



Company Profile



Straight and flexible
pre-insulated pipes



ECOTHERM[®]
system

ECOPEX[®]
system

ECOFLEX[®]
system

ECOLINE: HISTORY

ECOLINE'S story starts in 1980 in Lonato, in the Brescia area, with the production of pre-insulated pipes. Expertise and reliability have led the company to improve its business in Italy, in Europe and all over the world.

ECOLINE is one of the European producers with the most extensive experience in pre-insulated pipework systems and special pieces, in control systems for civilian and industrial application.

Thanks to a continuous research and development ac-

tivity allowed the company to offer innovative and personalised solutions to give concrete reply to market's needs. **ECOLINE'S** customers, from building companies to institutions, to project design offices, can find unique competitive solutions in **ECOLINE'S** products.

ECOLINE guarantees right delivery timetable, flexibility, attention to detailed and customised projects: these are the key points of the company's improvement and development.





THE PRODUCTION SITE

ECOLINE is based on two production sites: the first one is in Vescovato (Cremona area) which is the historical site, and the second one in Casalromano (Mantua area), which opened in 2015.

Vescovato site

60.000 m² (of which 10.000 m² covered) where the company produces all the accessories required for building district heating systems. In one year in the

Vescovato site 300.000 m of pipes and 50.000 accessories have been produced.

Casalromano site

50.000 m² (of which 5.000 m² covered) where pre-insulated flexible pipeworks with service PE, PEX, INOX pipe (UNO version and DUO version) are produced thanks to innovative machinery to guarantee the best product performances.

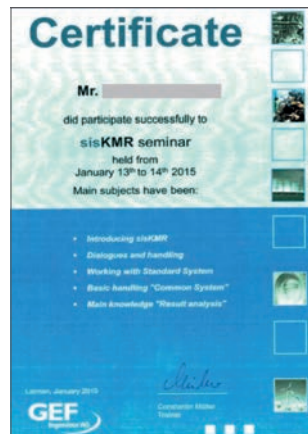


ECOLINE and **ECOTECH** sites and their warehouses

ECOLINE: QUALITY AND CERTIFICATIONS

High quality levels have been reached through the years ensuring finished products complying with the European standards EN 253/448/488/489. Compliance with additional standards has been reached in the last few years, :

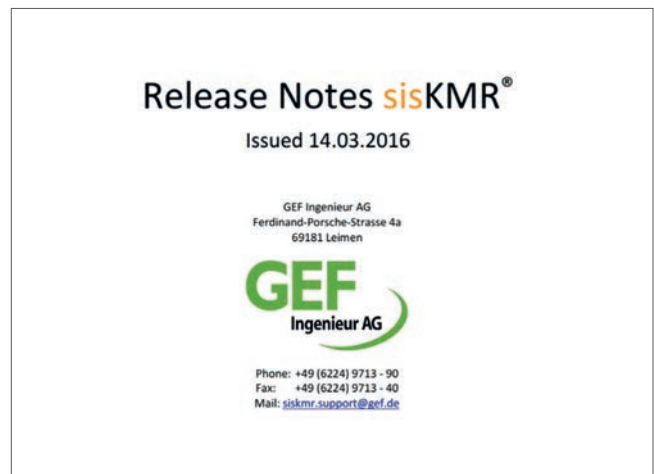
- Standard EN 13941, about design and installation pre-insulated bonded pipe systems for district heating;
- Standard EN 14419, about Surveillance systems for pre-insulated bonded pipe systems for district heating.



Since January 2012, we have obtained also DET NORSKE VERITAS certification of compliance for the products manufactured in the **ECOLINE** site in Vescoato [CR], with the guide lines EUROHEAT & POWER EHP/001, and, since June 2012 the certification of compliance of the environmental system with the standard UNI EN ISO 14001.

ECOLINE can carry out the stress-analysis tests of buried pre-insulated pipeline networks according to standard EN 13491, using the specific software sisKMR (always available in the latest updated version) and relying on highly experienced technical staff.

Our constant commitment has been recognized by TUV: the production of all materials, stress-analysis calculation and on site assistance comply with the requirements of ISO 9001 [Quality Systems].





CUSTOMER CARE AND SERVICES

ECOLINE offers detailed projects and tailor made solutions.

- The technical staff guarantee:
 - Project check (laying conditions - stress-analysis)
- Material computation
- Technical training
- Project support for any kind of change and solution
- Stress-analysis check after thermal expansion
- Tele-alarm system project
- Laying rules book
- Detailed layout



ECOLINE follows the project from the beginning up to the final delivery. The availability of materials in the company warehouse is a high level service for any kind of project.



ECOTHERM SYSTEM®

Ecotherm® system is a set of pipelines, special parts and accessories suitable to build up district heating/cooling networks. **ECOLINE** indeed produces pre-insulated pipelines able to transport fluids with temperature between -200°C / +300°C. The pre-insulated pipeline systems for district heating/cooling networks are used for temperatures between 0°C and 140°C. The transported fluid is generally cool, hot, heated water or low pressure steam.

The pipelines are suitable also for transporting other types of fluids. The insulation is made of high-quality polyurethane foam. The pipelines can be rigid or flexible. The applied material is generally carbon steel [P 235/355]. The features and operational limitations are listed in the tables below. It is possible to supply, on request, other types of service pipe: seamless steel pipes, high-quality steels, stainless steels, galvanized steels, pex, copper, etc.

SERVICE PIPE

Welded steel according to the requirements of the Standard UNI EN 10217, with minimum yield strength 235N/mm². All the steel pipes, during their manufacturing, are hydrotested (or tested using alternative systems) in order to verify their tightness. On request, other types of steel pipes can be supplied.

INSULATION

Rigid polyurethane foam according to the Standard EN 253. Thermal conductivity coefficient is $\leq 0,027$ W/m²K, at an average temperature of 50°C. Density: ≥ 60 Kg/m³. PUR Compression: $\geq 0,3$ MPa.

OUTER CASING PIPE

High density polyethylene in accordance with the standard EN 503 (SINGLE BLOCK).



SURVEILLANCE SYSTEM

In the insulation are inserted 2 copper cables, with a section of 1,5 mm² (a bare copper cable and a tinned copper one), suitable for the realization of the leak detecting system. On request, as an alternative, it is possible to provide the system pipelines with Brandes leak detecting system.

ASSEMBLED PIPE

Available in 6 metres bars for diameters between DN 20 and DN 150 (included), and in 12 metres bars starting from DN 25 (included). Ends without insulation for 150/200 mm. Maximum temperature 155°C. For higher temperatures, we can supply the other systems until temperatures of 300° are reached.

FIELDS OF APPLICATION OF THE ECOTHERM® SYSTEM



HEATING



COOLING



GEO THERMAL ENERGY



SANITARY WATER



FIREPROOF NETWORK



CONDITIONING



GREENERY PLANTS



THERMAL PLANTS



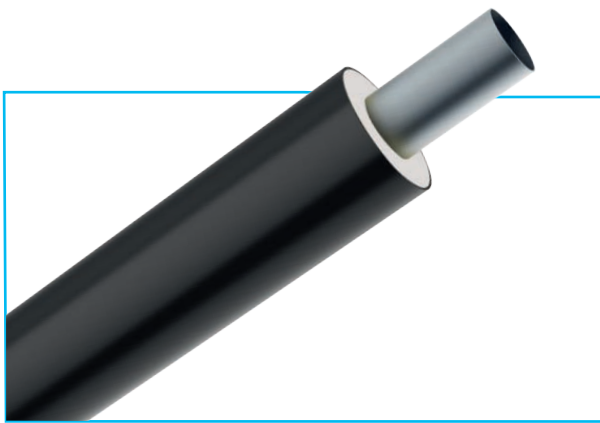
PROCESS PLANTS



STEAM TRANSPORT

RANGE OF PRODUCTS

STRAIGHT PRE-INSULATED PIPES



Bonded pre-insulated pipes in compliance with the standard EN 253, manufactured by highly technological plants. Standard production includes welded steel service pipe in compliance with the standard EN 10217. Other types are available upon request.

Pipes are manufactured with different insulation thicknesses (shown by series 1, 2, 3). The suitable thickness depends on the required thermal dispersions. **ECOLINE** technicians are available to provide suitable support.

Pipe ends free from insulation are 150/200 mm long. Upon request, they can be supplied with alarm wires, according to the customer requirements.

Steel Pipe			Insulation series 1		Insulation series 2		Insulation series 3		Water content [l/m]
DN	Ø [mm]	WT [mm]	HDPE casing [mm]	Pipe weight [Kg/m]	HDPE casing [mm]	Pipe weight [Kg/m]	HDPE casing [mm]	Pipe weight [Kg/m]	
20	26,9	2,0	90	2,5	110	2,9	125	3,2	0,4
25	33,7	2,3	90	3,0	110	3,4	125	3,7	0,7
32	42,4	2,6	110	4,1	125	4,4	140	4,8	1,1
40	48,3	2,6	110	4,5	125	4,8	140	5,2	1,5
50	60,3	2,9	125	6,0	140	6,5	160	7,0	2,4
65	76,1	2,9	140	8,0	160	8,0	180	8,4	3,9
80	88,9	3,2	160	10,0	180	10,0	200	10,5	5,5
100	114,3	3,6	200	13,0	225	14,5	250	15,5	9,0
125	139,7	3,6	225	17,0	250	17,5	280	18,8	14,0
150	168,3	4,0	250	21,0	280	22,5	315	24,2	20,0
200	219,1	4,5	315	31,0	355	33,0	400	36,0	34,7
250	273,0	5,0	400	44,0	450	47,5	500	51,7	54,4
300	323,9	5,6	450	57,0	500	61,0	560	66,5	77,0
350	355,6	5,6	500	64,0	560	69,2	630	77,0	93,2
400	406,4	6,3	560	81,0	630	88,0	710	97,5	122,0
450	457,0	6,3	630	94,0	710	103,0	800	114,5	155,3
500	508,0	6,3	710	108,0	800	120,0	900	134,0	193,0
600	610,0	7,1	800	140,0	900	155,0	1000	171,0	278,5
700	711,0	8,0	900	180,0	1000	196,0	1100	214,0	380,0
800	813,0	8,8	1000	222,0	1100	240,0	1200	260,0	497,0

ACCESSORIES

BENDS

We are able to provide pre-insulated bends in compliance with the standard EN 448, with angles between 0 and 90°. The manufacturing features (forged, bended) and the thickness are specifically calculated for each project.



TEES

Pre-insulated tee manufactured in compliance with the standard EN 448. They can be supplied in the following models: 45° branch, parallel or straight. The manufacturing features (forged, extruded, reinforced) and the thickness are specifically calculated for each project.



REDUCTIONS

We provide pre-insulated reductions in compliance with the standard EN 448. Dimensions and thicknesses are specifically calculated for each project.



JOINT SYSTEMS

DOUBLE SEALING JOINTS

Heat-shrink HDPE double seal joints, with mastic at the ends and later sealed with an additional heat-shrinkable cross-linked ring on each end. Our double seal joint complies with the standard EN 489 requirements.



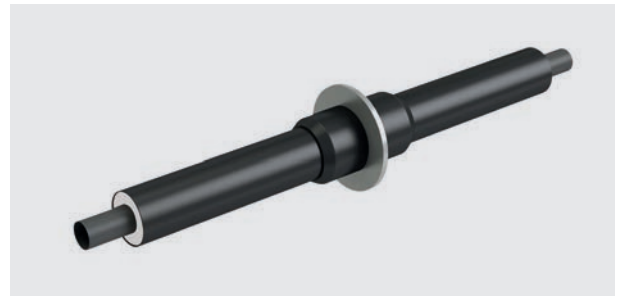
VALVES

We provide pre-insulated valves in compliance with the standard EN 488. It is possible to supply stainless steel bore, floating or trunnion, total or reduced flow, with or without manual, electric or pneumatic gear operator. Butterfly valves can also be supplied. Vent/drain valves can be supplied, to be placed upstream and downstream of the valve.



FIXED POINTS OR ANCHORS

We provide pre-insulated fixed points in compliance with the standard EN 448. The manufacturing features and the thickness are specifically calculated for each project.



BENDED PIPES

Pre-insulated bended pipes can be supplied according to our customers' technical specifications.



CROSSLINKED JOINTS

The crosslinked HDPE joint is composed by a cross-linked PE overcasing. It can be with mould, with foaming performed before or, more traditionally, after placing the sleeve, which will need to be sealed with proper welding plugs. This type of joint complies with the EN 489 requirements at 1000 cycles.



THE ECOPEX® SYSTEM

The **ECOPEX®** preinsulated pipeline system, complying with standard EN 15632-1/2, consists of a PE-Xa main pipe provided with an EVOH oxygen diffusion barrier, thermally insulated with polyurethane flexible foam, CFC-free and coated with PE-LD polyethylene. This system reduces laying times with respect to other systems.

The **ECOPEX®** preinsulated pipeline system can be used to convey several types of fluids, it provides full corrosion protection, it is packaged in rolls, supplied according to the requested measures, which can be laid easily and quickly, even if there are obstacles, being light and extremely flexible.

ADVANTAGES OF THE ECOPEX® SYSTEM



SAVING

Excellent thermal insulation
 $\leq 0,023 \text{ W/m.K}$



STRUCTURE

Costs arising from excavation and network building are minimized



FLEXIBILITY

Possibility to obtain small bending radius



RESISTANCE

No corrosion and incrustation



VELOCITY

Up to several hundred meters without joints



COMPLETE RANGE

Including fittings and accessories

FIELDS OF APPLICATION OF THE ECOPEX® SYSTEM



HEATING



COOLING



CONDITIONING



BIOGAS



SOLAR ENERGY



BIOMASS



GEOTHERMAL ENERGY



LANDFILL GAS



WASTE INCINERATORS



DISTRIBUTION DIAGRAM



ECOPEX® FOR HEATING

ECOPEX® flexible pre-insulated pipes composed of PE-Xa cross linked polyethylene with EVOH barrier against oxygen diffusion PN6 Max. operating temperature 95 °C – EN15632 -1/2

ECOPEX® UNO FOR HEATING



ECOPEX® UNO HEATING 6 BAR

Type [mm]	DN	Inches [-]	Bending radius [m]	Roll length up to=0,8 m (quantity meters)	Roll length up to= 1,2 m (quantity meters)
25/75	20	3/4	0.80	530	830
32/75	25	1	0.80	530	830
40/90	32	1 1/4	0.80	380	580
50/110	40	1 1/2	0.85	260	380
63/125	50	2	0.90	155	250
75/140	65	2 1/2	1.00	105	170
90/160	80	3	1.00	90	144
110/160	100	4	1.20	90	144
125/180	125	5	1.40	*	*

* on request

ECOPEX® DUO FOR HEATING



ECOPEX® DUO HEATING 6 BAR

Type [mm]	DN	Inches [-]	Bending radius [m]	Roll length up to=0,8 m (quantity meters)	Roll length up to= 1,2 m (quantity meters)
25+25/90	20	3/4	0.80	380	580
32+32/110	25	1	0.85	260	380
40+40/125	32	1 1/4	0.90	155	250
50+50/160	40	1 1/2	1.00	90	144
63+63/180	50	2	1.20	80	120

ECOPEX® FOR SANITARY USE

ECOPEX® flexible pre-insulated pipes composed of PE-Xa cross linked polyethylene with EVOH barrier against oxygen diffusion PN10 Max. operating temperature 95 °C – EN15632 -1/2

ECOPEX® UNO FOR SANITARY USE



ECOPEX® UNO SANITARY 10 BAR					
Type [mm]	DN	Inches [-]	Bending radius [m]	Roll length up to=0,8 m (quantity meters)	Roll length up to= 1,2 m (quantity meters)
25*/75	20	3/4	0.80	530	830
32/75	25	1	0.80	530	830
40/90	32	1 1/4	0.80	380	580
50/110	40	1 1/2	0.85	260	380
63/125	50	2	0.90	155	250

* The diameter is indicative. Alternatively Ø 22 or Ø 28

ECOPEX® DUO FOR SANITARY USE



ECOPEX® DUO SANITARY 10 BAR					
Type [mm]	DN	Inches [-]	Bending radius [m]	Roll length up to=0,8 m (quantity meters)	Roll length up to= 1,2 m (quantity meters)
25*+20/90	20+16	3/4 + 5/8	0.80	380	580
32+20/110	25+16	1 + 5/8	0.85	260	380
40+25*/125	32+20	1 1/4 + 3/4	0.90	155	250
50+32/125	40+25	1 1/2 + 1	0.90	155	250

* The diameter is indicative. Alternatively Ø 22 or Ø 28

ECOFLEX

ECOFLEX® type flexible pre-insulated stainless steel pipes in rolls, for substation branch, connections to buildings, solar panels – EN15632-1/4

ECOFLEX® UNO



ECOFLEX® UNO	
Type	
DN - inches	PE
25 - 1"	110
32 - 1" 1/4	125
40 - 1" 1/2	125
50 - 2"	140

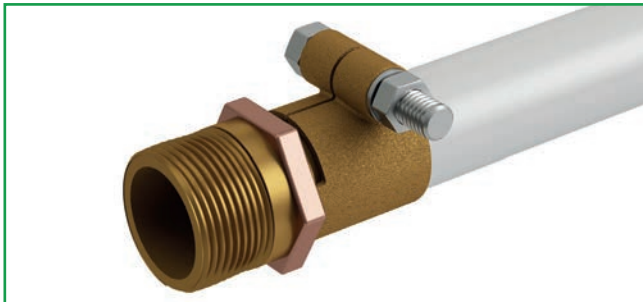
ECOFLEX® DUO



ECOFLEX® DUO	
Type	
DN - inches	PE
25+25 - 1"	125
32+32 - 1" 1/4	140
40+40 - 1" 1/2	160

ACCESSORIES

SCREW END FITTING



PRESS END FITTING



PRESS INTERMEDIATE FITTING



WATER STOP AND WALL ENTRY SLEEVES



PRESS TEE FITTING



ENTRY SLEEVES PRESS TEE FITTING



OTHER PRODUCTS

In addition to the above mentioned materials, **ECOLINE** manufactures pre-insulated pipes combining the following components:

SERVICE PIPE

- Welded carbon steel grade P235/355
- Seamless carbon steel grade P235
- Welded galvanized threaded steel grade S195T
- Seamless galvanized threaded steel grade S195T
- Rigid copper bars
- Stainless steel AISI grade 304 or 316
- High density polyethylene PEHD
- Reinforced polypropylene PP-R

INSULATION

Rigid polyurethane foam, obtained by mixing polyol and isocyanate. The foam is homogeneous with closed cells > 90%, Min. density 60 kg/m³ complying with the requirements of the European standard EN 253.

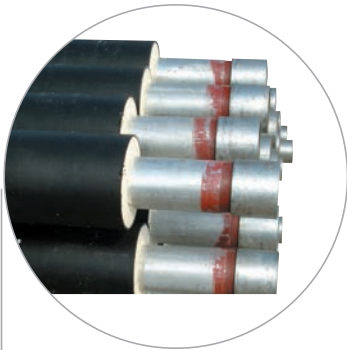
EXTERNAL CASING

For pipelines to be buried, it is composed of a high density polyethylene pipe, in compliance with the European standard EN253.

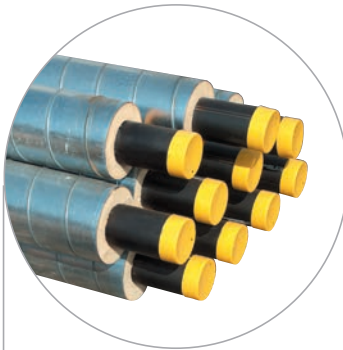
For external pipes, it can be made up of a galvanized, stainless steel, or aluminium spiropipe:

- Alarm system to detect leaks and/or infiltrations
- Heating cable to prevent fluids from freezing

Moreover, in order to convey fluids at high temperatures, **ECOLINE** has developed a HIGH TEMP system, to convey fluids with a temperature up to 300 °C.



Galvanized



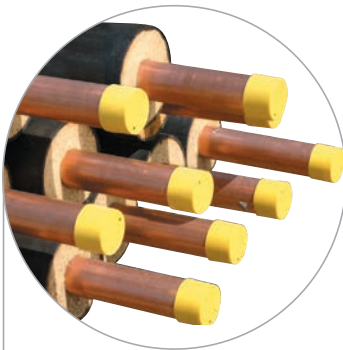
Spiro-Pipe



Pe with Pe



Eco Cool



Copper



Oil & Gas

Our technical and sale team is available to provide customized solutions and quotations.



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