

**GIELLE**



**yes,  
we serve  
solutions.**

# yes, we solve problems.



## GIELLE

**Gielle [Headquarter]**  
Via Ferri Rocco, 32 Z.l.  
70022 Altamura (Ba)  
Tel. +39.080.311.89.98  
Fax +39.080.310.13.09  
e-mail: info@gielle.it

**Gielle Lombardia**  
Via Bruno Buozzi, 37  
20097 S. Donato Milanese (Mi)  
Tel. +39.02.556.07.442  
Fax +39.02.518.77.075  
e-mail: milano@gielle.it

**Gielle Piemonte**  
Via Bengasi, 25  
10095 Grugliasco (To)  
Tel. +39.011.707.26.75  
Fax +39.011.707.83.40  
e-mail: torino@gielle.it

**Gielle Lazio**  
Via Orvieto, 132  
00040 Pomezia (Rm)  
Tel. +39.06.910.666.10  
Fax +39.06.910.666.10  
e-mail: roma@gielle.it

Contact us for free



# giellefire



Follow us



twitter.com/giellefire



Gielle  
Fire Suppression  
System



ANNIVERSARY  
1965-2010

# Index

- 2 **Experience and tradition**  
Nearly half a century
- 4 **Mission**  
Worldwide best service
- 6 **Men and facilities**  
Gielle's power
- 8 **Certifications**  
Guarantee of safety

## Products and systems

- 12 **Halons/HCFC bank**  
Preserving the present for the future
- 14 **Waste service**  
Fire Extinguisher Recycling Unit
- 16 **Fire extinguishers**  
We protect history
- 17 **Marine section**  
Worldwide service
- 18 **Novec™ 1230**  
Asset fire protection
- 20 **Fm 200**  
Protecting your most valuable assets
- 22 **Inert systems**  
Fires nature's way
- 23 **CO<sub>2</sub> System**  
Versatile & economical
- 24 **Water mist**  
Protecting People and Vassels
- 25 **Foam**  
The firebrand for water
- 26 **AFFF Phase out  
Cold Fire**  
The new generation of extinguishing agents

## Consulting and servicing

- 30 **Engineering**  
Complete design solutions
- 32 **Rescue and Fire fighting service**  
Consulting and training
- 34 **Servicing and maintenance**  
All fire protection and suppression systems

# Experience and tradition

Nearly half a century



GIELLE is known in every part of the world for its electronic system for safety, for fire-fighting protection and for the services that follow.

Our philosophy consists of a total quality. This is not an abstract conception, the product's peculiarities go beyond the normal industrial standard.

For more than 45 years GIELLE has assisted and supplied the most important European companies, planning and carrying out fire-fighting detectors and extinction systems, assuring every day a complete service.

GIELLE is associated with AIAS (Associazione Italiana Addetti Alla Sicurezza) and UNI (Ente Nazionale Italiano di Unificazione), HARC (Halon Alternative Research Corporation) and NFPA (National Fire Protection Associations).

GIELLE has a system of procedures, in conformity with the regulations UNI EN ISO 9001 (total quality) and UNI EN ISO 14001 (environment quality).

Our strong points are the qualities that characterize our company, making us substantially different from our direct competitors.

#### **Professionalism**

Our organisation has a team of qualified, professional surveyors and engineers, constantly kept up-to-date on current regulations and any new developments.

We only use approved components for our products and we can issue certificates and guarantees valid for years.



### **Quality**

For us this is not simply an overused slogan. We take it to mean extreme care in the planning and production of avant-garde systems, while rigorously following procedures that conform to 9001 (Total Quality) regulations, to which every member of our company staff adheres. We also take it to mean being very careful to listen to our clients' every request or specific need, so as to constantly improve our offer of products and services.

### **Service**

Upon the delivery and testing of each system, a work card is immediately created, and later used by the "Service" department to keep all useful information for monitoring the perfect operative functioning of the system under constant control.

This allows us to always intervene extremely quickly, 365 days a year, 24 hours a day, and to be immediately able to individuate any possible inefficiencies in the system.

#### **All-inclusive service**

We immediately perceived the need for a single interlocutor who can handle all of a company's security systems.

# Mission

Worldwide best service



Gielle srl, the parent company of the Gielle Group, with more than 45 years of experience in the field of fire fighting, has become one of the leading European companies in the design and manufacture of automatic fire fighting systems. Technological innovation, quality and internationalization are the strong points that have made Gielle one of the most qualified companies in this field. This active and dynamic company supplies its systems all over the world and offers a level of professionalism to its clients that is unsurpassed. ISO 9001, ISO 14001, BS OHSAS 18001, SA 8000, ATEX 94/9/CE and PED 97/23/CE certifications of its integrated management system make an undisputed statement of Gielle's full potential. In nearly half a century the Group has always considered flexibility as one of its major strengths.

Our mission is to make the world a safer place. To do this, we develop and supply advanced fire fighting products and systems, supported by first class service. People and businesses everywhere trust our brands and depend on our expertise to protect what is most valuable. Including fire detection, fire suppression and fire control products. Our products set the benchmark for fire safety detection, prevention and protection. We are devoted to protecting people, property and processes from everyday hazards and danger. People trust us to do that because we are experts in our field. And that trust is reinforced by the quality we instill in everything we do.

# The most important presence of Gielle factory in the world.



# Men and facilities

Gielle's power



Altamura  
Gielle Headquarter



Altamura  
Jesce



Altamura  
via del Tabacco



Altamura  
via della Roverella



Napoli



Palermo







Pomezia / Roma



Grugliasco / Torino



San Donato Milanese / Milano



Genova / San Remo



Verona



Luxemburg

# Certifications

## Guarantee of safety



Gas fire-fighting systems Gielle's Core-business. The choice of the best extinguishing agent to be used involved, in the previous years, but above all recently, the analysis on products that had to take into serious consideration some aspects.

### Standards

Being members of the European Union has certainly had positive consequences on the fire-fighting system market. The compulsory observance of precise production standards by the manufacturers of components, with the following step of "certification lter", has been an important innovation. In such a way the manufacturers technical levels have been increased because the lack of certified products prevents them to be present on the marketplace. This new period was marked by the coming into force of the following standard: As regards the technical specifications, i.e. all the aspects related to the system dimensioning, the distribution pipelines, the people safety and test procedures (for example the Door Fan Test), the following standard is to be used.

► **UNI EN 12094**

Fixed fire-fighting systems.  
CE certification and marking for the components of gas fire-fighting-systems.

► **UNI EN 15004**

Fire-fighting systems using gas extinguishants.  
Physical properties and dimensioning criteria.

► **UL 2166**

Gielle fire suppression systems are listed as per UL Standard for Safety for Halocarbon Clean Agent Extinguishing System Units.

### The environment safeguard

The choice of an extinguishing agent cannot but take into consideration, as a priority, the impact it causes in the atmosphere as regards the environment safeguard.

This is particularly true for the "chemical gas extinguishants"; for the "inertgas agents", the environmental impact concern does not exist because they are produced by air separation and they return back into air.

The parameters to measure the environmental impact are the following ones:





- ▶ **ODP:** Ozone Depletion Potential (index of the ozone layer depletion)
- ▶ **GWP:** Global Warming Potential (index of the global warming of the earth 's crust - green-house effect)
- ▶ **ALT:** Atmospheric Life Time (index of the atmospheric life of the extinguishant)



## Products and systems



# Halons/HCFC bank

Preserving the present for the future



We are specialized in all the Halocarbon alternative, and we are an International Halocarbon Bank with all worldwide approvals and certifications. Gielle has taken an innovative role in decreasing the emission of ozone-depleting and global warming substances, through the establishment of our comprehensive **Halocarbon Bank Management Program**.

The Gielle Halocarbon Bank Management Program accepts “used” CFCs, HCFCs, HFCs and **Halons from clients for reclamation**.

## Products / Services

- ▶ Worldwide Halon Banking and Reclamation.
- ▶ Refrigerant Disposal Program.
- ▶ On-Site Recovery for Halons and Refrigerants.
- ▶ Separation of Cross-Contaminated CFCs, HCFCs, HFCs and Halons.
- ▶ On-Site AHRI Certified Laboratory.
- ▶ Safe Disposal of Contaminated CFCs, HCFCs, HFCs and Halons.
- ▶ On-Site Plasma Arc Destruction.
- ▶ Ozone Friendly Replacement Programs.
- ▶ Technology Transfer and Training.
- ▶ Strategic Reserves.
- ▶ U.S. DOT Approved Cylinder Testing and Recertification.
- ▶ Halon System Bottle Refurbishment and Recharge.
- ▶ NOVEC1230™ System Recharge Station.
- ▶ Worldwide Parts and Service for Refrigerants and Halons.

We are specialized in all the Halon and Halocarbon alternatives.





# Italian Gielle's Halon banking



# Waste service

## Fire Extinguisher Recycling Unit

**Gielle offers a safe and legitimate fire extinguisher recycling service for the collection and disposal of condemned fire extinguishers, so you can have total peace of mind.**

Every business has a legal responsibility to protect its people, buildings and assets from the hazards of fire. Part of this responsibility means ensuring that all fire fighting equipment including fire extinguishers need to be maintained and serviced properly by a competent person. But as with any pressurised container, a fire extinguisher needs to be treated with respect, and can become dangerous if mistreated or abused, or indeed simply after it has come to the end of its useful working life.

But what happens when a fire extinguisher is ‘condemned’ and no longer safe to use?

As a business you have a Legal Duty of Care to dispose of waste legitimately and safely via a licensed waste carrier. Failure to do so - by fly tipping for example – can result in prosecution, even if you have outsourced the disposal to a third party.

Gielle offers to their existing customers for a fixed charge a safe and legitimate fire extinguisher recycling service for collection and disposal of condemned fire extinguishers, so you can have total peace of mind.

### **A dedicated facility**

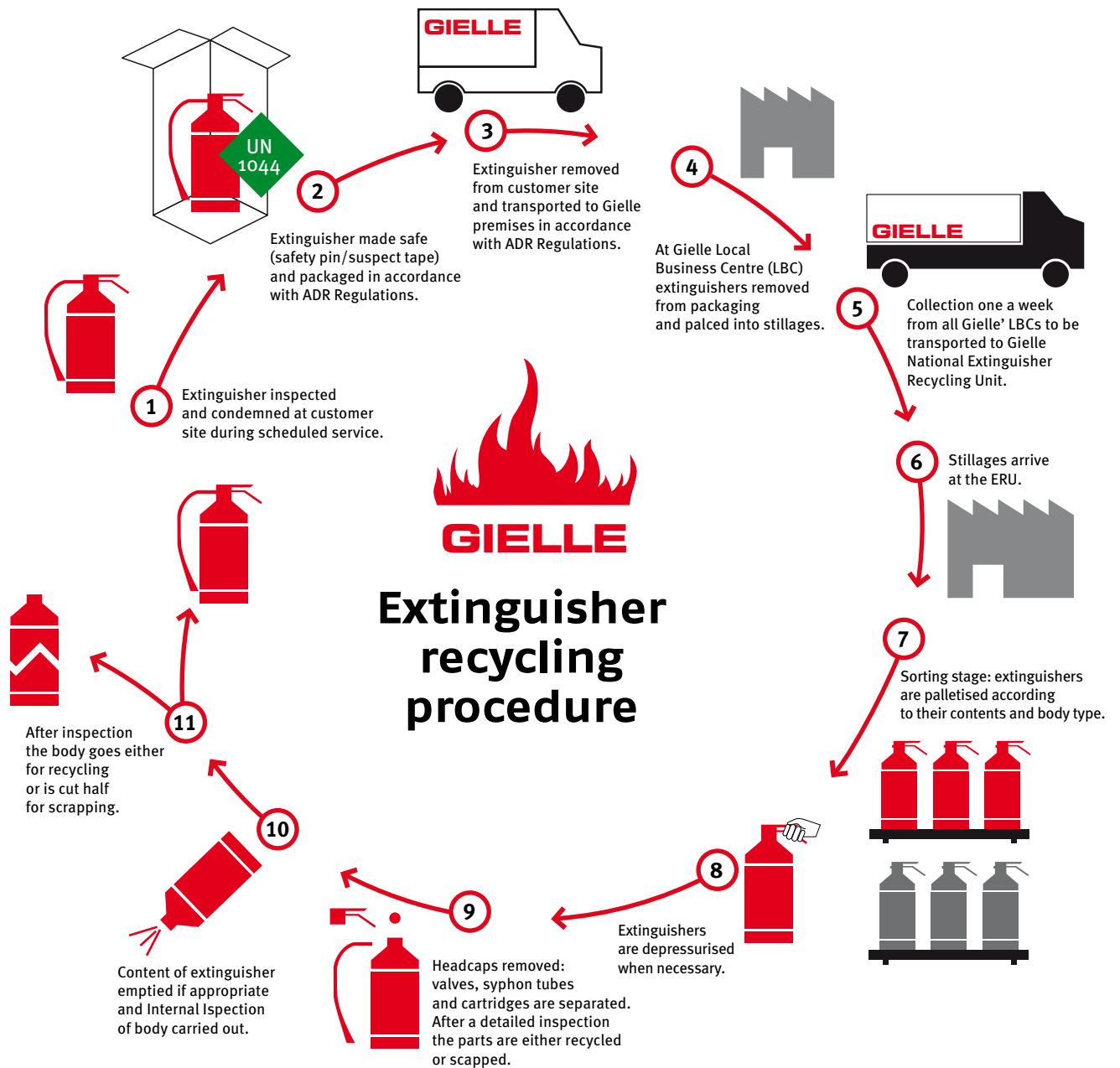
Gielle Fire’s Extinguisher Recycling Unit (ERU) is a dedicated facility offering a service for the safe processing and recycling/disposal of fire extinguishers across Europe. Gielle has worked closely with the local Water Authority and the Environment Agency to develop safe, efficient and environmentally friendly processes.

If a fire extinguisher has been condemned on site and is considered too dangerous for removal the customer will be informed and a specialist will be dispatched to deal with the fire extinguisher safely prior to returning it to the ERU.





As a business you have a Legal Duty of Care to dispose of waste legitimately and safely via a licensed waste carrier...



# Fire extinguishers

## We protect history

[www.gielle.it](http://www.gielle.it)

A world free of fire risks is a world that protects its history.

### Protecting cultural assets

Continuous technological research allows us to be in the forefront of the protection of Cultural Assets. That is why our products protect monuments all over the world. Gielle is specialised in the protection of historical monuments, theatres, churches, and all places where it is necessary to utilise extinguishing agents that, besides putting out the fire and protecting the structures, does not damage the treasures inside, such as paintings, clothes, statues and furnishings.

### Highly qualified personnel

Systems installation must be carried out by personnel specifically qualified for intervention in special environments, where the minimum error could provoke irreparable damage to assets that are part of the national and global cultural heritage.



# Marine section

▶ [www.giellemarine.com](http://www.giellemarine.com)

## Worldwide service



### System design, installation, service

Gielle Marine Systems are available through a global network of qualified distributors. Our distributors can provide the services—design & installation, retrofit, recharge, and maintenance—necessary to keep your Gielle system functioning properly and in compliance with marine fire protection regulations

Gielle FM-200 and Novec™ 1230 engineered fire suppression systems are used to suppress fires in specific hazards or equipment where an electrically non-conductive agent is required, where agent cleanup creates a problem, where extinguishing capability with a low weight is desired and where the hazard is normally occupied. Gielle Marine Systems are intended to protect spaces containing the following hazards:

- ▶ Class A - surface type fires—wood or other cellulose type material
- ▶ Class B - flammable liquids
- ▶ Class C - energized electrical equipment

### Marine approvals

In addition to land-based approvals, the Gielle FM-200 and Novec™ 1230 engineered fire suppression systems are approved by the marine regulatory bodies listed below. More marine approvals are pending.

- ▶ US Coast Guard
- ▶ American Bureau of Shipping (ABS)
- ▶ Maritime and Coastguard Agency (UK)
- ▶ Det Norske Veritas (DNV)
- ▶ Australian Maritime Safety Administration
- ▶ Swedish Maritime Administration
- ▶ Norwegian Maritime Directorate
- ▶ New Zealand Maritime Safety Admin.
- ▶ Registro Italiano Navale
- ▶ Germanischer Lloyd (GL)

# Novec™ 1230

## Asset fire protection

The fire extinguishing agent Novec™ acts both physically and chemically. Novec™ 1230 is widely used throughout the world and thanks to its environmental properties it has become established in many countries as the extinguishing agent for manageable IT and electrical risks. Novec™ 1230 is suitable for class A and class B fire and is used as total flooding agent. It is neither corrosive nor electrically conductive and therefore causes no damage through short circuits or through residues left on sensitive components. It is colourless and almost odourless and is in liquid form at room temperature. Its molecules consist of carbon, fluorine and oxygen. Novec™ 1230 deprives the flames of heat, thus interrupting the combustion reaction.



### Safety of person

Novec™ 1230 has an outstanding safety factor, reaching the NOAEL value (No Observed Adverse Effect Level) of 10%. When used to protect IT rooms this safety factor is 78% - measured for the release concentration of 5.6% in accordance with DIN ISO14520-5.

This is another reason why the fire protection working group of the Employers' Liability Insurance Associations confirms that Novec™ 1230 is a safe extinguishing gas, particularly when used for areas frequented by persons. In its plan for new alternative extinguishing agents (SNAP Program = Significant New Alternatives Policy Program), the USA's EPA (Environmental Protection Agency) certifies Novec™ 1230 as harmless when used as an extinguishing agent for flooding areas where people are present.

### GL-1230 fire extinguishing system

- ▶ Very high environmental compatibility
- ▶ Rapid extinguishing effect
- ▶ Exceedingly safe for use in occupied areas
- ▶ No extinguishing agent residues, neither corrosive nor electrically conductive
- ▶ Higher operating pressure possible so longer pipeworks and multi-zone systems can be achieved
- ▶ Compact and space-saving
- ▶ Approved system (VdS)
- ▶ Worldwide recognized and approved extinguishing agent.

**GIE**



**GIELLE**

**3M**  
Novec 1230  
Fire Protection Fluid

**GIELLE**®  
ANTINCENDIO - ESTINTORI  
72022 ALTAMURA (BA)  
www.gielle.it 800-313233  
Certificata ISO 9001

13-0-04



# Fm 200

## Protecting your most valuable assets

FM-200<sup>®</sup> Fire Suppression agent was the first environmentally acceptable replacement for Halon 1301. FM-200<sup>®</sup> has zero ozone depleting potential, a low global warming potential and a short atmospheric lifetime. It is particularly useful where an environmentally acceptable agent is essential, where clean up of other media presents a problem, where weight versus suppression potential is a factor, where an electrically non-conductive medium is needed, and people compatibility an overriding factor.



FM-200<sup>®</sup> is a colourless, liquefied compressed gas. It is stored as a liquid and dispensed into the hazard as a colourless, eclectically non-conductive vapour that is clear and does not obscure vision. It leaves no residue and has acceptable toxicity for use in occupied spaces at design concentration. FM-200<sup>®</sup> does not displace oxygen and therefore is safer for use in occupied spaces without fear of oxygen deprivation.

FM-200<sup>®</sup> is chosen to protect occupied areas such as computer rooms and now the fast expanding telecommunications market. Its low extinguishing concentration of seven percent by volume for Class A risks, its high level personnel safety and absence of toxicity makes it a very attractive option. Very little cylinder storage space is required which can be an important consideration in city centre sites where floor space is at its most expensive.

Perhaps most in FM-200<sup>®</sup> favour though is the fact that it out performs the majority of other gaseous systems in terms of speed of reaction to fire. FM-200<sup>®</sup> is effective within 10 seconds of initial discharge. The rapid discharge time means that there is rapid knockdown of flame and the fire is rapidly extinguished. The amount of damage, toxicity effects and decomposition products of combustion are minimised. The safety percentage factor between the design concentration and toxicity levels is the largest margin of any fixed gaseous extinguishing systems and conformity exceeds that of Halon 1301.



FM200 systems stop fire in those critical first few seconds

FM200 is a clean agent and leaves no oily residues that may damage delicate equipment



# Inert systems

## Fires nature's way



European Parliament, Strasbourg - France.  
Gielle installs fire protection systems.

Gielle Inert Systems use natural gases as an extinguishing gas: argon, nitrogen and  $\text{CO}_2$ . These gases act on the fire by decreasing the percentage of oxygen from 20.9% to below 15%, which is theoretically the threshold below which the fire should go out. The saturation principle used is of the total flooding type.

Gielle Inert Systems are ideally suited to extinguishing various types of fires:

- ▶ Risks relating to electrical and electronic systems
- ▶ For the protection of spaces in underfloors and suspended ceilings
- ▶ Risks relating to flammable and combustible liquids and gases
- ▶ High-value immovable property (museums, libraries)
- ▶ In areas with expensive machines and appliances (CED, control rooms)
- ▶ Gielle Inert Systems are 100% environmentally friendly

Gielle Inert Systems reducing the oxygen percentage to the 12%, allow human being presence and extinguish the fire.

### Inert Solutions

Gielle manufactures all kind of inert gas suppression systems both at 200 and 300 working pressure bar. The systems proposed by Gielle are Argonite, Inergen, IG 55, IG100 and IG 541.

The natural gases required to extinguish a fire is stored in special 80/140 litre T-PED approved cylinders, in which the gas is pressurized at 200/300 bar. The pipes required to transport and dispense the gas are made of galvanized steel API 5L Schedule 40, complete with fitting type ASA Series 3000 downstream from the pressure regulator, while the manifolds upstream exploit pipes type 160/XXS. The radial spraying nozzles, with outlet diameter made according to hydraulic calculations, distribute the gas uniformly in the room with the required design concentration. Any over pressure that may form in the protected area after the extinguishing agent has been discharged will be reduced by one or more overpressure gate valves, equipped with pre-calibrated springs that evacuate the pressure in excess. The applicable standard imposes a leak measurement test, called **Fan Door Test**, to check the physical characteristics of the rooms to be protected and to process the project correctly.

The system is activated by means of the smoke detectors.





# CO<sub>2</sub> System

## Versatile & economical



**A fire in your facility is never pleasant. But, it doesn't have to be debilitating.** Carbon Dioxide, the original “clean agent”, is still an economical solution, providing automatic or manual protection for Class A, B or C fires.

### Tried and True

CO<sub>2</sub> is the only gaseous agent where the design rules specifically provide guidance on the protection of deep seated hazards. Total flooding or local application systems are designed to meet the requirements of NFPA 12 or BS5306-4 and are specifically designed using hydraulic flow calculation software.

The system complies with the requirements of the Pressure Equipment Directive and uses standard 67 and 45 litre containers.

### Gielle High Pressure CO<sub>2</sub> Systems

Gielle High Pressure Carbon Dioxide Systems are especially effective for non-occupied hazards such as semiconductor wet benches, control rooms and paint lines. Whatever the application, from container to nozzle, each system is custom-designed for your specific fire hazards.

Carbon Dioxide fire suppression systems have been proven effective in numerous unmanned applications:

- ▶ Commercial And Industrial Fryers
- ▶ Dip Tanks
- ▶ Electric Generators
- ▶ Waste Disposal Equipment
- ▶ Gas Turbines
- ▶ Coal Silos
- ▶ Hazardous Material Storage
- ▶ Quench Tanks
- ▶ Semiconductor Wet Benches
- ▶ Computer Room Subfloors
- ▶ Unmanned Control Rooms
- ▶ Coating Operations
- ▶ Wave Solder Machines
- ▶ Machining Operations
- ▶ Hose Reel Stations
- ▶ Transformer Vaults
- ▶ Inerting Systems



Municipality of San Remo, Italy - Gielle installs fire protection systems.

European Commission, Luxembourg - Gielle installs fire protection systems.

# Water mist

## Protecting People and Vassels

▶ [www.shiphalonphaseout.com](http://www.shiphalonphaseout.com)



The water mist system GL MIST designed and constructed Gielle, operates at a pressure of between 100 and 120 bar, and is fitted with special distributor nozzles which sprinkle water in tiny droplets. The spraying of micro drops of water has a total extinguishing action on the fire itself thanks to the combination of three main features:

- ▶ cooling action: the water particles, as a consequence of their size, are subject to rapid evaporation, with the consequent removal of a large quantity of thermal energy
- ▶ inerting action: the water vapor, generated by the water evaporation, behaves just like an inert gas and it helps to control and suppress the fire
- ▶ shielding action: the particles of water sprayed are capable of absorbing the radiant energy released by the fire, and so they significantly reduce the probability of the materials situated in the vicinity of the flames reaching their ignition temperature

### Applications:

- ▶ machinery space, turbines, generators, off shore
- ▶ warehouses, shops, hotels, archives, libraries
- ▶ computer and telephone rooms
- ▶ military and civil ships

### Advantages:

- ▶ environmentally friendly
- ▶ minimises the damage caused by the extinguishing agent
- ▶ safe for people
- ▶ eliminates the cost of large storage tanks



The water mist system GL MIST system offered by Gielle complies with the NFPA 750 fire protection standards and IMO 913, A800 and IMO/CIR. 1165. It's been tested following FM Standards (Appendix G and H) and certified by BV (Bureau Veritas). The Nozzles have been tested following UL standards and it was performed tests for archives and electrical cables by RINA Industry. Water mist system GL MIST is a system classified as class 1 (minimum diameter of the water droplets sprayed less than 100 microns) and it has also been acknowledged as being suitable, in accordance with the above standards, for use in extinguishing both Class A fires (solid combustibles such as paper, wood, etc.) and class B fires (liquid combustible such as petrol, oils, etc.).



# Foam

## The firebrand for water

### Water/low expansion foam systems

The systems used to protect inflammable liquids use synthetic low expansion AFFF foams that act very quickly, spreading over the surface of the liquid on fire. Unlike traditional foams, aqueous filming foams not only form a consistent layer of foam but also generate by drainage an aqueous film that excludes the surface of the inflammable liquid from coming into contact with the air and so prevents the releasing of vapours. In the event of breakage at some point in the continuity of the film, the latter has the ability to autoregenerate itself.

In the event of applications on polar solvents, which are water soluble, the use of alcohol resistant AR-AFFF filming foam is necessary. Once applied on polar solvents, the polymers (polysaccharides) contained in the foam form a polymeric film over the surface of the liquid. The polymeric film is generated by a reaction between the polar solvent and the water that is drained from the foam. The aqueous film that floats over the polymeric layer maintains its ability to autogenerate itself and contributes to extinguishing the fire and suppressing any vapours.

**Main use:** wet sprinkler or deluge systems used to protect inflammable liquids.

### Water/medium and high expansion foam systems

High expansion foam is used to extinguish class A and B fires inside confined spaces. Medium expansion foam was instead studied for applications in open air and windy spaces.

Both medium and high density foam are bubble aggregates generated mechanically thanks to the passing of the concentrated foaming agent through special generators and the subsequent contact with air. The expansion of the foaming agent can vary between 20:1 and 1000:1.

Medium expansion systems can be used to protect liquid and solid combustibles where an extensive coverage of the spaces to protect is required, such as for the total flooding of small volumes such as cabins with engines and transformers.

They are used to protect inflammable or toxic liquids where the rapid saturation is vital to prevent the propagation of vapours both for indoor and outdoor applications.



# AFFF Phase out Cold Fire

## The new generation of extinguishing agents

The environmental concerns being raised over the release of AFFF, and all other firefighting foams, has started a search for more benign agents. Many formulations are possible, using both existing surfactant technology and new technology that will likely be developed in the near future. The use of foams containing fluorochemical surfactants is widespread because of their extremely effective firefighting capability. Almost all foams used for class B firefighting contain these surfactants, to varying degrees. The formulations also contain hydrocarbon surfactants, solvents, and various other additives. However, the fluorochemical surfactants are the key ingredient to produce a foam with film formation capability (aqueous film forming foam, AFFF). Unfortunately, the fluorochemical portions of the surfactant molecules currently in use are not biodegradable in the environment. In addition, the molecule that remains after biodegradation may be bioaccumulative and toxic. This has raised concerns about the use of these molecules in firefighting foams and created an interest in finding alternative formulations that limit or eliminate the use of these fluorochemical surfactants. In addition, the current formulations of firefighting foam may have other undesirable environmental impacts. These impacts have raised concerns over the installation of foam systems and have limited the use of foam in some instances.



### **Cold Fire®**

#### Liquid Foam Concentrate

Non-toxic and biodegradable, Cold Fire® is the only Patented concentrated alcohol-resistant microbial fire fighting agent on the market today. Once the fire is out or the spill is covered with finished foam, the microbes begin remediating the AFFF, hydrocarbon and alcohol wastes.

Cold Fire® is designed for both class B Hydrocarbon and Polar Solvent fuels. On Class B Hydrocarbon fuels, it creates an aqueous film that effectively shuts down the fire. On Polar Solvent fuels, a polymeric membrane is formed between the fuel and the foam which makes extinguishment possible. U/L-162 Listed.



#### Employability on the following classes of fires:

Class A: Wood, tires, brush, forests, structures, textiles, etc.

Class B: Vehicles, oil, gasoline, diesel, alcohol

Class D: Metals such as magnesium, aluminum and titanium

#### Product Features Cold Fire-Flame Out:

- ▶ Safe for the environment;
- ▶ 100% biodegradable;
- ▶ Non-toxic;
- ▶ Non-corrosive;
- ▶ High capacity cooling;
- ▶ Soluble 100%;
- ▶ Product life indefinite if kept in sealed containers at a temperature between -2 ° C and 49 ° C, guaranteed 20 years;

#### Benefits from the use of water added with Cold Fire Flame-Out:

- ▶ Reduces the density of smoke by increasing the visibility;
- ▶ High capacity cooling and then increased safety and less chance of spread of flame;
- ▶ Not clog the pipes, unlike foam, and perfectly usable in all types of fire control station;
- ▶ Ability to penetrate the source of fire, extinguish the fire with much less water thereby reducing the damage caused by the excessive use of water alone as the extinguishing agent;
- ▶ Increases exponentially the ability of water to absorb heat, allowing operators to fire into a structure more quickly.

#### Certifications and Approvals

- ▶ CE approval granted under the standard EN 1568-3;
- ▶ Certificate MPA Dresden;
- ▶ Approval Underwriters Laboratories Inc. (extinguishing agent, wetting agent);
- ▶ Certificate of American Bureau of Shipping (product approved for use in marine firefighting equipment);
- ▶ Certificates of government agencies or awards;
- ▶ Certificate of no toxicological effects on man and environment and biodegradable;
- ▶ Certificate of absence of the corrosive effects.



- ▶ Environmentally friendly replacement for current AR-AFFF foams
- ▶ Excellent fluidity creates rapid knockdown
- ▶ Our unique ingredients are quickly biodegraded by Cold Fire® microbes
- ▶ Compatible with all current foam proportioning and delivery systems
- ▶ Usable with fresh or sea water
- ▶ Will not clog delivery systems; easy to clean fittings after use
- ▶ Superior wetting characteristics when applied to Class A combustible materials
- ▶ Suitable for use along with dry chemical extinguishing agents



# Consulting and servicing



# Engineering

## Complete design solutions



### Design and calculation software

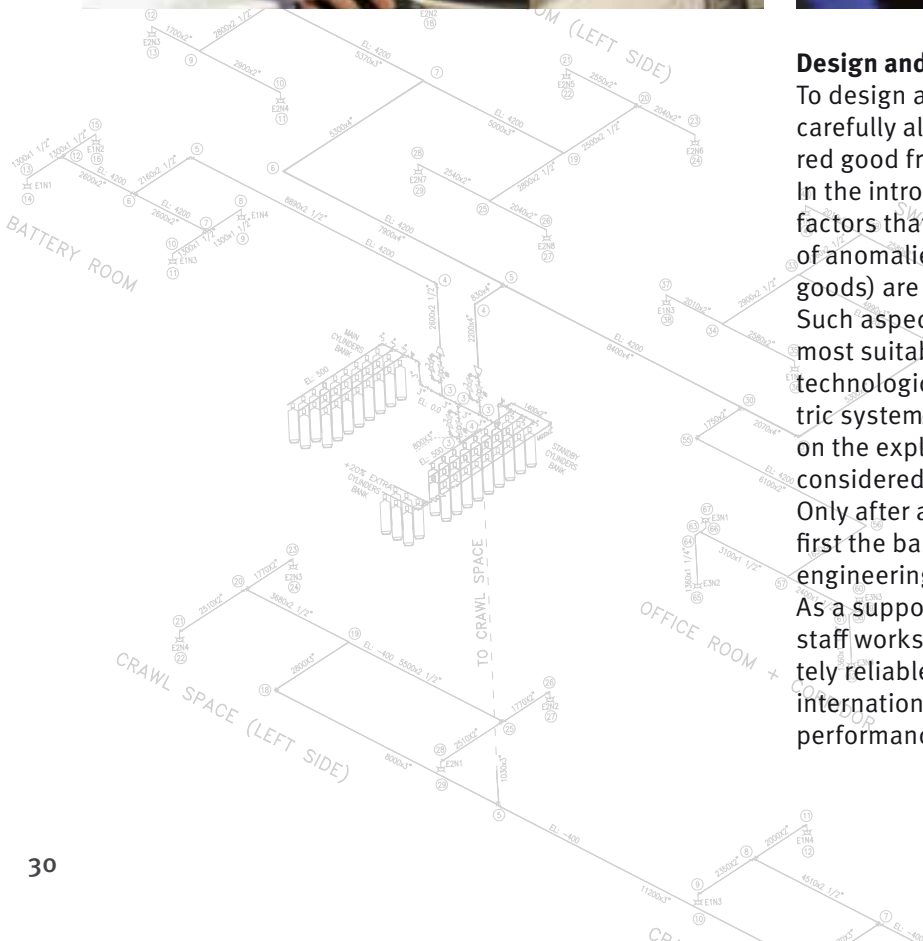
To design a fire fighting system it is necessary to evaluate carefully all the factors needed to reach a target, considered good from all points of view.

In the introductory step, through the risk analysis, all the factors that can cause damages to properties because of anomalies or failures (we mean damages to people or goods) are to be taken into consideration.

Such aspects as the personnel safety, the choice of the most suitable firefighting system, the interface with other technological systems (for example air conditioning, electric systems, etc.) and even the area classification basing on the explosion risk rates must be carefully and seriously considered.

Only after an accurate analysis of all these elements, at first the basic engineering and subsequently the detail engineering can be developed.

As a support to define the system design, Gielle technical staff works daily following such criteria using an absolutely reliable calculation software, in compliance with the international certifications necessary to grant the best performance.





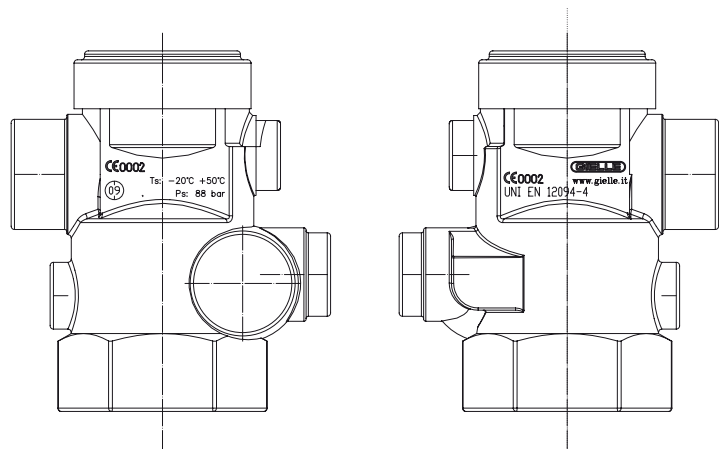


### References

Thousands of systems have been set-up by several installation companies using systems manufactured by Gielle in the last decades.

### Such systems have been employed for the main product fields:

- ▶ Chemical and gas-oil companies
- ▶ Electrical power companies
- ▶ Mechanic and automotive factories
- ▶ Telecommunication companies
- ▶ Data management companies
- ▶ Bank and Insurance agencies
- ▶ Ministry offices
- ▶ Government archives
- ▶ Notary Record Offices
- ▶ Libraries
- ▶ Museums



# Rescue and Fire fighting service

## Consulting and training

### Fire Prevention/Protection Services

Our specially trained fire guards perform equipment control, patrols and monitor fire alarms.

Fire prevention is crucial for many companies in order to operate their business without disruption. In most countries we can offer complete fire safety solutions provided by specially trained fire guards. This could, for example, involve checking that fire safety equipment is compliant with regulations, patrolling premises from a fire prevention perspective, monitoring fire alarms and, in some cases, working with in-house fire fighters. Most fire guards have basic training in fire protection and fire fighting.

### Tunnel Fire Prevention/Protection Services

Disastrous tunnel fires in the past years have shown that there's still a lot of work to do in regard to effective fire protection for road and train tunnels. Gielle technologies with its tunnel extinguishing service has now developed an effective concept which will provide a major contribution to tunnel safety. When the fire fighter faces the challenge of being a great distance away from the fire or narrow environment has to be navigated a Gielle fighting service with motorcycle is the right choice for the task. It can quickly get through congested traffic and reach a fire scene much quicker than conventional vehicles due to its high speed and narrowness. The fire fighting system is mounted on motorcycle and comes with emergency lights and sirens. The motorcycle is fully capable of carrying the extra weight and stay stable at any speed. Operators Gielle are highly specialized.



## Who need our expertise

- ▶ Aerospace Technology
- ▶ Air Force Technology
- ▶ Airport Technology
- ▶ Army Technology
- ▶ Chemicals Technology
- ▶ Design Build Network
- ▶ Food Processing Technology
- ▶ Hospital Management
- ▶ Hotel Management Network
- ▶ Hydrocarbons Technology
- ▶ Industry Appointments
- ▶ Mining Technology
- ▶ Mobile/Cellular Technology
- ▶ Naval Technology
- ▶ Offshore Technology
- ▶ Packaging Gateway
- ▶ Power Technology
- ▶ Railway Technology
- ▶ Road Traffic Technology
- ▶ Ship Technology
- ▶ Water Technology
- ▶ World Cruise Network

[www.nfpa.it](http://www.nfpa.it)



### Ports & Airports Fire Protection

Ensuring the safety of travellers and the efficiency of the international transport system

In today's interdependent global economy, international trade and travel is reliant upon the security of our vast network of ports and airports.

At Gielle, we know that the key to releasing wider benefits for our clients is to always look at the overall picture to consider solutions that transform performance.

Gielle works closely with clients to understand the specific security and business risks they face.

Bringing together our expertise in logistics, technology, project management and managing the world's biggest security personnel work force, we design solutions to mitigate these risks, with the aim of adding value in the process.

In today's modern economic world, International Port Operators face a myriad of risks and challenges in undertaking business, ranging from continually increasing governmental security, safety and environmental compliance standards; the economic demands for improved operational efficiencies; threats from organized crime and global terrorism.

Gielle understands these risks and challenges faced by the Port industry and works closely with many customers within the sector around the world to successfully address and overcome these challenges.

# Servicing and maintenance

## All fire protection and suppression systems

Ever mindful of the need to maintain fire safety standards for its customers, GIELLE is able to undertake the regular inspection and maintenance of gaseous extinguishing installations on a worldwide basis. While many of the installations maintained by GIELLE were also installed by the company, a growing proportion were originally supplied and installed by competitors.

Immediately upon the delivery and testing of each system, a work card is created, and later used by the “Service” department to keep all information useful for monitoring the perfect operative functioning of the system under constant control.

This allows us to always intervene extremely quickly, 365 days a year, 24 hours a day, and to be immediately able to individuate any possible inefficiencies in the system.

### All-inclusive service

We immediately perceived the need for a single interlocutor who can handle all of a company’s security systems.

### Price

Our prices are certainly not the lowest on the market. However, thanks to our use of the best components available and the most recent productive technologies so as to guarantee you the highest possible level of safety, we are sure that we offer you the best price/quality ratio on the market.

We have dedicated a page to the description of our ideal client because we are aware that it is not possible to do everything well, nor to please everyone.

The extreme specialization in our sector is not enough to contain the ideal parameters for excellent service. For that reason, we have further segmented our market to the mid-high range.

As a matter of fact, our investment in constantly updating the know-how of our professionals, and our technology positions us as the ideal interlocutors for resolving particularly





**Room integrity testing:**

Additionally, where required, the company undertakes room integrity testing using the latest computerised technology, and issues a detailed report package to verify the concentration integrity of the protected space in accordance with BS 5306: Part 5.1, NFPA2001 and the BFPSA Code of Practice.

**Recharges and retest**

Periodically (generally every ten years) the pressure tanks should be tested again by specialized companies that empty the tanks, check the pressure and new recharge again. Such procedures should be carried out in presence of jurisdiction authorities .

In Altamura the service of recharge and retest of all the cylinders is carried out not only for the fire-fighting field. The retest operations frequency allows a quick service for the customers and limits the problems connected to such procedures.







# GIELLE

Fire Protection  
Company

The mission of Gielle Fire Systems, since 1965, is to provide the highest quality and the most reliable fire detection and suppression systems for special hazard applications and to offer them to customers through our global network.

[www.gielle.it](http://www.gielle.it)