

SOLIN S.A.



**PRODUCTION OF PLASTIC PIPES
FOR HEATING - SANITATION - DRAINAGE**

PRODUCTS CATALOGUE

ISO 9001:2008



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**PRODUCTION OF PLASTIC PIPES
FOR HEATING - SANITATION - DRAINAGE**

PRODUCTS CATALOGUE

Factory: A' Industrial Area of Volos, 38500, Volos Greece, tel.: +30 24210 95402, +30 24210 95421, fax: +30 24210 95422
Offices: 12 Souliou Str., N. Chalkidona, 143 43, Athens, tel.: +30 210 2531990, +30 210 2523636, 210 2531585, fax: +30 210 2523049
www.solin.gr e-mail: secretary@solin.gr

INTRODUCTION TO SOLIN S.A.

Pipes & fittings of a wide range

of applications



SOLIN S.A. is a greek production company that produces composite and plastic pipes, as also fittings of a wide range of applications. It's one of the oldest companies of its kind and the only one with such large range of pipe production for heating and sanitation.

In cooperation with its mother company, Petros Blatzas S.A., it offers integrated solutions for heating, sanitation, drainage systems, as well as for greenhouse heating, geothermy, solar systems, cooling and irrigation.

Primary and integral presupposition of its existence, since its establishment until today, is the quality of its products. SOLIN's driving force is not only the profit, as much as the ambition to develop and create innovative products of high technology, under strict standards and quality certification. The philosophy of management and executives of our company was and remains the complete harmonization of the production to the requirements of stringent regulations and certification, but also with the needs of Solin's clients.

The company employs 80 -highly trained- persons, that are working strongly for covering the philosophy of the company that is: **Total customer's satisfaction.**

The head office is located in Athens, as well as the management and some areas of storage, while the factory with the main warehouses is located in A' Industrial Area of Volos with buildings of 16.000m², in a total plot extent of about 35.000m². In a course of 25 years in the manufacturing process and having the experience and knowledge of experts in this field, our products are amongst the top quality of their kind in the international markets and provide practical, reliable and enduring solutions to multiple applications. SOLIN S.A. is a company, whose products



have a strong presence in greek market. Although, it has major customers in domestic market, SOLIN does not rely, but expands its sales all over the world. By participating to international exhibitions, like ISH in Frankfurt, Mostra Convegno in Milan and AHR in Las Vegas and with certified products by international and famous institutes, its exports cover more than 50% of its annual turnover. SOLIN's products have already been sold to qualitative demanding international markets such as USA, Canada, China, Scandinavia and in countries of Western and Eastern Europe, in Middle East countries, in Balkan countries, New Zealand, Sri Lanka etc.

The philosophy of management and executives of our company was and remains the complete harmonization of the production to the requirements of stringent regulations and certification, but also with the needs of Solin's clients.

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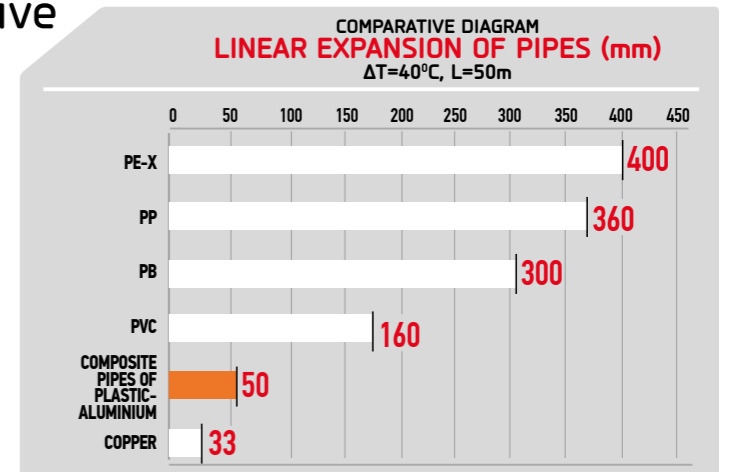
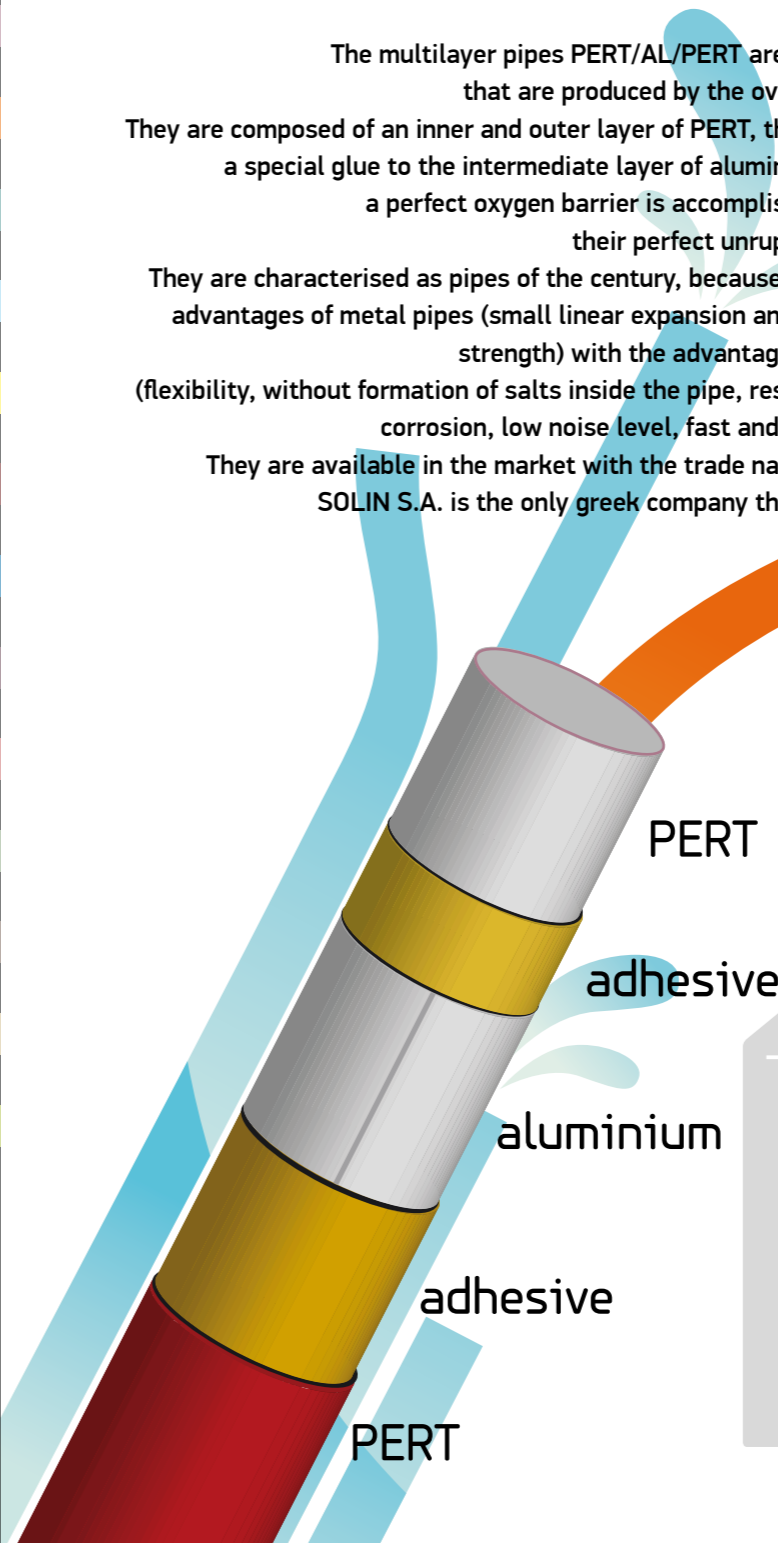
AL-PERT-SOL

Composite pipes of aluminium-plastic

The multilayer pipes PERT/AL/PERT are composite pipes, that are produced by the overlapping method. They are composed of an inner and outer layer of PERT, that are bonded by a special glue to the intermediate layer of aluminium. By that way, a perfect oxygen barrier is accomplished, that ensures their perfect unruptured connection. They are characterised as pipes of the century, because they combine the advantages of metal pipes (small linear expansion and high mechanical strength) with the advantages of plastic pipes (flexibility, without formation of salts inside the pipe, resistance to electro corrosion, low noise level, fast and easy installation) They are available in the market with the trade name AL-PERT-SOL. SOLIN S.A. is the only greek company that produces them.

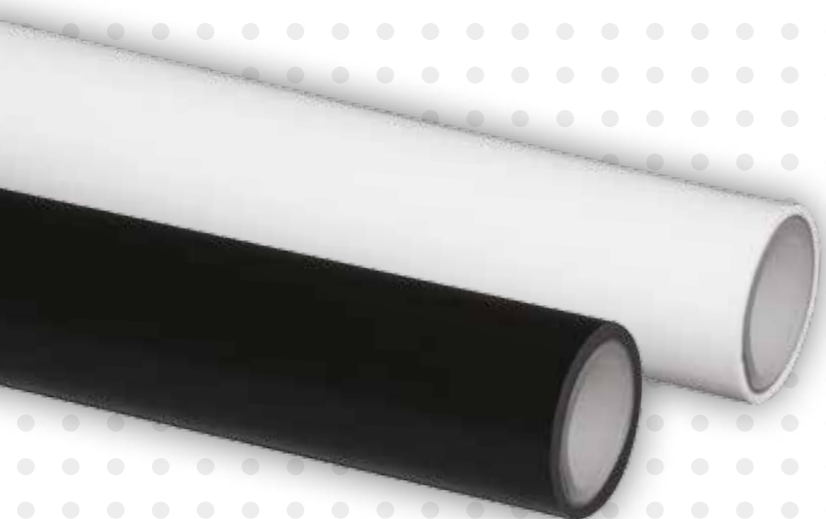
- ### ADVANTAGES
- ▶ Great flexibility
 - ▶ No salts are deposited on the inner surface
 - ▶ Without electrolysis
 - ▶ Small thermal expansion
 - ▶ Resistance to adverse conditions (high temperature, high pressure)
 - ▶ Wide range of dimensions
 - ▶ Easy connection to all conection systems of plastic pipe
 - ▶ Guaranteed quality and insurance for their good function
 - ▶ 100% oxygen barrier existence

AL-PERT-SOL pipes are produced according to international specifications ASTM F1282 and are accompanied by SKZ certification for their mechanical resistance and by guarantee of good operation up to 2.000.000 CHF.



AL-PERT-SOL

MULTILAYER COMPOSITE PIPES PERT/AL/PERT
for Heating-Sanitation-Cooling
in white & black color



AL-PERT-SOL

CODE

WHITE	BLACK	DIMENSION	PRICE €/m	PACKING
1877142011	1877142012	14x2*		100m/200m
1877162011	1877162012	16x2	1.050	100m/200m
1877182011	1877182012	18x2	1.434	100m/200m
1877202011	1877202012	20x2	1.598	100m/200m
1877263011	1877263012	26x3	3.500	50m
1877323011	1877323012	32x3	4.917	50m

*Production upon request

RETIFLEX

Cross-linked polyethylene pipes

RETIFLEX pipes are produced by high density polyethylene and are cross linked by SILAN method (PEX-b), according to European Normes EN 15875 and DIN 16892/16893 specifications, by using last generation raw materials, that are supplied by the largest international companies of its kind.

They are certified not only for their mechanical resistance, but also for their suitability for use in drinkable water networks from international institutes SKZ, WRAS, MPA, ITS and TRUSDAIL LABORATORIES.

They are accompanied by guarantee of 2.000.000 CHF.

They are produced in natural white or black color with UV stabilizers, and in other colors as

well, according to the customer needs.

They are available in various lengths of coils, with or without corrugated protective pipe of red, blue and black color.

For underfloor heating and cooling applications, these pipes are also produced with oxygen barrier of 3 or 5 layers with trade name RETIFLEX-NOXY.

The oxygen barrier is achieved by coating the pipe with a film of special material (EVOH), that either is externally bonded (3 layers) or in the middle of the thickness (5 layers).

The oxygen barrier prevents the entrance of oxygen in the water circulation and corrosion of the metal parts of the system is avoided.

TECHNICAL CHARACTERISTICS PROPERTIES

- ▶ Excellent thermal properties
- ▶ Resistant to corrosion and chemical substances
- ▶ High mechanical resistance
- ▶ Low friction rate
- ▶ Light, flexible and economical
- ▶ Sealed
- ▶ Silent
- ▶ Non toxic
- ▶ Certified by international institutes
- ▶ Longevity

RETIFLEX LIFE DURATION

*OPERAT. TIME	50y	50y	50y	50y	25y	10y
**SAFETY FACTOR	SF1,25	SF1,25	SF1,25	SF1,25	SF1,25	SF1,25
DIMENSION						
TEMPERATURE	10°C	20°C	40°C	70°C	80°C	90°C
16x2	24.6	21.8	17.2	12.2	11.0	10.0
16x2,2	27.5	24.3	19.1	13.6	12.3	11.2
18x2	21.5	19.0	15.0	10.7	9.7	8.8
18x2,5	27.8	24.6	19.4	13.8	12.5	11.3
20x2	19.1	16.9	13.3	9.5	8.6	7.8
20x2,8	28.0	24.8	19.5	13.9	12.6	11.4
22x3	27.2	24.1	19.0	13.5	12.2	11.1
25x2,3	17.4	15.4	12.2	8.7	7.8	7.1
25x3,5	28.0	24.8	19.5	13.9	12.6	11.4
28x3	20.7	18.3	14.4	10.3	9.3	8.4
32x3	17.8	15.8	12.4	8.8	8.0	7.3

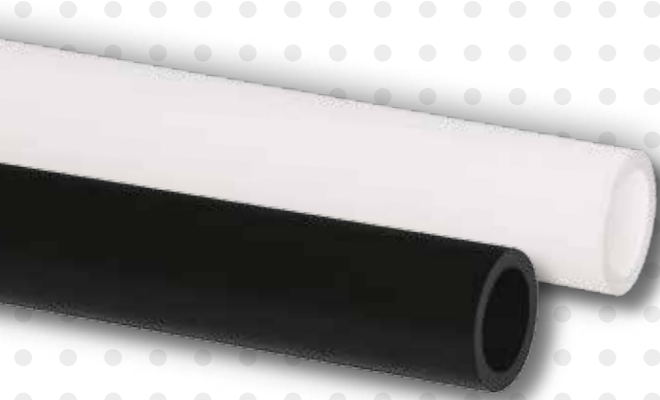
*CONTINUOUS OPERATION TIME

**SAFETY FACTOR

PRESSURE → bar

RETIFLEX

CROSS-LINKED POLYETHYLENE PIPES PEX-b
for Heating-Sanitation-Cooling
in white & black color (with U.V. protection)



CODE		DIMENSION	PRICE €/m	PACKING
WHITE	BLACK			
1110101410	1110101420	10x1,4	0.426	50m
1110102010	1110102020	10x2*	0.498	50m
1110122010	1110122020	12x2*	0.632	50m
1110152010	1110152020	15x2*	0.674	100m/200m
1110152510	1110152520	15x2,5	0.690	100m/200m
1110161510	1110161520	16x1,5*	0.644	100m/200m
1110161810	1110161820	16x1,8*	0.652	100m/200m
1110162010	1110162020	16x2	0.672	100m/200m
1110162210	1110162220	16x2,2*	0.683	100m/200m
1110172010	1110172020	17x2*	0.683	100m/200m
1110182010	1110182020	18x2	0.742	100m/200m
1110182510	1110182520	18x2,5	0.830	100m/200m
1110202010	1110202020	20x2	0.891	100m/200m
1110202810	1110202820	20x2,8*	0.976	100m/200m
1110223010	1110223020	22x3	1.286	100m/200m
1110252010	1110252020	25x2*	1.061	100m
1110252310	1110252320	25x2,3*	1.097	100m
1110253510	1110253520	25x3,5*	1.692	100m
1110283010	1110283020	28x3	1.692	50m/100m
1110323010	1110323020	32x3	2.444	50m/100m
1110324410	1110324420	32x4,4*	2.570	50m/100m
1110380010	1110380020	3/8" *	0.498	100m/200m
1110120010	1110120020	1/2"	0.672	100m/200m
1110340010	1110340020	3/4"	1.013	100m/200m
1110100010	1110100020	1" *	1.692	50m/100m

* Production upon request

● The above mentioned pipes can go through steam treatment for smelling purposes with 7% extra cost on the current price.

RETIFLEX

CROSS-LINKED POLYETHYLENE PIPES PEX-b
for Heating-Sanitation-Cooling
in white color with protective corrugated pipe of blue-red-black color



CODE			DIMENSION	PRICE €/m	PACKING
BLUE	RED	BLACK			
1212101414	1212101413	1212101412	10x1,4	0.773	50m
1212102014	1212102013	1212102012	10x2*	0.844	50m
1212122014	1212122013	1212122012	12x2*	0.978	50m
1212152014	1212152013	1212152012	15x2*	1.020	50m
1212152514	1212152513	1212152512	15x2,5	1.037	50m
1212161514	1212161513	1212161512	16x1,5*	0.990	50m
1212161814	1212161813	1212161812	16x1,8*	0.998	50m
1212162014	1212162013	1212162012	16x2	1.018	50m
1212162214	1212162213	1212162212	16x2,2*	1.030	50m
1212172014	1212172013	1212172012	17x2*	1.030	50m
1212182014	1212182013	1212182012	18x2	1.127	50m
1212182514	1212182513	1212182512	18x2,5	1.215	50m
1212202014	1212202013	1212202012	20x2	1.276	50m
1212202814	1212202813	1212202812	20x2,8*	1.361	50m
1212223014	1212223013	1212223012	22x3	1.672	50m
1212252014	1212252013	1212252012	25x2*	1.780	50m
1212252314	1212252313	1212252312	25x2,3*	1.815	50m
1212253514	1212253513	1212253512	25x3,5*	2.410	50m
1212283014	1212283013	1212283012	28x3	2.618	50m
1212323014	1212323013	1212323012	32x3	3.472	50m
1212324414	1212324413	1212324412	32x4,4*	3.598	50m
1212380014	1212380013	1212380012	3/8" *	0.844	50m
1212120014	1212120013	1212120012	1/2"	1.018	50m
1212340014	1212340013	1212340012	3/4"	1.399	50m
1212100014	1212100013	1212100012	1" *	2.410	50m

* Production upon request

● The above mentioned pipes can go through steam treatment for smelling purposes with 7% extra cost on the current price.

RETIFLEX

CROSS-LINKED POLYETHYLENE PIPES PEX-b
for Heating-Sanitation-Cooling

in **black** color with protective corrugated pipe of blue-red-black color



CODE

BLUE	RED	BLACK	DIMENSION	PRICE €/m	PACKING
1212101424	1212101423	1212101422	10x1,4*	0.773	50m
1212102024	1212102023	1212102022	10x2*	0.844	50m
1212122024	1212122023	1212122022	12x2*	0.978	50m
1212152024	1212152023	1212152022	15x2*	1.020	50m
1212152524	1212152523	1212152522	15x2,5	1.037	50m
1212161524	1212161523	1212161522	16x1,5*	0.990	50m
1212161824	1212161823	1212161822	16x1,8*	0.998	50m
1212162024	1212162023	1212162022	16x2	1.018	50m
1212162224	1212162223	1212162222	16x2,2*	1.030	50m
1212172024	1212172023	1212172022	17x2*	1.030	50m
1212182024	1212182023	1212182022	18x2	1.127	50m
1212182524	1212182523	1212182522	18x2,5	1.215	50m
1212202024	1212202023	1212202022	20x2	1.276	50m
1212202824	1212202823	1212202822	20x2,8*	1.361	50m
1212223024	1212223023	1212223022	22x3	1.672	50m
1212252024	1212252023	1212252022	25x2*	1.780	50m
1212252324	1212252323	1212252322	25x2,3*	1.815	50m
1212253524	1212253523	1212253522	25x3,5*	2.410	50m
1212283024	1212283023	1212283022	28x3	2.618	50m
1212323024	1212323023	1212323022	32x3	3.472	50m
1212324424	1212324423	1212324422	32x4,4*	3.598	50m
1212380024	1212380023	1212380022	3/8" *	0.844	50m
1212120024	1212120023	1212120022	1/2"	1.018	50m
1212340024	1212340023	1212340022	3/4"	1.399	50m
1212100024	1212100023	1212100022	1" *	2.410	50m

* Production upon request

● The above mentioned pipes can go through steam treatment for smelling purposes with 7% extra cost on the current price.

RETIFLEX-NOXY

CROSS-LINKED POLYETHYLENE PIPES PEX-b
for Heating

with oxygen barrier of 3 & 5 layers



*Also available
in other colors

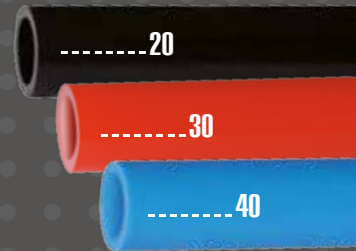
CODE

WHITE

3 LAYERS	5 LAYERS	DIMENSION	PRICE €/m	PACKING
1510101410	1610101410	10x1,4*	0.503	50m
1510102010	1610102010	10x2*	0.588	50m
1510122010	1610122010	12x2*	0.746	50m
1510152010	1610152010	15x2*	0.795	100m/200m
1510152510	1610152510	15x2,5*	0.815	100m/200m
1510161510	1610161510	16x1,5*	0.760	100m/200m
1510161810	1610161810	16x1,8*	0.769	100m/200m
1510162010	1610162010	16x2	0.793	100m/200m
1510162210	1610162210	16x2,2*	0.806	100m/200m
1510172010	1610172010	17x2*	0.806	100m/200m
1510182010	1610182010	18x2	0.876	100m/200m
1510182510	1610182510	18x2,5*	0.979	100m/200m
1510202010	1610202010	20x2*	1.051	100m/200m
1510202810	1610202810	20x2,8*	1.151	100m/200m
1510223010	1610223010	22x3*	1.518	100m/200m
1510252010	1610252010	25x2*	1.252	100m
1510252310	1610252310	25x2,3*	1.295	100m
1510253510	1610253510	25x3,5*	1.997	100m
1510283010	1610283010	28x3*	1.997	50m/100m
1510323010	1610323010	32x3*	2.884	50m/100m
1510324410	1610324410	32x4,4*	3.033	50m/100m
1510380010	1610380010	3/8" *	0.588	100m/200m
1510120010	1610120010	1/2"	0.793	100m/200m
1510340010	1610340010	3/4"	1.196	100m/200m
1510100010	1610100010	1" *	1.997	50m/100m

* Production upon request

The code
is adjusted by
changing the
last two numbers
as follows:
Black: 20
Red: 30
Blue: 40



RETIFLEX-NOXY

CROSS-LINKED POLYETHYLENE PIPES PEX-b
for Heating

with oxygen barrier of 3 layers and protective corrugated pipe



CODE

3 LAYERS (WHITE INTERNAL PIPE)

BLUE	RED	DIMENSION	PRICE €/m	PACKING
1512162014	1512162013	16x2	1.139	50m
1512182014	1512182013	18x2	1.261	50m
1512182514	1512182513	18x2,5*	1.364	50m
1512202014	1512202013	20x2*	1.436	50m
1512223014	1512223013	22x3*	1.903	50m

CODE

3 LAYERS (BLACK INTERNAL PIPE)

BLUE	RED	DIMENSION	PRICE €/m	PACKING
1512162024	1512162023	16x2	1.139	50m
1512182024	1512182023	18x2	1.261	50m
1512182524	1512182523	18x2,5*	1.364	50m
1512202024	1512202023	20x2*	1.436	50m
1512223024	1512223023	22x3*	1.903	50m

CODE

3 LAYERS (RED INTERNAL PIPE)

BLUE	RED	DIMENSION	PRICE €/m	PACKING
1512162034	1512162033	16x2	1.139	50m
1512182034	1512182033	18x2	1.261	50m
1512182534	1512182533	18x2,5*	1.364	50m
1512202034	1512202033	20x2*	1.436	50m
1512223034	1512223033	22x3*	1.903	50m

* Production upon request

OCTATHERM

Plastic Pipes from PE-RT (DOWLEX 2344E)

Polyethylene pipes of increased temperatures resistance (PE-RT), with the commercial trade name OCTATHERM, are produced by special type of polyethylene DOWLEX 2344 E.

Their unique molecular structure gives them high mechanical resistance to pressure and temperature combined with great flexibility and easy installation, without cross linking requirement.

They are particularly flexible with a smooth surface.

They are produced according to DIN 16833/16834/4721/4726 and ISO 22391 and are accompanied by quality certificates of german institutes, like SKZ for their mechanical resistance, MPA for oxygen barrier and by guarantee of 2.000.000 CHF, that covers their good function.

OCTATHERM pipes are in the market for more than 20 years and more specifically to installations of heating and sanitation with excellent results and their annual consumption is increasing year by year against other competitive pipes.

They are produced in white or black color with UV

stabilizers, with or without protective corrugated pipe. They are available in various coil lengths from 100m to 600m for single pipes and in 50m coils for pipes with protective corrugated pipe. They can be connected with many types of fittings, such as screw fittings, press fittings, speed fits, electro fusion etc.

OCTATHERM

LIFE DURATION

*OPERAT. TIME	50y	50y	50y	50y	25y	10y
**SAFETY FACTOR	SF1,25	SF1,25	SF1,25	SF1,25	SF1,6	SF1,6
DIMENSION						
TEMPERATURE	10°C	20°C	40°C	70°C	80°C	90°C
15x2,5	29.0	26.7	22.1	13.0	10.1	8.3
16x2	20.1	18.6	15.4	9.3	7.3	6.0
17x2	19.3	17.8	14.7	8.7	6.8	5.6
18x2	18.1	16.7	13.8	8.1	6.3	5.2
18x2,5	22.7	20.9	17.3	10.5	8.2	6.7
20x2	15.8	14.5	12.0	7.3	5.7	4.6
20x2,8	22.7	20.9	17.3	10.6	8.3	6.8
22x3	22.7	20.9	17.3	10.3	8.0	6.6
25x2,3	14.5	13.4	11.1	6.6	5.2	4.2
25x3,5	22.7	20.9	17.3	10.6	8.3	6.8
28x3	17.3	15.9	13.2	7.8	6.1	5.0
32x3	14.5	13.4	11.1	6.8	5.3	4.3

*CONTINUOUS OPERATION TIME

**SAFETY FACTOR
PRESSURE → bar

PHYSICAL PROPERTIES

- ▶ Density of raw material 0,933 gr/cm³ (according to ASTM D1505)
- ▶ Flow of raw material 0,64gr/10min (according to ASTM D1238 (190°C/2,16 Kg))
- ▶ Thermal conductivity 0,4W/mK at 60°C, (according to DIN 52612-1)
- ▶ Linear elongation coefficient 1,95x10⁻⁴/K, (according to DIN 53752 A at 20-70°C).
- ▶ Softening limit (VICAT point) 123°C, (according to ASTM 1525)
- ▶ Elasticity Factor 550 Mpa

Polyethylene pipes of increased temperatures resistance (PE-RT), with the commercial trade name OCTATHERM, are produced by special type of polyethylene DOWLEX 2344 E.

ADVANTAGES

- ▶ Excellent thermal properties
- ▶ Great resistance to high temperatures in networks under pressure
- ▶ Resistance to corrosion and chemical substances.
- ▶ High mechanical resistance.
- ▶ Low friction rate
- ▶ Light, particularly flexible and economical
- ▶ Easy installation (particularly in under floor heating)
- ▶ Non toxic
- ▶ Certified by international institutes.
- ▶ Durability and longevity

OCTATHERM

PLASTIC PIPES FROM PE-RT (DOWLEX 2344E)

for Heating-Sanitation-Cooling

in white & black color



OCTATHERM



CODE

WHITE	BLACK	DIMENSION	PRICE €/m	PACKING
1170081010	1170081020	8x1	0.353	50m
1170101410	1170101420	10x1,4*	0.402	50m
1170102010	1170102020	10x2*	0.469	50m
1170122010	1170122020	12x2*	0.596	50m
1170152010	1170152020	15x2*	0.635	100m/200m
1170152510	1170152520	15x2,5	0.651	100m/200m
1170161510	1170161520	16x1,5*	0.607	100m/200m
1170161810	1170161820	16x1,8*	0.614	100m/200m
1170162010	1170162020	16x2	0.633	100m/200m
1170162210	1170162220	16x2,2*	0.644	100m/200m
1170172010	1170172020	17x2*	0.644	100m/200m
1170182010	1170182020	18x2	0.699	100m/200m
1170182510	1170182520	18x2,5	0.782	100m/200m
1170202010	1170202020	20x2	0.840	100m/200m
1170202810	1170202820	20x2,8*	0.920	100m/200m
1170223010	1170223020	22x3	1.209	100m/200m
1170252010	1170252020	25x2*	1.000	100m
1170252310	1170252320	25x2,3*	1.034	100m
1170253510	1170253520	25x3,5*	1.595	100m
1170283010	1170283020	28x3	1.595	50m/100m
1170323010	1170323020	32x3	2.304	50m/100m
1170324410	1170324420	32x4,4*	2.422	50m/100m
1170380010	1170380020	3/8" *	0.469	100m/200m
1170120010	1170120020	1/2"	0.633	100m/200m
1170340010	1170340020	3/4"	0.955	100m/200m
1170100010	1170100020	1" *	1.595	50m/100m

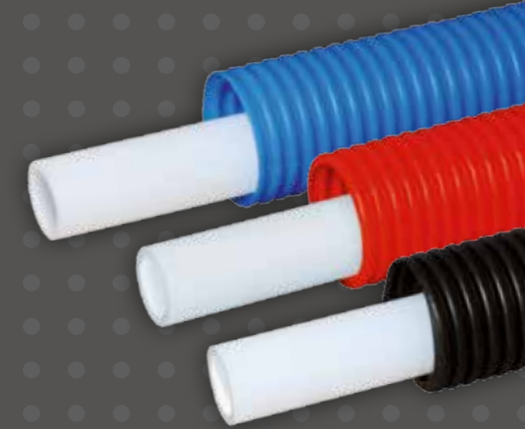
* Production upon request

OCTATHERM

PLASTIC PIPES FROM PE-RT (DOWLEX 2344E)

for Heating-Sanitation-Cooling

in white color with protective corrugated pipe of blue-red-black color



CODE

BLUE	RED	BLACK	DIMENSION	PRICE €/m	PACKING
1272101414	1272101413	1272101412	10x1,4*	0.748	50m
1272102014	1272102013	1272102012	10x2*	0.816	50m
1272122014	1272122013	1272122012	12x2*	0.942	50m
1272152014	1272152013	1272152012	15x2*	0.982	50m
1272152514	1272152513	1272152512	15x2,5	0.997	50m
1272161514	1272161513	1272161512	16x1,5*	0.953	50m
1272161814	1272161813	1272161812	16x1,8*	0.961	50m
1272162014	1272162013	1272162012	16x2	0.980	50m
1272162214	1272162213	1272162212	16x2,2*	0.991	50m
1272172014	1272172013	1272172012	17x2*	0.991	50m
1272182014	1272182013	1272182012	18x2	1.085	50m
1272182514	1272182513	1272182512	18x2,5	1.167	50m
1272202014	1272202013	1272202012	20x2	1.225	50m
1272202814	1272202813	1272202812	20x2,8*	1.305	50m
1272223014	1272223013	1272223012	22x3	1.594	50m
1272252014	1272252013	1272252012	25x2*	1.719	50m
1272252314	1272252313	1272252312	25x2,3*	1.752	50m
1272253514	1272253513	1272253512	25x3,5*	2.313	50m
1272283014	1272283013	1272283012	28x3	2.521	50m
1272323014	1272323013	1272323012	32x3	3.332	50m
1272324414	1272324413	1272324412	32x4,4*	3.451	50m
1272380014	1272380013	1272380012	3/8" *	0.816	50m
1272120014	1272120013	1272120012	1/2"	1.352	50m
1272340014	1272340013	1272340012	3/4"	1.340	50m
1272100014	1272100013	1272100012	1" *	2.623	50m

* Production upon request

OCTATHERM

PLASTIC PIPES FROM PE-RT (DOWLEX 2344E)

for Heating-Sanitation-Cooling

in **black** color with protective corrugated pipe of blue-red-black color



OCTATHERM

CODE

BLUE	RED	BLACK	DIMENSION	PRICE €/m	PACKING
1272101424	1272101423	1272101422	10x1,4*	0.748	50m
1272102024	1272102023	1272102022	10x2*	0.816	50m
1272122024	1272122023	1272122022	12x2*	0.942	50m
1272152024	1272152023	1272152022	15x2*	0.982	50m
1272152524	1272152523	1272152522	15x2,5	0.997	50m
1272161524	1272161523	1272161522	16x1,5*	0.953	50m
1272161824	1272161823	1272161822	16x1,8*	0.961	50m
1272162024	1272162023	1272162022	16x2	0.980	50m
1272162224	1272162223	1272162222	16x2,2*	0.991	50m
1272172024	1272172023	1272172022	17x2*	0.991	50m
1272182024	1272182023	1272182022	18x2	1.085	50m
1272182524	1272182523	1272182522	18x2,5	1.167	50m
1272202024	1272202023	1272202022	20x2	1.225	50m
1272202824	1272202823	1272202822	20x2,8*	1.305	50m
1272223024	1272223023	1272223022	22x3	1.594	50m
1272252024	1272252023	1272252022	25x2*	1.719	50m
1272252324	1272252323	1272252322	25x2,3*	1.752	50m
1272253524	1272253523	1272253522	25x3,5*	2.313	50m
1272283024	1272283023	1272283022	28x3	2.521	50m
1272323024	1272323023	1272323022	32x3	3.332	50m
1272324424	1272324423	1272324422	32x4,4*	3.451	50m
1272380024	1272380023	1272380022	3/8" *	0.816	50m
1272120024	1272120023	1272120022	1/2"	1.352	50m
1272340024	1272340023	1272340022	3/4"	1.340	50m
1272100024	1272100023	1272100022	1" *	2.623	50m

* Production upon request

OCTATHERM-NOXY

PLASTIC PIPES FROM PE-RT (DOWLEX 2344E)

for Heating

with oxygen barrier of 3 & 5 layers



OCTATHERM



* Also available in other colors

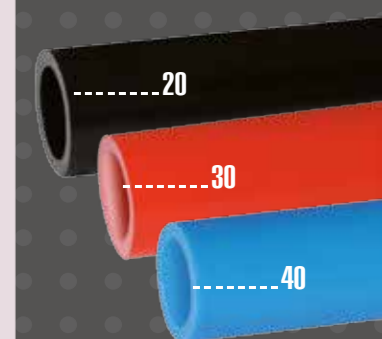
CODE

WHITE

3 LAYERS	5 LAYERS	DIMENSION	PRICE €/m	PACKING
1570081010	-	8x1	0.417	50m
1570101410	-	10x1,4*	0.474	50m
1570102010	1670102010	10x2*	0.554	50m
1570122010	1670122010	12x2*	0.703	50m
1570152010	1670152010	15x2*	0.749	100m/200m
1570152510	1670152510	15x2,5*	0.768	100m/200m
1570161510	-	16x1,5*	0.716	100m/200m
1570161810	-	16x1,8*	0.725	100m/200m
1570162010	1670162010	16x2	0.747	100m/200m
1570162210	1670162210	16x2,2*	0.760	100m/200m
1570172010	1670172010	17x2*	0.760	100m/200m
1570182010	1670182010	18x2	0.825	100m/200m
1570182510	1670182510	18x2,5*	0.923	100m/200m
1570202010	1670202010	20x2*	0.982	100m/200m
1570202810	1670202810	20x2,8*	1.085	100m/200m
1570223010	1670223010	22x3*	1.427	100m/200m
1570252010	1670252010	25x2*	1.181	100m
1570252310	1670252310	25x2,3*	1.220	100m
1570253510	1670253510	25x3,5*	1.882	100m
1570283010	1670283010	28x3*	1.882	50m/100m
1570323010	1670323010	32x3*	2.718	50m/100m
1570324410	1670324410	32x4,4*	2.858	50m/100m
1570380010	-	3/8" *	0.554	100m/200m
1570120010	1670120010	1/2"	0.747	100m/200m
1570340010	1670340010	3/4"	1.118	100m/200m
1570100010	1670100010	1" *	1.882	50m/100m

* Production upon request

The code is adjusted by changing the last two numbers as follows:
Black: 20
Red: 30
Blue: 40



FLEXITHERM

Plastic Pipes from Polybutylene (PB-1)

The pipes with the trade name **FLEXITHERM** are produced by polybutylene. This raw material has excellent physical, mechanical and thermal properties.

They are produced according to german specifications DIN 16968/16969, european norms EN ISO 15876 and british standards BS 7291. SOLIN S.A. is the only greek company that produces them.

They have excellent resistance to high temperatures and great flexibility. A unique characteristic is their resistance to adverse conditions. These pipes are the ideal choice for heating installations, because they combine maximum resistance to mechanical stress (pressure-temperature) with higher flexibility in comparison to all other plastic pipes, as it can be easily seen at the table below.

They are accompanied by german certificate SKZ for their mechanical resistance and MPA certificate for oxygen barrier as well as with guarantee of good function up to 2.000.000CHF.

They are also produced with oxygen barrier, of three or five layers in the same dimensions, upon request.

They are available in 100m and 200m coils and are also available with protective corrugated pipe of red, blue and black color in coils of 50m.

ADVANTAGES

- ▶ **Great flexibility.**
- ▶ They are not affected by low temperatures.
- ▶ **Low loss of pressure**
- ▶ Minimum weight (9 times less than copper or iron)
- ▶ **Non toxic**
- ▶ Bad conductor of electricity
- ▶ **No thermal memory**
- ▶ High resistance to chemicals
- ▶ **Excellent resistance to high pressures and temperatures**
- ▶ Easy replacement of inner pipe without damage of the floor.

FLEXITHERM

LIFE DURATION

DIMENSION	*OPERAT. TIME					
	50y	50y	50y	50y	25y	10y
	**SAFETY FACTOR					
	SF1,25	SF1,25	SF1,25	SF1,25	SF1,25	SF1,25
	10°C	20°C	40°C	70°C	80°C	90°C
8x1	33.4	31.2	26.4	17.4	14.5	11.3
10x1,4	38.0	35.6	30.0	19.8	16.6	12.7
10x1,5	41.2	38.6	32.6	21.5	18.0	13.6
12x2	46.7	43.7	36.9	24.4	20.3	15.6
15x1,7	29.8	27.9	23.6	15.6	13.0	10.2
16x2	33.4	31.2	26.4	17.4	14.1	11.3
18x2	29.2	27.3	23.1	15.2	12.7	10.2
20x2	25.9	24.3	20.5	13.5	11.0	8.8
20x2,8	38.0	35.6	30.0	19.8	15.9	12.7
22x2,3	27.3	25.5	21.6	14.2	11.6	9.2
25x2,3	23.7	22.1	18.7	12.3	10.2	8.1
28x2,5	22.9	21.4	18.1	11.9	9.8	7.8

*CONTINUOUS OPERATION TIME

**SAFETY FACTOR

PRESSURE → bar

COMPARISON OF RESISTANCE

MATERIAL	SPECIFICATIONS	WATER TEMPERATURE	FATIGUE STRESS σ (N/m ²)	TEST DURATION (in h)
PB Polybutylene	DIN 16968	20°C 95°C	15,5 6,0	1 1000
PE-X Cross Link Polyethylene	DIN 16892	20°C 95°C	12 4,4	1 1000
PP Polypropylene Random	DIN 8078	20°C 95°C	16 3,5	1 1000

FLEXITHERM

PLASTIC PIPES FROM POLYBUTYLENE (Pb-1)
for Heating-Sanitation-Cooling



FLEXITHERM

CODE

GRAY	DIMENSION	PRICE €/m	PACKING
1150081080	8x1	0.627	100m/200m
1150101480	10x1,4*	0.755	100m/200m
1150101580	10x1,5*	0.771	100m/200m
1150122080	12x2*	0.948	100m/200m
1150141080	14x1*	0.799	100m/200m
1150151780	15x1,7(B.S.)*	1.014	100m/200m
1150162080	16x2	1.158	100m/200m
1150182080	18x2	1.275	100m/200m
1150202080	20x2	1.533	100m/200m
1150202880	20x2,8*	1.833	100m
1150222380	22x2,3(B.S.)*	1.644	100m
1150252380	25x2,3*	1.967	100m
1150282580	28x2,5*	2.257	100m

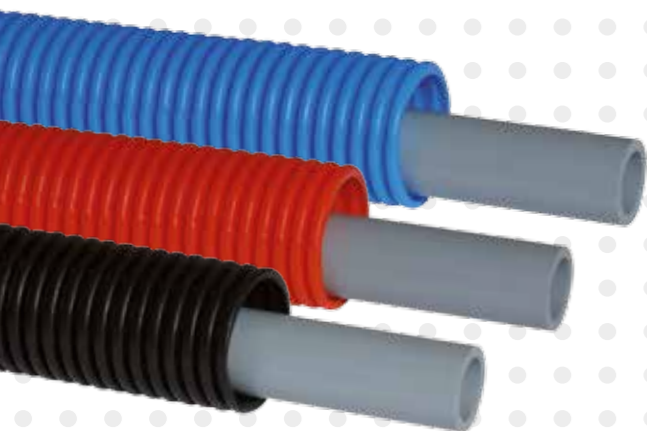
* Production upon request

FLEXITHERM

PLASTIC PIPES FROM POLYBUTYLENE (Pb-1)

for Heating-Sanitation-Cooling

with protective corrugated pipe of blue-red-black color



FLEXITHERM

CODE

BLUE	RED	BLACK	DIMENSION	PRICE €/m	PACKING
1252101484	1252101483	1252101482	10x1,4*	1.101	50m
1252101584	1252101583	1252101582	10x1,5*	1.117	50m
1252122084	1252122083	1252122082	12x2*	1.295	50m
1252141084	1252141083	1252141082	14x1*	1.146	50m
1252151784	1252151783	1252151782	15x1,7*	1.361	50m
1252162084	1252162083	1252162082	16x2	1.504	50m
1252182084	1252182083	1252182082	18x2	1.660	50m
1252202084	1252202083	1252202082	20x2	1.918	50m
1252202884	1252202883	1252202882	20x2,8*	2.218	50m
1252222384	1252222383	1252222382	22x2,3*	2.035	50m
1252252384	1252252383	1252252382	25x2,3*	2.685	50m
1252282584	1252282583	1252282582	28x2,5*	3.183	50m

* Production upon request

FLEXITHERM-NOXY

PLASTIC PIPES FROM POLYBUTYLENE (Pb-1)

for Heating

with oxygen barrier of 3 & 5 layers



FLEXITHERM

CODE

3 LAYERS	5 LAYERS	DIMENSION	PRICE €/m	PACKING
1550081080	1650081080	8x1	0.722	100m/200m
1550101480	1650101480	10x1,4*	0.868	100m/200m
1550101580	1650101580	10x1,5	0.887	100m/200m
1550122080	1650122080	12x2*	1.091	100m/200m
1550141080	1650141080	14x1*	0.919	100m/200m
1550151780	1650151780	15x1,7	1.167	100m/200m
1550162080	1650162080	16x2	1.332	200m
1550182080	1650182080	18x2	1.466	200m
1550202080	1650202080	20x2	1.763	200m
1550202880	1650202880	20x2,8*	2.108	100m
1550222380	1650222380	22x2,3*	1.891	100m
1550252380	1650252380	25x2,3*	2.262	100m
1550282580	1650282580	28*2,5*	2.595	100m

* Production upon request

SOLISAN

Plastic Pipes & Fittings from Polypropylene PP-R 80

Plastic pipes PP-R 80 are produced by polypropylene RANDOM type-3, according to german specifications DIN 8077-78 and ISO 15874. They present high resistance to networks under high pressure and temperature. They are connected by electrofusion welded fittings for installations of hot-cold water transportation. They are accompanied by SKZ quality certificate for their mechanical resistance.

ADVANTAGES

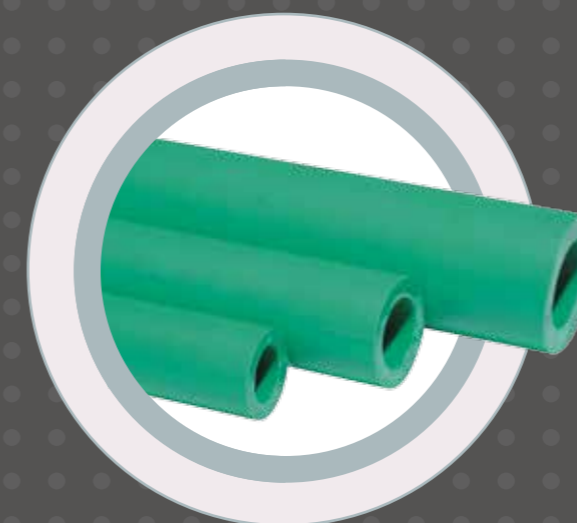
- ▶ **Long life expectancy.** They are free of electrochemical corrosion and thanks to the excellent technical standards of the raw material (PP-R 80), are particularly resistant to high pressure and temperature .
- ▶ **Low pressure loss.** Their smooth surface eliminates the pressure losses caused by frictions, as there is no formation of calcareous scaling so the initial pressure drop remains negligible throughout the pipe's life.
- ▶ **Non toxic** (they are certified for suitability for use in drinking water) and they are friendly to the environment (recyclable).
- ▶ **Thermal and sound insulation.** Due to the raw material that are produced of and the thickness of the pipe, the heat loss and the possibility of condensation when used in cooling systems is minimized. In that way, the thickness of insulation needed, is minimized. The flow is noiseless.
- ▶ **They are connected with fittings that provide credibility in tightness,** easy and quick installation and therefore quality and low cost.
- ▶ **Guaranteed for 10 years constant operation** in cold and hot water.

SOLISAN
LIFE DURATION

OPERATING TEMPERATURE	20°C	30°C	40°C	50°C	60°C	70°C	80°C
LIFE YEARS WITH SF 1,25	50	50	50	50	50	50	25
MAX. OPERATING PRESSURE Atm	30.9	26.1	22	18.5	15.3	10.2	7.6

SOLISAN

PLASTIC PIPES FROM POLYPROPYLENE RANDOM
TYPE 3 & FITTINGS
For Heating-Sanitation-Cooling



PLASTIC PIPES

CODE	DIMENSION	PRICE €/m	PACKING
1040203450	20x3,4*	0.817	100m
1040254250	25x4,2*	1.648	80m
1040325450	32x5,4	2.324	40m
1040406750	40x6,7	5.052	24m
1040508350	50x8,3	6.494	20m
1040631050	63x10,5	10.481	12m

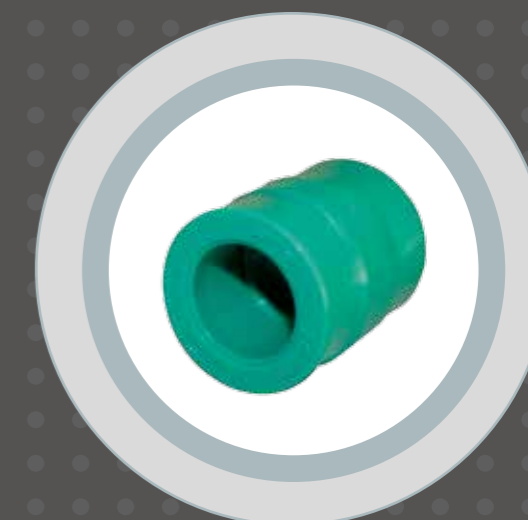
* Available in 100m coils as well

SOLISAN

SOCKET FF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900235130	Ø20	0.402	240
0900235131	Ø25	0.548	200
0900235132	Ø32	0.761	50
0900235133	Ø40	1.598	30
0900235134	Ø50	2.491	16
0900235135	Ø63	4.250	10
0900235136	Ø75*	6.482	5
0900235137	Ø90*	10.848	3

* Pn 20



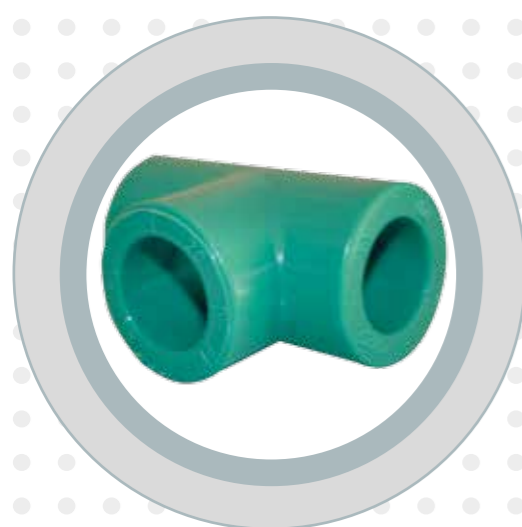
SOLISAN

FITTINGS

REDUCING BUSH PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900236138	20x16	0.475	150
0900236139	25x16	0.507	150
0900236140	25x20	0.507	150
0900236141	32x20	0.606	100
0900236142	32x25	0.638	100
0900236143	40x25	1.384	50
0900236144	40x32	1.384	50
0900236145	50x32	2.839	24
0900236146	50x40	2.839	24
0900236147	63x32	4.348	18
0900236148	63x40	4.348	16
0900236149	63x50	4.348	14
0900236150	75x50	6.294	12
0900236151	75x63*	6.294	12
0900236152	90x63*	9.660	3
0900236153	90x75*	9.660	3

* Pn 20



TEE 90° FF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900245160	Ø20	0.536	150
0900245161	Ø25	0.753	90
0900245162	Ø32	1.129	50
0900245163	Ø40	2.786	30
0900245164	Ø50	4.848	16
0900245165	Ø63	6.821	10
0900245166	Ø75*	13.642	5
0900245167	Ø90*	24.632	3

* Pn 20



REDUCING TEE 90° FF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900246174	20x16x20	0.810	100
0900246172	25x20x25	0.933	100
0900246173	32x20x32	1.408	40
0900246175	32x25x32	1.408	40
0900246176	40x20x40	3.125	15
0900246177	40x25x40	3.125	15
0900246178	40x32x40	3.125	15
0900246179	50x25x50	5.035	8
0900246180	50x32x50	5.035	8
0900246181	50x40x50	5.035	8
0900246182	63x25x63	7.017	5
0900246183	63x32x63	7.017	5
0900246184	63x40x63	7.017	5
0900246185	63x50x63	7.009	5
0900246170	25x20x20	0.982	80
0900246171	25x25x20	0.892	80
0900246186	32x32x25	1.482	40
0900246187	32x20x25	1.359	40



TEE 90° MF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900247189	Ø20	1.062	50

**ELBOW 90° FF PN25**

CODE	DIMENSION	PRICE €/pc.	PACKING
0900255190	Ø20	0.513	200
0900255191	Ø25	0.625	130
0900255192	Ø32	1.105	30
0900255193	Ø40	2.411	20
0900255194	Ø50	4.250	26
0900255195	Ø63	5.946	20
0900255196	Ø75*	10.107	6
0900255197	Ø90*	20.963	3

* Pn 20

ELBOW 45° FF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900265200	Ø20	0.606	120
0900265201	Ø25	0.737	90
0900265202	Ø32	1.121	50
0900265203	Ø40	2.625	20
0900265204	Ø50	4.589	12
0900265205	Ø63	6.33	20

**ELBOW 90° MF PN25**

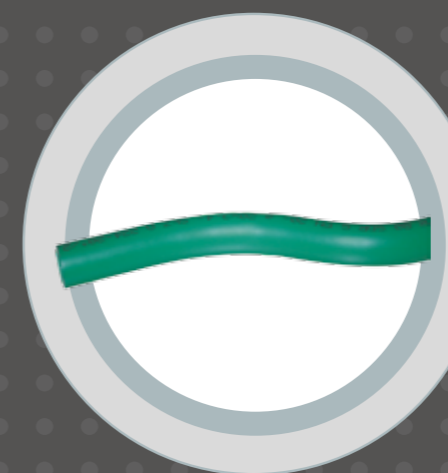
CODE	DIMENSION	PRICE €/pc.	PACKING
0900256280	Ø20	0.581	100
0900256281	Ø25	0.733	60
0900256283	Ø32	1.146	40

ELBOW 45° MF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900266285	Ø20	0.705	120
0900266286	Ø25	0.866	80
0900266287	Ø32	1.357	40

**BEND FF PN25**

CODE	DIMENSION	PRICE €/pc.	PACKING
0900285290	Ø20	2.099	60
0900285291	Ø25	2.406	40
0900285292	Ø32	2.796	20

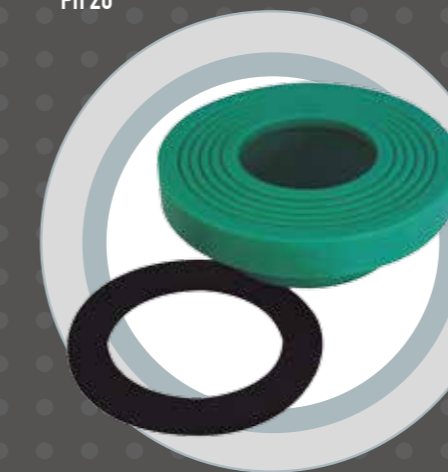
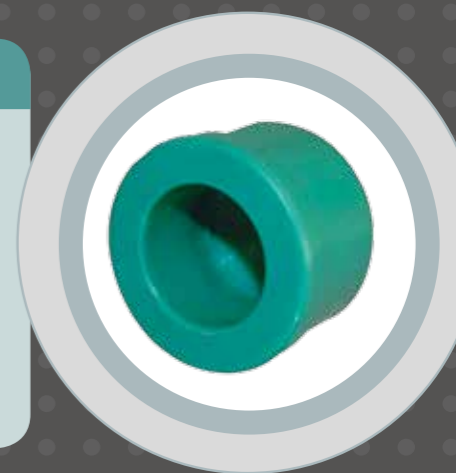
**SWAN NECK PN20**

CODE	DIMENSION	PRICE €/pc.	PACKING
0900860207	Ø20	1.161	50
0900860208	Ø25	1.622	50
0900860209	Ø32	2.247	30

CAP FF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900185210	Ø20	0.491	150
0900185211	Ø25	0.573	120
0900185212	Ø32	0.737	90
0900185213	Ø40	1.661	50
0900185214	Ø50	2.830	24
0900185215	Ø63	4.589	18
0900185216	Ø75*	6.723	8

* Pn 20

**FLANGE ADAPTOR F (WITH FLAT SEALING SURFACE)**

CODE	DIMENSION	PRICE €/pc.	PACKING
0900195295	Ø40	2.420	40
0900195296	Ø50	3.669	24
0900195297	Ø63	4.687	20
0900195298	Ø75	7.348	8



ADAPTOR SOCKET MF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900930217	1/2"x20	2.987	100
0900930219	1/2"x25	3.250	80
0900930218	3/4"x20	4.464	70
0900930220	3/4"x25	4.464	70
0900930221	1"x32	8.377	40
0900930222	1"1/4x40	21.204	15
0900930223	1"1/2x50	26.338	12
0900930224	2"x63	41.292	6
0900930225	2"1/2x75*	49.160	4

* Pn 20

ADAPTOR SOCKET MF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900932226	1/2"x20	3.415	80
0900932228	1/2"x25	3.794	80
0900932227	3/4"x20	4.910	50
0900932229	3/4"x25	4.910	50
0900932230	1"x32	10.937	30
0900932231	1"1/4x40	24.887	15
0900932232	1"1/2x50	29.909	10
0900932233	2"x63	43.301	6
0900932234	2"1/2x75*	62.061	4

* Pn 20



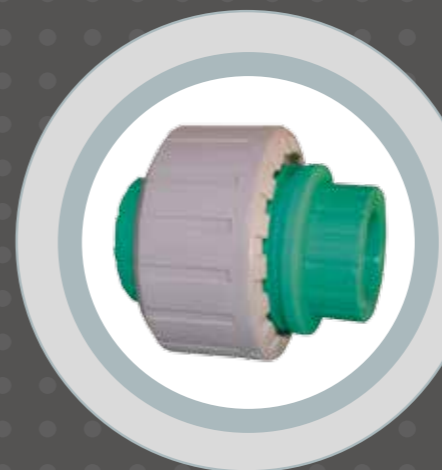
ADAPTOR TEE FF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900940235	1/2"x20	3.744	50
0900940236	1/2"x25	4.667	40
0900940237	3/4"x20	4.901	30
0900940238	3/4"x25	4.901	30
0900940239	3/4"x32	7.619	20
0900940240	1"x32	10.996	20



ADAPTOR TEE 90° MF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900942241	1/2"x20	5.074	50



UNION SOCKET FF PN10

CODE	DIMENSION	PRICE €/pc.	PACKING
0900295300	Ø20	4.460	30
0900295301	Ø25	5.361	30
0900295302	Ø32	6.130	30
0900295303	Ø40	8.732	20
0900295304	Ø50	11.401	20
0900295305	Ø63	15.410	20

STOP COCK WITH COVER PN25

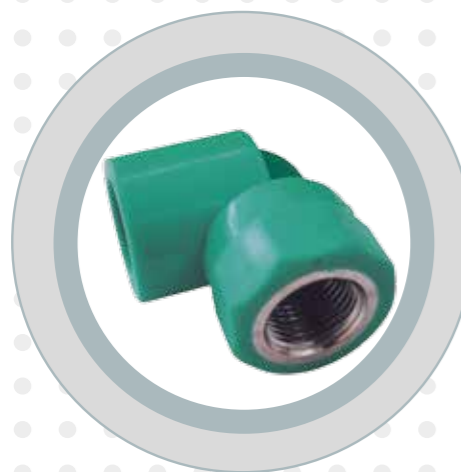
CODE	DIMENSION	PRICE €/pc.	PACKING
0900880255	Ø20	14.788	16
0900880256	Ø25	17.116	16
0900880257	3/4"x20	9.204	1
0900880258	3/4"x25	7.242	1
0900880259	Spare part	5.156	1
0900880261	spare part	6.071	1
0900880260	spare part	6.484	1



STOP COCK FF WITH HANDLE PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900890254	Ø20	20.475	10
0900890263	Ø25	22.811	10





ADAPTOR ELBOW 90° MF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900950242	1/2"x20	3.130	150
0900950243	1/2"x25	4.516	150
0900950247	3/4"x20	5.208	50
0900950244	3/4"x25	5.208	50
0900950245	3/4"x32	6.056	20
0900950246	1"x32	9.226	20

ADAPTOR PLATE BACK ELBOW FF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900951248	1/2"x20	3.150	120
0900951249	1/2"x25	3.700	60



ADAPTOR ELBOW 90° MF PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900952250	1/2"x20	3.794	70
0900952251	1/2"x25	4.617	50
0900952252	3/4"x25	5.729	40
0900952253	1"x32	11.257	20

TOOL KIT

CODE	DIMENSION	PRICE €/pc.	PACKING
0900901262	20/25/32	475.08	1

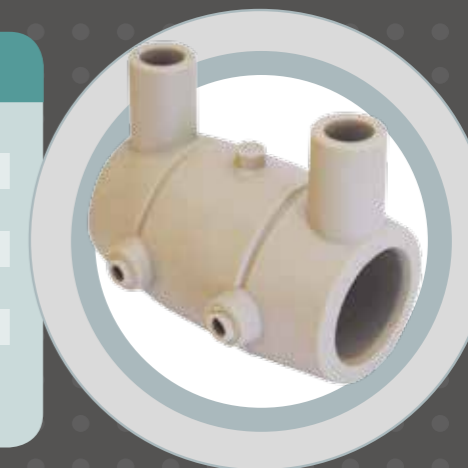


The mold sizes $\Phi 20$ - $\Phi 63$ are available upon request.



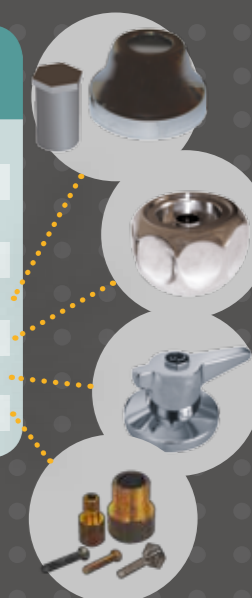
ELECTRIC SOCKET PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0900870310	$\Phi 20$	16.708	10
0900870311	$\Phi 25$	18.542	10
0900870312	$\Phi 32$	19.731	10
0900870313	$\Phi 40$	20.920	10
0900870314	$\Phi 50$	23.019	10
0900870315	$\Phi 63$	28.281	10
0900870316	$\Phi 75$	35.124	1



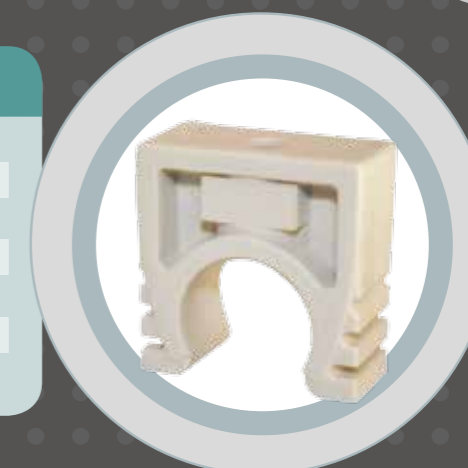
BALL COCK BODY PN25

CODE	DIMENSION	PRICE €/pc.	PACKING
0901211321	$\Phi 20$	27.230	10
0901211322	$\Phi 25$	27.498	10
0901211323	$\Phi 32$	36.560	5
0901211317	BALL COCK COVER	6.770	1
0901211318	BALL COCK HANDLE	11.874	1
0901211319	BALL COCK LEVER	12.151	1
0901211320	EXTENSION FOR STOP COCK	10.714	1



PLASTIC PIPE CLAMP

CODE	DIMENSION	PRICE €/pc.	PACKING
0900908324	$\Phi 20$	0.911	10
0900908325	$\Phi 25$	1.151	10
0900908326	$\Phi 32$	1.328	10
0900908327	$\Phi 40$	2.466	10
0900908328	$\Phi 50$	3.162	10
0900908329	$\Phi 63$	3.794	10



NOXY-AL

Multilayer plastic pipes for underfloor heating

NOXY-AL composite pipes are pipes composed of PB or PERT inner pipe, which is covered with aluminium film, crossing polyester thread and an outer layer of LDPE (low density PE) film. In that way, a perfect oxygen barrier is accomplished. Moreover, the aluminium film -as a good heat conductor due to its metal texture- favors the transmission of heat and thus eliminates the heating time of the underfloor heating's start up, which is the main application of these particular pipes.

It is particularly resistant to mechanical stress and very flexible.

They are accompanied by guarantee up to 2.000.000 CHF and by german certificate SKZ for its mechanical resistance. It is available in 360m coils and SOLIN S.A. is one of the two companies worldwide that produces this type of pipe.

TECHNICAL CHARACTERISTICS

- ▶ **Ideal for underfloor heating and cooling.**
- ▶ They are designed especially for this application and they are widely used in central Europe countries, such as Switzerland, Germany, Austria, Czech Republic etc. that underfloor heating is up to 80% of total installations.
- ▶ **The PB/PERT inner pipe provides flexibility, resistance to chemicals, to high temperatures and pressures and resistance to cooling.**
- ▶ The aluminium film, in combination with the crossing polyester threads, provides higher mechanical resistance and oxygen barrier, so that the boiler room systems and especially the metallic parts of the installations not to be oxidized. Also, as a good heat conductor, it helps the heat transmission of water to the floor.

NOXY-AL

MULTILAYER PLASTIC PIPES
for underfloor Heating from PB or PE-RT (DOWLEX 2344E)
with oxygen barrier



PB/AL

CODE	DIMENSION	PRICE €/m	PACKING
1750162070	16x2	1.350	360m
1750162270	16x2,2	1.359	360m
1750172570	17x2,5	1.502	360m

NOXY-AL

PE-RT/AL

CODE	DIMENSION	PRICE €/m	PACKING
1770162070	16x2	1.200	360m
1770162270	16x2,2	1.216	360m
1770172570	17x2,5	1.359	360m

HYDROSOLAR

Plastic pipes for solar systems

HYDROSOLAR pipes are produced by medium density polyethylene (MDPE), which with special additives, have great strength and durability in water networks (up to 70°C) under pressure.

They are flexible and available only in black color, due to carbon black content, that offers high resistance against UV radiation. The main applications of this pipe are solar systems, geothermal networks, greenhouse heating etc.

They are produced in a large range of dimensions and they are highly resistant to mechanical stress from the environment and impact. No salts are deposited at the inner surface of the pipe and their connection is easy, using all types of connection fittings (screw fittings, press fittings, speed fits).



HYDROSOLAR

PLASTIC PIPES FROM MDPE

for solar systems supply & green house's applications

for transportation of hot water (70°C), under pressure

CODE

BLACK	DIMENSION	PRICE €/m	PACKING
1180152520	15x2,5	0.608	100m/200m
1180162020	16x2	0.589	100m/200m
1180182020	18x2	0.641	100m/200m
1180182520	18x2,5	0.808	100m/200m
1180202020	20x2	0.808	100m/200m
1180223020	22x3	1.067	100m/200m
1180252020	25x2*	1.092	100m
1180252320	25x2,3*	1.185	100m
1180283020	28x3	1.620	50m/100m
1180323020	32x3	2.047	50m/100m

* Production upon request

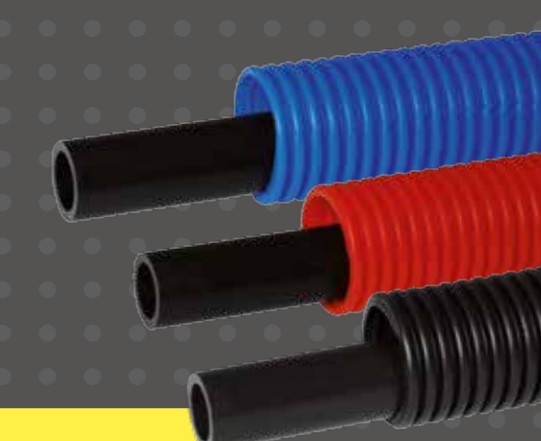


PLASTIC PIPES FROM MDPE
with protective corrugated pipe
of blue-red-black color

CODE

BLUE	RED	BLACK	DIMENSION	PRICE €/m	PACKING
1282152524	1282152523	1282152522	15x2,5	0.954	50m
1282162024	1282162023	1282162022	16x2	0.935	50m
1282182024	1282182023	1282182022	18x2	1.026	50m
1282182524	1282182523	1282182522	18x2,5	1.193	50m
1282202024	1282202023	1282202022	20x2	1.193	50m
1282223024	1282223023	1282223022	22x3	1.452	50m
1282252024	1282252023	1282252022	25x2*	1.810	50m
1282252324	1282252323	1282252322	25x2,3*	1.903	50m
1282283024	1282283023	1282283022	28x3	2.546	50m
1282323024	1282323023	1282323022	32x3	3.075	50m

* Production upon request



SOLICOR

Plastic corrugated pipes from HDPE (protection of aquifer pipes)

The corrugated plastic pipes with trade name SOLICOR, are produced by high density polyethylene (HDPE) and their role is to provide mechanical protection, from stresses and abuses, to the inner aquifer pipe. At the same time, they are offered as a guide for the replacement of the inner (aquifer) pipe, in case of problem, without causing damage and leftovers. These pipes provide thermal insulation, waterproofing and also soundproofing although it is not required, because the flow in the plastic pipes is noiseless.

They are available in three colors (blue, red and black), in coils of 50m.

In case of ultraviolet radiation, black colored corrugated pipes with carbon black must be used for UV protection.

CODE

BLUE	RED	BLACK	DIMENSION	PRICE €/m	PACKING
1320161140	1320161130	1320161120	Ø16(11)*	0.187	50m/100m
1320181340	1320181330	1320181320	Ø18(13,5)*	0.208	50m/100m
1320201640	1320201630	1320201620	Ø20(16)*	0.238	50m/100m
1320231840	1320231830	1320231820	Ø23(18)	0.259	50m/100m
1320252040	1320252030	1320252020	Ø25(20)	0.271	50m
1320282340	1320282330	1320282320	Ø28(23)	0.300	50m
1320302540	1320302530	1320302520	Ø30(25)	0.310	50m
1320362940	1320362930	1320362920	Ø36(29)	0.518	50m
1320403440	1320403430	1320403420	Ø40(34)	0.726	50m
1320504540	1320504530	1320504520	Ø50(45)	0.828	50m

* Production upon request

AQUAFLEX

Plastic pipes for transportation of cold water under pressure

The plastic pipes for transporting cold water (up to 50°C) under pressure, are produced by high density polyethylene of second generation PE80 and are distributed in the market with the trade name AQUAFLEX.

They are produced according to the german standards DIN 8074/8075, are available in blue or black color and they belong to MRS8 category (The minimum required strength, that a pipe bears when operating at nominal pressure PN for 50 years at 20°C).

The black colored pipes offer increased protection to UV radiation, because they have UV stabilizers.

AQUAFLEX pipes are suitable for a wide variety of chemical transport, like detergents, ethyl alcohol, glycol, hydrochloric acid (a.s.36%), sulfuric acid (a.s.40%), wine, ammonia etc.

In case of underground installation, we propose the use of black pipe inside a corrugated black pipe, for double protection, mechanical and against UV radiation.

The inner smooth surface that they have, prevents the accretion of salts.

Thus the cross section of pipe remains unchanged,

unlike the metal tubes, where the salt deposits may reduce the internal diameter to a large extent and create conditions for turbulent flow.

PE pipes have small curve radius (closed curves up to 20 times the diameter of the pipe) and due to their flexibility, a significant number of fittings is avoided, so they offer economy to the installation.

They are transported easily, due to their packing and they have easy stock.

Also, they withstand soil movements and chemical corrosion. The specific category of the raw material (PE 80) is proposed for pipes with diameter up to Ø32, since for larger diameters and for the same pressures, the third generation polyethylene (PE 100) saves wall thickness and thus, raw material.

So, the plastic pipes AQUAFLEX (transfer of cold water up to 50°C) under pressure, in larger pipe dimensions are produced by high density polyethylene of third generation PE100.

They are available in black color, but they can be produced also in blue color upon request.

They belong to MRS 10 category and are produced according to DIN 8074/8075 and EN 12201-2.

MATERIAL PROPERTIES

PROPERTIES	TEST SPECIFICATIONS	VALUES OF PE 80 (MRS 8)	VALUES OF PE 100(MRS 10)
Density of the raw material	ASTM D792	0,949 gr/cm ³	0,960 gr/cm ³
Material flow (at 5kg)	ISO 1133	0,85 gr/10min	0,45 gr/10min
Tensile strength	DIN 53455	28 Mpa	38 Mpa
Measure of elasticity	ISO 527	650 Mpa	1400 Mpa
Vicat point	DIN 53460	121°C	127°C
Thermal conductivity	DIN 52612	0,38 W/m x K	0,38 W/m x K
Linear coefficient of expansion	ASTM D696	1,3 x 10 ⁻⁴ K ⁻¹	1,3 x 10 ⁻⁴ K ⁻¹
Curve radius	-	20 x D	20 x D

AQUAFLEX

PLASTIC PIPES FROM 2nd GENERATION POLYETHYLENE **PE 80**

for transportation of cold water, under pressure

in blue & black color



AQUAFLEX

CODE

BLUE	BLACK	DIMENSION	PRICE €/m	PACKING
1160152540	1160152520	15x2,5*	0.520	100m/200m
1160162040	1160162020	16x2	0.503	100m/200m
1160162240	1160162220	16x2,2*	0.518	100m/200m
1160172040	1160172020	17x2*	0.534	100m/200m
1160182040	1160182020	18x2	0.548	100m/200m
1160182540	1160182520	18x2,5	0.691	100m/200m
1160202040	1160202020	20x2	0.691	100m/200m
1160202840	1160202820	20x2,8*	0.878	100m/200m
1160223040	1160223020	22x3	0.912	100m
1160252040	1160252020	25x2*	0.934	100m
1160252340	1160252320	25x2,3*	1.013	100m
1160253540	1160253520	25x3,5*	1.208	100m
1160283040	1160283020	28x3	1.385	50m
1160323040	1160323020	32x3	1.749	50m
1160324440	1160324420	32x4,4*	1.907	50m

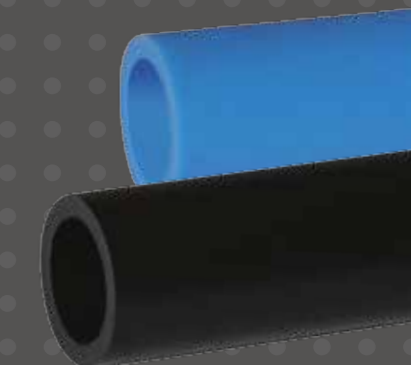
* Production upon request

AQUAFLEX

PLASTIC PIPES FROM 3^d GENERATION POLYETHYLENE **PE 100**

CODE

BLUE	BLACK	DIMENSION	PRESSURE	PRICE €/m
1160402440	1160402420	Φ40 x 2,4	10 ATM	1.215
1160403040	1160403020	Φ40 x 3,0	12,50 ATM	1.557
1160403740	1160403720	Φ40 x 3,7	16 ATM	1.863
1160404540	1160404520	Φ40 x 4,5	20 ATM	2.160
1160405540	1160405520	Φ40 x 5,5	25 ATM	2.592
1160406740	1160406720	Φ40 x 6,7	32 ATM	3.042
1160503040	1160503020	Φ50 x 3,0	10 ATM	1.863
1160503740	1160503720	Φ50 x 3,7	12,50 ATM	2.349
1160504640	1160504620	Φ50 x 4,6	16 ATM	2.853
1160505640	1160505620	Φ50 x 5,6	20 ATM	3.375
1160506940	1160506920	Φ50 x 6,9	25 ATM	4.248
1160508340	1160508320	Φ50 x 8,3	32 ATM	4.671
1160633840	1160633820	Φ63 x 3,8	10 ATM	2.952
1160634740	1160634720	Φ63 x 4,7	12,50 ATM	3.771
1160635840	1160635820	Φ63 x 5,8	16 ATM	4.509
1160637140	1160637120	Φ63 x 7,1	20 ATM	5.418
1160638640	1160638620	Φ63 x 8,6	25 ATM	6.318
1160630540	1160630520	Φ63 x 10,5	32 ATM	7.434
1160754540	1160754520	Φ75 x 4,5	10 ATM	4.212
1160755640	1160755620	Φ75 x 5,6	12,50 ATM	5.238
1160756840	1160756820	Φ75 x 6,8	16 ATM	6.318
1160758440	1160758420	Φ75 x 8,4	20 ATM	7.623
1160750340	1160750320	Φ75 x 10,3	25 ATM	9.036
1160752540	1160752520	Φ75 x 12,5	32 ATM	10.557
1160905440	1160905420	Φ90 x 5,4	10 ATM	6.048
1160906740	1160906720	Φ90 x 6,7	12,50 ATM	7.497
1160908240	1160908220	Φ90 x 8,2	16 ATM	9.126
1160900140	1160900120	Φ90 x 10,1	20 ATM	10.953
1160902340	1160902320	Φ90 x 12,3	25 ATM	12.933
1160901540	1160901520	Φ90 x 15,0	32 ATM	15.183
1160106640	1160106620	Φ110 x 6,6	10 ATM	8.964
1160108140	1160108120	Φ110 x 8,1	12,50 ATM	11.241
1160101040	1160101020	Φ110 x 10,0	16 ATM	13.635
1160102340	1160102320	Φ110 x 12,3	20 ATM	16.308
1160105140	1160105120	Φ110 x 15,1	25 ATM	19.395
1160108340	1160108320	Φ110 x 18,3	32 ATM	22.635
1160257440	1160257420	Φ125 x 7,4	10 ATM	11.466
1160259240	1160259220	Φ125 x 9,2	12,50 ATM	14.535
1160251140	1160251120	Φ125 x 11,4	16 ATM	17.559
1160251440	1160251420	Φ125 x 14,0	20 ATM	21.087
1160257140	1160257120	Φ125 x 17,1	25 ATM	25.056
1160250840	1160250820	Φ125 x 20,8	32 ATM	29.034



AQUAFLEX

PLASTIC PIPES FROM PE 80

for transportation of cold water under pressure

in **black** color with protective corrugated pipe of blue & black color



AQUAFLEX

CODE				
BLUE	BLACK	DIMENSION	PRICE €/m	PACKING
1262152524	1262152522	15x2,5*	0.866	50m
1262162024	1262162022	16x2	0.849	50m
1262162224	1262162222	16x2,2*	0.864	50m
1262172024	1262172022	17x2*	0.880	50m
1262182024	1262182022	18x2	0.933	50m
1262182524	1262182522	18x2,5	1.076	50m
1262202024	1262202022	20x2	1.076	50m
1262202824	1262202822	20x2,8*	1.263	50m
1262223024	1262223022	22x3	1.297	50m
1262252024	1262252022	25x2*	1.652	50m
1262252324	1262252322	25x2,3*	1.731	50m
1262253524	1262253522	25x3,5*	1.926	50m
1262283024	1262283022	28x3	2.311	50m
1262323024	1262323022	32x3	2.777	50m
1262324424	1262324422	32x4,4*	2.935	50m

* Production upon request

AQUAFLEX

PLASTIC PIPES FROM PE 80

for transportation of cold water under pressure

in **blue** color with protective corrugated pipe of blue & black color



CODE

BLUE	BLACK	DIMENSION	PRICE €/m	PACKING
1262152544	1262152542	15x2,5*	0.866	50m
1262162044	1262162042	16x2	0.849	50m
1262162244	1262162242	16x2,2*	0.864	50m
1262172044	1262172042	17x2*	0.880	50m
1262182044	1262182042	18x2	0.933	50m
1262182544	1262182542	18x2,5	1.076	50m
1262202044	1262202042	20x2	1.076	50m
1262202844	1262202842	20x2,8*	1.263	50m
1262223044	1262223042	22x3	1.297	50m
1262252044	1262252042	25x2*	1.652	50m
1262252344	1262252342	25x2,3*	1.731	50m
1262253544	1262253542	25x3,5*	1.926	50m
1262283044	1262283042	28x3	2.311	50m
1262323044	1262323042	32x3	2.777	50m
1262324444	1262324442	32x4,4*	2.935	50m

* Production upon request

GROUND THERM

Corrugated plastic pipes from polypropylene random

For greenhouse heating with UV protection

The corrugated plastic pipes, with the trade name GROUND THERM, are produced by polypropylene random and are suitable for the heating of greenhouses.

They are produced in black color and with UV stabilizers, that enables them to be resistant in sun exposure.

The modern greenhouses' heating system, Groundtherm, provides the best presuppositions for the normal growth of the plants, by saving energy.

In contrast to the usual heating systems, it can be installed above or below the ground, it activates the growth of plants by improving the nutrients intake and prevents fungus to affect the plants.

Due to better output that GROUND THERM has in comparison to the common systems applied, the system can operate with lower water temperature.

Also, it may cooperate with the modern saving energy systems, like heat pumps, solar collectors, geothermy etc.

It is manufactured by a special raw material polypropylene random and it is very resistant to corrosion, to axidic conditions of the ground, to fertilisers and to pesticides. Its profile looks like a "Radiator" and has double output from the usual smooth pipe of polypropylene.

It is available in 25mm diameter and has nominal operating pressure 1,5 Bar at the usual heating temperature of greenhouses(50°C). It is accompanied by fittings made of the same material. SOLIN S.A. offers full technical support through the specialised engineer department.

GREENHOUSE STUDY HEATING

For the study of the engineering department the following data are required:

- ▶ The area, where the greenhouse is located
- ▶ The dimensions of the greenhouse
- ▶ The cover material (PE film, single or double glass, polycarbonate plates etc)
- ▶ The type of plants that will be cultivated
- ▶ Distance between plants

GROUND THERM

PLASTIC CORRUGATED PIPES & CONNECTION FITTINGS
for greenhouse heating



CODE

CODE	DESCRIPTION	DIMENSION	PRICE €/m	PACKING
1330250020	CORRUGATED	Ø25	0.625	*

* Production upon request



CODE

CODE	DESCRIPTION	DIMENSION	PRICE €/pc.	PACKING
0330253420	ADAPTOR	Ø25x 3/4"	2.063	*
0330252520	ADAPTOR	Ø25xØ25	3.094	*

* Production upon request

SOLIDRAINS

Bathroom drainage system PIPES & FITTINGS OF PVC

The revolutionary drainage system SOLIDRAINS consists of flexible spiral outside and smooth inside PVC pipes, as well as PVC fittings. This system provides high standards of resistance and sealing for the operating conditions of the domestic drainage network or industrial installations.

These pipes are suitable for waste water. SOLIDRAINS system is patented and SOLIN S.A. is the only greek company that produces it.

ADVANTAGES

- ▶ Easy and quick installation
- ▶ Easy stock
- ▶ Reliable system
- ▶ Flexibility in installation, it can follow any prearranged direction on the floor due to the pipe's flexibility
- ▶ This system (both pipes and fittings) is made from PVC material that is already successfully tested at the drainage systems for many years.
- ▶ Easy transportation, since this system can be transferred with private car.



INSTALLATION INSTRUCTIONS

▶ To connect the fittings to the spiral surface of the pipe, coat four to six fundamental difference points of the tube, with SOLISEAL glue and rotate in order the fitting to be screwed. By that way, the glue is distributed over the total welding surface of the pipe. SOLISEAL is a special glue, polyurethane based, that with humidity, is polymerized in strong rubber, witch is very resistant to temperature changes or weather conditions and has high adhesion.

▶ This system can operate with safety, 24 hours after SOLISEAL application, necessary time required for its polymerization. This time is inversely proportional to the humidity of the place. That means that the bigger the humidity in the area, the less time is needed for polymerizing of SOLISEAL.

▶ To weld the cylindrical smooth surfaces of the fittings with the entrance of the waterspouts, you must use the special glue for PVC. In case that the waterspout is water-proofed with rubber rings, the fitting water-proofs by tightening nuts.

▶ If in the bathroom (under installation), the entrances of the waterspout are not sufficient (total 4) and you need one more, there is the possibility to increase them by using a semi tee $\Phi 40$. With its application, every entrance of the waterspout is divided into two individual.



Products & spare parts of Drainage System



Grey flexible spiral pipe PVC Ø57/50
for floor watertrap outlet to central drainage system

1490575080

4.719

10m



Grey flexible spiral pipe PVC Ø40/32
for floor watertrap inlet

1490403280

3.146

20m



White flexible spiral pipe PVC Ø37/32
for wash basin's water trap type "S"

1490373210

2.360

10m



Grey coupling Ø57/63 for central drainage system (F)

1990576380

0.787

50pc



Grey coupling Ø57/50 for water trap outlet(F)

1990575080

0.787

50pc



Grey coupling Ø57/50 for semi-tee connection (M)

1990574380

0.787

50pc



Grey coupling Ø40/40 for water trap inlet (M)

1990404080

0.629

120pc



Grey coupling Ø40/40 for connection and extension of PVC pipes (F)

1990404580

0.629

50pc



White coupling Ø37/32 for wash basin's water trap terminal type "S"

1990373280

0.472

100pc



White adaptor Ø37x1 1/4 for wash-basin's water trap initial type "S"

1990371480

1.573

100pc

DESCRIPTION	CODE	PRICE €/m or pc.	PACKING
Grey bend Ø32x44 for wash-basin discharge with rubber seal	1990324480	1.179	60pc
Grey bend for bath-tub with brass adaptor 1 1/2"xØ32	1990153280	3.630	80pc
Grey bend for bath-tub with plastic adaptor 1 1/2"x Ø32	1990153288	2.360	80pc
Grey bend for bath-tub with brass adaptor 1 1/4"xØ32	1990143280	3.630	100pc
Grey bend for bath-tub with plastic adaptor 1 1/4"xØ32	1990143288	2.360	100pc
SOLISEAL water-tighting, soldering, sealing material in 300ml.	0490300010	7.623	20pc
SOLISEAL water-tighting, soldering, sealing material in 125ml.	0490150010	3.290	16pc
Floor water trap	0490500080	10.375	30pc
Floor water trap Ø50	0103500001	14.040	
Floor water trap VALSIR Ø50	0490500083	16.380	



SPARE PARTS SOLIDRAINS

DESCRIPTION	CODE	PRICE €/pc.	DESCRIPTION	CODE	PRICE €/pc.
Rubber seal of the grey bend	0490324420	0.590	Grey bend Ø32 x 44 for wash-basin discharge without rubber seal	0490324489	0.590
Chrome plated bronze nut 1 1/2"	0480140080	1.966	Grey bend 1 1/2 x Ø32 for bath tube without nut and flange	0490003280	1.416
Bronze nut 1 1/2" of the grey bend for bath-tub	0480150090	1.754	Flange 1 1/2	0490150020	0.023
Bronze nut 1 1/4" of the grey bend for bath-tub	0480140090	1.754	Flange 1 1/4"	0490140020	0.023
White coupling Ø37	0480370010	0.472	Extension-elevation of water trap	0103500002	0.780

SANIFLEX

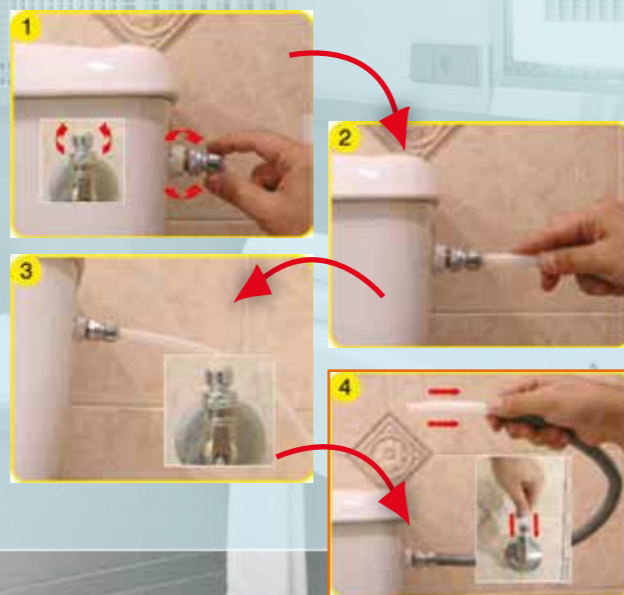
System of bathroom connections For hot & cold water supply

The unique connection system of bathroom for cold and hot water supply, SANIFLEX, is composed of chrome plated speed fit, which in combination with PEX-b pipes of special dimension ($\Phi 10 \times 1,4$), it replaces the flexible pipes that connect hot-cold water in bathrooms. This system offers easy stock, durability, speed installation and good aesthetics since the pipes are covered with outside corrugated pipe of white, gold and silver color.

The speed fits are available in dimensions 3/8", 1/2" and 3/4" with male or female thread. It is suitable for high temperatures and pressures, as it is certified by SKZ for its resistance and ITS-WRAS for resistance and drinkable water.

MEASURE-CUT-CONNECT

1. We screw one speed fit in the angle valve that supplies the water and the second speed fit to the water tank of basin (photo 1)
2. We push the pipe into the speed fit of the angle valve, until we hear the characteristic click of the termination. (photo 2)
3. We measure the required length of pipe till the second (opposite) speed fit and after we cut the pipe, we also cut an equal length of corrugated pipe. (photo 3)
4. We wear the corrugated pipe to the inner pipe and we push it on the side of the angle valve, in order to have a sufficient length of inner pipe so to push it through the speed fit until the characteristic click of the termination is heard. (photo 4)



CONTROL TESTS (for quality certification)

	SPECIFICATIONS	REQUIREMENTS	COMMENTS
Hydrostatic pressure	EN ISO 15875-5 Paragraph.4.2	12,5bar-95°C for 1000h	✓
Rotation temperature	EN ISO 15875-5 Paragraph.4.5	10bar with rotation 90°C/20°C per 15min for 5000 circles	✓
Rotation pressure	EN ISO 15875-5 Paragraph.4.6	23°C with rotation 0,5bar/15bar per 2sec for 10000 circles	✓

SANIFLEX SYSTEM OF BATHROOM CONNECTIONS

SANIFLEX (WHOLESALE PACKING)

CODE	DESCRIPTION	PRICE €/m	PACKING
1110101410	VPES $\Phi 10 \times 1,4$ (WHITE)	0.487	25m
1150081080	PBS $\Phi 8 \times 1$ (GREY)	0.627	25m
1170081010	DOWLEXS $\Phi 8 \times 1$ (WHITE)	0.353	25m
1320161010	SPIRAL $\Phi 16(10)$ WHITE	0.300	25m
1320161070	SPIRAL $\Phi 16(10)$ SILVER OR GOLD	0.300	25m
CODE	DESCRIPTION	PRICE €/pc.	PACKING
0000000144	PLASTIC DISCONNECTOR OF SPEED FIT $\Phi 8$	0.200	50
0000000145	PLASTIC DISCONNECTOR OF SPEED FIT $\Phi 10$	0.200	50
0000001842	SPEED FIT $\Phi 10 \times 1/2"$ (F) CHROME PLATED	2.800	10
0000001843	SPEED FIT $\Phi 10 \times 3/8"$ (F) CHROME PLATED	2.520	10
0000001846	SPEED FIT $\Phi 10 \times 3/4"$ (F) CHROME PLATED	3.710	10
0000001844	SPEED FIT $\Phi 10 \times 1/2"$ (M) CHROME PLATED	3.170	10
0000001860	ANGLE SPEED FIT FOR WASHING MACHINE $\Phi 10 \times 3/4"$ (F) (with free nut) CHROME PLATED	5.170	
1900001840	SET OF SREED FIT FOR BATHROOM FAUSHET $\Phi 8 \times M10$	6.220	
0000801842	SPEED FIT $\Phi 8 \times 1/2"$ (F) CHROME PLATED	2.800	10
0000801843	SPEED FIT $\Phi 8 \times 3/8"$ (F) CHROME PLATED	2.520	10
0000801846	SPEED FIT $\Phi 8 \times 3/4"$ (F) CHROME PLATED	3.710	10
0000801844	SPEED FIT $\Phi 8 \times 1/2"$ (M) CHROME PLATED	3.170	10

SANIFLEX (RETAIL PACKING)

CODE	DESCRIPTION	PRICE / €
1900001843	SET SANIFLEX with speed fit 3/8"(F)	39.560
1900001842	SET SANIFLEX with speed fit 1/2"(F)	43.550
1900001844	SET SANIFLEX with speed fit 3/4"(F)	56.370

EACH PACKAGE
INCLUDES:
3m $\Phi 10$ pipe
3m spiral
10 speed fits
1 disconnecter

SOLIFLEX

Flexible plastic pipes & fittings (for special uses)



FOR CLEANING SWIMMING POOL'S BOTTOM

CODE	DIMENSION	PRICE €/m	PACKING
1320460030	Ø46	2.765	*

* Production upon request



FOR CLOTH / DISH-WASHER DRAINAGE

CODE	DIMENSION	PRICE €/pc.	PACKING
0330231580	Ø23	2.145	1,5 m
0330232080	Ø23	2.405	2 m
0330232580	Ø23	2.633	2,5 m
0330233080	Ø23	2.893	3 m

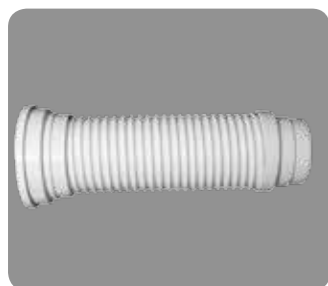
*NOTE: Each set is composed of flexible corrugated pipe with ends, the bend and its packing.
*If the bend is excluded the price is 0,15 € less
*If the bend and the packing is excluded, the price is 0,18 € less.



PIPE FOR A/C DRAINAGE HOSE

CODE	DIMENSION	PRICE €/m	PACKING
1190201695	20X16	0.640	25m
1192218115	22X18	0.692	25m

The white, flexible corrugated spiral drainage pipe for A/C is produced by PVC at usual dimensions and in 25m coils.



FLEXIBLE CONNECTION HOSE FOR BATHROOM

CODE	DIMENSION	PRICE €/pc.	PACKING
0990100401	Ø100	9.144	40cm
0990100501	Ø100	10.450	55cm
0990110401	Ø110	9.601	40cm
0990110501	Ø110	10.973	55cm

INSTALLATION PRODUCTS

STEEL CONCRETE NAILS M6

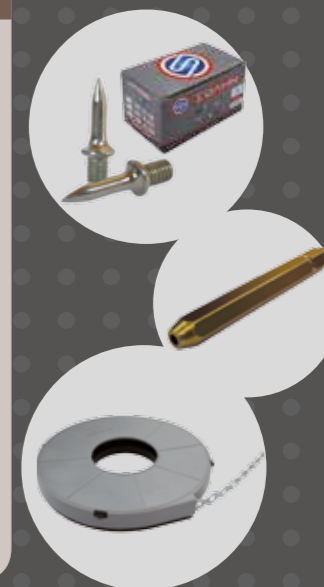
CODE	THICKNESS	LENGTH	PRICE €/box	PACKING	
				small	large
0001074018	4mm	18mm	5.250	100 PC.	5.000 PC.
0001074025	4mm	25mm	5.860	100 PC.	5.000 PC.
0001074030	4mm	30mm	7.030	100 PC.	5.000 PC.

SPECIAL TOOL FOR NAILING

CODE	PRICE €/box	PACKING
0001171825	2.240	100 PC.

PENETRATED METAL BAND

CODE	THICKNESS	WIDTH	PRICE €/pc.	PACKING
0001170012	0,55 mm	12 mm	3.063	30 PC.
0001170017	0,75mm	17 mm	4.156	30 PC.
0001170025	1,00 mm	25 mm	7.875	20 PC.



CHROME PLATED SPEED FITS

CODE	DIMENSION	PRICE €/pc.	PACKING
0000001847	Ø16x1/2"(M)	4.703	*
0000001848	Ø16x1/2"(F)	4.780	*



WATER OUTLET 1/2"

CODE	DIMENSION	PRICE €/pc.	PACKING
0130000008	1/2"(blue-red)	0.307	100



The irrigation pipes are produced by low density soft polyethylene and are available in 100m-500m coils. They are black and they withstand up to 6 Atm pressure.

IRRIGATION PIPES LDPE

CODE	DIMENSION	PRICE €/m.	PACKING
1120160020	Ø16	0.235	250m
1120200020	Ø20	0.300	250m
1120250020	Ø25	0.450	250m
1120320020	Ø32	0.580	200m

INSULATION

Insulation pipes



The pipes with trade name RETIFLEX, AL-PERT-SOL and HYDROSOLAR are also available in the normal dimensions with insulation of 9mm. This insulation is made of expanded polyethylene with closed-cells, which is coated by a special moisture resistant film of white color, that offers UV protection.

By minimising the heat loss, it is appropriate for outdoor use with resistance in solar radiation and in adverse weather conditions.

The insulation, with trade name ISOLIN, is also available without the inner aquifer pipe, in the usual dimensions of plastic and metal pipes in 50m coils.

It can be applied in already installed pipes in heating and sanitation systems, in water transportation or when protection from outdoor temperature is required (prevent of temperature loss, prevention of concentrates etc).

ADVANTAGES

- ▶ Thermal insulation
- ▶ Soundproofing
- ▶ Waterproofing with UV protection
- ▶ Mechanical protection of inner aquifer pipes
- ▶ 100% Recyclable

TECHNICAL CHARACTERISTICS of INSULATION

Thickness	9 mm
Density	35 kg/m ³
Thermal Conductivity	0,045 W/MK
Minimum Bending Curve	5 XD
Self-extinguishing	Class 1

RETIFLEX ISO

CODE	DIMENSION	PRICE €/m	PACKING
2212159021	15X2*	1.474	50m
2212159521	15X2,5	1.490	50m
2212169021	16X2	1.472	50m
2212189021	18X2	1.692	50m
2212189521	18X2,5	1.780	50m
2212209021	20X2	2.041	50m
2212229021	22X3	2.486	50m
2212329021	32X3*		50m

RETIFLEX-ISO (Pex-b)

The inner pipe is produced by high density polyethylene, that is cross linked by SILAN method. It is certified not only for its mechanical resistance, but also for its suitability for drinkable water from international institutes SKZ, WRAS,MPA,CSA,ITS and Greek certificate ELOT



APPLICATIONS

Heating

SINGLE PIPE SYSTEM

In this system there is a central column with two pipes. One for the supply and the other for the return of water. Through the central column, the hot water is transferred from the boiler room to the heating space, where it heats up the radiators and returns back to the boiler room, in order to warm up again and repeat the same procedure.

What characterizes the single pipe system is the **cascade connection of the radiators** in circuits of 2-4 heating radiators.

In that way, the pipe that begins from the inlet collector, reaching the first radiator of the circuit, sends through the valve, a quantity of water to the radiator, and the rest- after mixing with the return of **the radiator**- is directed through the bypass of the valve, to the next radiator of circuit.

There, the same process is repeated until the last radiator of the circuit, where the water returns to the return collector and from there, through the central column to the boiler room.

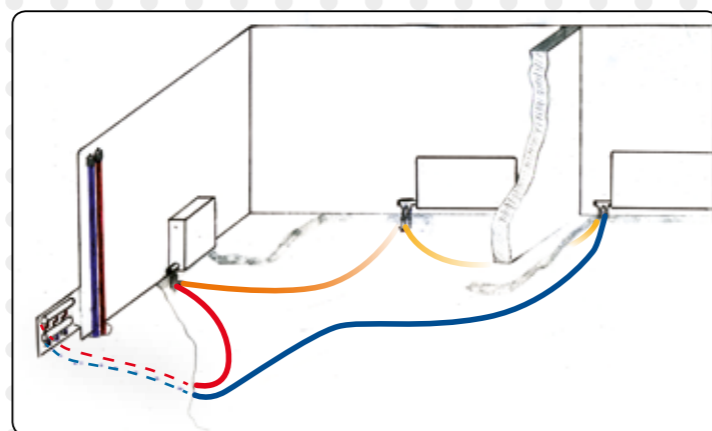
The main characteristic of the specific system is that the radiators **don't have the same**

temperature. The temperature of the water decreases from the first radiator to the last. That's why it's necessary to **increase the surface of the radiators** (reverse of their turn).

The single pipe system offers many advantages like the **opportunity of autonomy** (per apartment, floor or area), **the speed of installation**, **economy of materials** (mainly in pipes), but also **better inspection of the installation**.

The pipes that can be used in this heating system are: **RETIFLEX-NOXY, FLEXITHERM-NOXY, OCTATHERM-NOXY** and **AL-PERT-SOL**.

By using the above mentioned pipes inside corrugated pipes (SOLICOR), except the insulation that is offered, the main advantage of their use, compared to metallic pipes, is the **easy replacement** of the internal water pipe in case of problem, **without the need of dismantling the floors and causing costly damage to the installation location**.

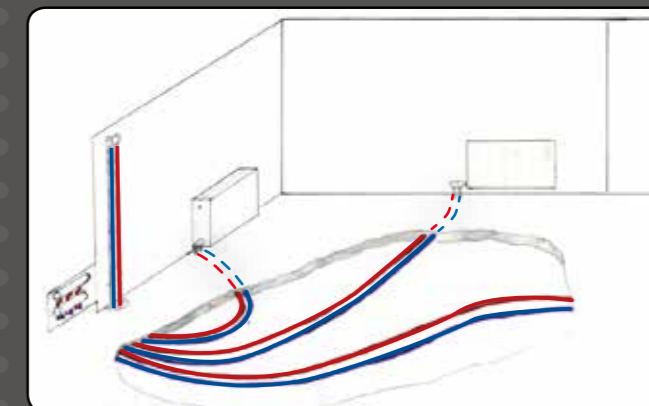


RADIAL SYSTEM

This system is common not only with the two pipe system, but also with the single pipe system and is called radial, because the radiators are connected with the central column radically.

There is a central column with water distribution collectors in every floor, like in the single pipe system. The only difference is that **each circuit supplies only one radiator**.

That means the **entire water quantity, that leaves the collector inlet, enters the radiator, heats it and then goes back to the return collector** and from there to the boiler room. The radiators in this system have theoretically the same temperature, so **no increase on their surface is observed**. The water inside plastic pipes moves with **double speed** than in copper pipes, because the plastic pipes have smooth inner surface. At the horizontal routes, no slopes are required.



ADVANTAGES-DISADVANTAGES:

The basic advantage is that it combines high water speed with stable and high temperature of radiators (no increase on the surface of radiators is observed- saving on radiator's surface 10-15% compared to the single pipe).

The basic disadvantage is that it requires many meters of pipe (60%-70% more than the quantity required for single pipe system). That means higher installation cost.

Pipes that are used for this system:

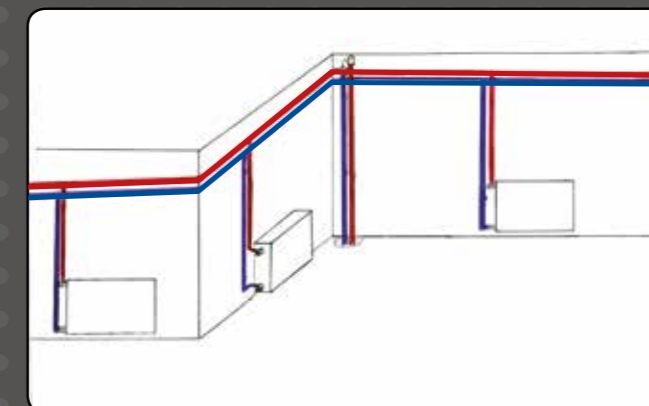
RETIFLEX-NOXY, FLEXITHERM-NOXY, OCTATHERM-NOXY and **AL-PERT-SOL**

"UMBRELLA" SYSTEM

This system is applied in houses that are ready and no heating installation exists.

The pipes are visible, they are installed along the vertical walls, just below the confluence with the ceiling. They must be **slightly inclined** (~1%), either upwards, or downwards, in order to release the air of the circuit using automatic air vent at the higher points of circuit.

Through these pipes the hot water passes to all radiators of the apartment. The pipe, recommended for this type of system, is composite pipe **AL-PERT-SOL**, in linear sticks.



APPLICATIONS

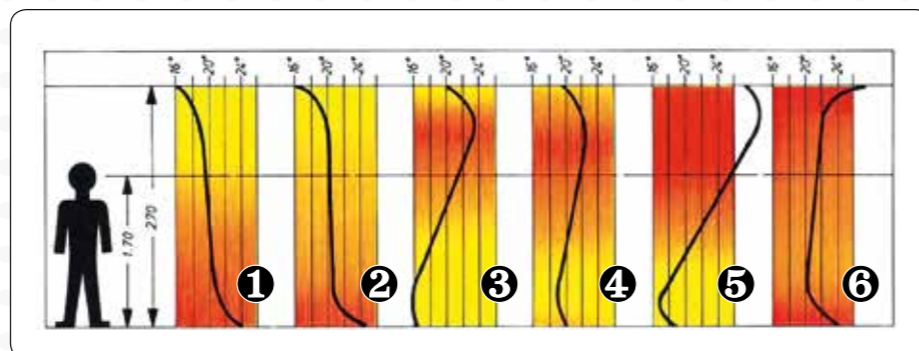
Underfloor heating

In contrast to conventional heating systems, in underfloor heating the pipes are not used for the supply of the radiator, but the pipes and the floor are turned into a radiator.

The pipe system, in the form of laminated or meandros, is embedded in the floor of the heating area and in combination with special concrete composition, that covers it, the floor radiates heat.

The pipes are distributed in separate circuits, which start from the collector inlet, that is stoked by the central column with water temperature of 40-50°C, and after having run the floor on fixed routes, they return back into the central column through the collector of return. By that way, the floor radiates heat, that is evenly distributed in the space, without creating aesthetic problems, as radiators in conventional heating systems do.

Also, it creates an ideal atmosphere and a healthy environment to people that live in the room, because the distribution retains warm feet and cold head.



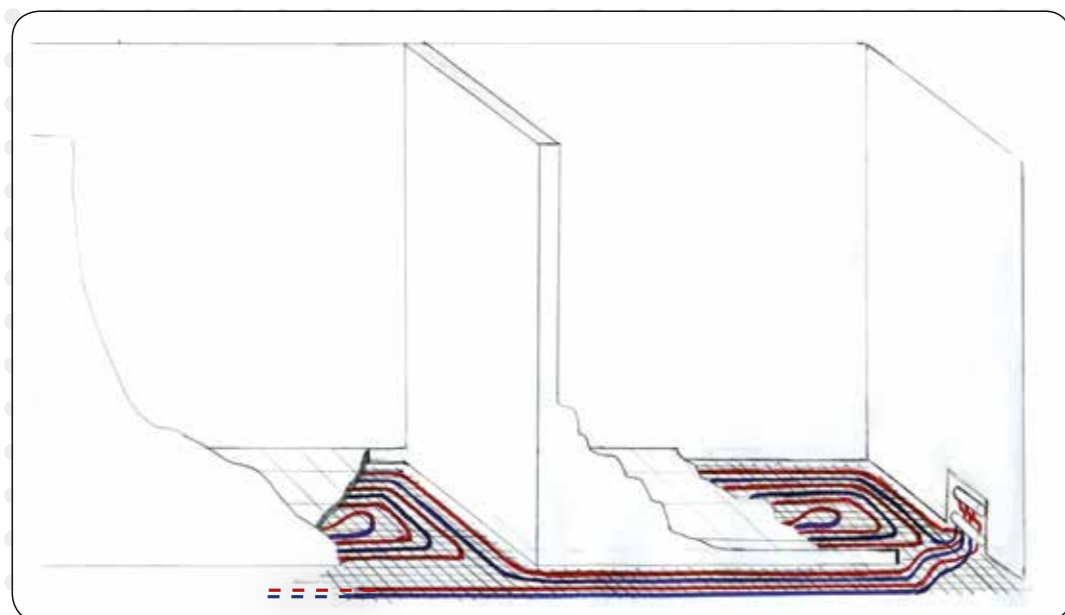
① Theoretically desirable heating system ② Floor heating system ③ Heating with radiators at internal walls ④ Heating radiators at external walls ⑤ Air heating system ⑥ Ceiling heating system

Due to the low temperature of the floor radiation, dehumidification of the space is minimized and the disadvantages of conventional heating systems are eliminated, either we refer to radiators with radiation or mainly with ventilation (fun coils).

Underfloor heating offers energy and expenses saving, due to low temperatures of its function, but mainly because

it is ideal for combinational use with systems that are powered with alternative and renewable energy, so they are friendly to environment and to our pockets (e.g. geothermy, solar thermal energy etc.).

Pipes that are used for this system: RETIFLEX-NOXY, FLEXITHERM-NOXY, OCTATHERM-NOXY, AL-PERT-SOL and NOXY-AL.



APPLICATIONS

Sanitation

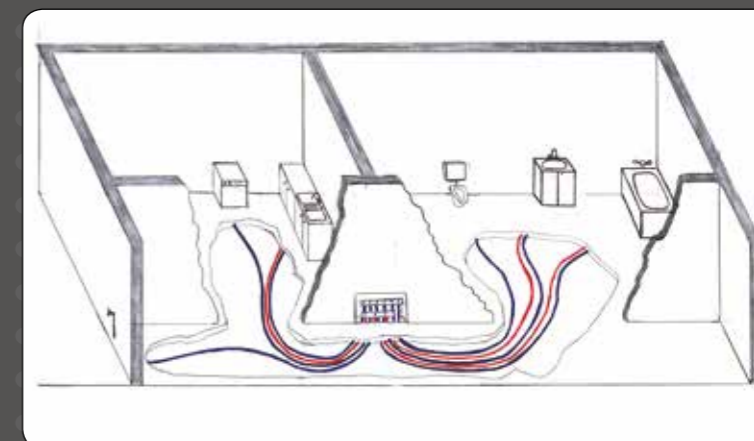
A) RADIAL SYSTEM

In this system there is a central column with two pipes, one for the supply of hot water and the other for the supply of the cold.

These two pipes are connected to the collectors for distribution of hot and cold water and are housed inside a wall cabinet that is existing in every bathroom and kitchen. From the collectors the distribution of cold and hot water is accomplished with a separate line for each hydraulic receptor. By this way, the water flow is more stable, in case that more than one water supplies are open.

The main advantage of this system is that in case of a problem, it can be replaced by sliding inside of corrugated conduit, without the slightest damage at the wall or floor. That is valid by using double fittings (brass fitting inside of plastic casket), because the pipe has not ramifications and it's double at all its length (pipe in pipe). Also, if there is a leakage, we can close the corresponding valve of the collector in order for the rest installation to work. The only disadvantage of this system is that it's more expensive, because of the increased length of the pipe that is needed.

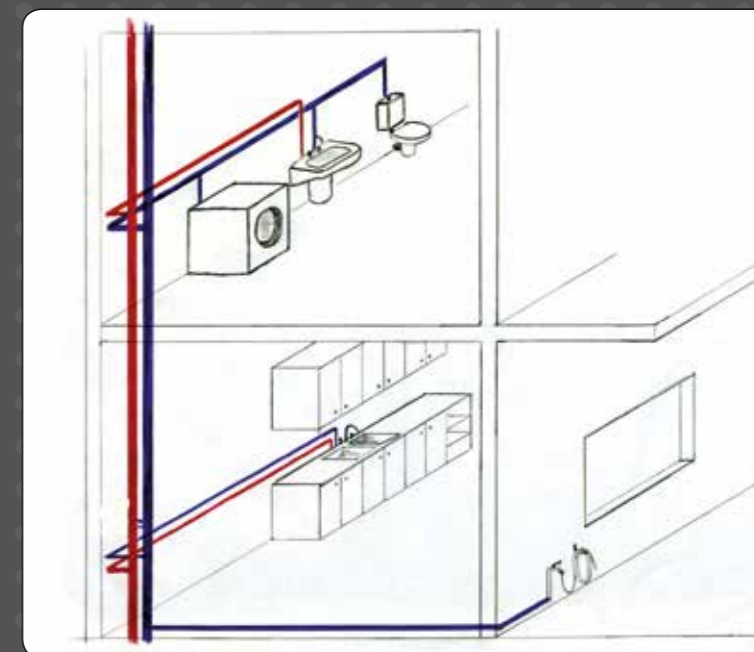
Pipes that are used for this system: RETIFLEX, FLEXITHERM and OCTATHERM.



B) CONVENTIONAL SYSTEM

In this system there are no collectors for the distribution of hot and cold water. Two pipes are running down the perimeter of the bathroom and by branching, they supply hot and cold water to any hydraulic receptor. The advantage of this system is that not many meters of the pipe are required for the installation, while its disadvantages are all the advantages of the radial system.

Pipes that are used for this system: RETIFLEX, OCTATHERM, FLEXITHERM, AL-PERT-SOL and SOLISAN



APPLICATIONS

Geothermy

Geothermal energy is the stored energy, in the form of heat, under the ground level.

Geothermy is based on the fact that **the subsoil temperature is kept constant** throughout the year, without being influenced by external conditions.

Geothermal energy is a **renewable and inexhaustible energy source**, which is offered free by nature and is environmentally friendly. By taking advantage of the constant temperature (that the subsoil offers) and independently of the season, **we can cover the heating needs of a building in winter and the cooling needs in summer and also hot water supply**, by using geothermal heat pumps and pipe network within the underground.

Geothermy reduces the operating costs of heating and cooling and works best with underfloor heating, because we have the ability to use as additional auxiliary power source the sun.

The categories of geothermal systems are:

A) Open geothermal system:

It is applied to areas, that are rich to aquifers or springs (either groundwater or at the surface on earth). The water is pumped from the aquifer, passes through the geothermal heat pump, where it exchanges the requested energy and returns to the source. This system though is the most economical in construction and has minimal land surface requirements, it requires more often maintenance, depending on the quality of the water .

B) Closed horizontal geothermal system :

The horizontal ground heat exchanger is constructed in at least 1.5 m range below the ground level. The pipe layers can be applied at many levels, with the presupposition that they have 1 m vertical distance between them.

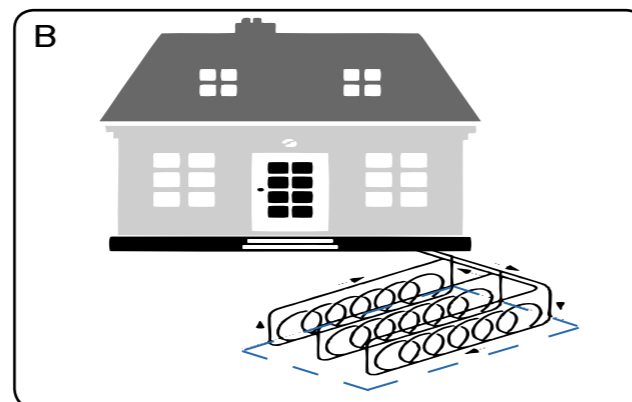
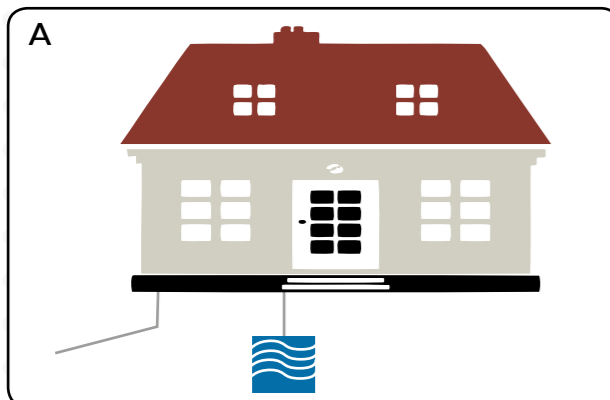
The pipes must be installed in a specific distance between them. The required surface of the pipe installation is calcu-

lated, according to thermal and cooling requirements of the building. The output of the geothermal heat exchanger is 25-30 w/m². Restrictions may be due to the geological characteristics of the subsoil (e.g. if it is particularly rocky). This system is the most economical for construction, between the two closed geothermal systems, so it is applied more often than the closed vertical, with the presupposition that the space of the area is sufficient.

C) Closed vertical geothermal system:

When the space of the area is not enough for horizontal geothermal exchanger or the composition of the subsoil is not the appropriate for the horizontal system, the vertical geothermal exchanger is applied. Each bore has a dept of 70-100m. The distance between these bores must be 5m minimum, in order thermal saturation of the subsoil to be avoided. The number of the bores depends on the required capacity of the system. Each vertical geothermal exchanger has an average yield of 40-45 w/m.

The pipe used is **AQUAFLEX (PE80 or PE100)**, depending on the pressures applied).



DISCOUNT LIST

SELLER: DATE:

CLIENT:

BASIC DISCOUNT

PRODUCT	SPECIAL DISCOUNTS	QUANTITY
AL-PERT-SOL (page 7)		
RETIFLEX (page 9)		
OCTATHERM (page 15)		
FLEXITHERM (page 20)		
SOLISAN (page 24)		
FITTINGS		
NOXY-AL (page 34)		
HYDROSOLAR (page 36)		
SOLICOR (page 38)		
AQUAFLEX (page 39)		
GROUND THERM (page 44)		

BASIC DISCOUNT

PRODUCT	SPECIAL DISCOUNTS	QUANTITY
SOLIDRAINS (page 46)		
Pipe & fittings		
SOLISEAL		
Grey bend for Bath tub 1 1/2" & 1 1/4" with brass adaptor		
Floor water trap		
SANIFLEX (page 50)		
Retail packing		
Wholesale packing		
SOLIFLEX (page 52)		
Pipe for cleaning swimming pool		
Pipe for cloth/dish-washer drainage		
Pipe for A/C drainage hose		
Flexible connection hose for bathroom		
Installation products (concrete nails etc.)		
Chrome plated speed fits		
Water outlet 1/2"		
Irrigation pipes LDPE		
INSULATED PIPES (page 54)		
AL-PERT-THERM		
RETIFLEX – ISO		
HYDROTHERM		
INSULATION ISOLIN		

GUARANTEE



The plastic pipe with trade name

.....
is accompanied by guarantee of good operation
and excellent quality, with the following terms:

1. For 10 years operation from the date of pipe production, which coincides with their printing on it, and only if conditions of proper installation have been respected, according to the instructions of the Data Sheet and taken into account all the rules of protection of the installation.
2. The guarantee covers possible damages to third installations up to 2.000.000CHF (Swiss Francs) per event and cumulatively on an annual basis. These damages must have come exclusively from quality defects of the pipe and not from intervention of external factors. It also covers civil liability.
3. Presupposition of validity of the guarantee is that none from the client's side can make any intervention of the damage, until an inspector from SOLIN S.A. and insurance company visits the place of the installation.

Athens ___/___/___
For the company



SOLIN S.A.

Factory: A' Industrial Area of Volos, 38500, Volos Greece, tel.: +30 24210 95402, +30 24210 95421, fax: +30 24210 95422
Offices: 12 Souliou Str., N. Chalkidona, 143 43, Athens - tel.: +30 210 2531990, +30 210 2523636, 210 2531585, fax: +30 210 2523049
www.solin.gr e-mail: secretary@solin.gr