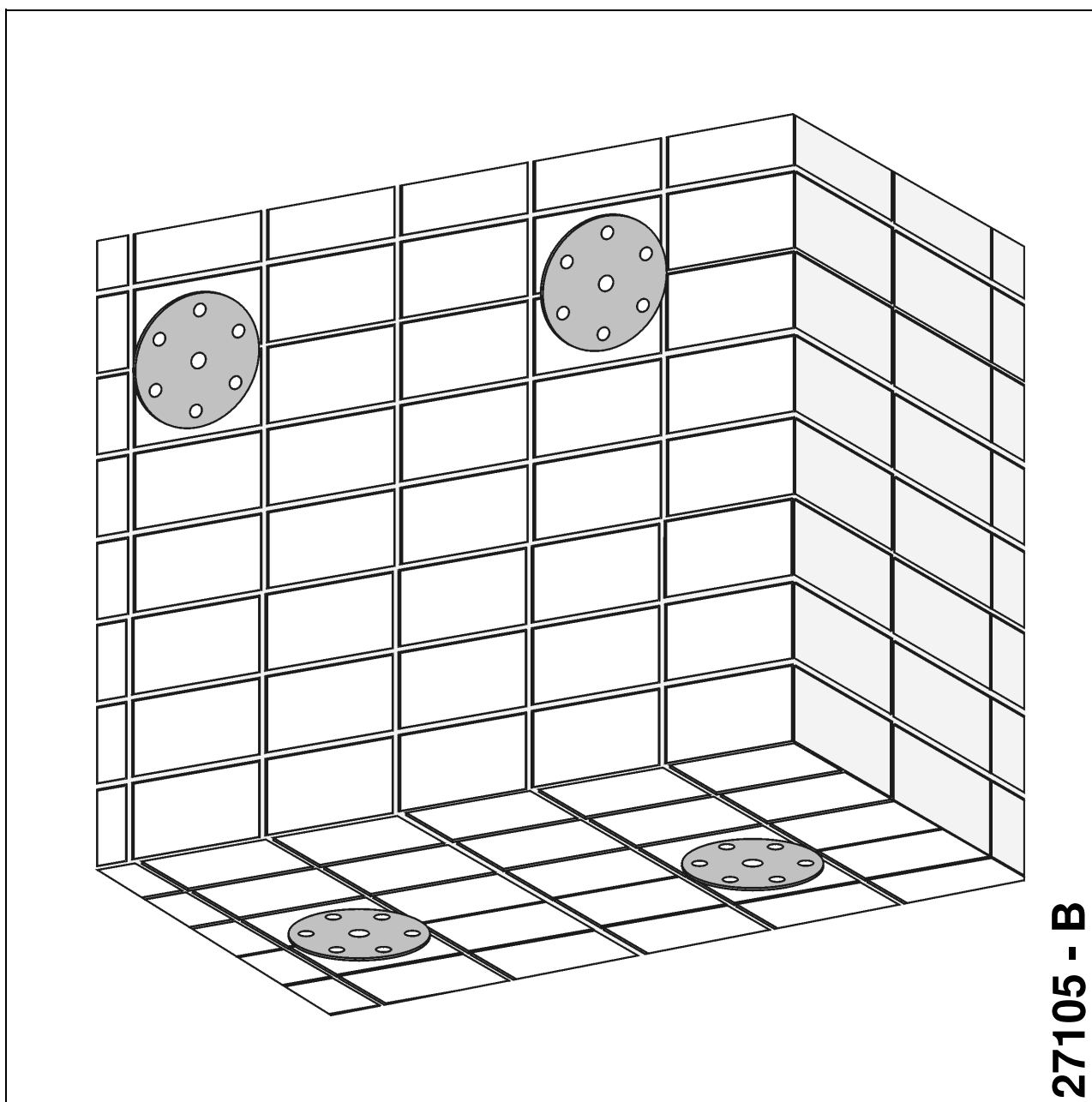


## rio Grande

**GB** Operator's Manual

Translation of the original



27105 - B

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## **1 General information / proper use**

### **1.1 General information**

As part of its wide assortment of swimming pool accessories, **fluvo** offers the *rio Grande* type massage jet. It is suitable for installation in large swimming pools as well as private pools.

The *rio Grande* type massage jet is made of ABS / PVC and has a tile pattern gauge for problem-free installation.

The installation kit consists of an installation housing covered with a plate. The installation housing has an attached central floor passage leading vertically down or optionally with a 90° elbow.

All parts in contact with media are designed for water quality according to DIN 19643.

The *rio Grande* massage jet represents the state of the art. It has been manufactured with the greatest care and is subject to continuous quality control.

This Operator's Manual contains important information to ensure the *rio Grande* massage jet is operated safely, properly, and economically. Your strict observance is necessary to prevent dangers and ensure a long service life for the massage jet.

This Operator's Manual does not take into consideration local requirements. The operator is responsible for ensuring these requirements are met, including personnel retained to assemble the system.

### **1.2 Proper use**

The entire system or parts of it are not suitable for use in other systems. Accordingly we explicitly instruct you only to use such parts or the entire system for their intended purpose. Massage jets must not be operated beyond the values specified in the technical data. If you have any questions, please contact your Customer Service representative or the manufacturer.

## 2 Safety instructions

Please read this Operating Manual carefully before installing the *rio Grande* massage jet and placing it in operation. Make certain you have understood everything.

### 2.1 Safety instructions for the operator

1. Electrical equipment must only be installed and serviced by qualified personnel. Applicable safety regulations and equipment requirements at the installation site must be observed. The term qualified professional (Fachkraft) is defined in **VDE 0105** and **IEC 364**. This Operator's Manual does not contain any information for non-qualified persons. We draw explicitly to your attention that the stipulations of the EC prohibit the use of non-qualified persons on electrical systems.
2. In Germany, the installation requirements of **VDE 0100 Part 702** must be observed during and after installation.
3. Repairs of any nature must only be made by qualified professionals. The pool must be emptied if necessary to make repairs.
4. The operator must ensure that
  - the Operator's Manual is always available for operating personnel
  - the instructions in the Operator's Manual are observed

All parts that come in contact with medium are resistant up to an absolute salt content of 0.75% (4500 mg/l Cl<sup>-</sup>). If higher concentrations of salt are present, please contact the manufacturer.

## 3 Description of the device / general technical data

**The *rio Grande* massage jet is delivered in 2 modules:**

1. Installation kit
2. Preassembled unit

### 3.1 Technical data

Material:	ABS / PVC
Operating pressure:	0.5 - 0.8 bar
Max. perm. pressure:	1.0 bar
Compressed air connection:	DN 65
Compressed air connection:	DN 15

	Wall installation	Floor installation
rio Grande	24 - 42 m <sup>3</sup> /h	48 - 60 m <sup>3</sup> /h

## 4 rio Grande massage jet

### 4.1 Shuttering for vertical air feed / concrete tile pools and concrete liner pools

Precisely determine the centre of the massage station. Drill a hole for the PVC pipe (R)  $d = 75 \text{ mm}$  in the desired position on the outer form wall and a hole with  $d = 30 \text{ mm}$  for the air hose (H).

Precisely align the installation kit (03.1) in the desired position. It will not be possible to make any corrections later!

At this position, fasten the installation kit (03.1) on the pool side of the form walls using the locking screws (V) and onto the reinforcement rods. Before the concrete is brought in, the installation kit (03.1) must be locked in place so it cannot move.

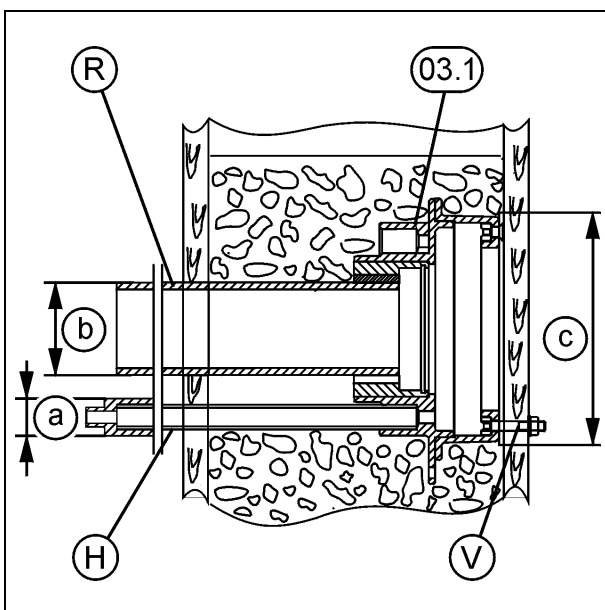


Fig. 1

$a = \varnothing 30 \text{ mm}$   
 $b = \varnothing 75 \text{ mm}$   
 $c = \varnothing 195 \text{ mm}$

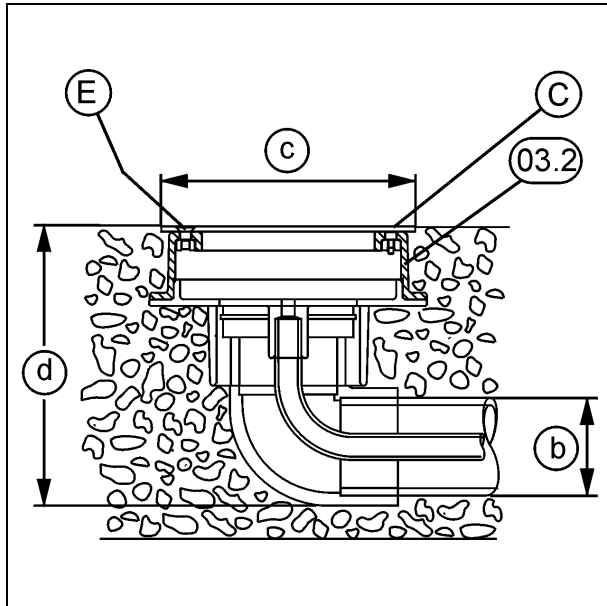
*H* Air hose  
*R* PVC pipe  
*V* Locking screw

*03.1* Installation kit

## 4.2 Shuttering for 90° air feed / concrete tile pools and concrete liner pools

Precisely determine the centre of the massage station. Precisely align the installation kit (03.2). It will not be possible to make any corrections later!

Before the concrete is brought in, the installation kit (03.2) must be locked in place so it cannot move. Therefore the installation kit (03.2) must be fastened in the desired position within the mould and onto the reinforcement bars.



$b = \varnothing 75 \text{ mm}$   
 $c = \varnothing 195 \text{ mm}$   
 $d = 113 \text{ mm}$

*C* Mud cover  
*E* Fastening screw

03.2 Installation kit

Fig. 2

## 4.3 Shuttering removal / concrete tile pools and concrete liner pools

see Fig. 2

After the shuttering has been removed from the pool, the mud cover (C) can be removed. To do this, remove the corresponding fastening screws (E).

#### 4.4 Installation process / concrete tile pools

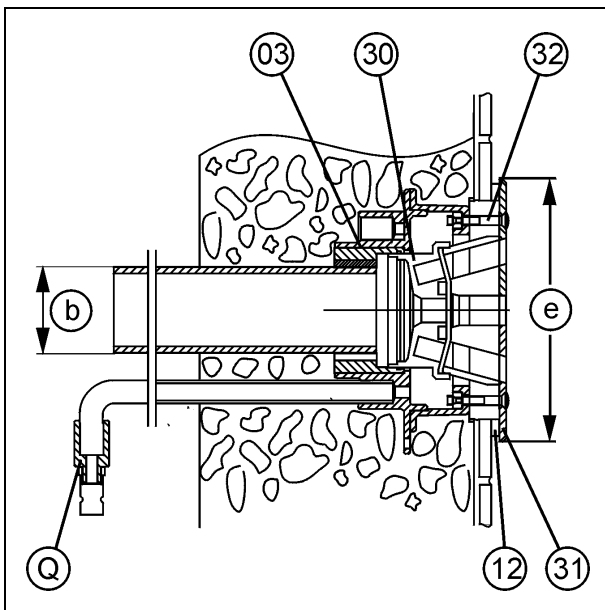
The nozzle (30) is inserted in the same manner for the version with the vertical air feed and the version with the 90° air feed.

After tiling work is complete, push the nozzle (30) into the installation kit (03) and cover it with the clamp gasket (12) and screen (31) for tiles. Then fasten the screen (31) onto the installation kit (03) with the corresponding screws (32).



#### Important!

The air valve (Q) must be installed above the water level of the pool. Keep the air line as short as possible.



$b = \varnothing 75 \text{ mm}$   
 $e = \varnothing 230 \text{ mm}$

- |    |                  |
|----|------------------|
| 03 | Installation kit |
| 12 | Clamp gasket     |
| 30 | Nozzle           |
| 31 | Screen           |
| 32 | Fastening screw  |

Fig. 3

## 4.5 Installation process / concrete liner pool

see Fig. 4 and Fig. 5

The nozzle (34) is inserted in the same manner for the version with the vertical air feed and the version with the 90° air feed.

Place the clamp gasket (14) between the pool liner (L) and installation kit (03), clamp with clamp ring (15) and fasten the screws (35). Then cut out the liner (L) inside the clamp ring (15).



### Important!

The air valve (Q) must be installed above the water level of the pool. Keep the air line as short as possible.

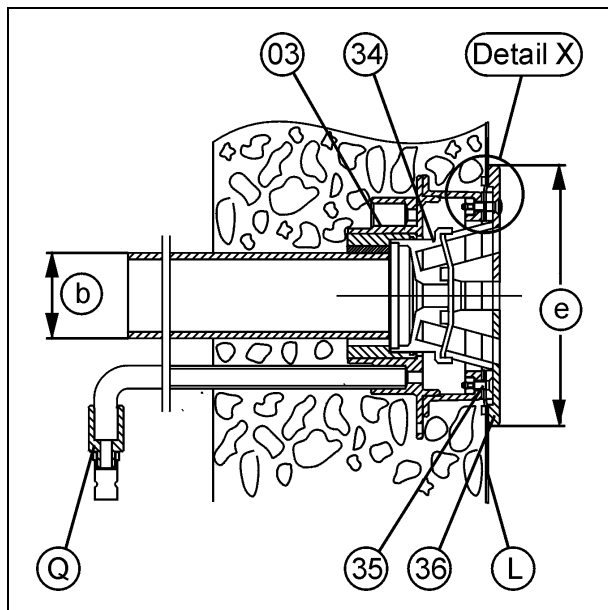


Fig. 4

Push the nozzle (34) into the installation kit (03) and cover with the screen (36) for liner. Then fasten the screen (36) onto the installation kit (03) with the corresponding screws (37).

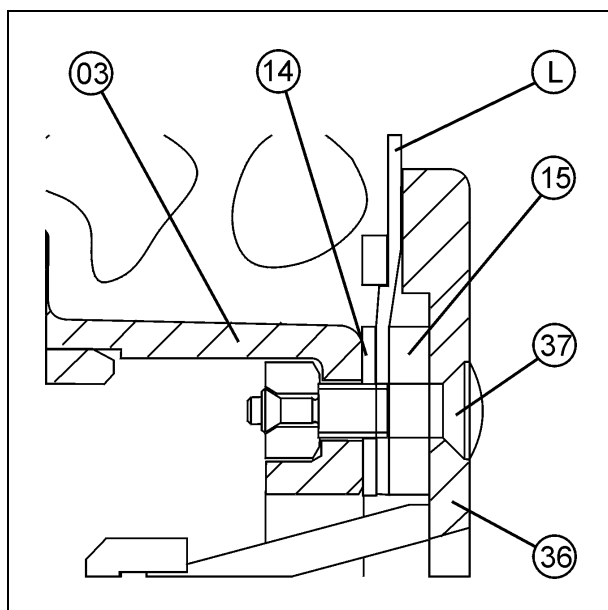


Fig. 5

$b = \varnothing 75 \text{ mm}$   
 $e = \varnothing 230 \text{ mm}$

03 Installation kit  
14 Clamp gasket  
15 Clamp ring  
34 Nozzle  
35 Fastening screw  
36 Screen  
37 Fastening screw

L Pool liner  
X For detail see Fig. 5



## 4.6 Installation process / pre-fabricated pools

see Fig. 6 and Fig. 7

Using the template from the pool wall (A), cut out an opening  $d = 190\text{ mm}$  and holes for the stud bolts (G) with  $d = 9\text{ mm}$ .

Set the clamp gasket (39) in place, insert the stud bolts (G) with clamp ring (38) into the holes provided for them, secure in place from behind with the hold ring (41) and fasten onto the pool wall (A).



### Important!

The air valve (Q) must be installed above the water level of the pool. Keep the air line as short as possible.

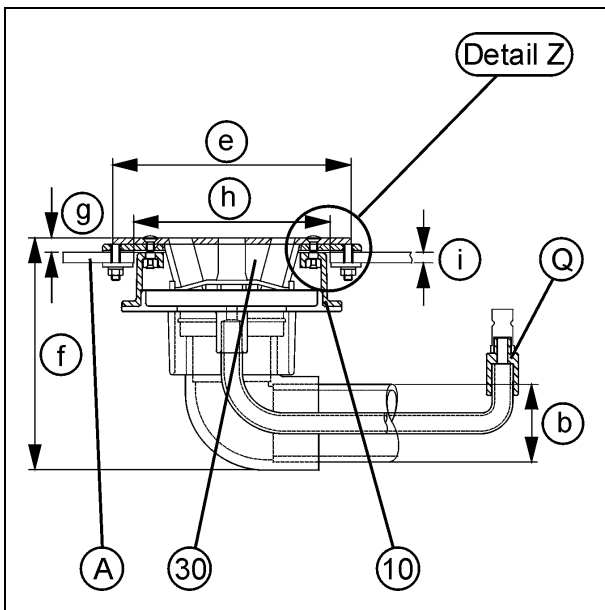


Fig. 6

Fasten the installation kit (10) with the nozzle inserted (30) onto the clamp ring (38). Set the screen (31) in place and secure with screws (37).

- $b = \varnothing 75\text{ mm}$
- $e = \varnothing 230\text{ mm}$
- $f = 234\text{ mm}$
- $g = 14\text{ mm}$
- $h = \varnothing 190\text{ mm}$
- $i = \text{max. } 10\text{ mm}$

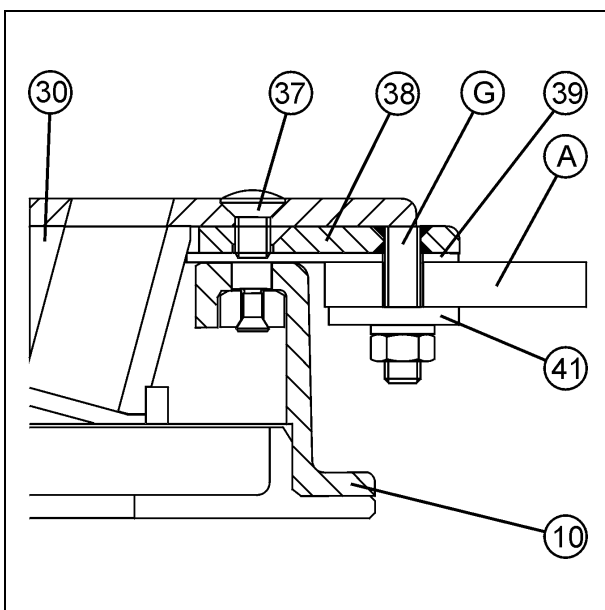


Fig. 7

- A Pool wall
- G Stud bolt
- Z For detail see Fig. 7

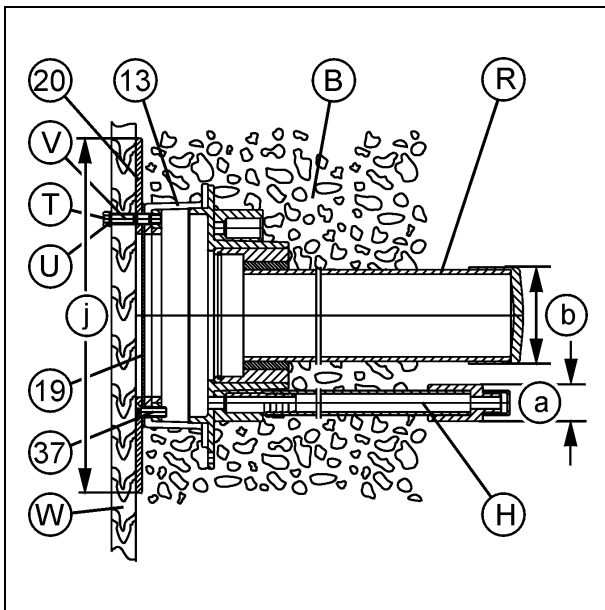
- 10 Installation kit
- 30 Nozzle
- 31 Screen
- 37 Fastening screw
- 38 Clamp ring
- 39 Clamp gasket
- 41 Hold ring

#### 4.7 Shuttering / concrete pool with brush-applied sealant

Precisely determine the centre of the massage jet. Drill a hole for the PVC pipe (R)  $d = 75 \text{ mm}$  in the desired position on the outer form wall (W) and a hole with  $d = 30 \text{ mm}$  for the air hose (H).

Precisely align the installation kit (13) in the desired position. It will not be possible to make any corrections later!

At this position, fasten the installation kit (13) on the pool side of the form walls (W) using the locking screws (V) and onto the reinforcement rods. Before the concrete (B) is brought in, the installation kit (13) must be locked in place so it cannot move.



$a = \varnothing 30 \text{ mm}$   
 $b = \varnothing 75 \text{ mm}$   
 $j = \varnothing 290 \text{ mm}$

<i>B</i>	<i>Raw concrete</i>
<i>R</i>	<i>Pipe</i>
<i>T</i>	<i>Nut</i>
<i>U</i>	<i>Distance washer</i>
<i>V</i>	<i>Locking screw</i>
<i>W</i>	<i>Form wall</i>
<i>13</i>	<i>Installation kit</i>
<i>19</i>	<i>Clamp gasket</i>
<i>20</i>	<i>Flange</i>
<i>37</i>	<i>Fastening screw</i>

Fig. 8

#### 4.8 Shuttering removal / concrete pool with brush-applied sealant

see Fig. 8

To remove the shuttering, remove the locking screws (V), nuts (T) and distance washers (U).

#### 4.9 Installation process / concrete pool with brush-applied sealant

The swimming pool can be lined with brush-applied sealant (S) up to the inner contour of the flange (20) and installation kit (13).

Then the pool can be tiled on the inside. Apply a layer of mortar (M) and tiles (F) almost up to the opening of the flange (20). Cut out the clamp gasket (19) on the inside along the flange (20)!

After tiling work is complete, push the nozzle (30) into the installation kit (13) and cover it with the screen (31).

Then fasten the screen (31) onto the installation kit (13) with the screws (32).



#### Important!

The air valve (Q) must be installed above the water level of the pool. Keep the air line as short as possible.

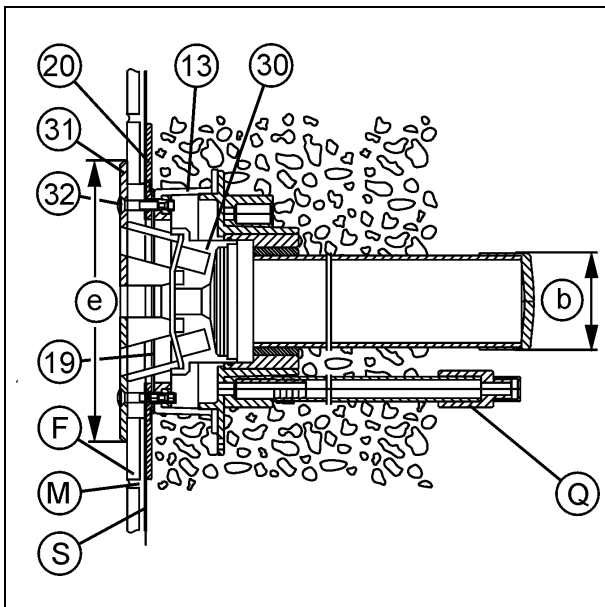


Fig. 9

$$b = \varnothing 75 \text{ mm}$$

$$e = \varnothing 230 \text{ mm}$$

F Tiles  
 M Mortar layer  
 S Brush-applied sealant

13 Installation kit  
 19 Clamp gasket  
 20 Flange  
 30 Nozzle  
 31 Screen  
 32 Fastening screw

## 5 Spare parts rio Grande massage jet

### 5.1 Tiled concrete pool

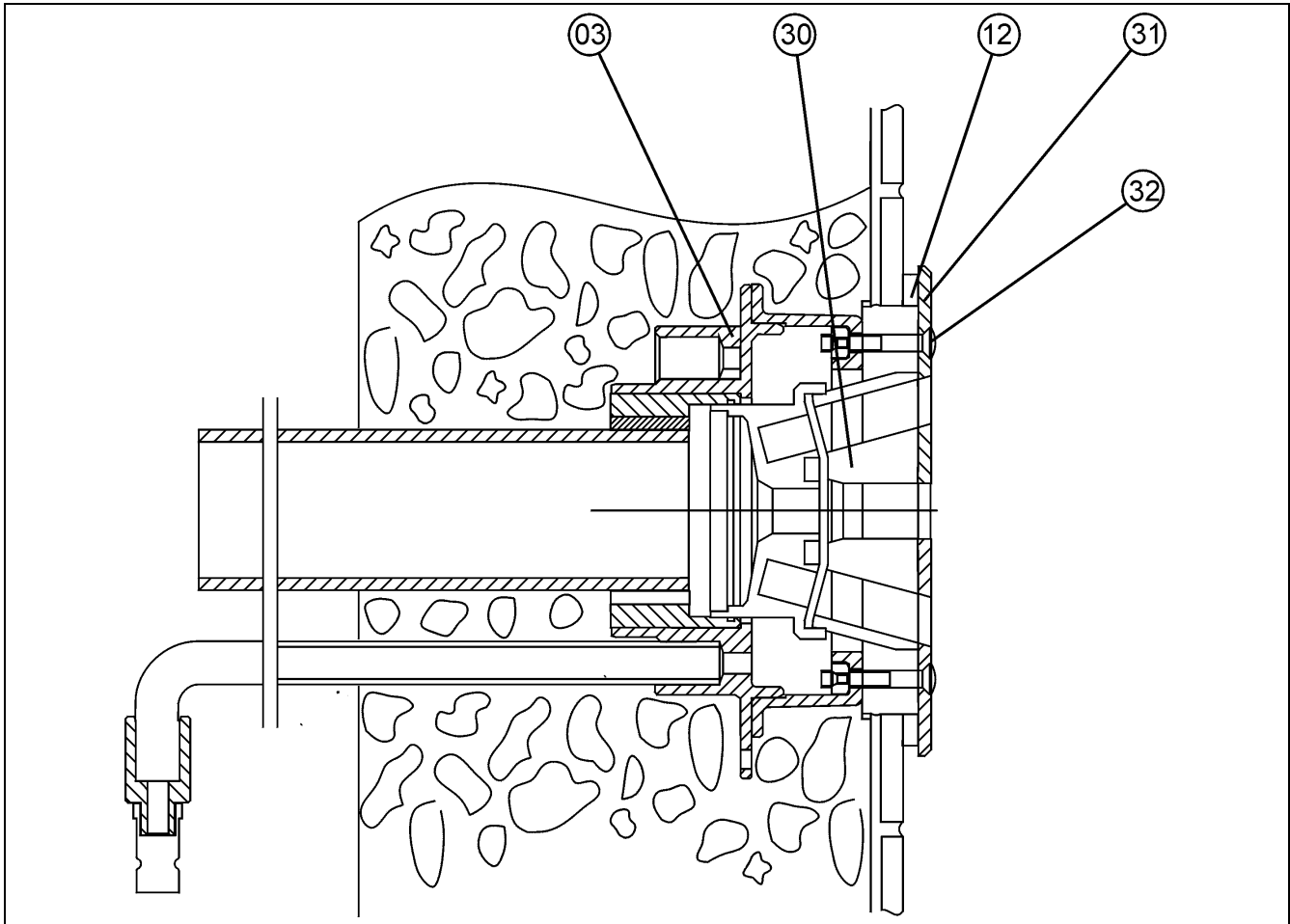


Fig. 10: Tiled concrete pool

Item	Order No.	Description	Pieces	Comment
3.1	91563	Installation kit, complete / wall installation	1	
3.2	91352	Installation kit, complete / floor installation	1	
12	22225	Clamp gasket	1	
30	91565.1	Nozzle	1	with screen
31	51077	Screen	1	
32	10129	Fastening screw	6	M8x80
	91565	Assembly kit, complete / wall installation	1	
	90337	Assembly kit, complete / floor installation	1	

## 5.2 Concrete liner pool

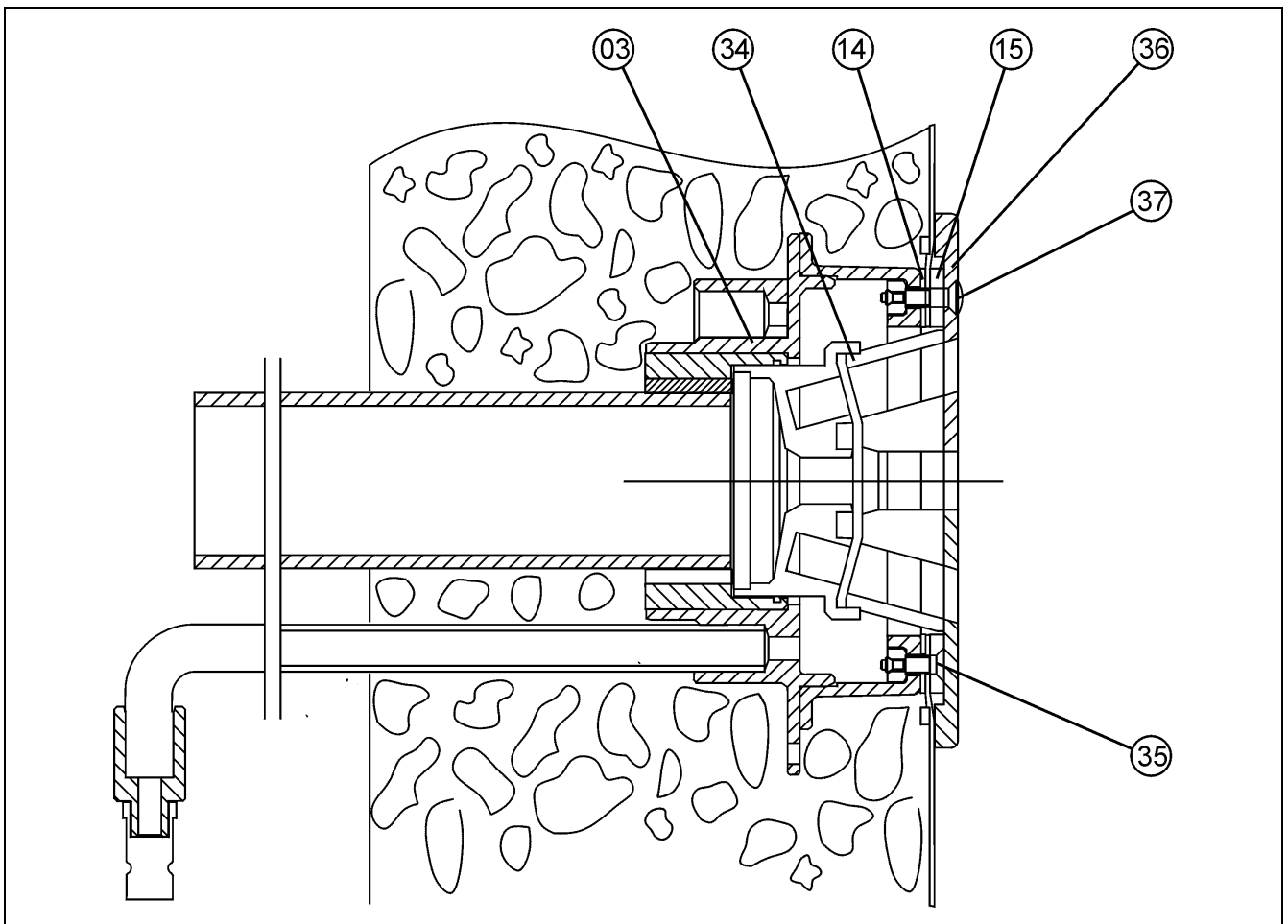


Fig. 11: Concrete liner pool

Item	Order No.	Description	Pieces	Comment
3.1	91563	Installation kit, complete / wall installation	1	
3.2	91352	Installation kit, complete / floor installation	1	
14	22239	Clamp gasket	1	
15	48462	Clamp ring	1	
34	91566.1	Nozzle	1	with screen
35	10140	Fastening screw	6	M8x12
36	51069	Screen	1	
37	10134	Fastening screw	6	M8x25
	91566	Assembly kit, complete / wall installation	1	
	90338	Assembly kit, complete / floor installation	1	

### 5.3 Pre-fabricated pool

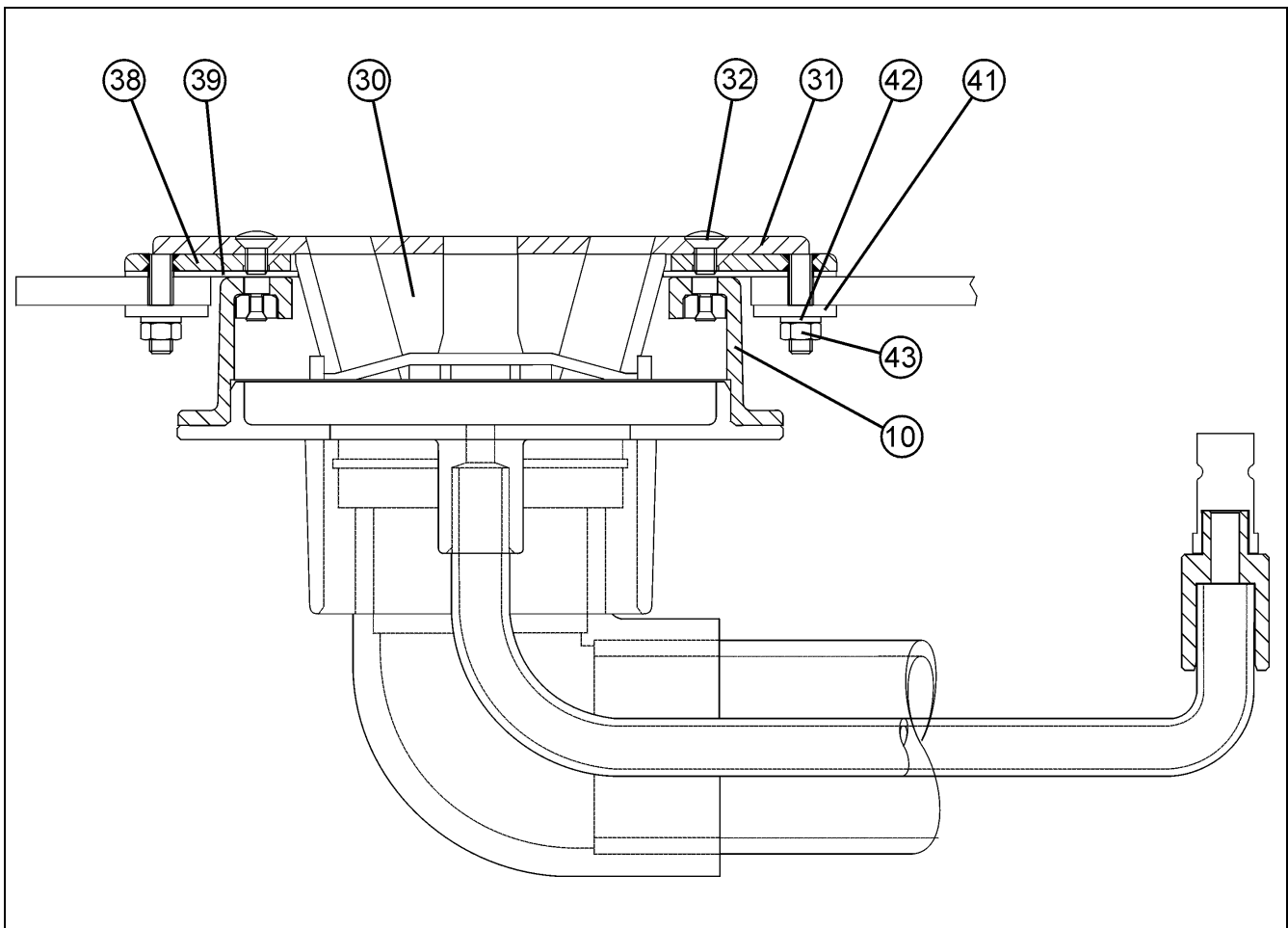


Fig. 12: Pre-fabricated pool

Item	Order No.	Description	Pieces	Comment
10	92113	Installation housing	1	
30	91565.1	Nozzle	1	with screen
31	51077	Screen	1	
32	10129	Fastening screw	6	M8x80
38	46010	Clamp ring	1	
39	22229	Clamp gasket	1	
41	55640	Hold ring	1	
42	12392	Distance washer	8	
43	12181	Nut	8	M8
	93018	Installation kit and assembly kit, complete / wall installation	1	
	90339	Installation kit and assembly kit, complete / floor installation	1	

### 5.4 Concrete pool with brush-applied sealant

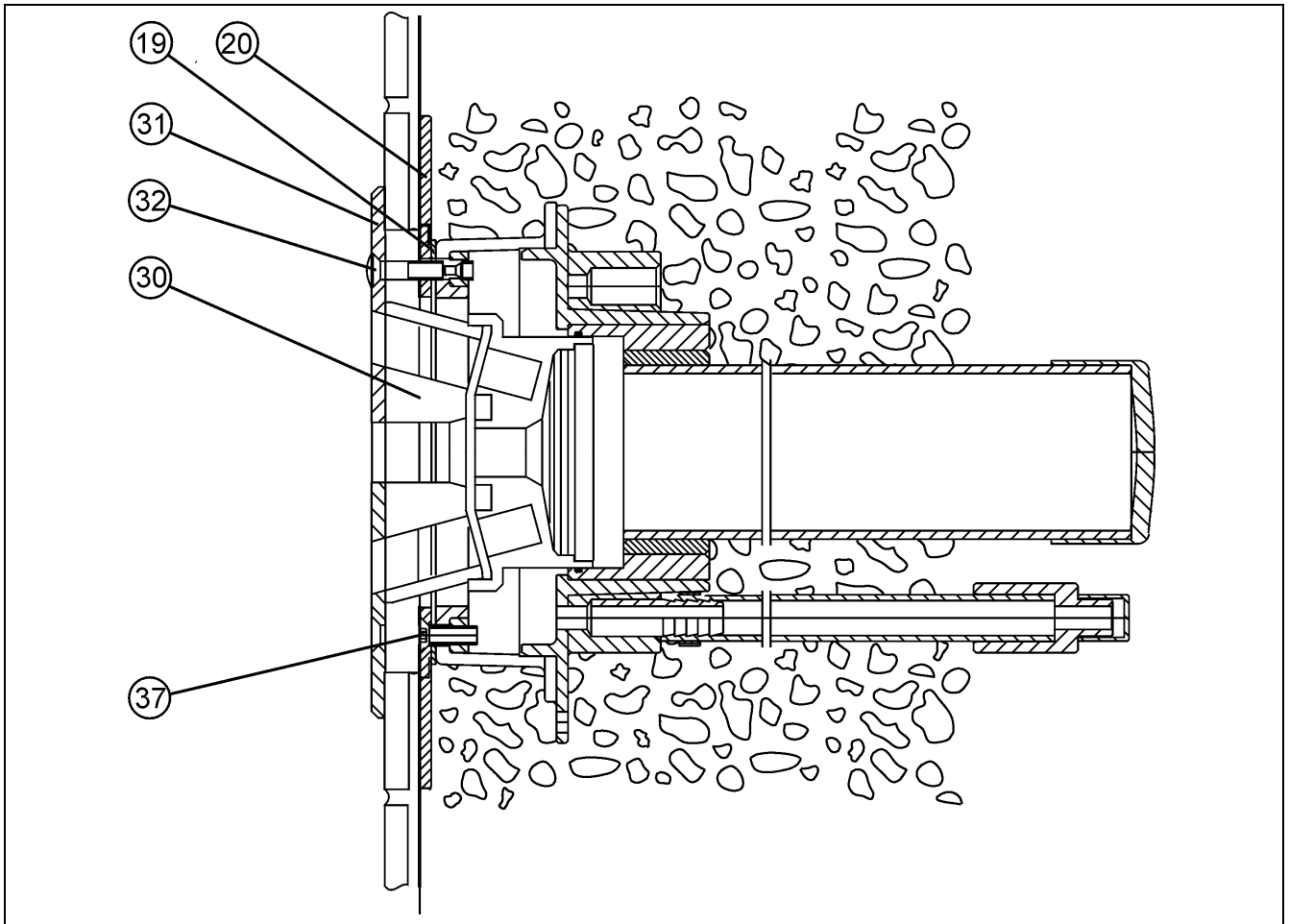


Fig. 13: Concrete pool with brush-applied sealant

Item	Order No.	Description	Pieces	Comment
19	22246	Clamp gasket	1	
20	59310	Flange	1	
30	91565.1	Nozzle	1	with screen
31	51077	Screen	1	
32	10129	Fastening screw	6	M8x80
37	10134	Fastening screw	3	M8x25
	91565	Assembly kit, complete / wall installation	1	
	92698	Installation kit, complete / wall installation	1	

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