



**PUSH FITTINGS**  
**INSTALLATION  
AND COMPONENTS**

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## PUSH FITTINGS INSTALLATION AND COMPONENTS

### ► Use

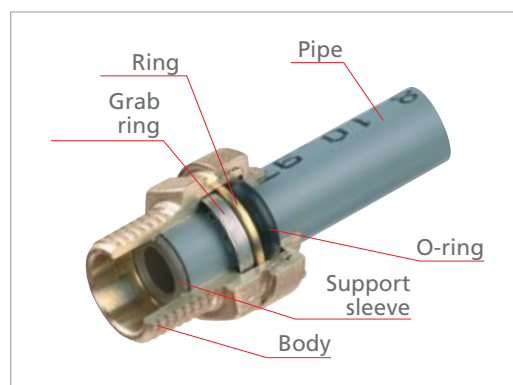
Giacomini's Push Fittings can be used for hot and cold water distribution systems for sanitary uses or for heating, with considerable time saving when compared to the other installation methods currently used. The use of push fittings does not require special mechanical or electrical equipment, but only common tools, with evident simplification of the building site components. The wide range of available figures and sizes allows making traditional or manifold distributions by using flexible synthetic pipes made of PE-X or PB or rigid pipes made of raw or annealed copper.

Using these fittings, irreversible joints are made. They can be placed also into chase if in compliance with the national standards, with no obligation for inspection. The development of the Push Fittings has been looked after carefully by giving particular reliability to the components to make the installer work easy, quick and with maximum safety results which are professionally satisfactory. The features that distinguish this series are the bodies made of pressed brass, having high mechanical performances, the sealing o-ring suitable to the use with food fluids, positioned upstream of the blocking package, the toothed blocking ring made of stainless steel, expressly designed with particular precision, RC900 support sleeves made of synthetic material calibrated for the various pipe thicknesses mostly used into the distributions. They are packed in protection bags against dust and impurities, the external diameter of the pipe to be connected is clearly stamped on the fitting bags and on the support sleeves bags with the relative pipe thickness.

The Push Fittings allow distributing fluids with extreme quickness and easiness, permitting to the installer to complete his work and make the expected pressure tightness test of the system by avoiding useless and expensive time losses.

### ► Technical data

- Pressed brass bodies
- Max. working pressure **1 MPa (10 bar)**
- Max. working temperature **110°C**
- EPDM seal o-ring suitable to be used for drinking water
- Grab ring made of inox steel AISI 301
- Support sleeves in synthetic material
- Suitable to be used with hot and cold water distribution, heating systems, and compressed air
- Suitable to be used with annealed and standard copper, PE-X and PB pipes.



## ► Installation with synthetic pipes

Cut the pipe perpendicularly to its axis by using shears and subsequently make a careful internal deburring of the pipe, in order to create a chamfer to make the insertion of the support sleeve easier. The end part of the pipe to be connected to the fitting shall not present scratching or abrasions, that could compromise the o-ring sealing.



The assembly and the perfect tightness of the Push Fittings, RC series, is possible only if the diameters, the pipe thicknesses and the support sleeves correspond. The RC fittings having various available sizes, enable the assembly of synthetic pipes with the same external diameters and different thicknesses provided that the sleeve corresponds to the pipe dimensions. In order to avoid incorrect assembly, before making the connection, check carefully the dimensions of the components and their compatibility.



With sufficient pressure, fit the RC900 support sleeve deeply into the pipe. The sleeve is fundamental for the connection of synthetic pipes made of PB or PE-X, that given their elasticity without an internal support could slip off due to the mechanical and thermal stresses to which pipes are subjected under working. In order to avoid mixing up the various sleeve sizes, open the package, having the relative pipe dimensions stamped on it, only at the time of use and subsequently close it again carefully.





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For ease of assembly of the pipe into the fitting, we recommend to lubricate slightly the end with silicone grease. Push the pipe deeply into the fitting with appropriate pressure up to the stop. During the pipe insertion, two shakes occur due respectively to the passage through the o-ring and afterwards to the passage through the toothed blocking ring. The pipe insertion depth into the fitting pocket is 25 mm. After coupling, pull the pipe to ensure that this is irreversibly blocked.



### ► Installation with copper pipes

For the assembly of RC Push Fittings with raw or annealed pipes, proceed by using a roller pipe cutter. The cut shall be clean and the pipe must be free from deformations, ovality and scratches. In order to guarantee sealing, it is recommended calibrating the pipe end and eliminate the external burrs through deburring. Eventual burrs on the pipe could engrave the sealing o-ring damaging it irreversibly, and would make the fitting assembly difficult.



During the first assemblies of RC fittings, it is recommended marking a notch with a felt-tip pen at the distance of 25 mm from the pipe head. This measure corresponds to the depth of the fitting pocket and is equivalent to the insertion length needed for the assembly. This operation that helps the user, giving him higher safety for the first assemblies, will become superfluous with the experience acquired in short time. The complete insertion of the pipe into the fitting is essential to ensure the blocking avoiding unthreading.



Once the pipe has been cut, calibrated and opportunely deburred before the insertion into the push fitting, lubricate it with silicone grease to favour the slipping without damaging the fitting o-ring.

The pipe surface shall be clean and free from impurities that would prevent the ring sealing. Do not lubricate the internal part of the fitting not to hurt inadvertently with the toothed blocking ring made of steel.



The support sleeve RC900 shall not be used with copper pipes, as the material is sufficiently rigid therefore it will not get deformed as it happens with synthetic materials. After making sure that the fitting is clean and with no impurities, insert the pipe deeply exercising a sufficient push. If the insertion is correct, the marking made previously at 25 mm from the pipe head, shall correspond to the collar of the nut. The connection with RC Push Fittings is permanent, therefore particular attention shall be given to the pipe cut and in the connections, not to remake the joints.



## PUSH FITTINGS INSTALLATION AND COMPONENTS

### ► Components

#### RC102



- Push fit straight connector, for GIACOTHERM, GIACOFLEX polybutylene and copper pipes.

PRODUCT CODE	CL	SIZE
RC102X004	4R	12
RC102X006	4R	15
RC102X007	4R	16
RC102X008	4R	18
RC102X009	4R	20
RC102X010	4R	22

#### RC107



- Push fit straight adaptor, male thread, for GIACOTHERM, GIACOFLEX, polybutylene and copper pipes.

PRODUCT CODE	CL	SIZE
RC107X014	4R	1/2" x 12
RC107X016	4R	1/2" x 15
RC107X017	4R	1/2" x 16
RC107X018	4R	1/2" x 18
RC107X019	4R	1/2" x 20
RC107X020	4R	1/2" x 22
RC107X046	4R	3/4" x 22

#### RC109



- Push fit straight adaptor, female thread, for GIACOTHERM, GIACOFLEX polybutylene and copper pipes.

PRODUCT CODE	CL	SIZE
RC109X014	4R	1/2" x 12
RC109X016	4R	1/2" x 15
RC109X017	4R	1/2" x 16
RC109X018	4R	1/2" x 18
RC109X019	4R	1/2" x 20
RC109X046	4R	3/4" x 22

#### RC122



- Push fit 90° elbow, for GIACOTHERM, GIACOFLEX polybutylene and copper pipes.

PRODUCT CODE	CL	SIZE
RC122X004	4R	12
RC122X006	4R	15
RC122X007	4R	16
RC122X008	4R	18
RC122X009	4R	20
RC122X010	4R	22

## RC127



- ▶ Push fit 90° elbow adaptor, male thread, for GIACOTHERM, GIACOFLEX polybutylene and copper pipes.

PRODUCT CODE	CL	SIZE
RC127X014	4R	1/2" x 12
RC127X016	4R	1/2" x 15
RC127X017	4R	1/2" x 16
RC127X018	4R	1/2" x 18
RC127X019	4R	1/2" x 20
RC127X046	4R	3/4" x 22

## RC129



- ▶ Push fit 90° elbow adaptor, female thread, for GIACOTHERM, GIACOFLEX polybutylene and copper pipes.

PRODUCT CODE	CL	SIZE
RC129X014	4R	1/2" x 12
RC129X016	4R	1/2" x 15
RC129X017	4R	1/2" x 16
RC129X018	4R	1/2" x 18
RC129X019	4R	1/2" x 20
RC129X046	4R	3/4" x 22

## RC139



- ▶ Push fit wall bracket 90° elbow, female thread, for GIACOTHERM, GIACOFLEX polybutylene and copper pipes.

PRODUCT CODE	CL	SIZE
RC139X014	4R	1/2" x 12
RC139X016	4R	1/2" x 15
RC139X017	4R	1/2" x 16
RC139X018	4R	1/2" x 18
RC139X019	4R	1/2" x 20
RC139X046	4R	3/4" x 22

## RC150



- ▶ Push fit equal tee, for GIACOTHERM, GIACOFLEX polybutylene and copper pipes.

PRODUCT CODE	CL	SIZE
RC150X004	4R	12
RC150X006	4R	15
RC150X007	4R	16
RC150X008	4R	18
RC150X009	4R	20
RC150X010	4R	22

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### RC151



- Push fit reducing tee, for GIACOTHERM, GIACOFLEX polybutylene and copper pipes.



INFO

PRODUCT CODE	CL	SIZE
RC151X032	4R	16x12x12
RC151X033	4R	16x12x16
RC151X046	4R	18x12x12
RC151X047	4R	18x12x18
RC151X080	4R	22x15x15
RC151X083	4R	22x15x22
RC151X085	4R	22x16x16
RC151X087	4R	22x16x22

### RC153



- Push fit adaptor tee, male thread, for GIACOTHERM, GIACOFLEX polybutylene and copper pipes.



INFO

PRODUCT CODE	CL	SIZE
RC153X016	4R	15x1/2"x15
RC153X017	4R	16x1/2"x16
RC153X018	4R	18x1/2"x18
RC153X019	4R	20x1/2"x20
RC153X046	4R	22x3/4"x22

### RC154



- Push fit adaptor tee, female thread, for GIACOTHERM, GIACOFLEX polybutylene and copper pipes.



INFO

PRODUCT CODE	CL	SIZE
RC154X016	4R	15x1/2"x15
RC154X017	4R	16x1/2"x16
RC154X018	4R	18x1/2"x18
RC154X019	4R	20x1/2"x20
RC154X046	4R	22x3/4"x22

## RC573



- Push fit wall elbow, female thread, nickel plated, for GIACOTHERM, GIACOFLEX polybutylene and copper pipe.

PRODUCT CODE	CL	SIZE
RC573Y004	V	1/2"x12
RC573Y006	V	1/2"x15
RC573Y007	V	1/2"x16

## RC179



- Chrome plated fitting to change from adaptor base to RC rapid connection.

PRODUCT CODE	CL	SIZE
RC179X015	4A	16x15
RC179X016	4A	16x16
RC179X026	4A	18x16
RC179X027	4A	18x18
RC179X028	4A	18x20

## RC900



- Pipe support sleeve for plastic pipe and RC push fittings.  
\*15x1,7 polybutylene pipes R986, R986N, R986B and R986R.

PRODUCT CODE	CL	SIZE
RC900Y012	V	12x1,1
RC900Y015	V	*15x2
RC900Y022	V	15x2,5
RC900Y016	V	16x1,5
RC900Y017	V	16x2
RC900Y018	V	16x2,2
RC900Y019	V	18x2
RC900Y020	V	18x2,5
RC900Y021	V	20x2
RC900Y050	V	22x2



## PUSH FITTINGS INSTALLATION AND COMPONENTS

### ► Guarantee

All products and components supplied by Giacomini are subjected to several controls to guarantee the high quality, confirmed by the certification of the quality management system, complying with UNI EN ISO 9001:2000. All products and components supplied by Giacomini are subjected to the guarantee and to the responsibility indicated in the 1994/44/CE, 2001/95/CE and 85/374/CEE directives.

The guarantee is not valid in the following cases:

- 1) If the working conditions or the transported fluids are different from the prescribed ones.
- 2) If the fittings are used to distribute fluids, which are not compatible with the materials.
- 3) If defects, visually perceivable, are present at the installation time or during the pressure tightness test of the system.
- 4) If the installation instructions are not scrupulously followed and in particular, if the RP202 tongs of the suitable dimension are not used.
- 5) If the pipes connected to the fittings are made of not compatible material, or not compatible dimensions.
- 6) If the fittings are installed with components not manufactured by Giacomini, the guarantee is limited to the fittings and it is not extended to the system.



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