TUBASYS

LEADERS IN PREFABRICATED PIPE SYSTEM

CATALOG

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TUBASYS

EFFICENCY IS OUR STRENGHT

Founded in 2003, TUBASYS is the first Spanish company to offer its own make of prefabricated pipe for fire protection installations under the most demanding seals of quality, using totally automated and robotised production systems. Tubasys completes its range of products with catalogue of couplings, grooved accesories, hoses and complements.

Market leaders, Tubasys' success lies in applying the most advanced technology to all its industrial processes, carrying out the strictest quality controls and committing to efficient customer service. Strict production and verification systems entirely automated and robotised, unique in our sector, have earned the trust from our clients, both inside and outside of Spain.

We lead the market contributing with our products to the tranquility given by having a reliable system and 100% in accordance with standards, supported in rigorous verification systems and the strictest quality certifications.

Our production process is endorsed by Factory Mutual <FM>, being the pioneers in the sector in obtaining such approval.

TUBASYS
prefabricated pipe

OUR COMMITMENTS

Its quality and service commitment has led TUBASYS to regularly update the most demanding certifications for this type of process and product:

- **First company worldwide to obtain the Factory Mutual <FM> certification** for prefabricated pipe. Year 2006.
- **First non-German company in the world to obtain VdS 2552en certification.** VDS - approved welding procedure for pipes < DN65: sleeves, pipe connection, branch pipe. Year 2020.

FM APPROVED

VdS

VDS - approved welding procedure for pipes < DN65: sleeves, pipe connection, branch pipe

- **Bureau Veritas product certification** for prefabrication of steel pipe for PCI Systems and other fluid ducts. Brand: Tubasys. BBVQi external audit.
- Environmental commitment set out in the environmental management certificate according to **UNE-EN-ISO 14001:2004**.
- Integral quality management guaranteed by standard **UNE-EN-ISO 9001:2000**

ISO 9001 BUREAU VERITAS Certification

ISO 14001 BUREAU VERITAS Certification

Product Certification BUREAU VERITAS Certification

We make a 100% commitment to the customer: from the initial technical assistance, optimising each installation, through the drawing up of exploded-view plans and budget and ending with an after-sale service with an immediate response capacity.

OFFICES & FACTORIES

HEADQUARTERS

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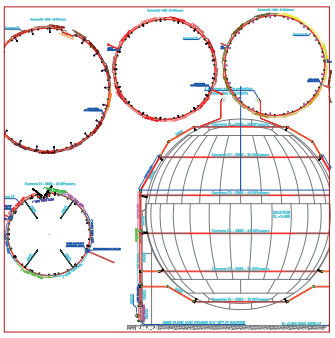
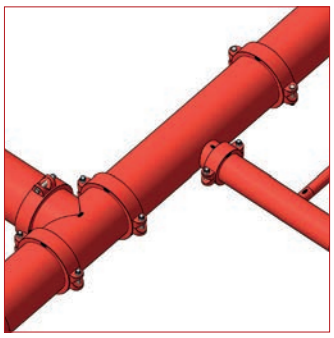







TECHNICAL SERVICE

Tubasys' technical office has over 15 years experience and works closely with our customers to provide the best and most optimal technical solutions aimed at facilitating field installation.

TUBASYS QUALITY

The quality of Tubasys products is recognized internationally and is backed up by various certifications and accreditations.

Our products are subject to inspections, audits and quality controls, both internal and external, at national and international level.

REDUCTION OF TIMES AND COST

Both with prefabricated pipe fittings and with grooved accessories significant time and cost savings are made during field installation.

No field welding is necessary, which leads to improved quality and faster installation, cleaning and presentation of the end product.

RELIABILITY AND DURABILITY

All products manufactured and marketed by Tubasys are designed and manufactured for a long functional life, minimizing maintenance costs.

ADAPTABILITY AND VERSATILITY

Our products are designed to minimize adjustments and maintenance work in the field.

The gaskets of our grooved accessories fit perfectly to the bearing areas on the ends of pipe or other accessories, providing excellent damping of vibrations and noises that can be transmitted throughout the pipe installation.

The flexible couplings we market enable both longitudinal and angular alignment defects to be corrected.

DISTRIBUTION

Tubasys distributes its products nationally and internationally, reaching anywhere in the world and adapting to the specific needs of each region and customer.

To do this it has a wide distribution logistics network committed to Tubasys' objectives and levels of service.

PRODUCT SPECIFICATIONS

- Pipe of diameters between 1" and 12", with grooved weld-o-lets between 1" and 4" and threaded weld-o-lets between 1/2" and 2 1/2". Pipe between 14" and 24" is manufactured to order.
- Seamless (AESS) and welded (ACS). EN-10255, EN-10216, EN-10217, ASTM A-53, ASTM A-106 and API 5L.
- Wide range of finishes, thicknesses and paint colours (Any from the RAL chart).
- Product ready for quick, clean on-site assembly.
- Joining and Assembly Accessories

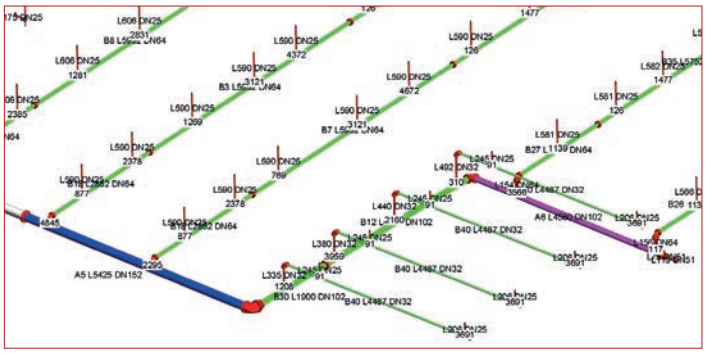
TECHNICAL OFFICE

Our team of outstanding professional engineers has over 15 years experience and works closely with our customers to provide the best and most optimal technical solutions aimed at facilitating site installation. A team of engineers and computer marked by profesionalism and the use of the latest technologies including **Building Information Modeling (BIM) software.**

We carry out an essential job at our technical office throughout the process, from the assistance to our customers to the drafting of explosion drawings for production.

It is a precise process which is developed following an accurately detailed step-by-step system required for a perfect installation.

CUSTOM SOLUTIONS



MANUFACTURING PROCESSES AND STAGES

Starting from the steel pipe, according to the standard specified by the customer, all the necessary processes are executed for the end product to be ready for on-site assembly:

- Cutting to the length required and elimination of burrs and roughness by milling.
- Grooving of ends and cap welding on ends.
- Opening of orifices with absolute guarantee that the cut-out is eliminated.
- Joining of the UL/FM approved weld-o-lets to the pipe by means of welding, in accordance with standard UNE-EN ISO 15609-1:2005.
- Marking on the pipe of all its characteristics and data, for traceability purposes.
- Testing of 100% of welds using the penetrating liquids procedure.
- Washing of the tube outside and inside, phosphate coating to guarantee the adherence of the paintwork, demineralisation and subsequent oven drying.

Paint finish:

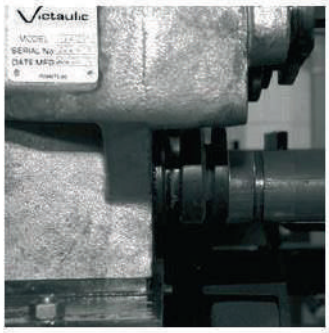
- Application of powder paint in automated booth.
- Polymerisation of the paint in oven at 180ºC.

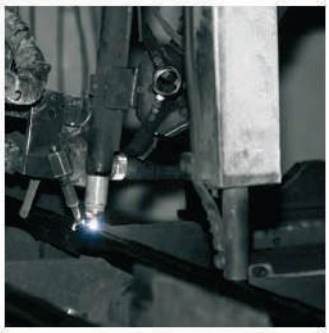
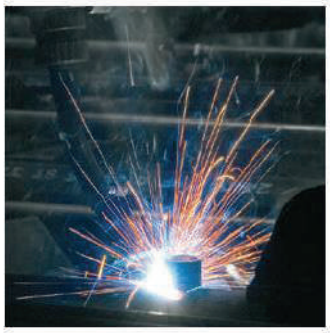
Galvanised finish:

- Hot galvanisation: Immersion in zinc oven at a temperature between 442 and 455ºC.
- Checking and review of grooves and threads to guarantee the required tolerances.

Multilayers:

- Printing + Painting
- Galvanisation + Printing + Painting

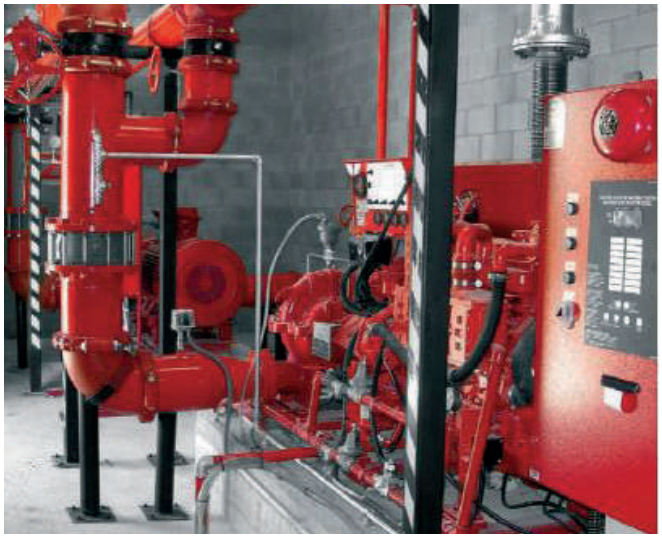





PREFABRICATION OF MACHINERY ROOMS

The Tubasys team is expert in the prefabrication of pumping rooms of up to 24" (600mm). In different qualities, painted or galvanised carbon steel pipe with welded or grooved union.

We carry out the execution and the design on the basis of the original plan of the room and after studying all the variables: space, maintenance, assembly, cleaning and organisation, among others.



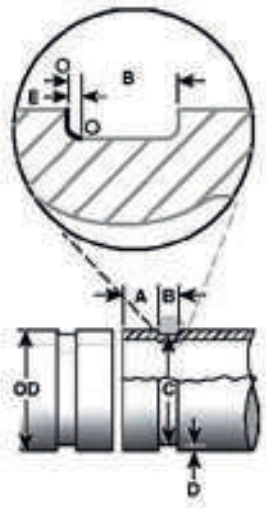
PIPING THICKNESS & FIRE PROTECTIONS STANDARDS

		10255(M) Welded EN12845 (ISO 65 M)			10255(M) Seamless EN12845 (ISO 65 M)			10216-1 Seamless			10217-1 Welded FM & EN 12845 (ISO4200D)			10217-1 Welded VDS/ APSAD R1-2014		
DN	INCH	Kg/M	thickness	weight w/water	Kg/M	thickness	weight w/water	Kg/M	thickness	weight w/water	Kg/M	thickness	weight w/water	Kg/M	thickness	weight w/water
33,70	1'	2,44	3,25	3,02	2,44	3,25	3,02	1,99	2,60	2,63	1,78	2,30	2,45	1,99	2,60	2,63
42,40	11/4'	3,14	3,25	4,15	3,14	3,25	4,15	2,55	2,60	3,64	2,28	2,30	3,40	2,55	2,60	3,64
48,30	11/2'	3,61	3,25	4,98	3,61	3,25	4,98	2,93	2,60	4,39	2,61	2,30	4,11	2,93	2,60	4,39
60,30	2'	5,10	3,65	7,31	5,10	3,65	7,31	4,11	2,90	6,44	3,29	2,30	5,73	3,70	2,60	6,08
76,10	21/2'	6,52	3,65	10,24	6,52	3,65	10,24	5,24	2,90	9,12	4,71	2,60	8,66	4,71	2,60	8,66
88,90	3'	8,48	4,05	13,60	8,48	4,05	13,60	6,77	3,20	12,11	6,15	2,90	11,57	6,15	2,90	11,57
114,30	4'	12,19	4,50	20,89	12,19	4,50	20,89	9,83	3,60	18,84	8,77	3,20	17,91	8,77	3,20	17,91
139,70	5'	16,60	5,00	29,82	16,60	5,00	29,82	13,39	4,00	27,01	12,10	3,60	25,87	12,10	3,60	25,87
168,30	6'	19,80	5,50	41,52	19,80	5,50	41,52	18,18	4,50	38,11	16,21	4,00	36,39	16,21	4,00	36,39
219,10	8'							33,07	6,30	66,55	23,82	4,50	58,48	23,82	4,50	58,48

		10255 L Welded OLD APSAD			NFPA GROOVED			NFPA THREADED			ASTM API ANSI B-36-10 SCH10S			ASTM API ANSI B-36-10 SCH40S		
DN	INCH	Kg/M	thickness	weight w/water	Kg/M	thickness	weight w/water	Kg/M	thickness	weight w/water	Kg/M	thickness	weight w/water	Kg/M	thickness	weight w/water
33,70	1'	2,20	2,90	2,81	2,20	2,90	2,81	2,54	3,40	3,11	2,09	2,77	2,74	2,50	3,38	3,10
42,40	11/4'	2,83	2,90	3,88	2,83	2,90	3,88	3,45	3,60	4,42	2,70	2,77	3,77	3,39	3,56	4,39
48,30	11/2'	3,25	2,90	4,67	3,25	2,90	4,67	4,07	3,70	5,38	3,10	2,77	4,55	4,05	3,68	5,37
60,30	2'	4,51	3,20	6,79	4,11	2,90	6,44	5,43	3,90	7,59	3,93	2,77	6,29	5,44	3,91	7,60
76,10	21/2'	5,76	3,20	9,57	5,76	3,20	9,57	9,10	5,20	12,48	5,26	3,05	9,34	8,63	5,16	12,43
88,90	3'	6,77	3,20	12,11	6,77	3,20	12,11	11,32	5,50	16,08	6,45	3,05	11,84	11,29	5,49	16,06
114,30	4'	9,83	3,60	18,84	8,77	3,20	17,91	16,03	6,00	24,24	8,36	3,05	17,56	16,07	6,02	24,29
139,70	5'	13,40	4,00	27,01	12,10	3,60	25,87	21,67	6,60	34,23	11,57	3,40	25,30	21,77	6,55	34,10
168,30	6'	18,18	4,50	38,11	14,60	3,60	35,01	28,24	7,10	46,88	13,84	3,40	34,31	28,26	7,11	46,91
219,10	8'				26,40	5,00	60,74	36,63	7,00	69,65	19,96	3,76	55,13	42,55	8,18	74,83

STANDARD ROLL GROOVE
SPECIFICATIONS FOR ROLL GROOVED STEEL PIPE SYSTEM

1			2	3	4		5	6	7	8
Dimensions (mm)										
Outside Diameter			Gasket seat A ±0,76	Groove width B ±0,76	Groove Diameter C		Groove Depth D (ref.)	Groove Corner E (max.)	Pipe Wall Thickness (min.)	Flare Diameter (max.)
Basic	Tolerance				Basic	Tolerance				
	+	-								
33,7	0,33	0,33	15,88	7,14	30,23	-0,38	1,6	2	1,65	36,3
42,4	0,41	0,41	15,88	7,14	38,99	-0,38	1,6	2	1,65	45
48,3	0,48	0,48	15,88	7,14	45,09	-0,38	1,6	2	1,65	51,1
60,3	0,61	0,61	15,88	8,74	57,15	-0,38	1,6	2	1,65	63
76,1	0,76	0,76	15,88	8,74	72,26	-0,46	1,98	2	2,11	78,7
88,9	0,89	0,79	15,88	8,74	84,94	-0,46	1,98	2	2,11	91,4
114,3	1,14	0,79	15,88	8,74	110,08	-0,51	2,11	2	2,11	116,8
139,7	1,42	0,79	15,88	8,74	135,48	-0,51	2,11	2	2,77	142,2
165,1	1,6	0,79	15,88	8,74	160,78	-0,56	2,16	2	2,77	167,6
168,3	1,6	0,79	15,88	8,74	163,96	-0,56	2,16	2	2,77	170,9
219,1	1,6	0,79	19,05	11,91	214,4	-0,64	2,34	1,5	2,77	223,5
273	1,6	0,79	19,05	11,91	268,28	-0,69	2,39	1,5	3,4	277,4
323,9	1,6	0,79	19,05	11,91	318,29	-0,76	2,77	1,5	3,96	328,2



- COLUMN 1: Outside diameter of the pipe. The outside diameter of roll grooved pipe will not be above, or below, the listed tolerances.
- COLUMN 2: Gasket seat. The surface of the pipe will be free of indentations, roll marks, and projections from the end of the pipe to the groove, to provide a leak-tight seal to the joint. All the chipped paint, dirt, grease, and rust must be removed. The gasket seat 'A' is measured from the end of the pipe.
- COLUMN 3: Groove width. The surface of the groove will be free of dirt and rust that could interfere with the montage of the grooved accessory. The corners of the groove must be radiused.
- COLUMN 4: Outside Diameter of the groove. The groove will be of uniform depth for the entire pipe circumference. The groove must be inside the tolerance of the diameter of the list.
- COLUMN 5: Groove Depth. For reference only, the groove depth must be the one that accomplishes the groove diameter listed in the column 4.
- COLUMN 6: Groove Corner. It is the distance between points (o) of the picture. The dimension 'E' starts in the reduction of the outside diameter of the pipe and ends in the bottom of the groove.
- COLUMN 7: Minimum allowable wall thickness. This is the minimum pipe wall thickness which may be roll grooved.
- COLUMN 8: Maximum allowable flare diameter. Diameter is measured at the grooved end pipe.

TUBASYS
prefabricated pipe

GROOVED FITTINGS & COUPLINGS

ASSEMBLY:

The assembly guidelines outlined here should be considered as recommendations to achieve a correct installation of the grooved accessory. Failure to follow them may lead to the appearance of problems in the installation and to injuries and material damage.

Operators must wear personal protection equipment appropriate to the work and the sites on which the work is to be carried out. It is recommended that at least a helmet, protective glasses, gloves and safety boots be worn.

Ensure that the installation on which the work is to be done is empty and depressurized.

The accessories are not components on which the installation's supports can be placed.

Check that the tooling and equipment that will be used are appropriate, in perfect condition and that staff know how to use them.

Check that the measurements and materials of the accessories and their gaskets are suitable for the type of installation on which they are to be assembled.

Check that the lubricants to be used are appropriate for the type of gasket of the accessory selected.

Check that on the pipes or grooved accessories:

- The cuts are straight at the ends, which must be free of burrs, dents, dirt and any other thing that may affect the integrity of the rubber or its placement or the placement of the accessory's body.
- The grooves must be free of burrs, dents, dirt and anything else that may hinder the accessory's assembly.
- Ensure that the dimensions of the pipes' grooves comply with the grooving standards (available on the Tubasys website, Download Area).
- It is not recommended that the ends are bevelled.

Check that the gasket:

- Is appropriate for the facility in which is to be mounted. Class E EPDM gaskets have a green mark.
- Is suitable for the temperature range of the installation or area in which it is to be placed.
- Will never come into contact with lubricants or products containing mineral oils.
- Has no damage and is in perfect condition.

ASSEMBLY STEPS:

1. Remove the coupling gasket.
2. Apply a thin layer of lubricant to the gasket both outside and on the sealing lips.
3. Apply a thin layer of lubricant to the inside of the two coupling segments.
4. Apply a thin layer of lubricant to the outside of the pipe ends.
5. Mount the gasket on the pipe making sure that it is completely supported in the pipe without protruding from it ..
6. In large diameter pipes it may be more convenient and easy to turn the gasket so that the lips are facing upwards.
7. Join the ends of the pipes or grooved accessories, ensuring their alignment is straight and concentric.
8. Slide the gasket until it is between the two grooves of the two pipe ends. If you placed the gasket upturned, you must return to its correct position. Ensure that the gasket does not get positioned on either of the two grooves.
9. Unscrew the bolt and nut from one the two sides of the coupling and loosen the other until the coupling can be opened and turn it to place it on the gasket.
10. Place the segments on the gasket so that their cotters stay lodged inside the grooves.
11. Check that the gasket has not been bitten or pinched.
12. Place the bolt and nut removed previously, tightening the two bolt-nut assemblies by hand.
13. Check that the necks of the bolts are lodged in the holes of the segments arranged for this purpose.
14. Tighten the nuts gradually and alternately, thus achieving a better placement and more even seating of the accessory.
15. Once you have finished mounting the accessory, you should inspect it to detect any anomalies.
16. Below we indicate the recommended torques, for indicative purposes.

Bolts 8.8	Torque (Nm)
M10	40 - 60
M12	110 - 135
M16	135 - 175
M20	175 - 245
M22	245 - 325