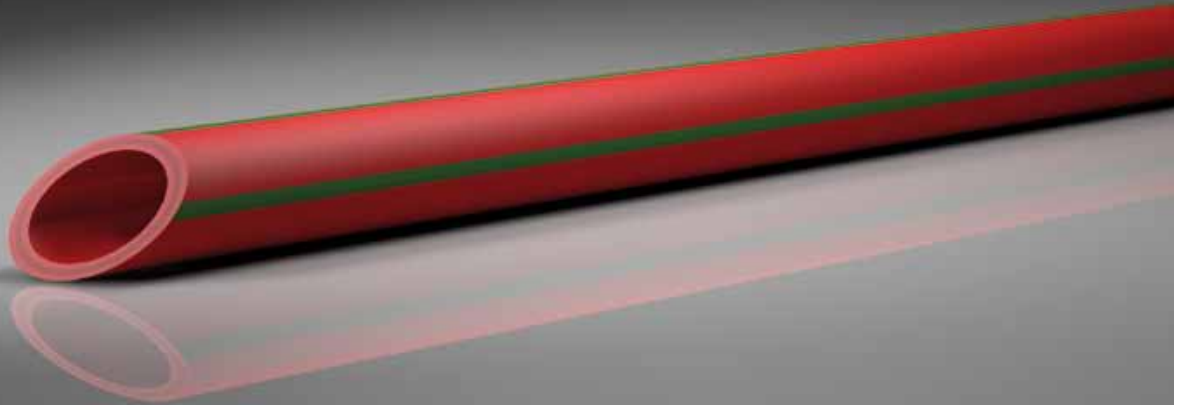


aquatherm red pipe



ADVANTAGES

- certified and quality inspected
- connection by fusion welding
- resistant against corrosion and chemicals
- no accumulation of corrosion products
- low pipe roughness factor and high abrasion resistance
- heat and sound-insulating characteristics
- high impact strength
- leak-proof connection of pipe and fitting by fusion technique
- not easily flammable acc. to DIN 4102-1, building material class B1
- low weight compared to metal pipes
- short processing time
- no gaskets - sealing elements are not required
- 3-layer pipe with fibre glass reinforced inner layer
- concealed fire protection
- reduction of structural works costs by laying in concrete
- weld-in saddle

aquatherm red pipe offers an extensive range of pipes and fittings for the installation of fire sprinkler systems.

The system is based on a fibre reinforced polypropylene pipe (faser composite pipe) produced in a multi-layer extrusion process.

The material fusiolen® PP-R FS, used for the pipe production, is a plastic whose properties are designed for the special demands of the fields of application. Both, the installer's request for easier processing and the demand for maximum safety in later application was regarded during the development.

aquatherm red pipe is:

- connection by fusion welding

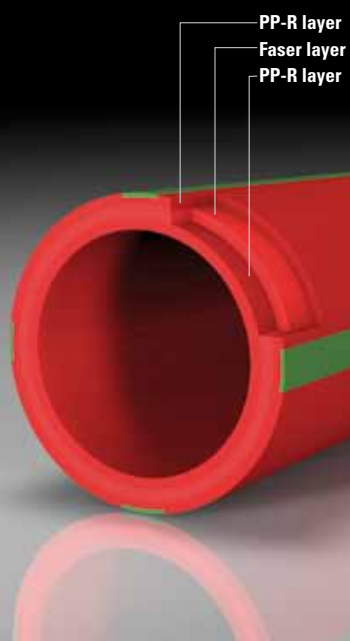
No sealants or adhesives are required for this permanent connection

- corrosion-proof

Prevents the clogging of the sprinkler with corrosive material. This ensures a long, low-maintenance service life as well as failure-free functioning of the system.

The production of pipes and fittings is controlled according to the highest quality standards on most modern injection moulding machines and extrusion lines. The high quality of our products is guaranteed by extensive controls of incoming goods and the production process.

The aquatherm quality management system is certified according to DIN EN ISO 14001:2004, 9001:2008 and 50001:2011.



PROCESSING

Fusion technique

By the fusion of pipe and fitting the plastic melts to a homogeneous material unit.

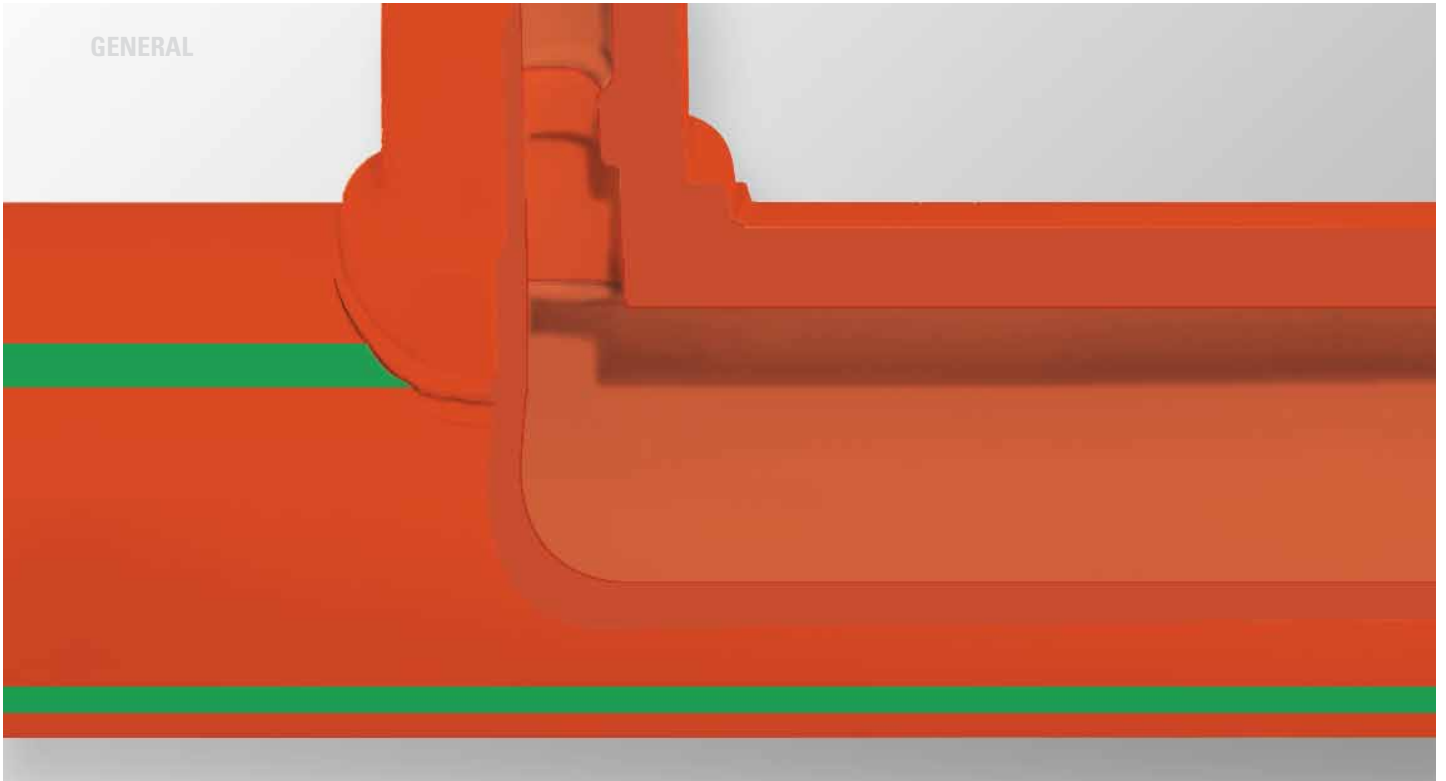
Pipe and fitting are heated quickly with specially provided welding tools and joined together - finished!

Double material thickness at the joint – giving double safety at the otherwise critical point of a pipe system.

A permanent leakproof connection is created with the aquatherm fusion technique.



GENERAL



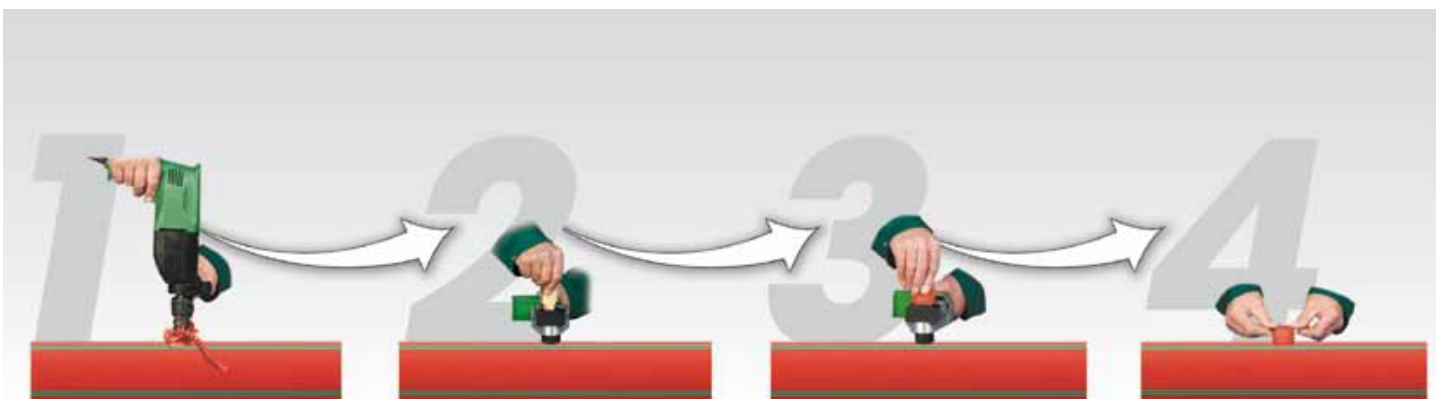
PROCESSING

Weld-in saddle technique

Branches can easily be made by weld-in saddles, even post-installation. Material costs and processing time are reduced by using weld-in saddles.

Whereas in case of tees three joints are to be processed, work is limited to mounting the saddle and the branch pipe only.

Simply drill the pipe; heat up the saddle, pipe wall and surface; connect the parts. Finished!





PART B:
Heat-up of pipe and fittings

6. Push the end of the pipe, without turning, up to the marked welding depth into the welding tool and at the same time the fitting, without turning, as far as it will go on the tool. It is essential to observe the above mentioned heating times.

Pipes and fittings of the dimensions \varnothing 75 to 125 mm may only be welded with welding device Art.-No. 50341 (or with machine Art.-No. 50148). On using the aquatherm green pipe-welding machine Art.-No. 50148 a separate operating instruction has to be observed.

ATTENTION:

The heating time starts, when pipe and fitting have been pushed with the correct welding depth on and in the welding tool. Not before!

PART B:
Setting and alignment

7. After the stipulated heat-up time quickly remove pipe and fitting from the welding tools. Join them immediately, without turning, until the mark welding depth is covered by PP-bead of the fitting.

ATTENTION:

Do not push the pipe too far into the fitting, as this would reduce the bore and in an extreme case may close the pipe.

8. The joint elements have to be fixed during the specified processing time. Use this time to correct the connection. Correction is restricted to the alignment of pipe and fitting. Never turn the elements or align the connection after the processing time.
9. After the cooling period the fused joint is ready for use.

The result of the fusion of pipe and fitting is a permanent material joining of the system elements.

Unrivaled connection technique with security for a life-time!

PART C:**Weld-in saddles**

1. Before starting the welding process, check if the aquatherm welding devices and tools meet the requirements of "Fusion Part A".
2. The first step is to drill through the wall of the pipe at the point intended for the outlet by using the aquatherm drill.

branch 20/25 mm:	Art.-No. 50940/41
branch 32 mm:	Art.-No. 50942
branch 40 mm:	Art.-No. 50944
branch 50 mm:	Art.-No. 50946
branch 63 mm:	Art.-No. 50948
branch 75 mm:	Art.-No. 50950
branch 90 mm:	Art.-No. 50952

3. The welding device/saddle welding tool must have reached the required operating temperature of 260 °C (check with reference to "Fusion Part B, item 2").
4. The welding surfaces have to be clean and dry.
5. Insert the heating tool on the concave side of the weld-in saddle tool into the hole drilled in the side wall of the pipe until the tool is completely in contact with the outer wall of the pipe. Next the weld-in saddle spigot is inserted into the heating sleeve until the saddle surface is up against the convex side of the welding tool. The heating time of the elements is generally 30 seconds.
6. After the welding tool has been removed, the weld-in saddle spigot is immediately inserted into the heated, drilled hole. The weld-in saddle should then be pressed on the pipe for about 15 seconds. After being allowed to cool for 10 minutes the connection can be exposed to its full loading. The appropriate branch pipe is fitted into the sleeve on the aquatherm weld-in saddle using conventional fusion technology.

By fusing the weld-in saddle with the pipe outer surface and the pipe inner wall the connection reaches highest stability.



Drilling through the pipe wall



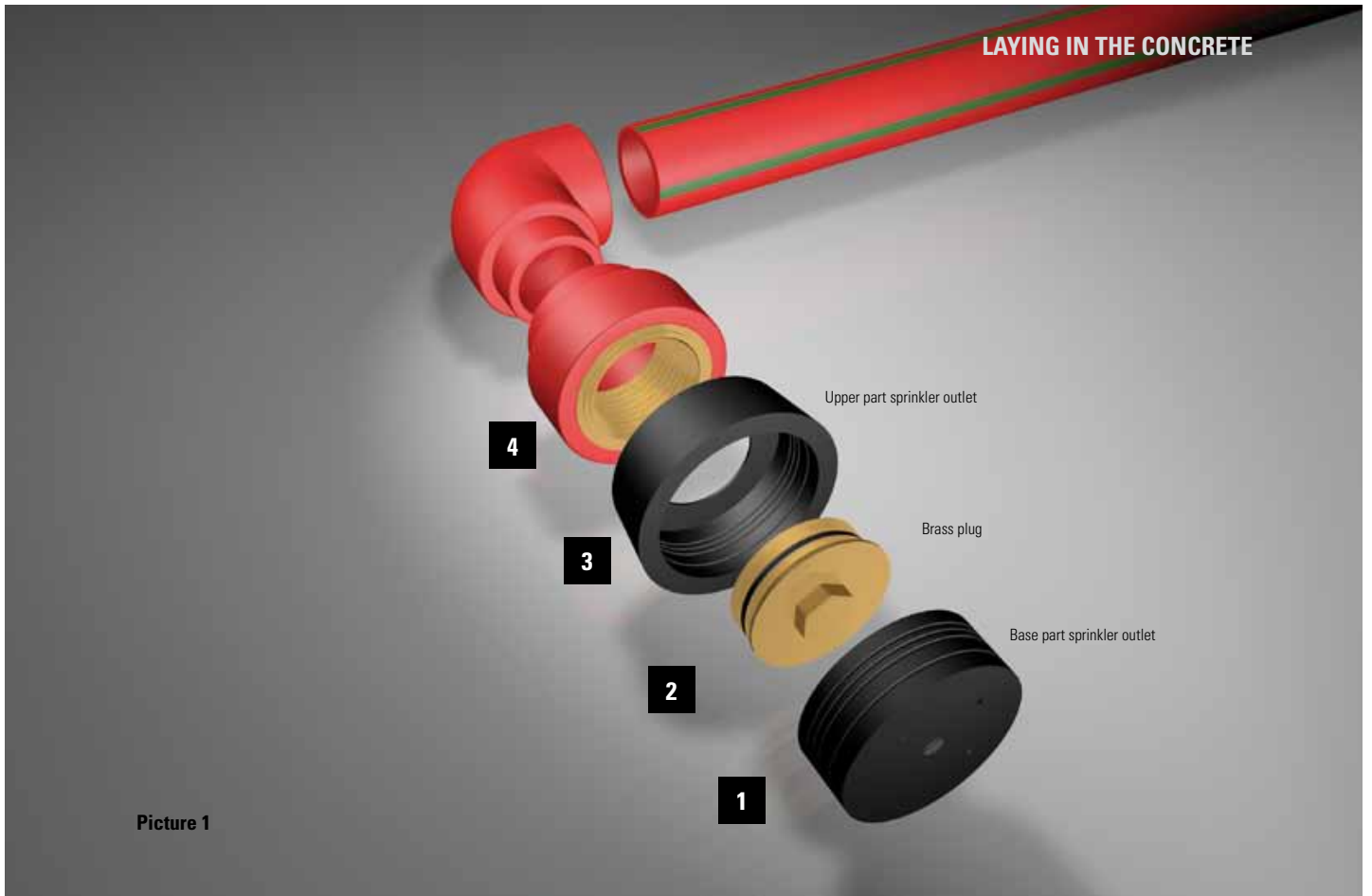
Heat-up of pipe...



...and fitting



Joining



Picture 1

LAYING OF **AQUATHERM RED PIPE** IN THE CONCRETE

Part 1:

Connecting of pipe work to the aquatherm red pipe sprinkler outlet

The connection is described in picture 1 as follows:

The base part of the sprinkler outlet (1) is screwed with 4 screws on the shuttering.

Brass plug (2), upper part of the sprinkler outlet (3) and aquatherm red pipe connection piece (4) are connected to each other and plugged onto the base part of the sprinkler outlet (1), so that part 3 is flush with the shuttering.

Detailed information regarding the different dimensions of the sprinkler outlet please take from tables on pages 19 and 20!

Colour of plastic sleeve may differ.

LAYING IN THE CONCRETE



Picture 2

LAYING OF **AQUATHERM RED PIPE** IN THE CONCRETE

The aquatherm red pipe sprinkler connection is finished (picture 2).

When removing the shuttering (after pouring of the concrete) the base part of the sprinkler outlet (1) is pulled out of the upper part of the sprinkler outlet (3).

The brass plug (2) is unscrewed from the aquatherm red pipe-connection piece (part 4). Now, the upper part of sprinkler outlet (3) must be pulled out of the concrete easily with the aquatherm red pipe extraction tool (Art- No. 50290).

The sprinkler connection (picture 3) can be completed very easily. The, acc. to CEA 4001, required distance from the sprinkler head to the completed ceiling, can be accomplished with the compensating fitting from the sprinkler connection thread up to the aquatherm red pipe connecting piece (see drawing page 52).

Picture 3

