



Product presentation

POLY SKID MODULE SL50-100

Peter Kratochwill

15 April 2016

 **rosenbauer**

Agenda



- Product details
- Powerful CAFS firefighting equipment
- Unique functionality
- Optional accessories
- Technical data

Product details



If a flexible and compact design is needed, then the **universally** deployable **CAFS extinguishing system** is the ideal extinguishing system.

Impresses with ...

- Powerful CAFS firefighting equipment
- Unique functionality
- Optional accessories



Powerful CAFS firefighting equipment



Production of CAF foam

CAFS stands for **Compressed Air Foam System** and is a system for the production of **high-quality CAF foam** (compressed air foam), which is used to fight **solid and liquid fires**.

In the production of CAF foam, the same three **components** are required (water, foam compound and air) as in the generation of conventional fire fighting foam. The crucial difference lies in the **foam expansion fo the water-foam compound mixture**, which in the CAFS system does not take place passively through the injector principle on the nozzle, but rather **actively in a mixing chamber in the system by means of compressed air**.

Due to this active foam expansion, the resulting CAF foam has a **more homogeneous foam structure** as well as a much **higher energy content** in comparison with conventional fire fighting foam.



Powerful CAFS firefighting equipment



Properties of CAF foam

- **Excellent throw range** as well as **superb throw height** due to the increased energy value of the CAF foam.
- **Excellent adhesion** of the CAF foam to smooth and vertical surfaces as well as **first-class foam stability** due to the fine and homogeneous foam structure.



Powerful CAFS firefighting equipment



Mode of action of CAF foam

Cooling by evaporation of fire fighting water

During active foam expansion, a single water drop is distributed across multiple foam bubbles, which results in a larger surface area for heat absorption. Furthermore, the CAF foam sticks to the flammable material thanks to its homogeneous structure and thus enables continuous heat absorption. As a result, a large part of the water bound in the CAF foam is able to evaporate, thus providing maximum cooling at the seat of the fire.

Suffocation by displacement of oxygen and separating the reaction partners

The oxygen is displaced from the flammable material through evaporation of the water. Additionally, a natural separating layer is created between the flammable material and the oxygen as a result of the CAF foam. Thus the oxygen supply to the seat of the fire is interrupted in the best possible way.

Reduction through penetration of burning material

Due to the high kinetic energy of the CAF foam and the reduction of surface tension through the added foam compound, water can penetrate deeper into the flammable material and thus soak in better.



Powerful CAFS firefighting equipment



Advantages of CAFS firefighting equipment

- suitable for **direct fire fighting** of solid and liquid fires as well as for **preventative protection** of objects at risk of fire through the application of CAF foam
- **rapid extinguishing success** as well as **excellent burn-back safety** thanks to the thorough and highly efficient mode of action of the CAF foam
- **minimal fire damage** through immediate suppression of flames as well as **low water damage** through complete evaporation of the water bound in the CAF foam
- **simple extinguishing procedure** that **saves extinguishing agent** due to the CAF foam sticking to the flammable object and evaporation on the still hot surface
- **large safety distance** between the user and the flammable object as well as fighting of fires in **inaccessible areas** thanks to excellent throw ranges and heights of the CAF foam
- **large extinguishing agent capacity** with equal water volume due to active foam expansion



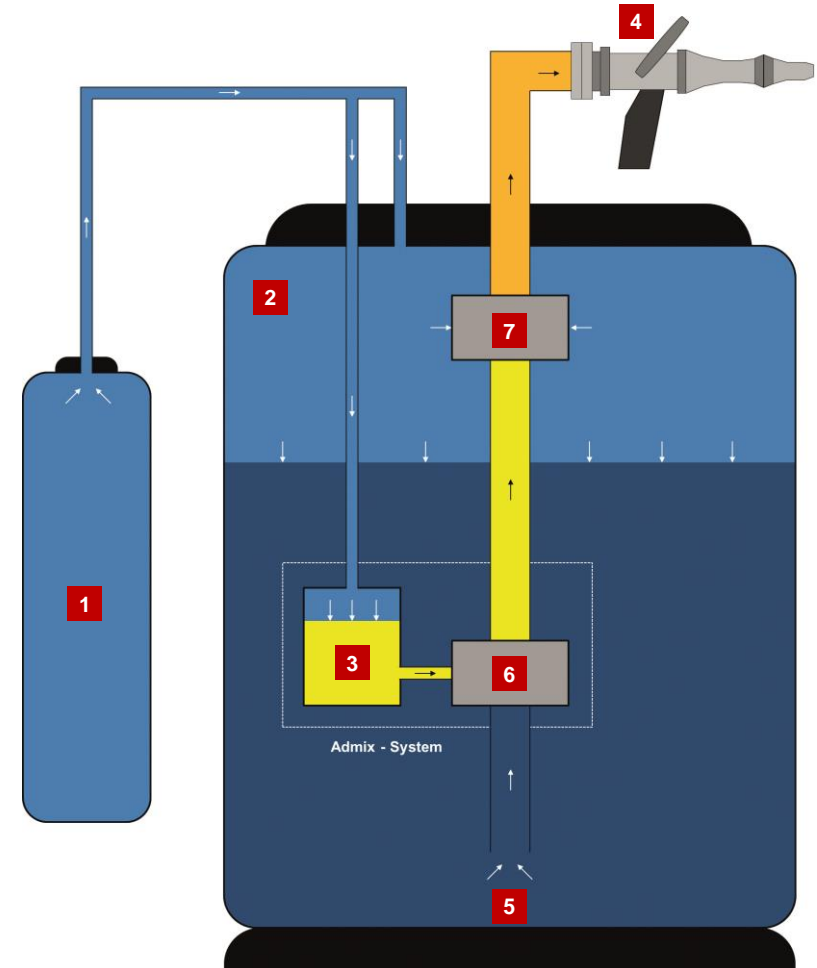
Unique functionality

Principle of operation of the POLY extinguishing system with the unique Admix system

After opening the compressed air bottle (1), the compressed air flows into the extinguishing agent tank (2) as well as into the separate foam compound cartridge (3) and brings them up to a constant working pressure.

After activation of the CAFS nozzle (4), the water in the extinguishing agent tank is forced into the riser tube (5), and the foam compound located in the separate foam compound cartridge (3) is continuously mixed with the water in the admix mixing chamber (6).

Subsequently, the water-foam compound mixture that is produced in the CAFS mixing chamber (7) is actively made into CAFS foam (compressed air foam) with the compressed air located in the extinguishing agent tank and is discharged via the CAFS nozzle (4).



Unique functionality



Advantages of the functionality

- works **entirely independent** from external energy sources (engine or power unit) and technical systems (centrifugal pump, foam proportioning system and air compressor) and is therefore always reliably and permanently ready for action
- **easy and fast start-up** by turning the compressed air bottle valve and actuating the CAFS nozzle
- can be operated with **environmentally-friendly, fluorine-free foam compounds** due to the storage of the foam compound separate from the water in a foam compound cartridge
- especially **easy to repair** by exchanging the compressed air bottle and through separate filling of the extinguishing agent tank with clear water as well as the separate foam compound cartridge with foam compound, without having to account for mixing ratios
- extremely **low maintenance costs** by storing the foam compound in a separate cartridge (separate from the water), which allows for longer extinguishing agent intervals compared to ready-to-use water-foam compound mixtures



Optional accessories



Supply

With the optional supply via an external connection, the extinguishing procedure can be continued in the case of an empty extinguishing agent tank via an external extinguishing agent source.



Technical data



Model	POLY SKID MODULE SL50	POLY SKID MODULE SL75	POLY SKID MODULE SL100
Nominal fill quantity	50 l (13,2 gal)	75 l (19,8 gal)	100 l (26,4 gal)
Operational duration	approx. 136 s	approx. 204 s	approx. 272 s
Weight	<ul style="list-style-type: none"> ▪ filled = approx. 70 kg (154,3 lbs) ▪ unfilled = approx. 20 kg (44,1 lbs) 	<ul style="list-style-type: none"> ▪ filled = approx. 104 kg (229,3 lbs) ▪ unfilled = approx. 29 kg (63,9 lbs) 	<ul style="list-style-type: none"> ▪ filled = approx. 138 kg (304,2 lbs) ▪ unfilled = approx. 38 kg (83,8 lbs)
Dimensions (L x W x H)	approx. 605 x 1.165 x 605 mm (23,8 x 45,9 x 23,8 inch)	approx. 605 x 1.355 x 605 mm (23,8 x 53,4 x 23,8 inch)	approx. 406 x 1.550 x 605 mm (23,8 x 61,0 x 23,8 inch)
Foam proportioning	continuous at approx. 1 %		
Expansion ratio ²	approx. 8 for wet CAF foam		
Flow rate	approx. 22 l/min (5,8 gal/min) at 7 bar (101,5 psi)		
Compressed air bottle	<ul style="list-style-type: none"> ▪ 5 l / 200 bar (1,3 gal / 2.900,8 psi) ▪ 6 l / 300 bar (1,6 gal / 4.351,1 psi) 	<ul style="list-style-type: none"> 6 l / 300 bar (1,6 gal / 4.351,1 psi) 	<ul style="list-style-type: none"> 6 l / 300 bar (1,6 gal / 4.351,1 psi)
Throw range / Throw height	approx. 16 m (52 ft) / approx. 10 m (32 ft)		
Hose	<ul style="list-style-type: none"> ▪ manual hose reel with hand crank with FORMTEX special textil hose DN 19 x 40 m (131 ft) ▪ automatic hose reel with spring return with FORMTEX special textil hose DN 19 x 40 m (131 ft) 		
Nozzle	<ul style="list-style-type: none"> ▪ CAFS nozzle RD 9 with fixed solid jet ▪ CAFS nozzle Select Flow RB 99 EN with adjustable spray jet 		
Foam compound ¹	<ul style="list-style-type: none"> ▪ STHAMEX -class A ▪ Fomtec AFFF 1% F ▪ Fomtec AB -30 NE 		
Operating temperature ²	- 20 °C (- 4 °F) bis + 50 °C (+ 122 °F)		

¹ Test was performed with these foam compounds (Use of other foam compounds is possible)

² Depending on foam compound used

Thank you!

Rosenbauer International AG
4060 Leonding, Paschinger Str. 90, Austria
Tel: +43 732 6794-0, Fax: +43 732 6794-89
office@rosenbauer.com
www.rosenbauer.com

