plumbing is designed and tested to a minimum of 500 psig (34.5 bar) burst pressure.

#### Drains:

Panel mounted drain valves are provided to drain water from the water pump, discharge manifold and compressor cooler.

#### Foam Proportioner:

- Aquis™ Foam Proportioner with foam proportioner rate rotary dial (optional operator interface terminal (OIT) available), pump module with electric motor/motor driver and microcontroller unit, foam concentrate strainer, shielded electrical cables for connection of all electronic components, foam inject check valve, WYE Strainer and flowmeter and tee.