

WAVIN TIGRIS
Technical Handbook

Tigris family one-fits-all



wavin

Contents

1. Tigris technical handbook	page 4
1.1 The one-pipe-fits all Tigris product family	page 5
1.2 Tigris Multi-layer pipe - key features	
1.2.1 The Wavin multi-layer composite pipe for drinking water applications	page 6
1.2.2 The Wavin multi-layer composite pipe for underfloor heating applications	page 7
1.3 The Radial Press-Fit system explained	
1.4 The Push-Fit system explained	page 8
1.5 The Tigris product family at a glance	page 9
2. Tigris fitting-product features	page 10
2.1 Fitting design K5/ M5	page 10
2.2 Fitting design K1/ M1	page 14
2.3 Fitting design smartFIX	page 16
2.4 Product matrix with benefits	page 17
2.5 Tigris feature explanation	page 18
2.6 Warranty (Adapt eventual to country specific)	page 19
3. Installation Instructions	page 22
Overall installation instructions	page 22
A quick guide to get started	page 22
Detailed installation instructions	page 24
3.3.1 Making a press-fit connection	page 24
3.3.2 Pipe bending	page 27
3.3.3 Tigris M5 Metal Connector: Assembly instructions	page 28
3.3.4 smartFIX push-fit transition to copper	page 28
3.3.5 Repair Couplers	page 29
3.3.6 Threaded fittings	page 30
General guidelines for handling and storage	page 31
Finalizing the installation; leak and pressure tests and flushing	page 33
3.5.1 Pressure tests (Defined Leak & Leak Alert)	page 33
3.5.2 Function check with water- Defined Leak	page 33
3.5.3 Function check with air- Acoustic Leak Alert	page 34
3.5.4 Flushing	page 35
3.5.5 Initial operation and handover	page 36
3.5.6 Usage of the Wavin Tigris pressure testplug	page 36
3.5.7 Protocol pressure test for drinking water installations	page 37
3.5.8 Pressure test for radiator installations in accordance with DIN 18380	page 39
3.6. Linear expansion and fixing	page 41
3.6.1 Basics	page 41
3.6.2 Consideration of thermally induced linear expansion	page 41
3.6.3 Absorption of length changes by bending joints	page 42
3.6.4 Fixing intervals	page 43
3.7. Concealed installations	page 44
3.7.1 Pipes in screed or concrete	page 44
3.7.2 Pipes in the floor construction	page 44
3.7.3 Pipelines installed under plaster	page 45
3.7.4 Pipelines installed in exposed locations	page 45

Installation examples	page 46
Installation variants for drinking water	page 46
3.8.1.1. Single Tee installation	page 46
3.8.1.2. In series installation	page 47
3.8.1.3. Loop installation	page 48
3.8.1.4. Loop installation with circulation connection	page 49
3.8.1.5. Internal circulation	page 50
3.8.2. Heating installation Variants	page 51
3.8.3. Radiator connection: installation Variants	page 52
3.8.3.1. Compact Radiators	page 52
3.8.3.2. Valve Radiators	page 53
4. Technical information	page 54
Technical specifications	page 54
Technical specifications MP Pipes	page 54
Technical specifications Fittings	page 55
Classification of operating requirements for Wavin Multi layer pipes	page 57
Flow performance	page 58
4.2.1 Zeta values Tigris M5 & Tigris K5	page 59
4.2.2 Zeta values Tigris M1 & Tigris K1	page 60
4.2.3 Pressure loss in pipes for drinking water applications	page 61
4.2.4 Pressure loss in heating systems	page 63
4.3 Pressing Tools	page 68
4.3.1 Wavin pressing jaws and alternative brand pressing profiles	page 68
4.3.2 Cordless and electric press tools	page 69
4.3.3 Overview of compatible press tools	page 70
5 Use of chemicals	page 72
5.1 Disinfection of drinking water pipelines	page 72
5.2 Thermal Disinfection	page 72
5.3 Chemical Disinfection	page 73
5.4. List of allowed chemicals	page 73
6 Certifications	page 74
7 Local Regulations	page 75
8 Product portfolio	page 76
8.1 Product portfolio M5 & M1	page 76
8.2 Product portfolio K5 & K1	page 78
8.3 Product portfolio on SKU level	page 79

Contents



Tigris technical handbook

This handbook will guide you on the specific characteristics of each member of the Tigris product family, explain the benefits and application field, provide assembly instructions and technical background, norms and regulations. Finally, you will find the assortment overview on product level.

For more information or personal advice, please contact your local sales representative or visit wavin.com.

1. Tigris family

- one-pipe-fits-all

The one-pipe-fits-all Tigris product family

With Tigris, Wavin offers a complete program of pipe and fitting solutions for multi-layer composite pipe systems. The Tigris family has 5 fitting solutions that are all perfectly designed to offer the most reliable connection for the Wavin's multilayer composite pipe, dedicated to the requirements of each specific field of application.

The core of the fitting program is based on the reliable Radial Press-Fit technology, offering a complete PPSU line with Tigris K5 and Tigris K1 or brass line with Tigris M5 and Tigris M1. The fitting program is completed with Tigris smartFIX, a PPSU fitting range based on Push-Fit technology.

All Tigris fitting lines fulfil the specific requirements for hot and cold water installations and radiator heating and underfloor heating systems. They meet all drinking water quality requirements and are physiologically harmless.

Being a real product family, all fittings fit to the same multilayer composite pipe, offering a 1-fits-all solution!

Tigris Multi-layer pipe - key features

The Wavin multi-layer composite pipes (MP) comprise either an internal layer of cross-linked polyethylene (PE-Xc) or PE with raised temperature resistance (PE-RT)¹, an external protection layer in HD-PE and an intermediate butt welded aluminium layer. These layers are uniformly connected by means of bonding agents. This produces a pipe structure with a total of five layers.

Multilayer composite pipes offer many advantages

- ⦿ Dimensional stability, resistant to unwanted movement yet flexible to work with
- ⦿ Limited linear expansion, comparable to copper, thanks to the aluminium layer
- ⦿ Significant lower demand of fittings due to ease of pipe bending
- ⦿ Perfect for tight installation situations due to easy bending
- ⦿ Pipe holds its shape after bending thanks to the aluminium layer
- ⦿ Corrosion resistant, free of encrustation
- ⦿ Diffusion-proof

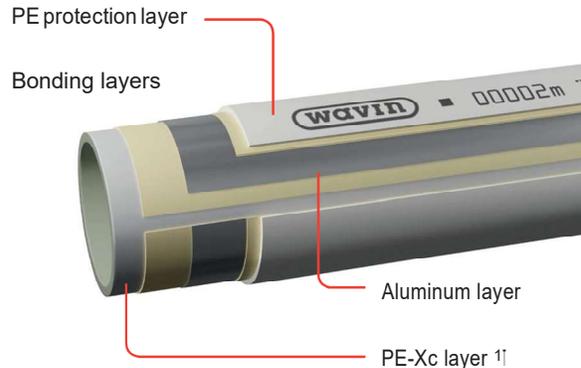


Fig. 1: Multi-layer composite pipe structure.

Specific benefits of Wavin multilayer pipes

- ⦿ Big inner diameter for an optimal flow performance
- ⦿ Wide field of applications, drinking water as well as heating systems
- ⦿ Suitable for all kind of water qualities
- ⦿ High pressure, temperature and chemical resistance.
- ⦿ Butt-weld aluminium layer; uniform thickness and resistance to peeling apart
- ⦿ Physiologically harmless
- ⦿ Low weight
- ⦿ Quick and safe assembly
- ⦿ On coils and straight lengths
- ⦿ Pre-insulated or with protection pipe
- ⦿ Easy to cut and easy to bend
- ⦿ Broad range of dimensions (14 mm to 75 mm)

The Wavin multilayer composite pipes can be handled by a single installer. An optimal aluminium thickness means it can be bent by hand or supported by bending springs and bending pliers.

The Wavin multilayer composite pipes are classified by the kind of application according to ISO 21003. Please see the chapter Technical specifications MP Pipes for detailed information.

¹PE-Xc available in the range 16 to 63 mm,

PE-RT available in 16, 20 and 75 mm

PE-Xc is a reinforced physical (electron-beam) cross-linked polyethylene. Due to the cross-linking, the PE is not fusible and has a high thermal stability that especially predestines it for drinking water installations and high temperature radiator connections. The physical cross-linking ensures an equal spread of the links and an environmental and drinking water quality friendly cross-linking without any addition of chemicals.

PE-Xc is typically chosen when more extreme conditions are applied, like chemical or thermal disinfection.

PE-RT is a raised-temperature resistant reinforced polyethylene that also shows a higher temperature resistance than standard PE but below the level of PE-Xc. This makes it especially suitable for underfloor heating applications and low-temperature radiator connections.

See the technical chapter 5 for an overview of released chemicals.

The Wavin Tigris pipe family contains 2 core ranges of multilayer pipes, dedicated to their application.

Wavin White - drinking water applications
Wavin Blue - underfloor heating applications

The Wavin multi-layer composite pipe for drinking water

The white coloured Wavin multilayer pipes can be applied for hot & cold water installation as well as heating systems. The pipes meet all drinking water quality requirements and are physiologically harmless. They also are oxygen tight and fulfil the requirements for low temperature radiator connections and underfloor heating systems.

Depending on the pipe dimension, they have an inner layer material in PE-Xc or PE-RT, an external layer in HDPE with an aluminium layer in between connected by special bonding agents.



Fig. 2: Multi-layer composite pipe for multiple applications.

The Wavin multi-layer composite pipe for drinking water applications fulfils the requirements according to ISO 21003 and carries amongst others DVGW, KIWA and KOMO certifications.

Please see the chapter Technical specifications MP Pipes for detailed information.

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