

# General information

## Product Standards

The international malleable cast iron pipe fittings standard ISO 49 and the European malleable cast iron pipe fittings standard EN 10242 apply. Both standards are similar to each other. The European fittings standard (EN 10242) has been adopted by most European countries as a national version (DIN EN 10242, ÖNORM EN 10242, SN EN 10242, BS EN 10242 etc.), the former national standards have been withdrawn (e.g. DIN 2950).

«**Design Symbols**» corresponding to the materials and thread combination are to be noticed as new elements of the fittings designation in accordance with both ISO 49 and also EN 10242.

For example, the following details of combination are abbreviated with the design symbol «**A**»:

Design Symbol	Type of thread		Type of material
	Taper external thread	Parallel internal thread	
<b>A</b>	<b>R</b>	<b>Rp</b>	<b>EN-GJMW-400-5</b>

In addition, for the first time EN 10242 requires a documented and certified quality management system in accordance with EN ISO 9001 or EN ISO 9002.

**Georg Fischer meets these prerequisites and operates a certified QM system in accordance with EN ISO 9001.**

**Georg Fischer malleable cast iron fittings are manufactured from decarbonized annealed malleable cast iron type EN-GJMW-400-5 and in accordance with the current ISO 49 and EN 10242 comply with the fittings designated with the design symbol «A».**

## Designation at Georg Fischer

### Elements of the designation

It no longer suffices merely to refer to the new supply standard for malleable cast iron fittings (see Product Standards). The greatly varying malleable cast iron qualities and the different thread combinations are specified using the newly introduced Design Symbols as an element of the order details for malleable cast iron fittings.

**Georg Fischer malleable cast iron fittings (Design Symbol A) are ordered with the following details:**

1. Shape (catalogue number)
2. Size of connection
3. Surface (black «B» or galvanised «G»)
4. Quantity

To avoid confusion with similar fittings of other materials or other thread combinations, we recommend using the 9 digit Georg Fischer code. Shape, surface and connection size are defined with this code number (see example designation):

### Example of designation for:

Equal elbow with internal thread, fitting size 2, galvanized, Design Symbol «A»

### At Georg Fischer:

Code no. 770 090 209

Cat. no. 90 2 G

## According to standard:

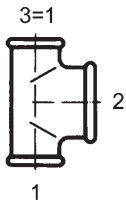
Elbow EN 10242 - A1 - 2 - Zn - A

Elbow	type of fitting
EN 10242 (ISO 49)	standard
A1	symbol
2	fitting size
Zn	surface finish
	hot dip zinc coated
A	Design Symbol

## Size designation

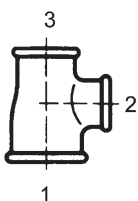
The naming of types of fittings starts from the simplest possible basic types such as bend, elbow, tee, cross etc.; basic features are also indicated.

The following rules apply for the sequence of connection sizes:



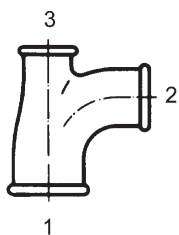
illustr. 1/A

- for **equal** fittings giving the individual connection size is sufficient.



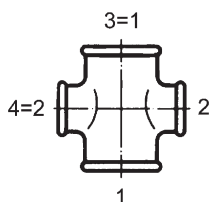
illustr. 1/B

- for **reducing fittings with 2 connections of different sizes** the connection size of the larger is given first, then that of the smaller connection. **Exception:** Elbow catalogue no. 92, first the connection size of the internal thread.



illustr. 1/C

- for  **fittings with 3 or more connections (illustr. 1/A and 1/D)** it is necessary to give the size of the the throughput first, and in the case of equal connections on the run, followed by the size of the branch.



illustr. 1/D

- for **3 different connections or sections reduced in run** the sequence for the designation of connections according to illustr. 1/B and 1/C applies.

## Surface finish of fittings

Our Georg Fischer malleable cast iron fittings are supplied in black or hot dip galvanised finish, covered with a preservative for temporary prevention of a rust film. An exception are fittings marked in this catalogue with "ST" which are made of steel. If a galvanised finish is required, these fittings have to be electroplated for technical reasons.

**Because of the considerably lower corrosion protection, electroplated coatings are not suitable for drinking water installations.**

Under the European and International standard malleable cast iron pipe fittings must be free from polycyclic aromatic hydrocarbons.

## Quality principles

The success of our business can only be ensured, if we meet the requirements of our customers with regard to product performance, quantity, delivery dates, prices and service. We define all this under the term «quality». Under quality we understand far more than the fabrication of products capable of performing their design requirements. At Georg Fischer, quality is a business culture; in research and development, for materials procurement and production and also in sales, logistics and after sales service. Transposing these quality principles is the aim of all employees.

**The quality management system at Georg Fischer Fittings GmbH is certified to EN ISO 9001:2000.**

We thus prove to our customers, as also to the organisations monitoring our quality, that at Georg Fischer quality is demanded and guaranteed. «Quality» a basic philosophy, which at George Fischer is based on a long-standing tradition and therefore represents a commitment for the present and the future.

## Quality testing

Georg Fischer malleable cast iron fittings are individually tested within the framework of the existing standard. Pressure testing for pressure carrying unions is carried out on their piece parts.

## Dimensions

The dimensions given are nominal values and are valid at the moment of printing - with the exception of errors and printing mistakes. In critical applications, please check for accuracy before proceeding.

## Representation in the catalogue section

This technical catalogue documents all Georg Fischer fittings and/or piece parts. Items without a code No. are given for technical information and are not part of the usual supply range.

The individual types of fittings are represented in the catalogue by the **Symbol photo** and **Line drawings** showing important dimensions.

For standardised types the **EN and/or ISO symbol** for the fitting shape is also given after the catalogue number.

## Symbols

<b>EN</b>	... the first column "EN" indicates the fittings standardised in European Standard EN 10242: <ul style="list-style-type: none"><li>● ... standardised</li><li>- ... not standardised</li></ul>
<b>B</b>	... black
<b>G</b>	... galvanised
<b>ST</b>	... these types of fittings are made from steel (galvanised finish = electroplated) and are not suitable for drinking water installations.
<b>Code</b>	... Georg Fischer part number
<b>ISO/EN</b>	... symbol to ISO 49/EN 10242
<b>R</b>	... taper external thread, for connections to EN 10226-1 and/or ISO 7-1 sealing on the threads.
<b>Rp</b>	... parallel internal jointing thread for connections to EN 10226-1 and/or ISO 7-1 sealing on the threads.
<b>G</b>	... parallel internal fastening thread for connections to EN ISO 228-1 not sealing on the thread.
<b>G ... B</b>	... parallel external fastening thread, tolerance class B for connections to EN ISO 228-1 not sealing on the threads.
<b>ET</b>	... Piece part
<b>s</b>	... width across flat The given measurement states the size of the screw-wrench that is to be used.
<b>*</b>	... Notes