PLIABLE SANITARY DISTRIBUTION

GIACOMINI
Technology in Comfort

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SUMMARY

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PLIABLE
SANITARY DISTRIBUTION

Pliable sanitary Giacomini distribution

Sanitary distribution, since the last years is becoming more and more important in engineering, because of the continuos research for innovative and comfortable solutions, able to satisfy the increasing needs of the customers looking for maximun comfort and conserving water.

The bathroom is now one of the most important rooms of the house equipped with expensive ceramics and components, whitch in order to be exploited to their best, require distribution systems to be functional and long-lasting.

In a modern system, dangerous solderings of pipes must be eliminated, as they always present the risk of cracking with discharge of water, and which, to be repaired require the breaking of coverings and ceramics, with great damage and problems for screening the repairs.

Pliable sanitary distribution presented by Giacomini, using cross link **GIACOFLEX** Polyethylene pipe, combined with proper fittings and distribution manifolds equipped with regulating lockshields, is the solution preventing all those maintenance problems, providing advantages which have never been guaranteed by any other distribution system.

Advantages of the pliable sanitary system

1 Lack of incrustation

Pipes remain clean for a long period, ensuring continuity of water flow, even when the system is not in continuous use.

2 Controlling the flow

Water flow to taps can be handled and proportioned as one likes, to avoid useless waste, optimizing the functioning of the tap.

When repairs are needed, it is possible to intercept the flow at the single connection without altering the functions of the remaining taps. In addition it is possible to select a more suitable diameter of pipe, to guarantee the best flow.

3 Pressure stability

With the use of sanitary distribution by manifolds, there is constant pressure to the connections, even when more taps are opened. This is a very important point for the correct operation of the mixing taps, and avoids the unpleasant drop of flow happening with different types of installations (for ex. in a traditional system, if the kitchen tap is opened while someone is taking a shower, water flow decreases, unabalancing the regulation of temperature)

4 Low noise

Pliable sanitary systems have a high level of acustic protection. Cross link Polyethylene pipe and sleeve render the distribution silent, thanks to the lack of soldered connections creating turbolences in the flow.

5 Maintenance possibility

In case of accidental damage of the pipes, it is possible to replace without breaking walls and ceramics. This operation can easily be performed if, when placing the pipe, elementary rules have been followed.

6 Saving time

In oder to carry out a pliable distribution, the time needed is less than one required for an other system. No special equipment is needed (soldering machines, tools, ect.), with consequent saving of time and money.

7 System with total guarantee

When installing a pliable Giacomini system, a total guarantee of the installation is provided. All components (distribution manifolds, pipes, fittings, adaptors) have been developed with great care, to have perfect consistency and maximum sealing.

Components for the design of the installation

Distribution manifolds

For the pliable distribution, Giaomini recommends the following two kinds of manifolds.
Article R585 in sizes of 3/4" and 1" equipped with built-in lockshields for interception and regulation of circuits. This manifold is the best solution for sanitary distribution and the best one for handling flow and pressure, allowing water saving and good operation of the taps.
Article R580 in size of 3/4" and 1", without regulation, is widely used in the cheaper installation, where a limited cost of the components is required.
For connection of the manifolds to the main distribution, reducers **R593** and plug **R592** are available, in addition to plug **R594** for closing the manifold outlets which are not used. Reducers **R593D** and plug **R592D** with self-sealing are also available.

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▸ Manifolds cabinets

Manifold can be positioned in the plastic cabinets **R584** or **R595** series, with cover and screws. These cabinets are suitable for being built in thin walls, due to their moderate depth. Metallic cabinet **R513A** are also available, with the cover which can be faced with ceramic tiles.

Cabinet	Dimension	Manifold	Brackets
R584	457 x 246 x 80	R580/R585	included
R584E	335 x 280 x 85		
R584F	475 x 280 x 85		
R595A	370 x 300 x 90	R580/R585	R598C – 3/4″ R598D – 1″
R595B	520 x 300 x 90		
R595C	670 x 300 x 90		
R593A	500 x 320 x 110	R580/R585	R588C R588E

▸ Interception valves

On the connection to the distribution line, it is always recommended to fit an interception ball valve, necessary when maintenance is required. Valves R603 with T-Handle can be used, as well as **R604** with slot adjustement and **R259D** ball valves.

Distribution fittings

For connection to taps, single and double fittings are available. Single fitting **R573R** has 1/2" female connection and is used for distibution with 15x2.5 and 16x2.2 pipes. To fitting **R573D** with1/2" female connection can be fitted pipes with a dimeter up to 18x2.5mm, necessary when connecting to high flows (for ex.washing machines, dish-washers, hydro-massage basins, ect.) Fittings **R573D** has a connection protruding from the wall, allowing connection to taps without the need of steel extentions. This fitting, also presents the advantage of being able to be fitted brackets, solving the problems arising from the various types of installations. Double fitting **R544** is used for both single pipe systems and for connections requiring

large flows with two pipes of the same diameter. Giacomini fittings can be installed on ny kind of wall, with bricks or prefabricated, using the correct brackets.

Distribution pipes

For sanitary installations cross link Polyethylene **GIACOFLEX** pipes are avaiable in sizes of 15x2.5, 16x2.2 and 18x2.5 supplied with blue sleeve article **R993**, and with red sleeve article **R994**.
Specific information on features of the pipe is avaiable in technical leaflet n. 4440.

▸ Brackets

For the assembly of built in fittings, suitable brackets can be used, made to satisfy any need. To fit article **R573R**, bracket **R578B**, must be used. Assembly of **R573D** can be performed with the adjustable bracket **R578E, R578F, R578Z**. When being assembled to thin walls with hollow space, special brackets **R596** and R597 can be used. The brackets listed above can be used only once, fitted to the wall permanently; more

practical, with the possibility of being used more than once is the installation bar **R579** suitable for fittings **R573D** and **R554**. It is supplied in 3 mt. length, and can be cut in pieces according to oneís needs.

▸ Spare components

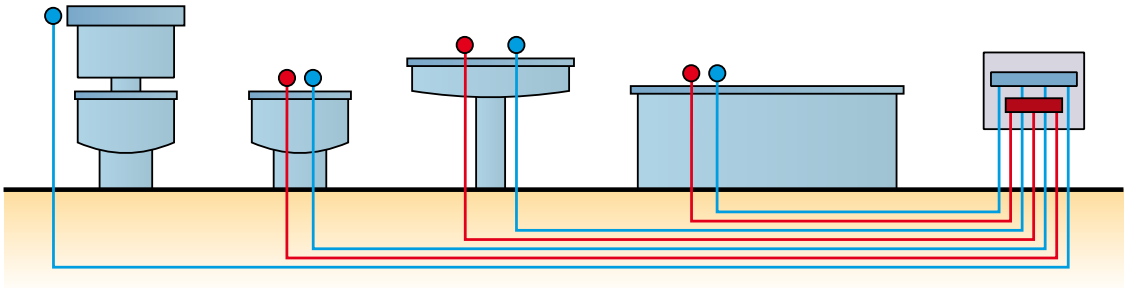
In order to perform a pliable correct sanitary installation, Giacomini offers to plumbers a wide range of components and accessories.

Available articles are: **R577** and **R577D** end pieces for use during assembly, **R523** self-sticking set of labels to name the circuits on manifolds, **R998R** and **R998B** protection covers for red and blue sleeve to avoid any foreign particle i. e. concrete, to go inside between pipe and sleeve: **R989** reduces for the sleeve used to connect 18x2.5 pipe to distribution fittings. **R549** angle pipe guide to guarantee correct bending radius of pipes; **R997** pipe protection cap; **R990** pipe cutter; **R576** traction fittings for replacement of pipes accidentally damaged.

TYPES OF INSTALLATIONS

Distribution with single connections

This system is made by distribution manifolds equipped with the same number of connection as the connection to be used. Each tap is fitted to two pipes, one for hot and the other for cold water, directly to the manifold placed in the cabinet. Some advantages of this kind installation is the possibility to intercept the circuits for servicing (if a manifold with built in lockshields has been used), continuity and the best setting of the flow, and finally the possibility to use different diameters of pipe based on the requirement of the taps.



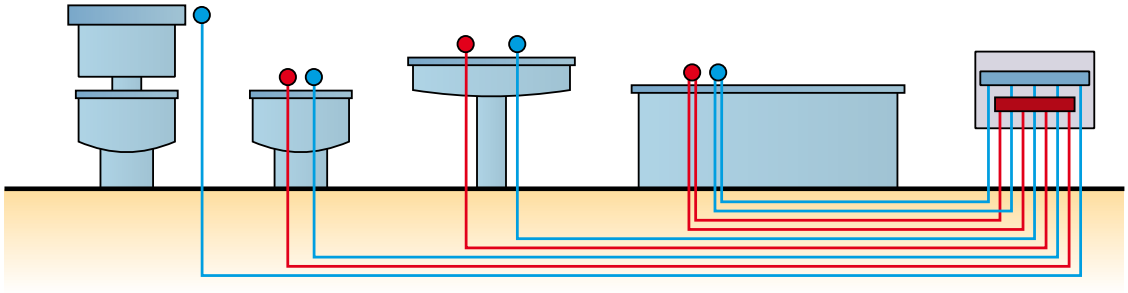
To carry out the installation of a bathroom with one wash-basin, one bath-basin, a WC, a shower, a bidet, a washing-machine with this kind of a system, the following components can be used:

- 1 cabinet with suitable brackets
- 1 manifold **R585/R580** with 5 outlets
- 1 manifold **R580/R585** with 4 outlets
- 2 plugs **R594 4** for manifold outlets
- 7 fittings **R573D** size 1/2"x16
- Giacoflex pipe **R993** and **R994** (15x2.5 or 16x2.2)
- 14 adaptors **R179** 16x(15x2.5) or 16x(16x2.2)
- 2 plungs for manifold **R592**
- 2 interception valves (**R259D**, **R603** or **R604**)
- 4 protection for sleeves **R998B** (blue)
- 3 protection for sleeves **R998R** (red)

Plus brackets for distribution fittings

Large flow distribution

This kind of solution is widely is widely used when the supply taps require lage flows, i.e. hydro-massage basins, garden valves, connections for hotel kitchens or dining-rooms. It is carried out when pipes of small diameter have been used i.e. a pipe of 15x2.5 or 16x2.2. It is done using double fittings **R544** with both connections fitted to the distribution manifold. In this way the distribution manifold. In this way the advantage is that the water goes to the fitting from two pipes, ensuring lager quantity and lower loss of pressure than with a single pipe of the same diameter.



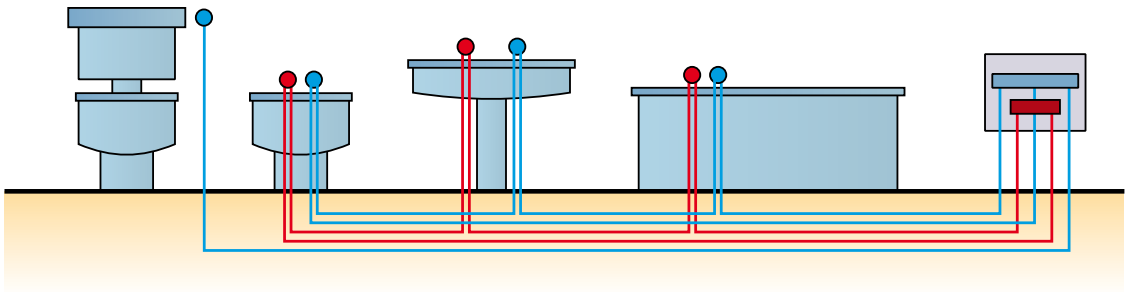
Distribution with closed circuit

In this case supply pipes are not individually connect to the manifold.
There is only one pipe for hot water and one for cold water going through all the connections creating a closed circuit. This kind of distribution has the advantage of requiring a low amout of pipe, the best solution where retrofi installations are concerned, or when the avaiable space on the wall is limited. This installation is carried out using built in double fittings **R544**. It has the advantage of having balancing of the pressures, and allowing large flow rates to the taps. With this kind of installation, when carring out maintenance, it is imperative to intercept the circuit with the lockshield, while single connection system, the interception is made on each supply.

To carry out the installation of a bathroom with i.e. one wash-basin, one WC, a shower, a bidet, a washing-machine with this kind of distribution, the following components can be used:

- 1 cabinet with suitable brackets
- 1 manifold **R585/R580** with 4 outlets
- 1 manifold **R580/585** with 3 outlets
- 2 plugs **R594** for manifold outlets
- 6 double fitting **R544** size 1/2"x16
- 1 fitting **R573D** size 1/2"x16 (for the WC)
- Giacoflex pipe **R993** and **R994** (15x2.5 or 16x2.2)
- 18 adaptors **R179** 16x(15x2.5) or 16x(16x2.2)
- 2 plugs for manifold **R592**
- 2 interception valves (**R259D**, **R603** or **R604**)
- 3 protection for sleeves **R998B** (blue)
- 2 protection for sleeves **R998R** (red)

Plus brackets for distribution fitting



INSTALLING A PLIABLE SYSTEM

Performance of a Giacomini pliable system is very easy and quick. To make an efficient job it is necessary to follow some elementary rules which guarantee operation of the system and ensure that maintenance can be made at a later date or the replacement of individual components. The logical procedure for carryng out the installation is first to position the distribution cabinet in an easy to reach location, but screened for appearance purposes. In some cases it is recommended to place the cabinet in store rooms close to the bathroom, behind mirrors or doors. After installing the cabinet, the brackets must be placed in position ready to accept the wall fitting. The last step is to position the distribution pipes with their connections to manifolds and distribution fittings.

Setting precautions

Setting operations must be carried out following the simple rules listed below:

1) positioning of the fittings must be done paying particular attention to the interaxis of the connections and their level, to guarantee the aestethic look after the assembly of the taps.

2) Pipe must be cut precisely and perpendicularly to its axis using art. **R990**.

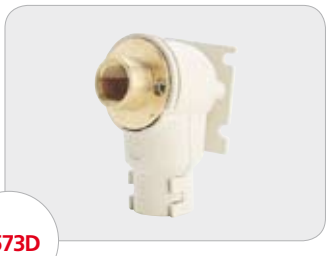
3) When installing a pipe with sleeve, avoid making the curves too tight; it is recommended to have a radius whicht must be at least 8 times higher than the outsite diameter of the pipe used.

4) When connecting the pipe to the fittings, use the correct adaptors and ensure the O'Rings seals are lubricated.

5) When the installation is finished, it is recommended to submit the system to a pressure test, to establish if there are any leaks. For the proper execution of the test ensure the system has been fully vented, then pressurize it to a pressure 1.5 times more than the operating pressure, and after 30 minuts, check the system to see if there are any leaks or loss of pressure. When testing close the connections using art. **R577D**.

6) Once the system has been successfully tested, then cover the pipes with concrete, to avoid damaging or compressing the sleeves.

R73K



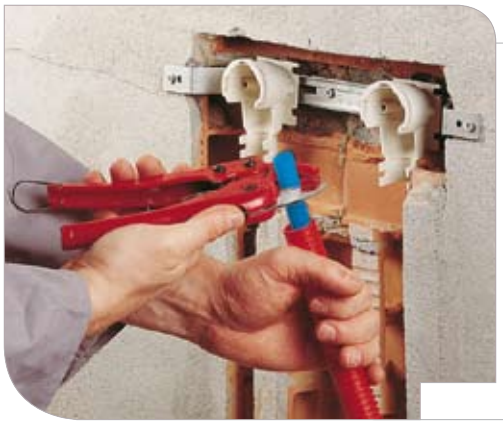
R573D

R544

Sequence of installation

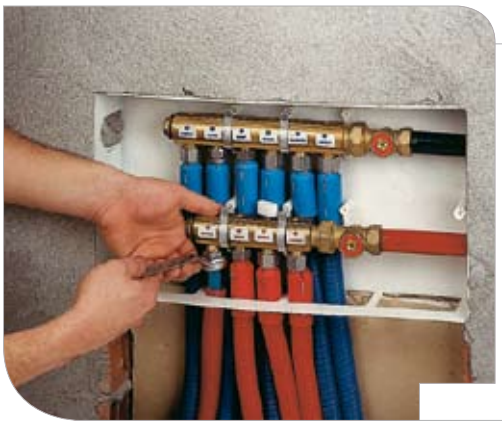
After selecting the required position on the wall for drains and pipes, proceed with the assembly of the fittings using the correct brackets.

Correct position of the connections is done using a sprit level.

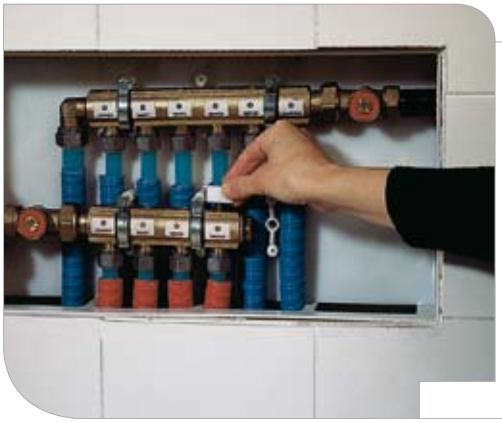


For a correct positioning of the fittings, it is necessary the pipe is cut precisely and perpendicularly with cutters R990.

Tightening of the nut of the adaptors is easier when using the end piece R577 and key R131.



Once the pipe is cut with the right lenght, proceed with the connection to the manifold. Ends of the pipe are protected with the covers R998.



When assembly is carried out, set the single circuits with R73K key.

Use of the installation bar

Bar R579 is equipped with holes to allow the installation of built-in wall fittings with different interaxis. Its use is practical in standard installations and necessary when fixed brackets cannot be used, i.e. when there are suspended basins, of when there is the need to install theree wall fittings close to each other, tho for connection to the wash basin and one to the wash vasin and one tothe washing machine. This bar also has the advantage of being able to be used more than once, and being re-used the installation is finished.

Position the fittings to the bar with the desired interaxis.

The bar is set to the wall using expansion dowels and a spirit level for the correct position.

Once the bar is fixed, proceed in connecting the pipes to the fittings.

When the assembly is carried out, perform a pressure test, and after that block the fittings and the protection covering of the sleeves with concrete.

Replacement of a damaged pipe

An important advantage of the pliable Giacomini sanitary system is the opition to replace at any time the pipe without damaging walls and furnitures.
Following the selection of the connection to be fixed, using the proper adaptors, disconnect the pipe from the manifold by untightening the nut of adaptor. Now using the suitable traction fitting **R576** connect the damaged pipe to the new one. This operation is performed by fully tightening with a 16mm key the traction fitting to the pipe.
By using the piece **R577**, pull out the damaged pipe from the connection, and insert on the other side the new pipe. When the damaged pipe is completely out, take the **R576** off and cut the end of the pipe damaged by the thread of the traction fitting. Restore the connection using a new adaptor. Following assembly to the wall fitting, cut from the side of the manifold the pipe in the correct length and proceed to the connection with a new adaptator. The cut of the pipe must be precise, and therefore it is suggested to use the pipe cutter **R990**.
Re-open the lockshield and check for any water leakage. We recommend that two persons are employed to carry out the replacement of the pipes in a swift and efficient manner.

Close the lockshield, untighten the nut of the adaptator and disconnect the pipe to be replaced.

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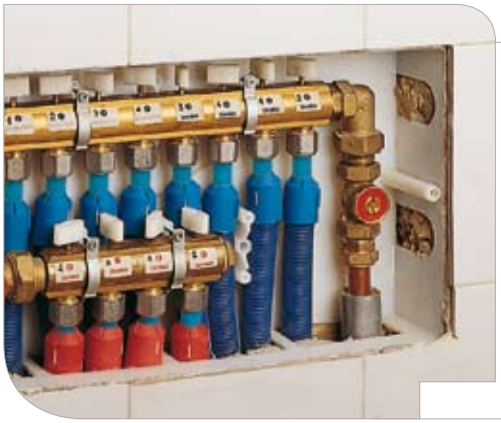
Connect the new pipe to the damaged one with the R576 traction fitting.

While the pipe is pulled out from the wall fitting side, insert the new pipe on the other side.



When replacement is over, re-open the lockshield and re-fit the cover of the cabinet.

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