

TECEflex system pipes	Multi-layer composite pipes							
Pipe designation	PE-Xc/AL/PE							
Dimension	14	16	20	25	32	40	50	63
Delivery length – roll in m	120	100	100	50	-	-	-	-
Rods (m) (5 m/pipe)	-	100	70	45	30	15	15	5
Field of application*	HKA, FBH, DLA	TWA, HKA, FBH, DLA, GAS		TWA, HKA, DLA, GAS				
Application class/ operating pressure	2 / 10 bar 5 / 10 bar							
Colour	white	white yellow						
Outside diameter in mm	15	17	21	26	32	40	50	63
Wall thickness in mm	2.60	2.75	3.45	4.00	4.00	4.00	4.50	6.00
Inside diameter in mm	9.8	11.5	14.1	18	24	32	41	51
Available in corrugated protective pipe	yes				-			
Deliverable with insulation $\lambda = 0.040 \text{ W}/(\text{m} \cdot \text{K})$								
- 6 mm	--		yes				--	
- 9 mm	--		yes				--	
- 13 mm	--		yes				--	
Pipe weight empty in kg/m	0.11	0.14	0.21	0.30	0.40	0.53	0.80	1.29
Internal volume in dm ³ /m	0.08	0.10	0.16	0.25	0.45	0.80	1.32	2.04
Pipe roughness in mm	0.007							
Thermal conductivity uninsulated in W/(m ² K)	0.35							
Coefficient of thermal expansion in mm/(mK)	0.026							
Minimum bending radius in mm (5 x dimension)	70	80	100 (80)**	125	160	200	250	315

* TWA - drinking water systems; HKA - radiator connection; FBH - floor heating; DLA - compressed air systems; GAS - gas installations

The classification of the application classes corresponds to the information in ISO 10508[4].

** Pipes of dimension 20 can also be bent with 4 times the dimension.

Technical pipe data TECEflex – Part 1

TECEflex - System Description

TECEflex system pipes	PE-MDXc 5S heating pipes in accordance with DIN 4724		PE-Xc 5S heating pipes in accordance with DIN EN ISO 15875	
Pipe designation	PE-MDXc 5S		PE-Xc	
Dimension	16	20	16	20
Delivery length – roll in m	200/600	200/600	200	120
Rods (m) (5 m/pipe)	-	-	-	-
Field of application*	FBH, HKA		FBH, HKA	
Application class/ operating pressure	5 / 4 bar		2 / 10 bar 5 / 6 bar	
Colour	mother of pearl		silver	
Outside diameter in mm	16.2	20	16	20
Wall thickness in mm	2.0	2.8	2.2	2.8
Inside diameter in mm	12	14.4	11.6	14.4
Available in corrugated protective pipe	-	-	yes	yes
Deliverable with insulation $\lambda = 0.040 \text{ W}/(\text{m} \cdot \text{K})$				
- 6 mm	--	--	--	--
- 9 mm	--	--	--	--
- 13 mm	--	--	--	--
Pipe weight empty in kg/m	0.08	0.14	0.09	0.14
Internal volume in dm ³ /m	0.11	0.16	0.11	0.16
Pipe roughness in mm	0.007		0.007	
Thermal conductivity uninsulated in W/(m ² K)	0.35		0.35	
Coefficient of thermal expansion in mm/(mK)	0.2		0.2	
Minimum bending radius in mm (5 x dimension)	80	100	80	100

* TWA - drinking water systems; HKA - radiator connection; FBH - floor heating; DLA - compressed air systems
The classification of the application classes corresponds to the information in ISO 10508[4].

Technical pipe data TECEflex – Part 2

Operating parameters

If the operating parameters are exceeded then the pipes and connections will be overstressed. The operating parameters must therefore not be exceeded. This should be ensured using suitable safety/regulation devices (e.g. pressure regulators, safety valves or similar).

Application class	Calculation temperature T_D °C	Operating period ^b with T_D Years ^a	T_{max} °C	Operating period with T_{max} Years	T_{mal} °C	Operating period with T_{mal} Hours	Typical application area
1 ^a	60	49	80	1	95	100	Hot water supply (60 °C)
2 ^a	70	49	80	1	95	100	Hot water supply (70 °C)
3 ^c	20	0.5	50	4.5	65	100	Low-temperature floor heating
	30	20					
	40	25					
4 ^b	20	2.5	70	2.5	100	100	Floor heating and low-temperature radiator connection
	40	20					
	60	25					
5 ^b	20	14	90	1	100	100	High-temperature radiator connection
	60	25					
	80	10					

T_D = temperature the pipe system is designed for. T_{max} = maximum temperature permitted for a short time.

T_{mal} = highest possible temperature that may be reached in the event of the fault "mal" (maximum 100 hours in 50 years).

^a A state can select either class 1 or class 2 according to its national provisions.

^b If there is more than one operating temperature for the operating duration and the associated temperature for an application class, the corresponding operating duration times should be added. "Plus cumulative" in the table implies a temperature group for the temperature given for an operating period (e.g. the temperature group for a period of 50 years for class 5 is made up as follows: 20 °C over 14 years, followed by 60 °C over 25 years, followed by 80 °C over 10 years, followed by 90 °C over 1 year, followed by 100 °C over 100 h).

^c Only permitted if the fault temperature cannot exceed 65 °C.

Application classes and classification of operating conditions in accordance with ISO 10508