ARMANfire Chef, Kitchen hood and cooking equipment protection

Presentation of the product

airfire.eu

AIRfire® Worldwide

CONTENT

Flames, accumulated fat and hot cooking surfaces (among other risks in the kitchen), can quickly trigger disastrous results in a professional kitchen.

The fires of oil and grease, ignite and propagate rapidly and can quickly get out of control, which makes their extinction complicated and leads to unnecessary loss of lives and buildings, putting many companies out of service forever.

Selecting an efficient and reliable extinguishing system for kitchens **is vital for the welfare of working professionals**, as well as the safety of the premises and the surroundings where they are located.

The system has to guarantee:

- **Automatic and simultaneous protection** of the entire hood, duct and the equipment below.
- Can be activated manually.
- Can **cut the heat source as well as extraction fan**.
- Keep the extinguishing agent out of the heat wear from the flames.
- That it is **tested, approved and certified** by an independent external laboratory.

A professional extinguishing solution for kitchen hoods and commercial kitchen equipment, which acts simultaneously on the various elements that can be found:

- **Cookers, fryers, griddles, woks, etc.**
- **Filters and interior of the hood.**
- **Extractor duct.**

ARMANfire® Chef

Automatic Kitchen Suppression Systems

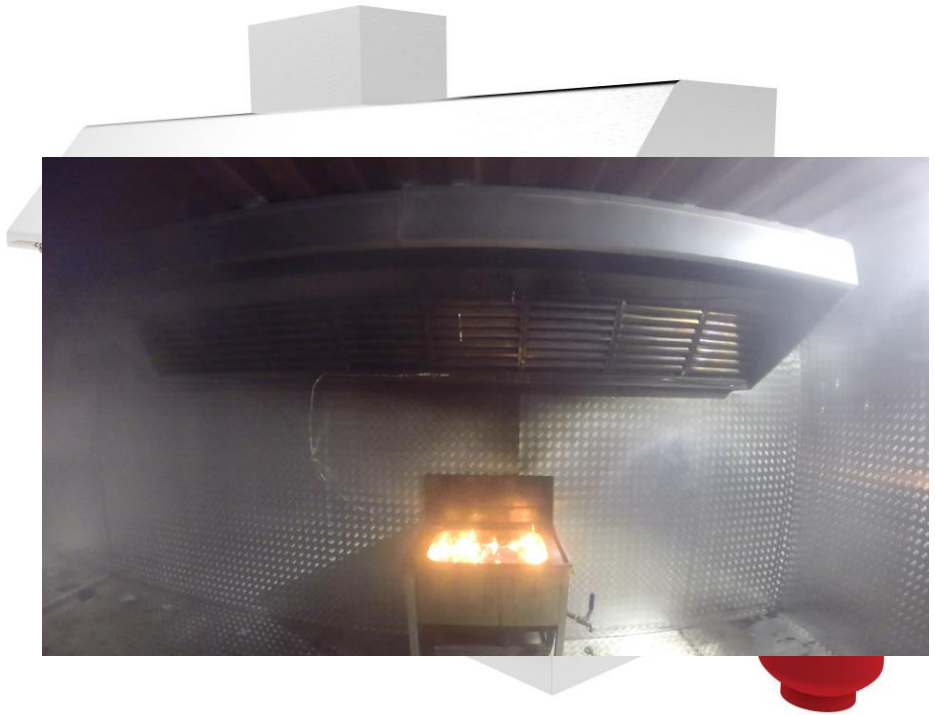
1. A pressurized linear heat detector, the **Easydetect tube**, is installed throughout the entire hood inside and out, providing **full coverage of heat detection**.

2. After the thermal rupture (150 °C) of the Easydetect tube, the pressure drops to open the cylinder valve.

3. **An Eco-Encapsulating Foam (special for Class F fires)** is released through the pipe network that reaches the nozzles located above the cooking equipment, plenum (behind the filters) and exhaust duct.

4. **The fire is suffocated, contained and cooled preventing its reignition.**

5. If necessary**, the system can also be activated manually**.



The system has been certified by an external laboratory, LPCB, according to its standard:

LPS 1223: Issue 2.3, Requirements and testing procedures for the LPCB certification and listing of fixed fire extinguishing systems for catering equipment.

- All components are tested individually to guarantee longetivity and reliability.
- Manufacturer undergoes **Factory Production Control to guarantee continous quality.**
- **Real full size fire tests** are carried out to test the system in different scenarios.
- **Manufacturer** must train installers to be authorised to install and maintain the systems.

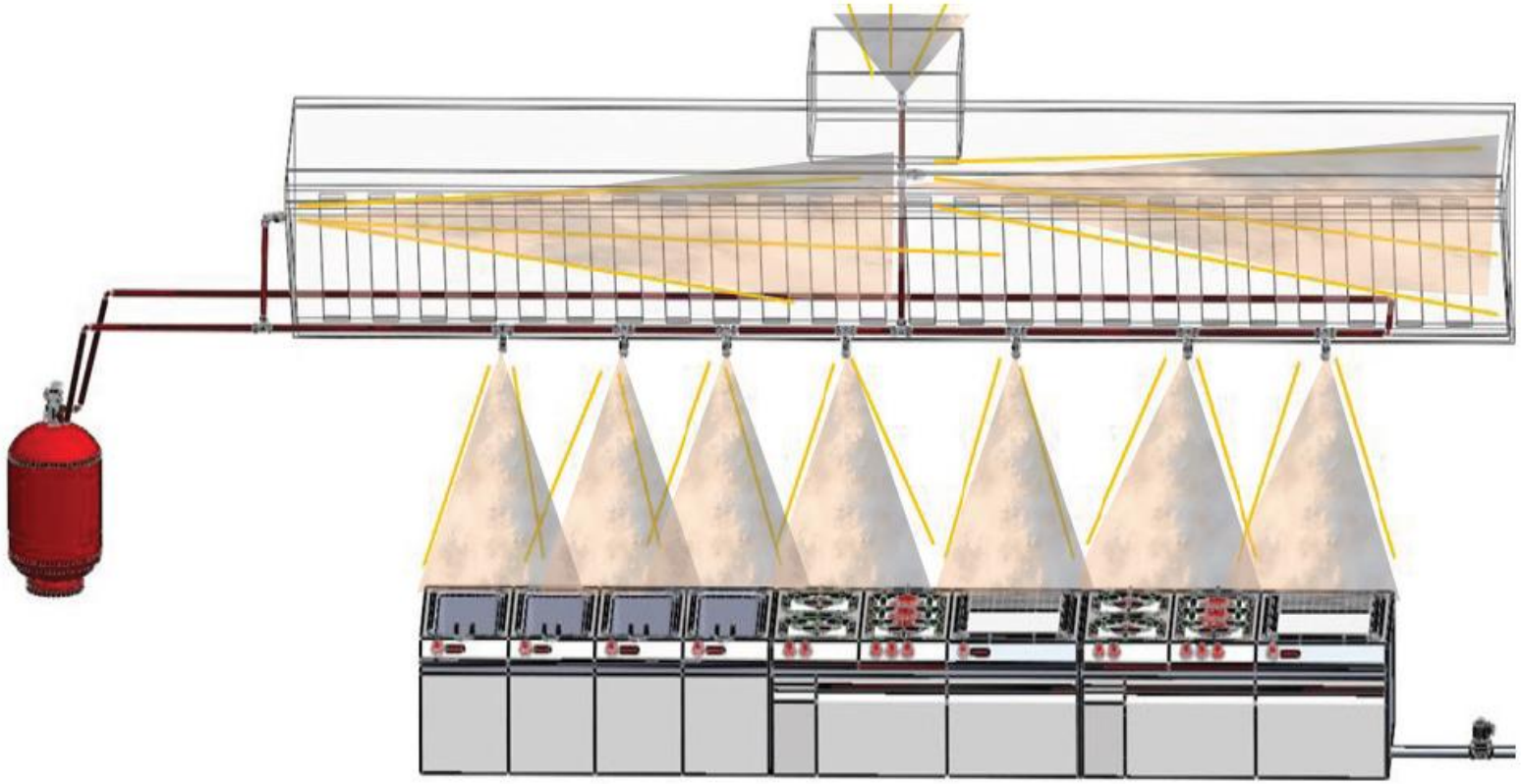
LPS 1223: Issue 2.3
LPCB Cert ref. 1408a

Detection throughout the entire hood, inside and outside, guaranteed.
In contrast to the systems with thermofusible detection, they detect only in points covered by the fuse (point detection).

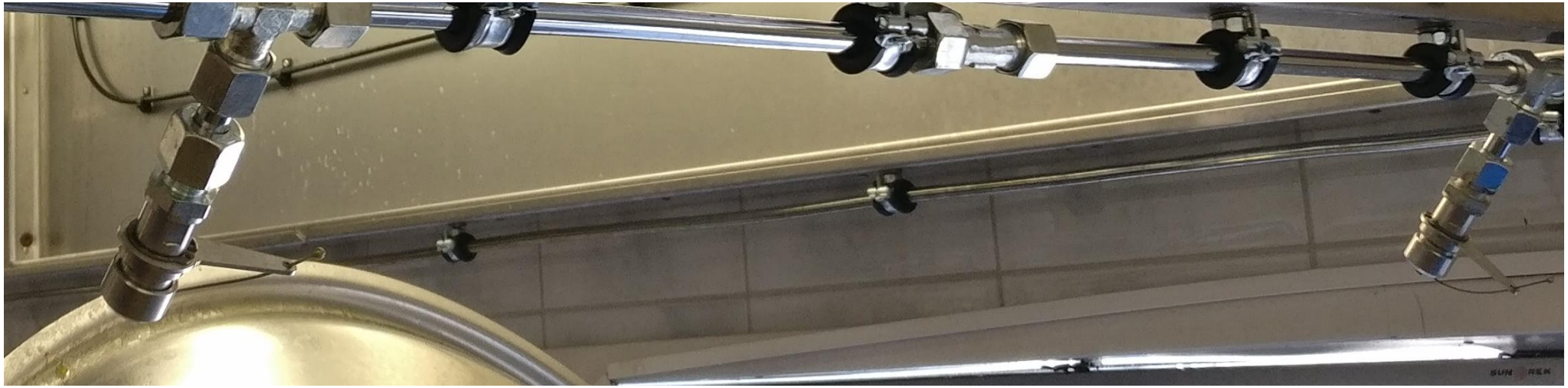
Continuous thermal detection by Easydetect tube

Point detection by thermofusible links

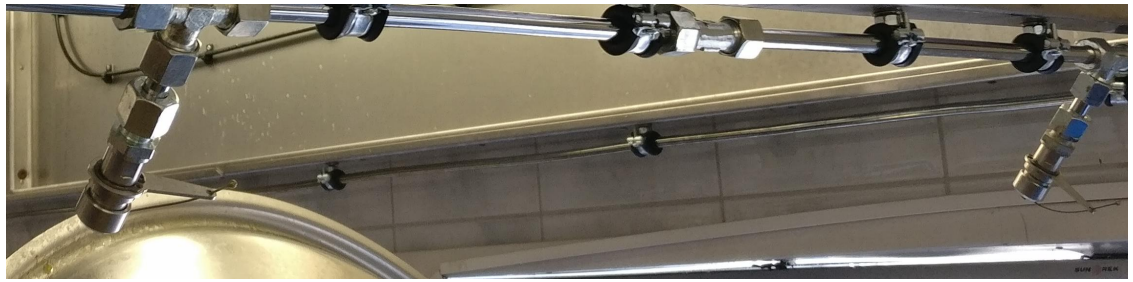
The entire hood is flooded during discharge.
While systems with sprinklers, detection by bulb, only extinguishes at the point where the first sprinkler has been activated.



Simplifying nozzle use.
Only 2 types of nozzles used, long reach and short reach. Both guarantee the same flow rate of 2 L.
Where as other systems have easily more than 4 types of nozzles, with different flow rates, uses …. = tedious design, cumbersome installation.



Nozzles protected throughout their service lifetime.
The nozzles come with a protective metal cap resistant to heat and protects against accumulation of dirt/grease. Other systems do not usually have a cap (clogged by dirt) and if they have it, it is usually made of plastic (not heat-resistant).



ARMANfire Chef nozzles with metal caps

Nozzles with plastic caps

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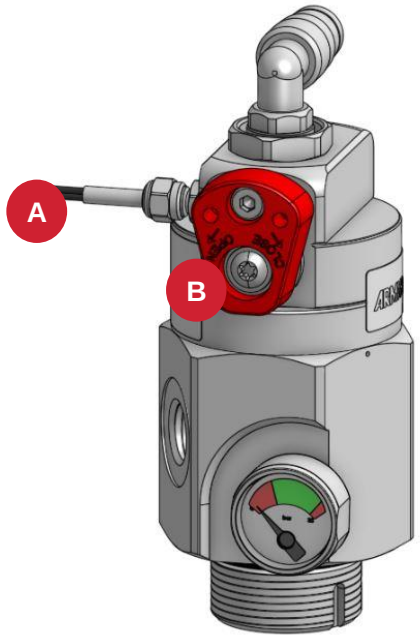
Eco-foam encapsulator agent
Highly efficient fire extinguishing agent, superior cooling and optimum burn back resistance

Biodegradable up to 99%, not considered a residue
Harmless with human skin, noncorrosive for equipment
Simultaneous action on temperature, fuel, oxygen and chain reaction

Stainless steel cylinders
Nice end user looking, no need to put extra enclosure on installation.

Monitoring and locking device
Control over system status (A), possibility to monitor the position externally.

Security on transport, installation and maintenance (B) with locking screw.



Autonomous and free of power supply.
It does not depend on an extinguishing panel to operate, which translates into greater savings in materials and does not need electrical power for its operation.

Being pre-engineered, versatile application.
All types of hoods can be easily protected

- **Quick and easy** installation
- **Easy cleaning and maintenance**
- Compact system
- **Non-corrosive, non-toxic and biodegradable** extinguishing agent.
- Electrical signal of equipment in service included in the kit. Optional electric pressure switch signal.
- Tested and certified system

LPS 1223: Issue 2.3
LPCB Cert ref. 1408a

Where to apply this solution?

Health: Hospitals, nursing homes…

Industrial canteens

Shopping malls

Hospitality: hotels, resorts, sport clubs, marinas...

Security forces

Educational centers: schools, colleges, universities...

These are just some ideas

Two types of configurations available:

- **Total area protection -** Full protection.

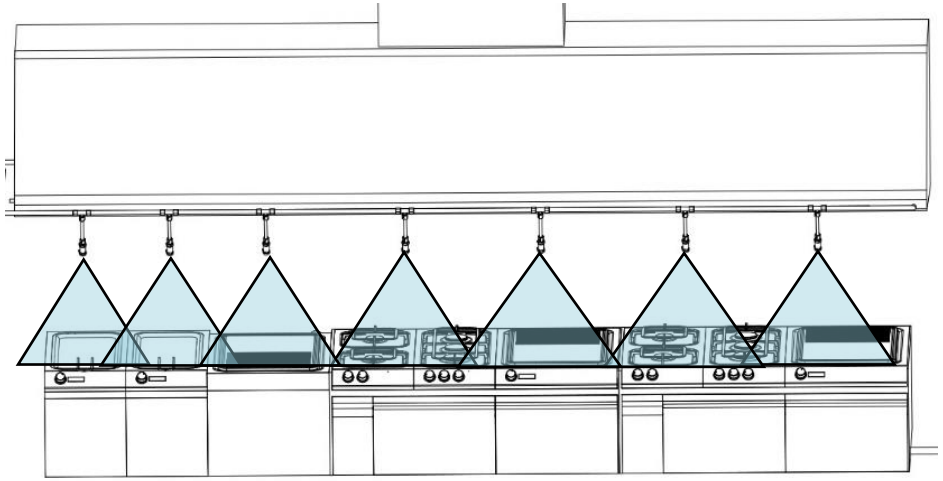
The nozzles are arranged so that the **entire kitchen worktop is covered upon discharge**.

Convenient for services that regularly change their kitchen equipment layout.

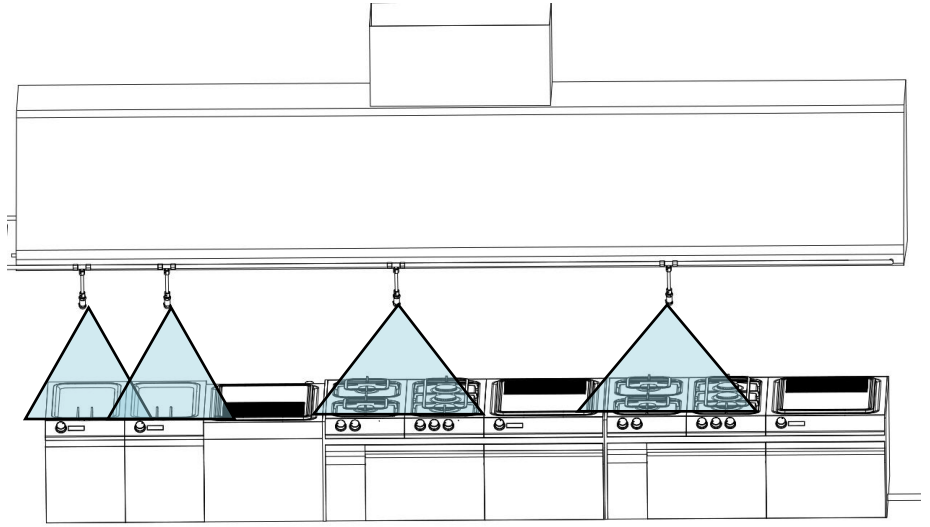
- **Area specific protection –** Zone protection.

The nozzles **cover specifically** where the kitchen equipment is located.

Ideal to be cost-effective and adapt the system to the project.



Total area protection – Full protection



Specific area protection – Zone protection

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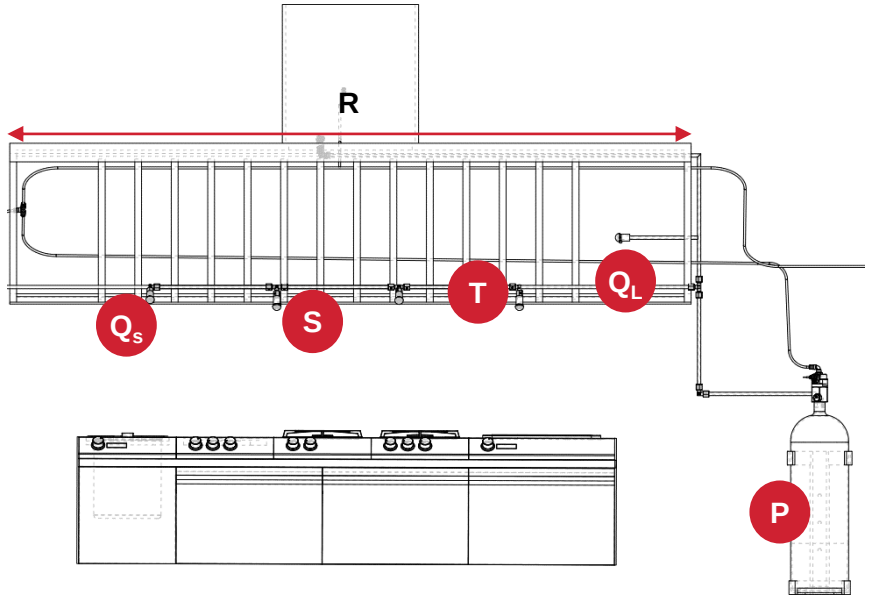
Technical characteristics

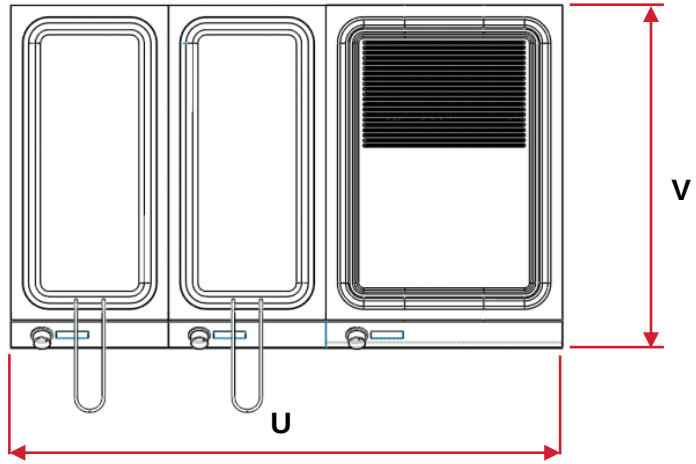
		"Piccolo"		"Medio"			"Grande"		
		ARFCHEF06C	ARFCHEF08C	ARFCHEF10C	ARFCHEF12C	ARFCHEF14C	ARFCHEF16C	ARFCHEF18C	ARFCHEF20C
P	Cylinder capacity (L)	11,8		15,9		25,3	25,3		
P	Total amount of extinguishing agent (L)	6	8	10	12	14	16	18	20
P	Quantity of pressurizing gas (N_2) (L)	5,8	3,8	5,9	3,9	11,3	9,3	7,3	5,3
Q_S	Maximum number of short reach nozzle	3	4	5	6	7	8	9	10
Q_L	Maximum number of long reach nozzle	1	1	2	2	2	2	2	2
Q_T	Total number of nozzles	3	4	5	6	7	8	9	10
R	Maximum Hood length for Zone Protection (mm)	4000		8000			8000		
U	Maximum kitchen Surface length for Full Protection (mm)	800	1600	2400	3200	3200	4000	4800	5600
V	Maximum kitchen surface width (mm)	800	800	800	800	800	800	800	800
T	Maximum length of Easydetect tube (m)	10		20			25		
T	Easydetect tube burst temperatura	150 ºC							
T	System working pressure	20 bar							
S	Maximum quantity of fittings	6		6			8		
S	Maximum length of piping (m)	7		2 x 7 (14)			20		
-	Maximum distance to the last nozzle (m)	5		7			10		

Recommendations:

- Take pictures or request, along with kitchen layouts with detail of the cooking areas.
- If kitchen in operation, measure working temperatures.



Kitchen Hood dimensions

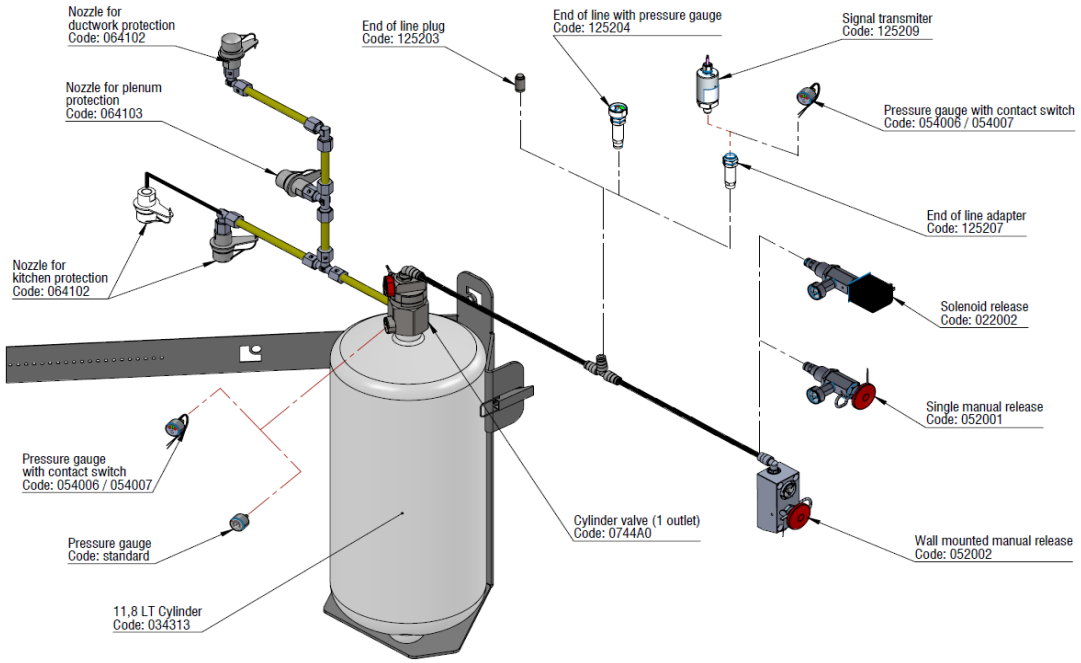


Cooking equipment dimensions

Agent	System type	Code	Cylinder size	Agent quantity	Nozzles/ System
Eco-Encapsulating Foam, AFFF classified, pressurised with Nitrogen (20 bar)	**System P - Piccolo**	ARFCHEF06C	11,8 L	6 L	3
		ARFCHEF08C		8 L	4
	System M - Medio	ARFCHEF10C	15,9 L	10 L	5
		ARFCHEF12C		12 L	6
		ARFCHEF14C	25,3 L	14 L	7
	System G - Grande	ARFCHEF16C		16 L	8
		ARFCHEF18C		18 L	9
		ARFCHEF20C		20 L	10

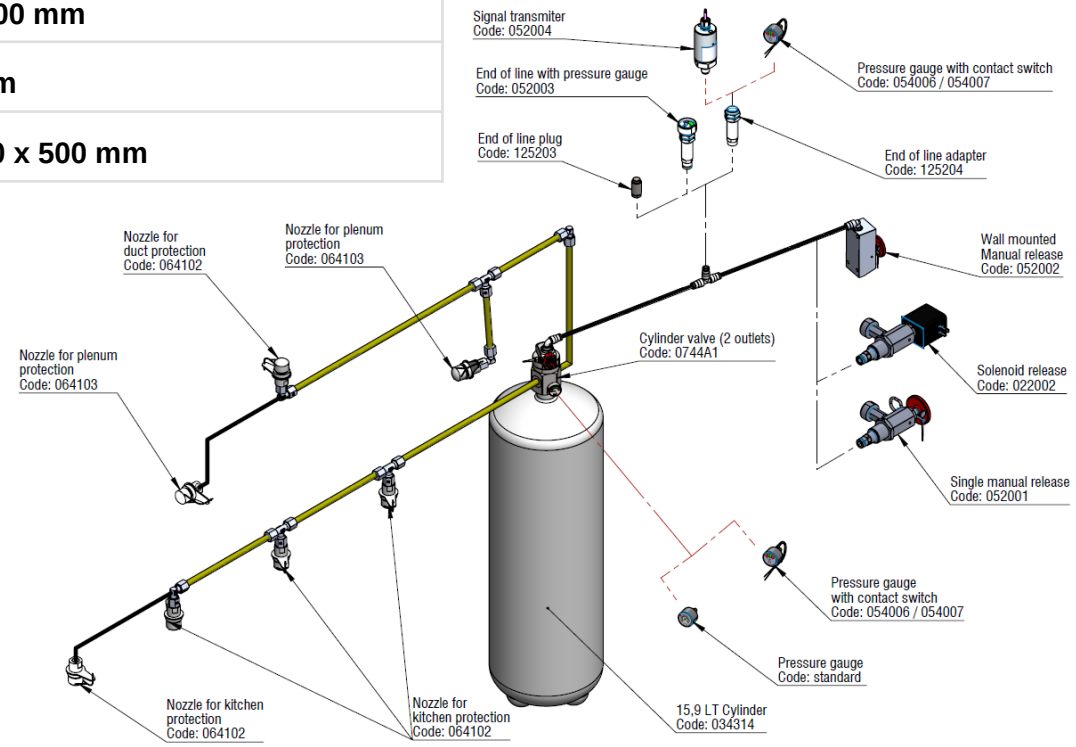
Available kits: System P - Piccolo

PROTECTION COVERAGE		
Nozzles used	**3**	**4**
Full Protection	Max. kitchen Surface length, **800 mm**	Max. kitchen Surface length, **1600 mm**
Zone Protection	Kitchen Hood up to, **4000 mm**	
Width of worktop surface	Maximum, **800 mm**	
Extractor duct	Maximum cross-section, **500 x 500 mm**	



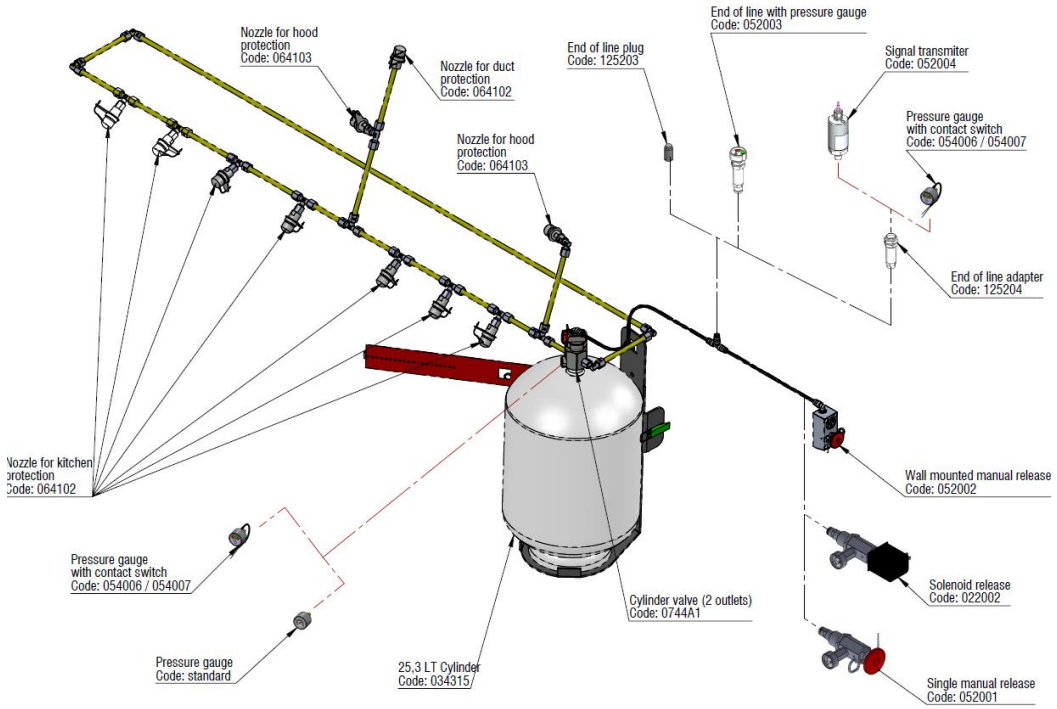
Available kits: System M - Medio

PROTECTION COVERAGE			
Nozzles used	**5**	**6**	**7**
Full Protection	Max. kitchen Surface length, **2400 mm**	Max. kitchen Surface length, **3200 mm**	Max. kitchen Surface length, **3200 mm**
Zone Protection	Kitchen Hood up to, **8000 mm**		
Width of worktop surface	Maximum, **800 mm**		
Extractor duct	Maximum cross-section, **500 x 500 mm**		



Available kits: System G - Grande

PROTECTION COVERAGE			
Nozzles used	**8**	**9**	**10**
Full Protection	Max. kitchen Surface length, **4000 mm**	Max. kitchen Surface length, **4800 mm**	Max. kitchen Surface length, **5600 mm**
Zone Protection	Kitchen Hood up to, **8000 mm**		
Width of worktop surface	Maximum, **800 mm**		
Extractor duct	Maximum cross-section, **500 x 500 mm**		



Installation & Maintenance

Starterkit toolbox for ARMANfire
Provides all necessary tools for a correct and fast installation of the system:

1. **Easydetect tube scissors**
2. **Tube deburring tool**
3. **Multi-tool**
4. **Easyfill cylinder**
5. **System filling tool**
6. **Filling connector for tube pressurisation**
7. **Filling adapter**
8. **Laser pointer**
9. **Burst disc**

Maintenance is simplified using the same tools.

→ Suitable for both extinguishing systems:

ARMANfire and **ARMANfire Chef**

Quick and Easy