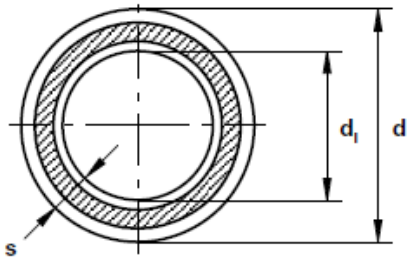
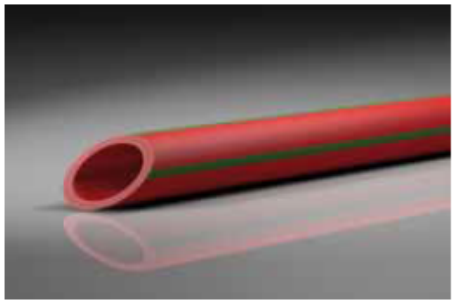
PIPE, FITTINGS

Material: PP-R FS
Pipe series: SDR 7,4
Packing Unit: straight length á 6 m
Colour: red/4 green stripes





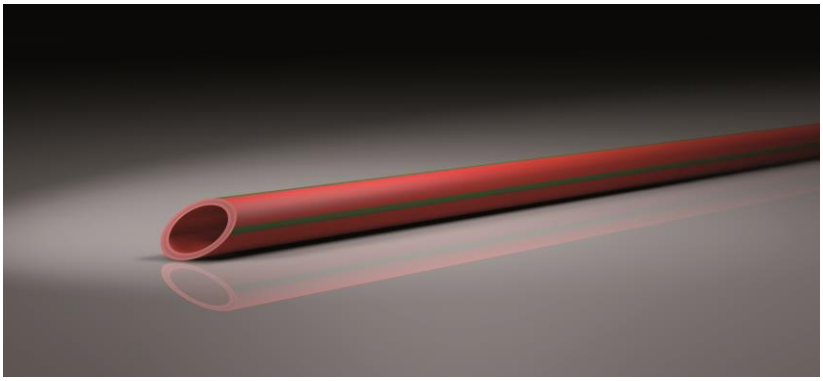
aquatherm red pipe PIPE SDR 7,4 / B1

Art.-No.	Dimension	PU m/pc	Price m/pc	Diameter d [mm]	Wall thickness s [mm]	Internal diameter d_i [mm]	Water content [l/m]	Weight [kg/m]
4170708	20 x 2,8 mm	120		20	2,8	14,4	0,152	0,163
4170710	25 x 3,5 mm	120		25	3,5	18,0	0,236	0,261
4170712	32 x 4,4 mm	60		32	4,4	23,2	0,379	0,403
4170714	40 x 5,5 mm	60		40	5,5	29,0	0,590	0,628
4170716	50 x 6,9 mm	30		50	6,9	36,2	0,919	0,955
4170718	63 x 8,6 mm	30		63	8,6	45,8	1,444	1,508
4170720	75 x 10,3 mm	18		75	10,3	54,4	2,054	2,160
4170722	90 x 12,3 mm	12		90	12,3	65,4	2,943	3,083
4170724	110 x 15,1 mm	6		110	15,1	79,8	4,403	4,500
4170726	125 x 17,1 mm	6		125	17,1	90,8	5,669	5,980

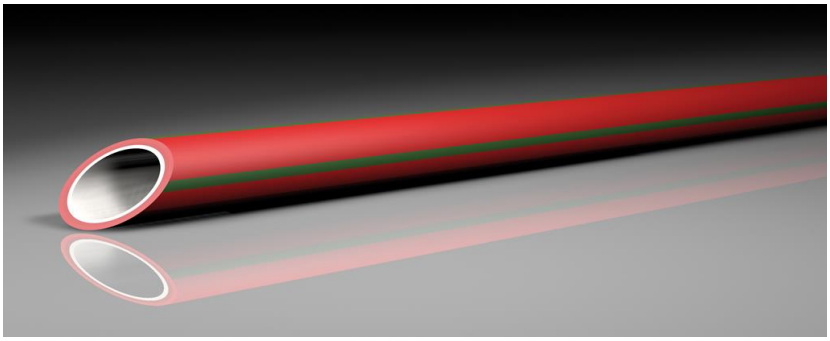
aquatherm red pipe PIPE SDR 11 / B1

Art.-No.	Dimension	PU m/pc	Price m/pc	Diameter d [mm]	Wall thickness s [mm]	Internal diameter d_i [mm]	Water content [l/m]	Weight [kg/m]
4170130	160 x 14,6 mm	6		160	14,6	130,8	15,792	6,728

New aquatherm red pipe SDR7.4 MF HI



old aquatherm red pipe SDR7.4 MF HI



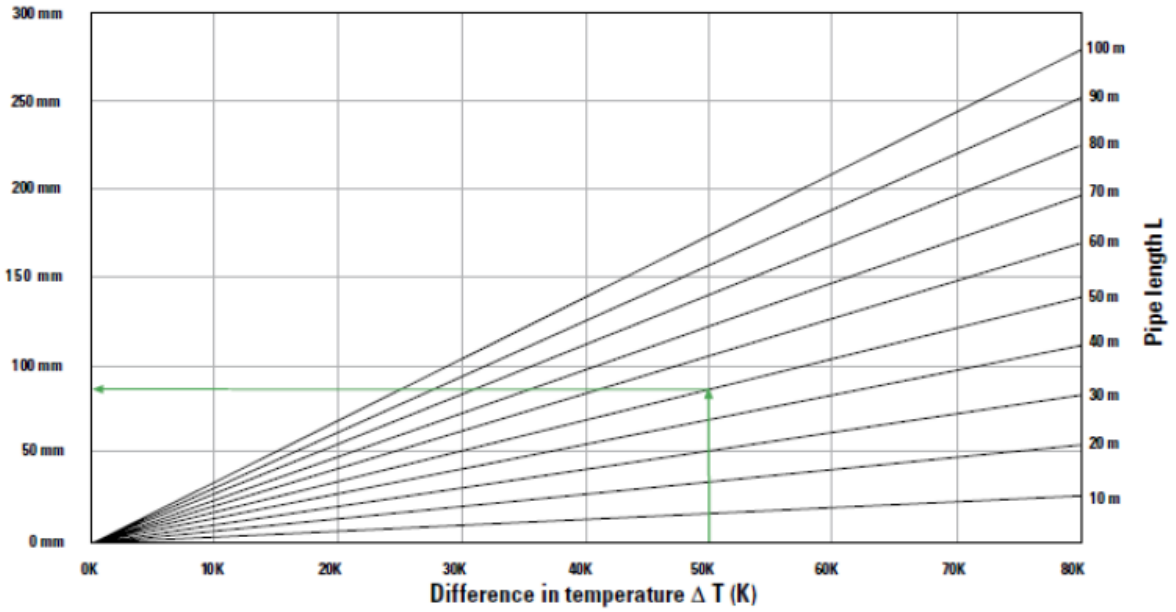
aquatherm green pipe MF (faser composite pipe)

aquatherm blue pipe MF (faser composite pipe)

Due to the integration and positive bond of the different materials, the aquatherm-faser composite pipes offers much higher stability. The linear expansion reduces its value to $^1/_5$ of the mere PP-pipes.

Linear expansion ΔL in [mm]: aquatherm-faser composite pipes - a = 0.035 mm / mK

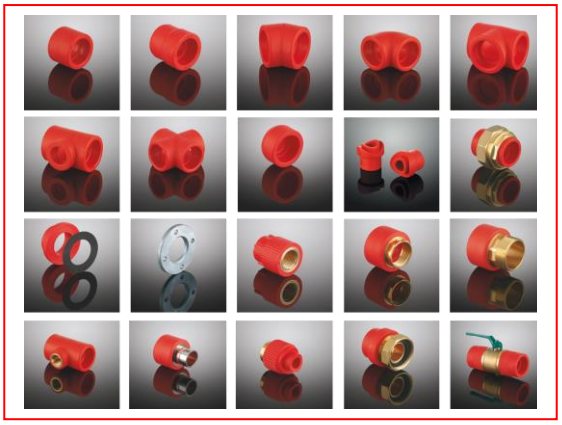
Pipe length	Difference in temperature $\Delta T = T_{operating\ temperature} - T_{installation\ temperature}$							
	10 K	20 K	30 K	40 K	50 K	60 K	70 K	80 K
	Linear expansion DL (mm)							
10 m	4	7	11	14	18	21	25	28
20 m	7	14	21	28	35	42	49	56
30 m	11	21	32	42	53	63	74	84
40 m	14	28	42	56	70	84	98	112
50 m	18	35	53	70	88	105	123	140
60 m	21	42	63	84	105	126	147	168
70 m	25	49	74	98	123	147	172	196
80 m	28	56	84	112	140	168	196	224
90 m	32	63	95	126	158	189	221	252
100 m	35	70	105	140	175	210	245	280



Pipe friction loss

The pressure loss caused by friction is to be calculated hydraulically with the Hazen-Williams-formula.

The value to be used for C is 150, applicable for calculations of sprinkler installations and water supply.



Equivalent lengths for the aquatherm red pipe sprinkler pipe system

The equivalent lengths of transition pieces, threaded connexions and tees (flow direction: straight) can be edequated with the socket values.

Pipe dimension											
Pipe series	SDR 7,4	SDR 7,4	SDR 7,4	SDR 7,4	SDR 7,4	SDR 7,4	SDR 7,4	SDR 7,4	SDR 7,4	SDR 7,4	SDR 11
Outer diameter aquatherm red pipe	20,0 mm	25,0 mm	32,0 mm	40,0 mm	50,0 mm	63,0 mm	75,0 mm	90,0 mm	110,0 mm	125,0 mm	160,0 mm
Article	**Equivalent pipe length in (m)**										
Socket	0,17	0,22	0,30	0,40	0,52	0,70	0,86	1,07	1,36	1,58	2,44
Reduction of 1 dimension	0,20	0,27	0,37	0,48	0,63	0,83	1,03	1,28	1,63	1,90	2,93
Reduction of 2 dimensions	0,27	0,36	0,49	0,64	0,84	1,11	1,37	1,71	2,17	2,53	3,91
Elbow < 90° - 45°	0,51	0,67	0,91	1,20	1,57	2,09	2,57	3,20	4,07	4,74	7,33
Elbow < 45°	0,25	0,33	0,46	0,60	0,78	1,04	1,28	1,60	2,03	2,37	3,66
Standard tee or cross flow direction branch	0,74	0,98	1,34	1,76	2,30	3,06	3,76	4,70	5,96	6,96	10,75

INTERNATIONAL APPROVALS

for the application as sprinkler lines

Fire protection requirements and standards for planning and construction of sprinkler systems vary locally.

Thus, the application of aquatherm red pipe in any case has to be agreed and coordinated with the local national fire protection authorities, the constructor and the building insurers.

Further certification either national or local are in process.