Material

- PERT – raised temperature polyethylene - DOWLEX
- bonding layer - adhesive
- aluminium
- bonding layer - adhesive
- PERT – raised temperature polyethylene - DOWLEX

Area of application

- installations of hot & cold tap water
- central heating (radiator connections)
- surface heating (underfloor and wall heating installations)
- ice water

Construction

Tweetop PERT pipes have a multilayer structure - their core is made from ultrasonically welded aluminium pipe. After adding two layers of the raised temperature polyethylene (PERT) material to the inside and outside of the aluminium pipe, we obtain a multilayer pipe capable of simultaneous work under the influence of pressure and temperature rated at 10 bar and 95 deg C. This unique combination of plastic material and conventional aluminium insert allow Tweetop PERT pipes to keep the advantages of both, traditional and plastic pipes while eliminating their disadvantages.
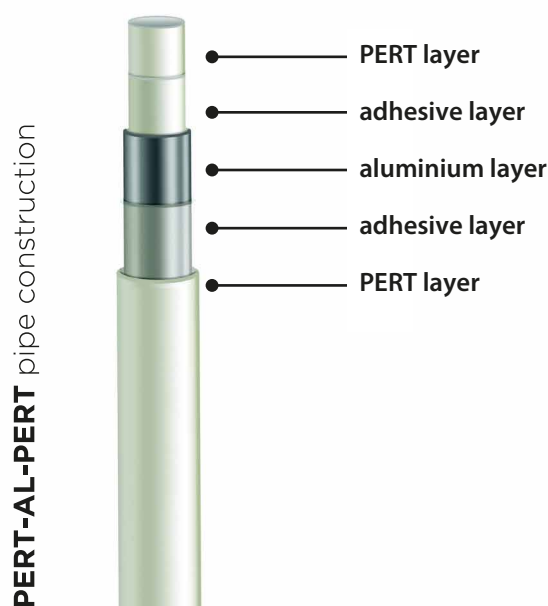
Constant operating parameters

- radiator connections: temp. 95°C under pressure of 3 bar or temp. 90°C under pressure of 6 bar
- tap water: temp. 60°C under pressure of 10 bar with possible anti-legionella overheat

Dimension range

16x2, 18x2, 20x2, 25x2.5, 32x3, 40x4, 50x4.5, 63x6, 75x7.5

Technical properties

- **durability** - estimated lifespan of min. 50 years
- **energy - saving** due to low pressure losses and low thermal conductivity
- **flexibility with no shape remembrance -** multilayer pipes are more flexible than any other known pipes and can be bended without any supports. Bending radius is on the level of 4-5 x Dn
- **thermal stability** (0.025mm/mK)- very low thermal expansion coefficient (0.025mm/mK), is comparable with values characteristic for steel or copper pipes
- **total impermeability of connections**
- **resistance for oxygen diffusion -** both pipes and fittings are totally resistant for oxygen diffusion
- **possibility of making connection with any other pipes** by using threaded couplings
- **low weight**
- **wide diameter range** (16-75mm)

PERT-AL-PERT pipe construction

- PERT layer
- adhesive layer
- aluminium layer
- adhesive layer
- PERT layer

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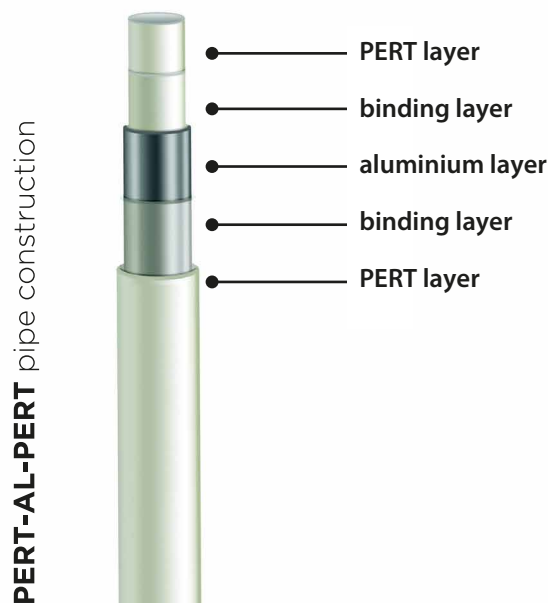Ludowa 24c **I** 71-700 Szczecin

Tweetop PERT

system offer includes pipes and fittings in 16 - 75mm diameters with a set of essential accessories and installation tools dedicated to specific applications of the system.

Construction

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PERT-AL-PERT pipe construction

- PERT layer
- binding layer
- aluminium layer
- binding layer
- PERT layer

Dimension »	16x2	18x2	20x2	25x2,5	32x3	40x4	50x4,5	60x6	75x7,5
Inside diameter Dw [mm]	12	14	15,5	20	26	32	41	51	60
Pipe length in a coil [m]	200	200	200	100	50	25	-	-	-
Pipe length in a straight bar [m]	-	-	-	-	4	4	4	4	4
Pipe weight in a coil / straight bar [g/m]	120 109	136 128	165 154	222 215	325 325	508 -	742 -	1242 -	1780 -
Pipe weight in a straight bar (coil) including water with 10°C temperature [g/m]	231 (220)	288 (280)	352 (341)	535 (528)	862 (882)	1320 -	2072 -	3285 -	4600 -
Pipe weight in a coil [kg]	21,8	25,6	15,4	10,75	16,3	-	-	-	-
Pipe weight in a straight bar [kg]	0,60	0,68	0,83	1,11	1,63	2,54	3,71	6,21	8,00
Pipe unit volume [dm³/m]	0,113	0,153	0,190	0,314	0,531	0,803	1,320	2,042	2,825
Pipe inner surface smoothness [mm]	0,0004								
Thermal conductivity [W/mK]	0,40								
Thermal expansion coefficient [m/mK]	$2,5 \times 10^{-6}$								
Minimal manual bending radius [mm]	80 [5xDz]	90 [5xDz]	100 [5xDz]	125 [5xDz]	-	-	-	-	-
Minimal bending radius with bending spring usage [mm]	64 [4xDz]	72 [4xDz]	80 [4xDz]	100 [4xDz]	128 [4xDz]	-	-	-	-
Minimal bending radius with manual pipe bender usage[mm]	60	60	105	105	-	-	-	-	-
Minimal bending radius with machine pipe bender usage [mm]	55	65	75	95	125	150	180	252	-
Max. distance between supports [m]	1,20	1,30	1,30	1,50	1,60	1,70	2,00	2,20	2,40

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