

Aquatherm Technical Bulletin

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Aquatherm Butt Fusion 4" Pipe

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Aquatherm has recently introduced the 4-in. (125 mm) Blue Pipe® SDR 17.6 fiber-composite pipe available for purchase. This product line has been available in 6- to 24-in. diameter sizes for two years – and it still is. However, Aquatherm identified a customer demand for 4-in. Blue Pipe SDR 17.6 to allow for more cost effective installations and more energy efficient operation in applications such as chilled water, geothermal, and condenser water, among others.

One of the benefits of using Aquatherm 4" (125 mm) SDR 17.6 is that it can be butt fused instead of having to use couplings. The following table shows the required Butt fusion parameters for Aquatherm 4" (125 mm) piping in both SDR 17.6 and SDR 11.

4" Butt Fusion Parameters							
Pipe OD, in. (mm)	Pipe SDR	Pipe Wall, in. (mm)	Circular Bead (min.), in. (mm)	Heat-up Time, sec.	Max. Change- over Time, sec.	Time to Reach Welding Pressure, sec.	Cool-Down time, min.
4.92 (125)	11	0.449 (11.4)	0.04 (1.0)	237	7	11	19
	17.6	0.280 (7.1)	0.04 (1.0)	176	6	7	12

Note that it is permissible to butt fuse the 4" (125 mm) SDR 11 and the SDR 17.6. It is not recommended to butt fuse the SDR 7.4 because internal bead height is sufficient to cause larger than desired pressure drops. If the internal bead can be removed, then the butt fusion process of SDR 7.4 is permissible. Aquatherm's tool partners offer tools for removing the interior beads.