

# Engineered FIRE PIPING

# 21.22



## INNOVATION BY EXPERIENCE

[www.firepiping.com](http://www.firepiping.com)



ISO 9001  
ISO 14001  
BUREAU VERITAS  
Certification



VdS-approved welding  
procedure for pipes < DN 65:  
sleeves, pipe connection





ISO 9001  
ISO 14001  
**BUREAU VERITAS**  
Certification



VdS-approved welding  
procedure for pipes < DN 65  
sleeves, pipe connection

## Anerkennung Approval



### von Verfahren of Procedures

Neuer der Anerkennung / Holder of the Approval:  
**Engineered Fire Piping, S.L.**  
Calle Del Pino 17  
Pol Ind La Malena  
ES - 45210 Yuncos, Toledo

Approvals-No. / Approval No.	Seite der Seiten / No. of pages	Gültig vom (TT.MM.JJJJ) / Valid from (dd.mm.yyyy)	Gültig bis (TT.MM.JJJJ) / Valid until (dd.mm.yyyy)
E 22200004	5	16.03.2020	15.03.2022

Bezeichnung der Anerkennung / Subject of the Approval:  
Anerkennung von Schweißverfahren an Röhren kleiner DN 65 /  
Approval of Welding Procedures for Pipes < DN 65

Herstellungsort / Manufacturing Site:  
**Engineered Fire Piping, S.L.**  
Calle Del Pino 17

## Certificación

Concedida a

### ENGINEERED FIRE PIPING SL

CL DEL PINO 17 POL IND LA MALENA - 45210 - YUNCOS -  
TOLEDO - ESPAÑA

Bureau Veritas Certification certifica que el Sistema de Gestión ha sido auditado y  
encontrado conforme con los requisitos de la norma.

NORMA

## ISO 9001:2015

El Sistema de Gestión se aplica a:

SUMINISTRO DE PREFABRICADOS PARA  
SISTEMAS MODULARES DE TUBERÍA,  
TANQUES DE RESERVA DE AGUA, HIDRANTES,  
BIES Y DISTRIBUCIÓN DE PRODUCTOS PARA  
SISTEMAS CONTRA INCENDIOS.



## Certificate of Compliance

This certificate is issued for the following:

**Pipe Couplings and Fittings for Aboveground Fire Protection Systems**

**Sprinkler Pipe Assemblies**  
(see attached configuration table)

Prepared for:

Engineered Fire Piping SL  
Poligono Industrial La Malena C/Del  
Pino 17, Yuncos Toledo 45210.

Manufactured by:

Engineered Fire Piping SL  
Poligono Industrial La Malena C/Del Pino  
17, Yuncos Toledo 45210.

## Certificate of Compliance

This certificate is issued for the following:

Approval of a Range of Steel Suction Tanks  
For EQ Zones >500-yrs and 50-yrs

Prepared for:

Engineered Fire Piping SL  
Poligono Industrial La Malena C/Del Pino 17  
Yuncos, Toledo 45210  
Spain

FM Approvals Class: 4020

Approval Identification: 3058314

Approval Granted: 9/25/2017

## Certificación

Concedida a

### ENGINEERED FIRE PIPING SL

CL DEL PINO 17 POL IND LA MALENA - 45210 - YUNCOS -  
TOLEDO - ESPAÑA

Bureau Veritas Certification certifica que el Sistema de Gestión ha sido auditado y  
encontrado conforme con los requisitos de la norma.

NORMA

## ISO 14001:2015

El Sistema de Gestión se aplica a:

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SISTEMAS MODULARES DE TUBERÍA,  
TANQUES DE RESERVA DE AGUA, HIDRANTES,  
BIES Y DISTRIBUCIÓN DE PRODUCTOS PARA  
SISTEMAS CONTRA INCENDIOS.



## CERTIFICADO

TUBERÍAS DE ACERO PREFABRICADAS PARA USO EN INSTALACIONES DE PCI

Fabricado por:

**Engineered FIRE PIPING**  
C/ del Pino, nº 17, Pol. Ind. La Malena  
45210 Yuncos (Toledo)  
Teléfono: 902 551 558  
Fax: 902 551 663  
[www.firepiping.com](http://www.firepiping.com)  
[info@firepiping.com](mailto:info@firepiping.com)

Nº Identificación:  
201901013

Código Producto:  
0101

Este certificado es válido para las configuraciones recogidas en el reverso y está sujeto  
al resultado de las auditorías de seguimiento y al estricto cumplimiento del  
procedimiento aplicable para la concesión del Sello Cepreven



Puede consultar la veracidad y  
limitaciones de este certificado en  
la página web [www.cepreven.com](http://www.cepreven.com)



Nº de Certificado  
2019010130101

Válido hasta: 30/06/2020

Número del certificado:	ES111238-1
Aprobación original:	23-01-2012
Certificado en vigor:	18-03-2020
Caducidad del certificado:	17-03-2023

Este certificado está sujeto a los términos y condiciones generales y particulares de los servicios de certificación

Bureau Veritas Iberia S.L.  
C/Valportillo Primera 22-24, Edificio Caba, 28108 Alcobendas - Madrid, España  
1/1







01

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## PREFABRICATED PIPES

Advantages of an expert partner in prefabricated pipes · What do we do in Engineered FirePiping? · Advantages of the prefabricated pipe by E-Fire Piping · Painting line process · Table of the thicknesses and pipe walls standards · Mechanical grooved products, Valves and Pipe supports

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## WATER TANKS

Water tanks for fire protection and drinking water · Two sealing systems · Why to buy our tanks? What are the advantages of the bolted manufacturing · Supply. Rectangular Tanks.

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## PVC PIPING AWWA C900/C905

Benefits of PVC AWWA C900/C905 pipe · PVC pipe system AWWA C900/C905 versus HDPE FM · Connection accesories for PVC pipes AWWA C900/C905

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## ACCESORIES FIREPIPING AND SEISMIC

Grooved accesories · Valves · Support elements · Seismic accesories by nVent CADDY

05

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## HYDRANTS, CABINETS & EQUIPMENT

Underground hydrant with 1 or 2 outlets · Dry barrel hydrant · Ooutside hose storage cabinet with standard pedestal according to Cepreven · Wet barrel fire protection hydrants and strainers for petrochemical use · Foam equipment

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## RACKs - REELS

Hose reels + accesories · Robinet incendie armé · Fire hose cabinets (RACKs)

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## SPECIAL PROJECTS

Key features for special projects · Tests and finishes · Fire protection systemfor gas spheres · SKIDs · Fire protection systems for flammable liquids storage tanks · Large flow Manifold

Engineered  
**FIRE PIPING**



[www.firepiping.com](http://www.firepiping.com)



# ADVANTAGES OF AN EXPERT PARTNER IN PREFAB



## WE MAKE IT EASY

CONFIDENTIAL AND INDEPENDENT PARTNERSHIP  
COSTE EFFECTIVE OF INSTALATION  
QUALITY: FM APPROVALS, CEPREVEN AND VDS  
CERTIFICATES ISO 9001 & ISO 14001  
ENVIROMENTAL FIENDLY & CIRCULAR ECONOMY

INTERNATIONAL PRESENCE  
TECHNICAL ASSESMENT BY EXPERTS

Variable length of prefab tubes up to 9m  
Prefab capacity: +10.000 spk heads / day  
Complete range of prefab pipe configurations

## ROBOTIC PREFABRICATION

## AUTOMATIC PAINTING LINE

Full RAL color range

Metallic blasting line - Cleaning, degreasing, phosphating and passivating tunel - Demineraliser and sewage treatment plant - Spray liquid painting booth - Polyester Powder painting booth





# What do we do Engineered FIRE PIPING S.L.?

Our commitment is to supply prefabricated pipe with the most innovative technologies and the most professional technical support.



Quality system according to ISO 9001, certified by Bureau Veritas.

Pipes with inspection certificate 3.1 according to UNE-EN 10204.

Welded steel pipes are manufactured in the CE, by manufacturers of maximum guarantee.

Factory Mutual (FM) approved threaded and grooved sockets.

The manufacturing process is adapted to the product. The surface preparation of the pipe for painting can be done by metallic shot blasting or by application of amorphous phosphate, which prevents oxidation and corrosion, washing inside and outside the tube, passivating, blowing drops and drying in the 180° oven.

A lifting and vibration system ensures the emptying of the shot and the emptying of the cut pipe piece.

## MAXIMUM QUALITY GUARANTEES



Non-destructive test by penetrating liquids, in 100% of sleeve welds.

Hydrostatic test of 5 - 10% of pipes over 6 m in length under 50 bar for 5 minutes.

Dimensional control of the prefabricated product alongside with control of thickness and adhesion of the paint.

Identification of all pipes with a sticker that includes all quality records in a barcode.

FM approval of all pipe manufactured by e-Fire Piping.

Civil liability insurance of 10 M €.



VdS-approved welding  
procedure for pipes < DN 65:  
sleeves, pipe connection



# ADVANTAGES OF THE PREFABRICATED PIPE BY E.FP

**m**anufacture of pipes up to 9.0m in length. E-Fire Piping is the first workshop in the world that has a robotic cell capable of manufacturing pipe units for automatic sprinklers system up to 9.0 m length. In addition, the orbital welding is approved by FM

- Production capacity. E-Fire Piping has 6 fully automatic robotic cells, capable of manufacturing pipes for more than 10.000 sprinklers a day and is able to paint more than 30.000 m of pipe per day.
- Not having manufacturing limitations, when the separation between sprinklers is different from 3.0m, the robotic cells allow to significantly reduce the number of different pipes. For example, when the distance between sprinklers is 3.50m, E-Fire Piping manufactures pipes of 7.0m in length. This advantage allows to reduce assembly costs and the number of grooved joints by looking for symmetrical pipes without assembling direction.
- Automated manufacturing for pipes up to 14" with outlets up to 8"
- The pipes manufactured by E-Fire Piping have an identification label with information

about quality, type of the pipe, number of a corresponding plan, mounting area and other data which is necessary to facilitate assembly, such as the identification of the type of pipe, the number of the assembly plan to which the tube corresponds, text with identification of the mounting area, etc. Guarantee of traceability and supply compliance with the labeling and reading system.

- The e-Fire Piping painting process guarantees the highest adhesion of the paint and the highest resistance to corrosion. Depending on where the pipeline is going to be installed, we can adapt to some painting processes or others.

• The technical department of e-Fire Piping will advise and optimize the design of the sprinkler system, making the assembly plans and the isometric (workshop sheets).

- Product ready for assembly on site, quickly, cleanly and safely. Limitation of welding on site regulated by EN 12845, section 17.1.3 and NFPA 13 section 6.5.2.2; and environmental limitation of painting on the working site. Avoid welding and painting on the working site.
- Packaging that prevents transportation damage and facilitates a quick identification.





# PAINT LINE PROCESSES

E-Fire Piping has the paint line with the highest capacity, quality and versatility to be able to undertake any type of finish and guarantee corrosion resistance in the salt spray chamber.



## MECANICAL SURFACE PREPARATION

Metallic blasting line up to SA 2 ½" grade, according to ISO 8501-1, coarse nodular grain roughness according to ISO 8503-1.

COMPLETE RAL CHART IS AVAILABLE



## CHEMICAL SURFACE PREPARATION AND CABIN FOR THE PRIMER



Internal and external washing of the pipe, degreasing and application of amorphous phosphate and passivated, which prevents oxidation and corrosion. Blowing of drops and drying in the oven 180°.

Antioxidant or finishing, liquid application



## CABIN FOR POWDER COATING, DRYING OVEN AND POLYMERIZATION OVEN



Electrostatic application and rapid color change.

The first oven is for drying after degreasing - phosphating.  
The second one is for the polymerization of powder coat.





# TABLE OF PIPE WALL THICKNESSES AND STANDARDS

## WALL THICKNESS ACCORDING TO STANDARDS

DN	PIPE STANDARD DESIGN (e=mm)										
	EN 10216-1  (1)	EN10217-1  (1)	EN10255				ANSI/ASME B36.10M				
			Serie M	Type L1	Type L	Type L2	Sch 5	Sch 10	Sch 20	Sch 30	Sch 40
25	2,3 a 8,8	1,4 a 8,8	3,2	2,9	2,9	2,6	1,7	2,77	N/A	N/A	3,3
32	2,6 a 10,0	1,4 a 8,8	3,2	2,9	2,9	2,6	1,7	2,77			3,56
40	2,6 a 12,5	1,4 a 8,8	3,2	2,9	2,9	2,9	1,7	2,77			3,81
50	2,9 a 16,0	1,4 a 10,0	3,6	3,2	3,2	2,9	1,7	2,77			3,81
65	2,9 a 20,0	1,6 a 10,0	3,6	3,2	3,2	3,2	2,1	3,05			5,08
80	3,2 a 25,0	1,6 a 10,0	4,0	3,6	3,2	3,2	2,1	3,05			5,59
100	3,6 a 32,0	2,0 a 11,0	4,5	4,0	3,6	3,6	2,1	3,05			6,1
125	4,0 a 40,0	2,0 a 11,0	5,0	N/A	4,5	N/A	2,8	3,4			6,6
150	4,5 a 50,0	2,9 a 11,0	5,0		4,5		2,8	3,4			7,1
200	6,3 a 70,0	3,2 a 12,5	N/A		N/A		2,8	3,76			6,4
250	6,3 a 80,0	3,2 a 12,5					3,4	4,19	6,4	7,8	9,27

The maximum thickness depends on each manufacturer. Not in all cases the maximum thickness of the standard EN 10220 is reached

## MINIMUM PIPE WALL THICKNESS ACCORDING TO SPRINKLERS STANDARDS

PIPE			STANDARD DESIGN										e-FP: MINIMUM WALL THICKNESS APPROVED BY FM  (mm)
			MINIMUM WALL THICKNESS (mm)										
DIAMETERS (mm)			EN 12845		CEA 4001 - CEPREVEN				NFPA 13		FM LPD 2-0		
THREAD SIZE	NOMINAL DIAMETER	OUTSEIDE DIAMETER	ROLL GROOVED ISO 4200 D	THREADED AND CUT GROOVED ISO 65 M	ROLL GROOVED OR WELDED		THREADED or CUT GROOVED		ROLL GROOVED OR WELDED  SCH10	THREADED OR CUT GROOVED  SCH40	ROLL GROOVED	THREADED OR CUT GROOVED	
					10217-1	10255 L2/L	10217-1	10216-1					
1"	25	33,7	2,0	3,2	2,6	2,6	3,2	3,2	2,8	3,4	2,6	Minimum wall thickness 3,4 mm	2,0
1 ¼"	32	42,2	2,3	3,2	2,6	2,6	3,2	3,2	2,8	3,6	2,6		2,3
1 ½"	40	48,3	2,3	3,2	2,9	2,6	3,2	3,2	2,8	3,7	2,6		2,3
2"	50	60,3	2,3	3,6	2,9	2,6	3,6	3,6	2,8	3,9	2,6		2,3
2 ½"	65	76,1*	2,6	3,6	3,2	2,6	3,6	3,6	3,0	5,2	2,9		2,6
3"	80	88,9	2,9	4,0	3,2	2,9	4,0	4,0	3,0	5,5	2,9		2,9
4"	100	114,3	3,2	4,5	3,6	3,2	4,5	4,5	3,0	6,0	2,9		3,2
5"	125	139,7	3,6	5,0	4,5	3,6	5,0	5,0	3,4	6,6	3,3		3,6
6"	150	168,3**	4,0	5,0	4,5	4,0	5,0	5,0	3,4	7,1	3,3		4,0
8"	200	219,1	4,5	N/A	--	4,5	6,3	--	4,8 (1)	7,0 (2)	4,5		4,5
10"	250	273	5,0	N/A	--	5,0	6,3	--	4,8 (1)	7,8 (2)	4,5		---

(1) It has to be used SCH20, e = 6,35 mm

(\*) 73,0 for Pipes ASTM


(\*\*) 165,1 for Pipes EN 10255

- Grooved: Refers to end preparation for joints WITHOUT material removal (F.EX welding or grooving "Roll groove")
- Threaded: Refers to end preparation for joints WITH material removal (F.EX threading or grooving "Cut Groove").
- Not mentioned minimum wall thickness. Smaller thicknesses are allowed for Listed tubes for use in sprinkler systems (NFPA 13-2019, punto 7.3.3.1).
- FM allows smaller wall thicknesses if the tubes used are approved for use in automatic sprinkler systems (LPD 2-0, punto 2.5.2.1)





# THICKNESS SPREADSHEET - FINISHING COAT

FINISHED PAINTING TO ENSURE THE CORROSION RESISTANCE		ANTICORROSION FINISHING COATS ACCORDING TO ISO 12944-6				
		EXTERNAL / INTERNAL COATING (Finishes stable polymerized polyester and resistant to weathering erosion)				
		C1	C2	C3	C4	C5
		CORROSION	CORROSION	CORROSION	CORROSION	CORROSION
		VERY LOW	LOW	MEDIUM	HIGH	VERY HIGH
THICKNESS LOSS PER YEAR	Steel low % carbon	≤10g/m <sup>2</sup> ≤ 1,3 µm	>10-200 g/m <sup>2</sup> > 1,3 -25µm	>200-400 g/m <sup>2</sup> >25 -50µm	>400-650 g/m <sup>2</sup> >50-80µm	>650-1500 g/m <sup>2</sup> >80-200µm
	Zinc	≤0,7g/m <sup>2</sup> ≤ 0,1 µm µm	>0,7-5g/m <sup>2</sup> / ≤ >0,1-0,7 µm	>5-15g/m <sup>2</sup> / ≤ >0,7-2,1 µm	>15-30 g/m <sup>2</sup> / ≤ >2,1-4,2 µm	>30-60 g/m <sup>2</sup> / >4,2-8.4 µm
		-INTERNAL:	-INTERNAL	-INTERNAL	-INTERNAL	-INTERNAL
		Buildings with heating and air condstioning	Buildings without heating and with possible condensation	Manufacturing ware-houses with high humidity.	Manufacturing ware-houses with high humidity.	Manufacturing ware-houses with high humidity. and aggressive chemical environments.
			-EXTERNAL	-EXTERNAL	-EXTERNAL	-EXTERNAL
			Rural areas with low pollution	Urban and industrial areas with moderate pollution Coast areas with low salinity	Urban and industrial areas with moderate pollution Coast areas with low salinity	Industrial areas with high humidity and aggressive chemical environment Coastal areas with high salinity.

PROTECTING FINISHING SYSTEMS ACCORDING TO ISO 12944-6							
MATERIAL BASE	SURFACE TREATMENT	PAINTING SYSTEM	MINIMUM THICKNESS	ENVIRONMENT	DURABILITY	MOISTURE BOOTH EN ISO 6270-1	SALT SPRAY EN ISO 9227-1
BLACK STEEL	CHEMICAL PRE-TREATMENT SPRAY SYSTEM (DEGREASING + PHOSPHATE + PURIFICATION) + PASSIVATING CHROME FREE	MEGAPOL IND. ULC 72U00	80 µ	C3	MEDIUM	120 H	240 H
		MEGAPRIMER 72P0N + MEGAPOL IND. ULC 72U00	140 µ	C4	MEDIUM	240 H	480 H
BLACK STEEL	METAL SHOT BLASTING GRADO Sa 2 ½	MEGAPRIMER 72P0N + MEGAPOL IND. ULC 72U00	140 µ	C4	MEDIUM	240 H	480 H
		MEGAPRIMER 72P0Z + MEGAPOL IND. ULC 72U00	140 µ	C5	MEDIUM	480 H	720 H
GALVANIZED STEEL	HEMICAL PRE-TREATMENT SPRAY SYSTEM (DEGREASING + PHOSPHATE + PURIFICATION) + PASSIVATING CHROME FREE	MEGAPRIMER 72P0N + MEGAPOL IND. ULC 72U00	140 µ	C5	MEDIUM	480 H	720 H
	MECHANICAL + CHEMICALTREATMENT + FINAL PASSIVATION		140 µ	C5	HIGH	720 H	1.440 H



# WATER AND FUEL TANKS

## FIRE PROTECTION AND DRINKING WATER

FIRE PIPING  
TANKS



### SEALING SYSTEMS

#### MEMBRANE

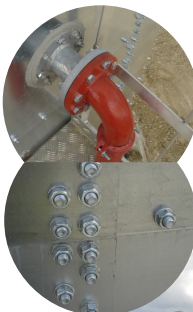
- Membrane PVC 1.100 gr/m2 with sanitary certificate for fire protection or potable water.
- Neoprene joints for connections.
- More simple civil works.

#### MASTIC

- Polyurethane mastic paste Sikaflex 11 FC.
- Doble expansion joint Sikaswell P2010.
- Two stages civil works.

### WHY BUY OUR TANKS?

- Manufacturing and design according to international standards (FM, UNE, CEPREVEN).
- Excellent quality and guarantee of manufacturing and assembly process.
- Automated design manufacturing.
- Customised and painted according to the client's requirements.
- Optional items: chlorination of water systems, space heater and plug-in measurement system.





# ADVANTAGES OF THE BOLTED MANUFACTURING

- Quick and economical assembly.
- Easy and cheap transportation all around the world.
- Leak-free tanks.
- Large stock in tanks and accesories.
- No special maintenance.
- Wide range in diameters and heights. Flexibility in design.
- No additional coating required.
- Enviromental friendly.

## SUPPLY



- Suction, return, over flow, fill and drain tank connections
- Automatic fill float valve. Emptying Gare Valve
- 275 gr zinc/m2 hot deep galvanized steel plates
- Aluminium ladder and platform.
- Floor level manhole and upper register hatch.

## RECTANGULAR TANKS

- Excellent solution to space limitation.
- Adaptation to the terrain (saving columns or leaving them inside)
- High-strength corrugated steel plates
- Interior and exterior supports according to dimensions and capacity.
- Same characteristics as circular tanks.





# AWWA C900/C905 PVC PIPE-PRODUCT ADVANTAGE



Approvals and certifications (UL / FM)

Hydraulic advantage (greater internal section)

Easy and quick connection (does not require qualified personnel or specialized machinery)

100% mechanical instalation (does not require termofision or electrofusión)

Does not require anti-push concrete blocks (restricor joints)

Wide avaliability of connections (listed and approved)

Less time in acceptance tests.

It allows repairs in humid coditions (No termofusión)

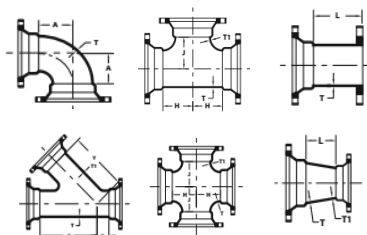
Allowed in explosive enviroments (No termofusión)

Less thermal expansion (there is no Poisson effect).

## CONNECTION ACCESSORIES FOR PIPES PVC AWWA C900/C905



Anti-thrust mechanical connections and restrictors



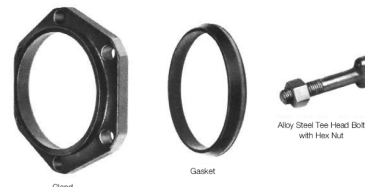
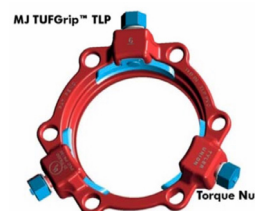
Ductile iron accessories

Internal restraint gasket

Mechanical restraint gasket

Connections with restraint system

Mechanical Joint








# UNDERGROUND PIPING SYSTEM:

PVC AWWA C900/C905 (Pressure) versus HDPE FM (Thermofusion)

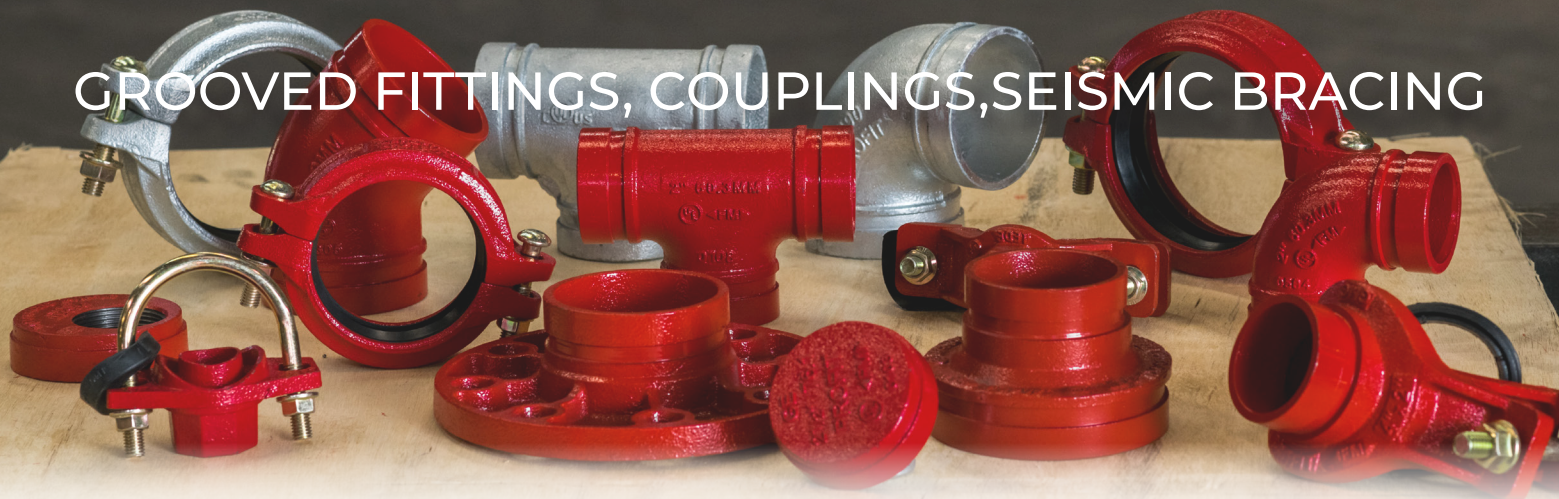
## ADVANTAGES OF THE PVC PIPING SYSTEM AWWA C900/C905 VERSUS HDPE FM PRODUCT

PRODUCT	AWWA C900/C905	HDPE FM
TYPE OF JOINT	Pressure joint. Easy installation greater laying of installed pipe. It does not require qualified personnel. Faster assembly as the pipe joints are easily connected by EMBONE	Joint by Thermo-Fusion: 8 to 10 pieces per day depending on the diameter, longer installation time, require purchase or rental of machine and trained personnel
INSIDE DIAMETER 	The inner diameter is more favorable compared to a HDPE pipe, This allows to reduce diameters of pipes and other accessories, being a more economical option.	The inner diameter is less favorable compared to the C900 pipe.
USE OF TOOLS	NO	YES (Thermofusion or Electrofusion)
WORKFORCE	Basic training.	Very trained and qualified.
INSTALATION TIME	Fast, longer pipe stretches installed.	Long and slow. 8-10 joints.
CIIVIL WORKS	The system with restriction eliminates the use of antithrust blocks (concrete)	Requires concrete blocks.





# GROOVED FITTINGS, COUPLINGS, SEISMIC BRACING



## GROOVED COUPLINGS AND FITTINGS



### RIGID AND FLEXIBLE COUPLING

### CAPS



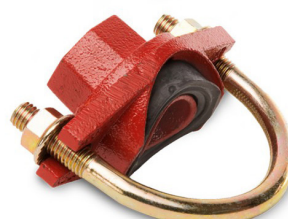
### TEE - ELBOW 90° - ELBOW 45°

### CONCENTRIC REDUCER



### MECHANICAL T AND FLANGE ADAPTORS

### OUTLET FOR SPRINKLER

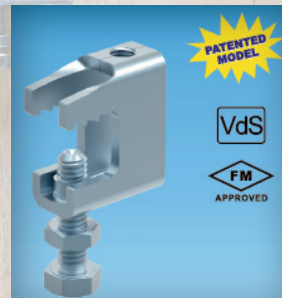


## SUPPORTS

### STANDARD AND QUICK CONNECTION LOOP

### PIPE CLAMPS

### BEAM CLAMP





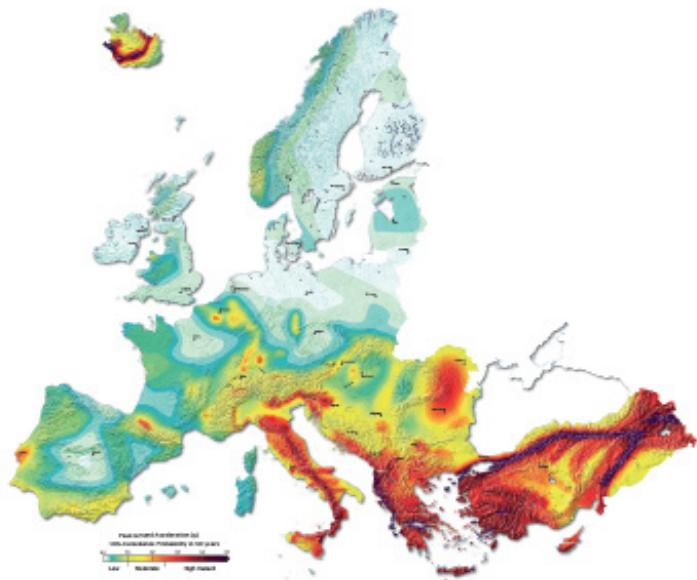


# SEISMIC BRACING

In areas with seismic risk it is important to protect fire extinguishing systems against damage caused by earthquakes.

The technical specification CEN/TS-17551 specifies the seismic protection requirements for automatic sprinkler systems and piping systems and requires the protection in earthquake zones in accordance to EN 1998-1:2004 3.2.1 and for areas subject to peak ground acceleration above 9% of G.

nVent CADDY product range is designed to offer superior performance at seismic loads, meeting the requirements of FM, NFPA and the new CEN/TS



**BAR JOIST ATTACHMENT**



**ADJUSTABLE I-BEAM ADAPTOR**

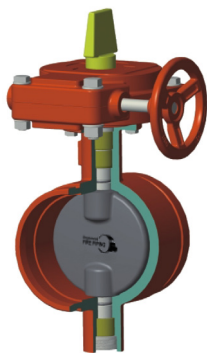
**QUICK GRIP  
LATERAL SWAY BRACE**



**CABLE BRACING**

# VALVES

**GROOVED BUTTERFLY**



**GROOVED GATE VALVES OS&Y**



**GATE VALVES OS&Y FLANGE**



**GROOVED CHECK VALVES**





# HYDRANTS, CABINETS AND EQUIPMENT

## 4" UNDEGROUND HYDRANT (DN100)



Fire Protection underground hydrant with 1 or 2 outlets according to UNE 23400. Straight entrance to flange pipe DIN PN-16 of 4", painted in red. Product marked CE according to Construction Products Directive 89/106 CE and manufactured according to Standard UNE-EN



**1 OUTLET**  
(100 MM - PUMPER  
OUTLET AND CAP)



**2 OUTLETS**  
(70 MM - OUTLETS WITH  
BARCELONA COUPLING  
AND CAPS)



## 4" DRY BARREL HYDRANT (DN100)



Dry Barrel with automatic draining system to protect against frost. Quick hose and firefighting equipment connections. With 4" pumper outlet and two 2 1/2 cast aluminium outlets with Barcelona coupling and caps.

INLETS	OUTLETS	FV FACTOR	WORKING PRESSURE	TEST PRESSURE
FLANGED DIN 4" PN16	1 de 4" BSP	187	16 bar	25 bar
	+ 2 de 2 1/2" BSP	130		







## OUTSIDE HOSE HOUSE WITH PYRAMIDAL LEG

Set made of reinforced polyester with fiberglass that guarantees a very high resistance to the weather. Hardware in stainless steel material.

Set consisting of two pieces

1. Cabinet with a canopy built in red polyester resin RAL 3000 reinforced with glass fiber. White reinforced polyester door and white door. (With interior compartment)
2. Pyramidal pedestal to anchor to the ground RAL 3000

The equipment included is for standard use, according to CÉPREVEN.



## WET BARREL FIRE PROTECTION HYDRANTS AND STRAINERS FOR PETROCHEMICAL USE

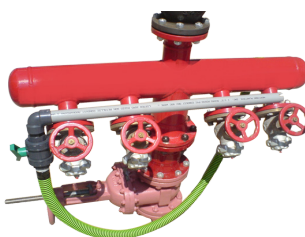
CLH WET BARREL  
HYDRANT



REPSOL WET BARREL  
HYDRANT



CEPSA WET BARREL  
HYDRANT



PETRONOR WET BARREL  
HYDRANT



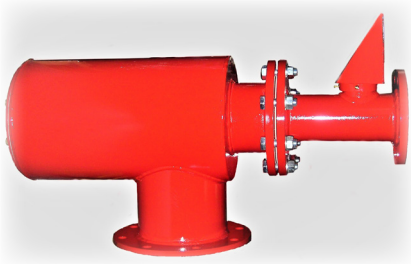
TEMPORARY AND PERMANENT REFI-  
NERY GASKED STRAINERS



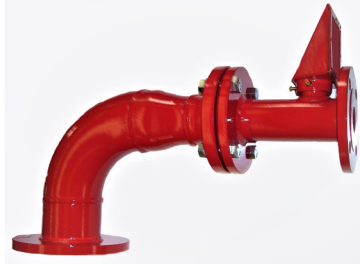


## FOAM EQUIPMENT

### FOAM CHAMBERS FOR TANKS



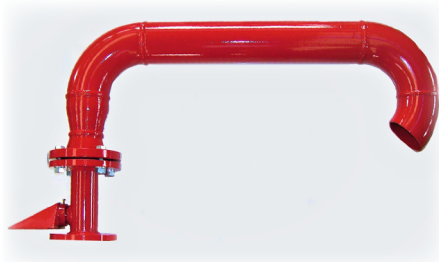
**CONE ROOF TANKS**



**FLOATING ROOF TANK**

Material: Carbon Steel or Stainless Steel.  
Foam Maker included.  
Range: From 159 lpm - 2055 lpm  
Manufacturing of floating roof tanks  
Rim Seal Deflector

## DIKED AREA FOAM POURER



Material: Carbon or Stainless steel  
Foal Maker included  
Range: From 159 lpm - 2055 lpm

## MONITORS BRONZE AND STAINLESS STEEL

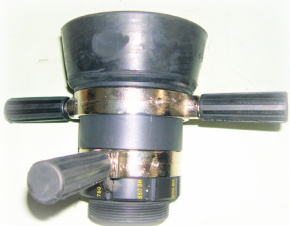
M. eFP-900-2V    M. inox eFP palanca    M. Akron Omega



Different models: Handwheel or lever operated monitors  
Flanges ANSI 150# - DIN PN16 Up to 4500lpm.

## WATER/SELF-EDUCTING NOZZLES AND WATER SPRAY

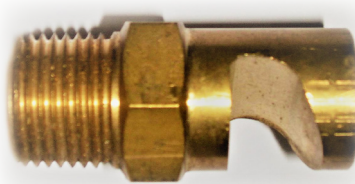
**WATER MONITOR**



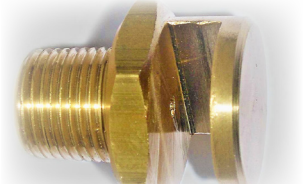
**FOAM MONITOR NOZZLE**



**WATER SPRAY NOZZLE**



**WATER SPRAY NOZZLE**



Material: Bronze or Aluminium  
Water and Water-Foam Self educating  
nozzles. Up to 2838 lpm

Material: Brass.  
Surface Cooling  
Range: 1/2" - 1" (BSP-NPT)





# CONTINUOUS FLOW REELS (BIE'S)

Wide range of different lengths of 25 mm semi-rigid Hose Reel Cabinets

## CABINET LESS WALL MOUNTED HOSE REEL

Hose reel to be installed on the wall into multi-functional cabinets or flush mounted.



## HOSE REEL (WITH CABINET)



Full Hose Reel into an opening door cabinet and ready to be wall-mounted. Steel Cabinet (thickness = 0.8mm galvanize or paint finished)

Concealed door hinges, blind or window glass cabinet door, aluminium recessed lock and easy access turning handle recessed with folding handle.

## HORSE REEL ACCESSORIES

FREE STANDING HOSE REEL  
AND CABINET

FREE STANDING HOSE REEL  
(WITHOUT CABINET)

CABINET AND HOSE REEL  
STAND

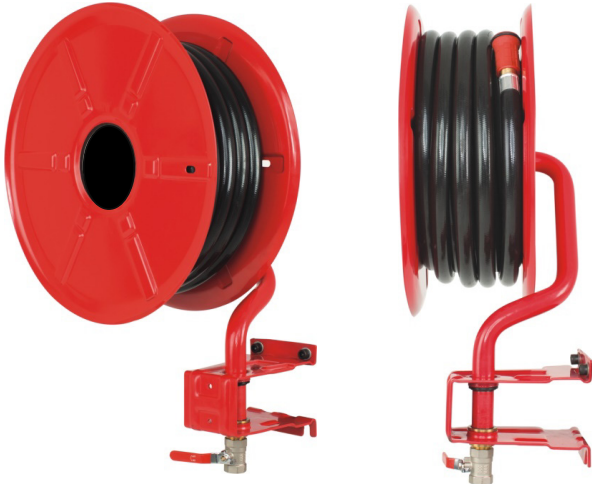




## CONTINUOUS FLOW REELS (RIA'S)

30m length of 25mm or 33mm semi-rigid Hose Reels

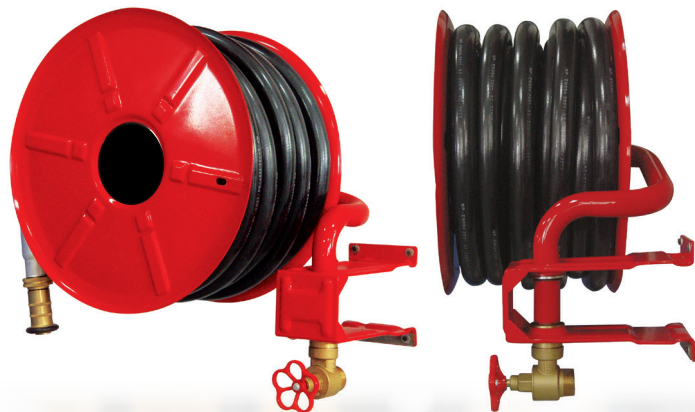
### ***HOSE REEL 25 (30 mts.)***



No cabinet swinging continuous flow hose reel (RIA) for surface, recessed or combined cabinets applications.

Includes: reel, 30m, 25 mm semi-rigid black PVC hose, 1" ball valve, jet/spray resin coated brass nozzle, pressure gauge and "easy-fit" swinging fixing system

### ***HOSE REEL 33 (30 mts.)***



No cabinet swinging continuous flow hose reel (RIA) for surface, recessed or combined cabinets applications.

Includes: reel, 30m, 33 mm semi-rigid black PVC hose, 1 1/4" ball valve, jet/spray resin coated brass nozzle, pressure gauge and "easy-fit" swinging fixing system







## RACKs · Fire Hose Cabinets

RACK's (Fire Hose Cabinets) certified and listed components (FM/UL) based on RACK's Reels 1 1/2" Flat Hose up to 100ft (30 m)

**1 1/2" CLASS II FIRE HOSE RACK ASSEMBLY**  
1 1/2" valve - 1 1/2" hose  
(with or without cabinet)



**CABINET AND RACK ASSEMBLY CLASS II**  
1 1/2" valve - 1 1/2" hose & 2 1/2" Valve  
for firefighter use



**FIRE HOSE RACK ASSEMBLY CLASS III**  
2 1/2" Valve - 1 1/2" hose



**FIRE PROTECTION ACADEMY**  
**FIREPIPING**





## SPECIAL PROJECTS

### KEY FEATURES

- ANSI/ASME, EN10216-1, EN10217-1 or EN10255 pipe
- Flange ANSI B 16.5 or EN1092
- Accessories ANSI B 16.9 o EN10253
- Pipe with grooved or flanged ends. Welded Outlets
- Fire department connections and caps: Barcelona, Storz, BS336, Guillemín, Gost or NH
- Hydrant valves: Globe and ball valve, angle and gate valve in bronze marine RG5 or brass.

### TESTS AND FINISHES

#### TEST

- Homologation of Welders kit and Welding procedure according to ASME and UNE code
- Non-destructive tests (NDT) by penetrating liquids, magnetic particles and radiography.
- Hydrostatic and flow trials in a test bench

#### FINISHES

- Powder coating
- Liquid paint. In all kind of procedures
- Galvanized according to UNE-EN ISO 1461.

### FIRE PROTECTION SYSTEM FOR GAS SPHERES

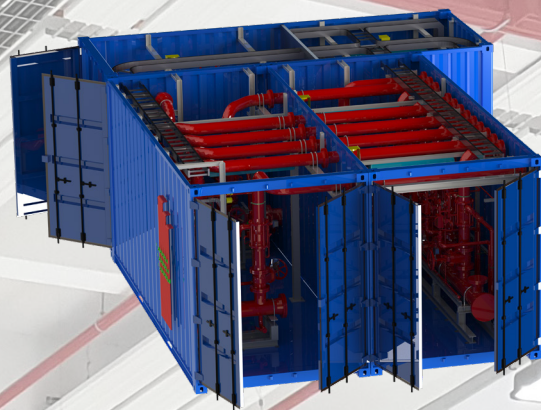
*Self-supporting with meridian belts and water cooling ring system.*

*Vertical branch pipes and reverse nozzle springs*

### SKID • MODULAR VALVE STATIONS FOR FIRE PROTECTION



*Deluge valves with trim.  
Foam storage and mix control room*

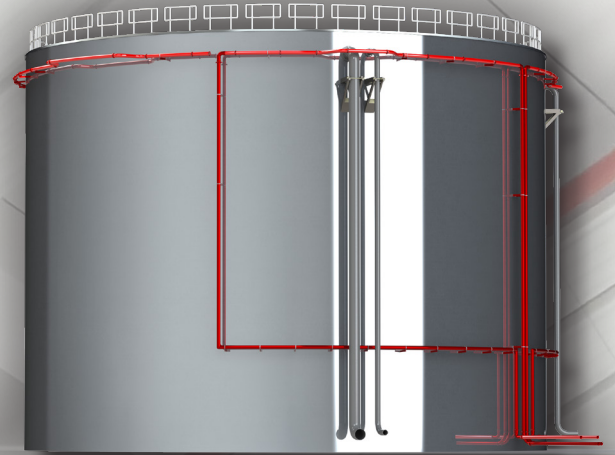


*Piped containers connections. Air vent system*



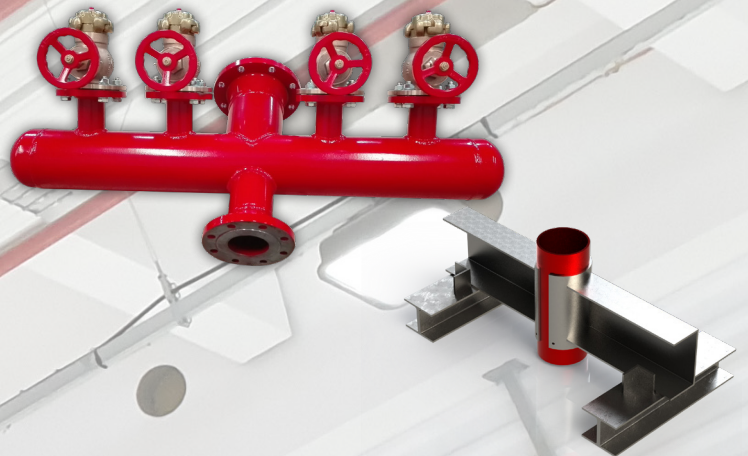


## FUEL TANKS FIRE PROTECTION



*Manufacturing of Cooling Rings (Water/Foam) for fuel tanks*

## MANIFOLD AND COLLECTORS OF HIGH FLOW



*Manufacturing of manifolds for Fire Pump areas. Fire Protection System Supply*

*Manufacturing of any kind of support for Collectors, Manifolds, Meridian belts, Gas spheres, Pump rooms.*

## INSTALATIONS







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Engineered  
FIRE PIPING  WWW



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· deadline ·

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