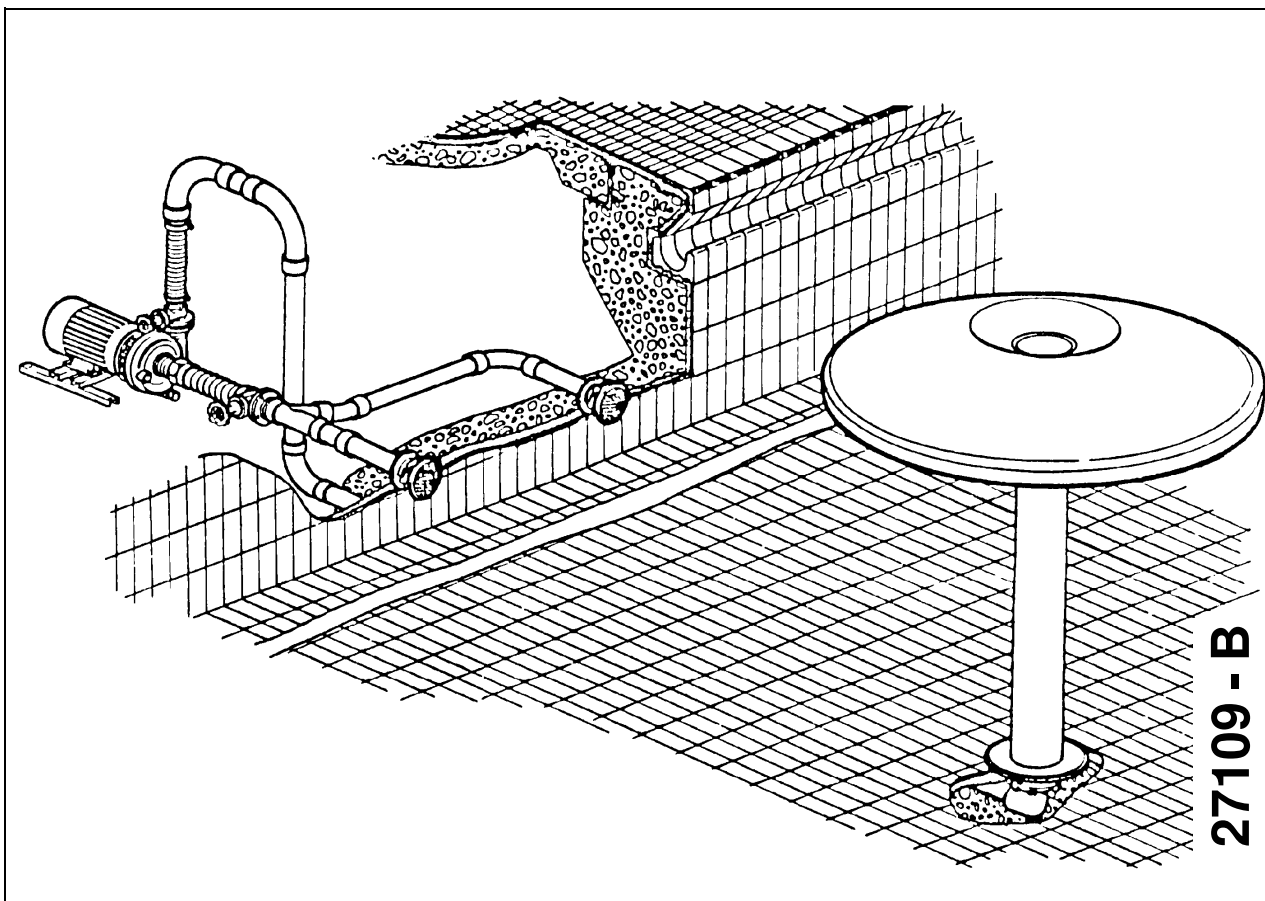


# Mushroom

**GB** Operator's Manual

Translation of the original



27109 - B

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## 1 General information

This mushroom 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 mushroom is operated safely, properly, and economically. Your strict observance is necessary to prevent dangers and ensure a long service life for the mushroom.

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.

## 2 Proper use

The mushroom was developed for use in public swimming pools. It can be used in both indoor and outdoor pools.

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.

The mushroom must not be operated beyond the values specified in the technical data (section 5). If you have any questions, please contact your Customer Service representative or the manufacturer.

## 3 Safety instructions

Please read this Operating Manual carefully before installing the mushroom and placing it in operation. Make certain you have understood everything.

The operator must ensure that

- the Operator's Manual is always available for operating personnel
- the instructions in the Operator's Manual are observed
- the mushroom is stopped immediately if any abnormal electrical voltages, temperatures, noises, vibrations, leaks, or other faults occur.

## 4 Description of the device

**fluvo** offers various mushrooms as swimming pool attractions. They are a valuable and attractive addition to any public pool. Pool-side parts are made of stainless steel and pool installation parts are made of bronze and PVC.

## 5 Technical data

<b>Connection</b>	DN 125 (PVC)	
<b>Material</b>	Installation housing	- 2.1096 / PVC (concrete tile pool or concrete pool with brush-applied sealant; also for subsequent installation) - 1.4571 (concrete liner pool)
	Fixing elements	1.4401 / 1.4571
	Assembly kit	1.4571 (all types of pools)
<b>Usage limits</b>	1.4401 (max. 3000 mg/l Cl <sup>-</sup> ) 1.4571 (max. 4500 mg/l Cl <sup>-</sup> )	
<b>Operating pressure</b>	0.4 - 0.6 bar	
<b>Max. perm. pressure</b>	0.8 bar	

<b>Curtain diameter</b>	Ø 1500 mm	Ø 1800 mm	Ø 2300 mm
<b>Flow rate</b>	90 m <sup>3</sup> /h	120 m <sup>3</sup> /h	150 m <sup>3</sup> /h

## 6 Pump circuit

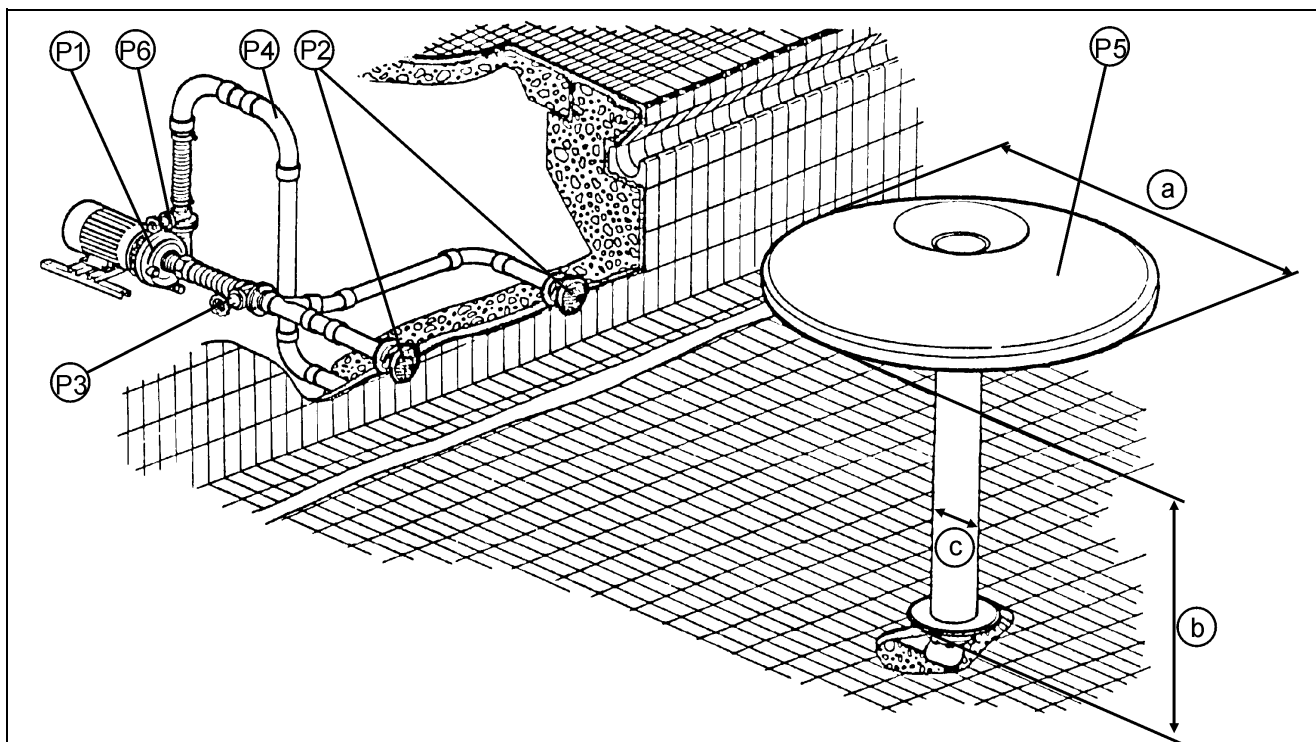


Fig. 1

- P1 Centrifugal pump
- P2 Suction DN 100
- P3 Suction-end shut-off unit
- P4 Pipeline
- P5 Mushroom
- P6 Pressure-end shut-off unit

- a  $\varnothing 1500 \text{ mm} / \varnothing 1800 \text{ mm} / \varnothing 2300 \text{ mm}$
- b  $2200 \text{ mm}$
- c  $\varnothing 256 \text{ mm}$

The centrifugal pump (P1) is non-self priming and must therefore be installed below the pool water level. The water is drawn out of the pool through the suction connection (P2). The intake quantity can be adjusted through the pressure-end shut-off unit (P6).

The suction-end shut-off unit (P3) must always be completely open while the system is in operation. Water is directed through the pipe system (P4) to the mushroom (P5). An additional shut-off unit (P6) is built into the pipe system (P4) for individual control of the flow rate.

The water flows through the mushroom (P5) back into the swimming pool. The mushroom can be started either by an air button located directly in the pool or from a control panel outside the pool.

## 7 General description

The **fluvo** mushroom consists of an installation kit, an assembly kit and a **fluvo** standard pump.

**fluvo** mushrooms are available in 3 different curtain sizes ( $a = \varnothing 1500 \text{ mm}$ ,  $\varnothing 1800 \text{ mm}$ ,  $\varnothing 2300 \text{ mm}$ ) and for 4 different types of pools. The stand pipe height up to the bottom edge of the umbrella is  $c = 2200 \text{ mm}$  for all sizes.



**Note!**

For curtain diameters of 1800 mm and 2300 mm, two DN 100 suction units are required.

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

## 8 Mushroom

### 8.1 Shuttering for water supply 90° / concrete tile pool

Fasten the installation kit (01) onto the inside form wall (W) with the locking screws (02), nuts (03) and distance washers (04).

Always fasten the installation kit (01) onto the reinforcement with the binding wire in addition.

Before the concrete is brought in, the installation kit (01) must be installed to correct dimensions and securely fastened so it cannot be moved between the form walls.



**Note!**

Make certain the installation kit (01) is resting fully against the form wall (W).

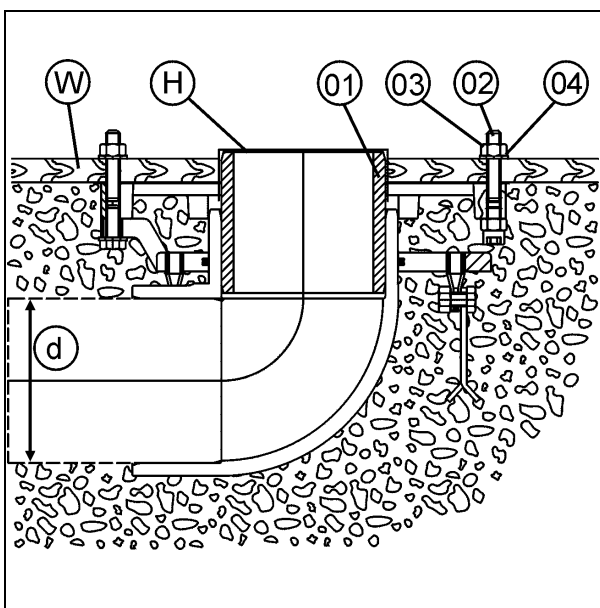


Fig. 2

Before loosening the form wall (W), the fastening parts that are no longer needed (02, 03, 04) and the protective cap (H) must be removed.

- H Protective cap
- W Form wall
- 01 Installation kit
- 02 Locking screws
- 03 Nut
- 04 Distance washer

$d = \text{DN } 125$

## 8.2 Installation process for 90° water supply / concrete tile pool

Apply a layer of mortar (M) and tiles (F) almost up to the hold ring (I).

Fasten the stand pipe with foot flange (07) onto the installation kit (01) with hex. socket head cap screws (08) and distance washers (09).

Pull the screen (12) over the stand pipe (07).

Place the screen (10) on the stand pipe (07) and adjust it so that the holes in the screen (10) and those in the stand pipe (07) line up.

Fasten with counter-sunk screws (11).

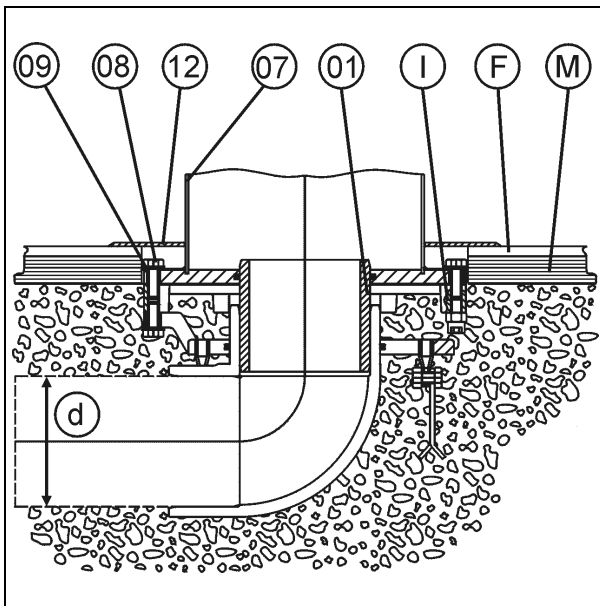


Fig. 3

- F* Tiles
- I* Hold ring
- M* Mortar
  
- 01* Installation kit
- 07* Stand pipe with foot flange
- 08* Hex. socket head cap screw
- 09* Distance washer
- 10* Screen
- 11* Counter-sunk screw
- 12* Screen

*d* = DN 125

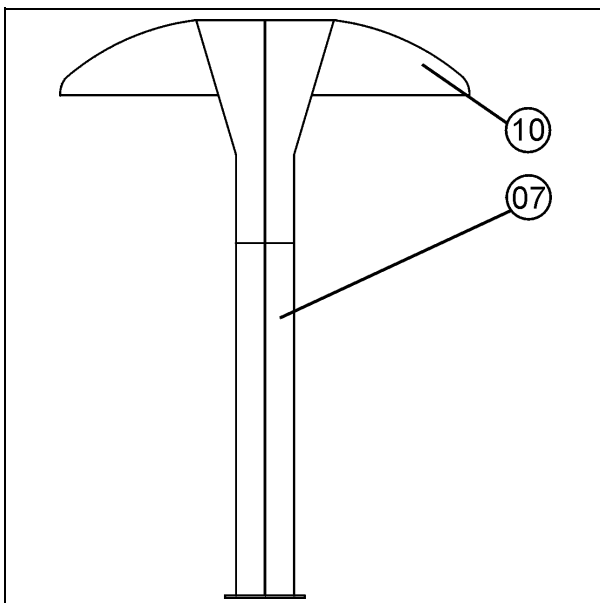


Fig. 4



### Important:

Before placing the screen (10) on the stand pipe (07), seal both pipes with DIRKO sealant.

### 8.3 Shuttering for vertical water supply/ concrete tile pool

Fasten the installation kit (05) onto the form wall (W) with the locking screws (02), nuts (03) and distance washers (04).

Always fasten the installation kit (05) onto the reinforcement with the binding wire in addition.

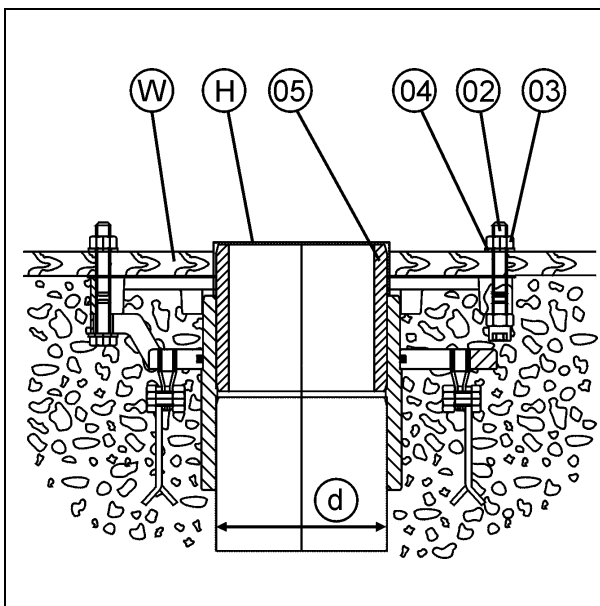
Before the concrete is brought in, the installation kit (05) must be installed to correct dimensions and securely fastened so it cannot be moved between the form walls.



**Note!**

Make certain the installation kit (05) is resting fully against the form wall (W).

Before loosening the form wall (W), the fastening parts that are no longer needed (02, 03, 04) and the protective cap (H) must be removed.



- H Protective cap
- W Form wall
- 02 Locking screws
- 03 Nut
- 04 Distance washer
- 05 Installation kit

d= DN 125

Fig. 5



### 8.4 Installation process for vertical water supply / concrete tile pool

Apply a layer of mortar (M) and tiles (F) almost up to the hold ring (I).

Fasten the stand pipe with foot flange (07) onto the installation kit (05) with hex. socket head cap screws (08) and distance washers (09).

Pull the screen (12) over the stand pipe (07).

Place the screen (10) on the stand pipe (07) and adjust it so that the holes in the screen (10) and those in the stand pipe (07) line up.

Fasten with counter-sunk screws (11).

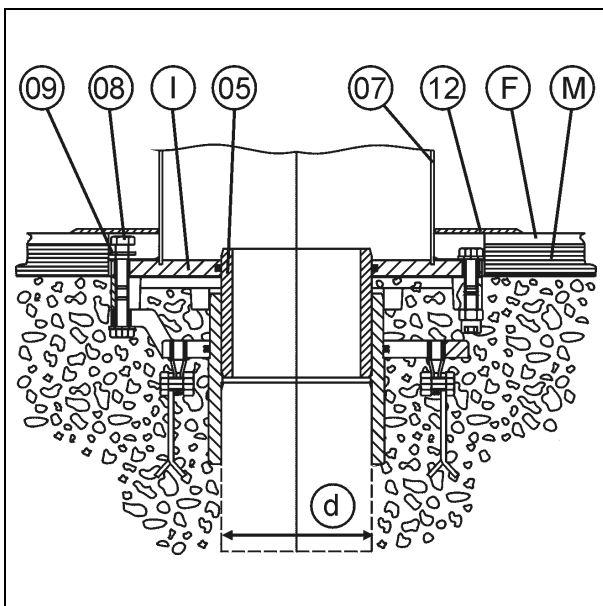


Fig. 6

- F* Tiles
- I* Hold ring
- M* Mortar
  
- 05* Installation kit
- 07* Stand pipe with foot flange
- 08* Hex. socket head cap screw
- 09* Distance washer
- 10* Screen
- 12* Screen

*d* = DN 125

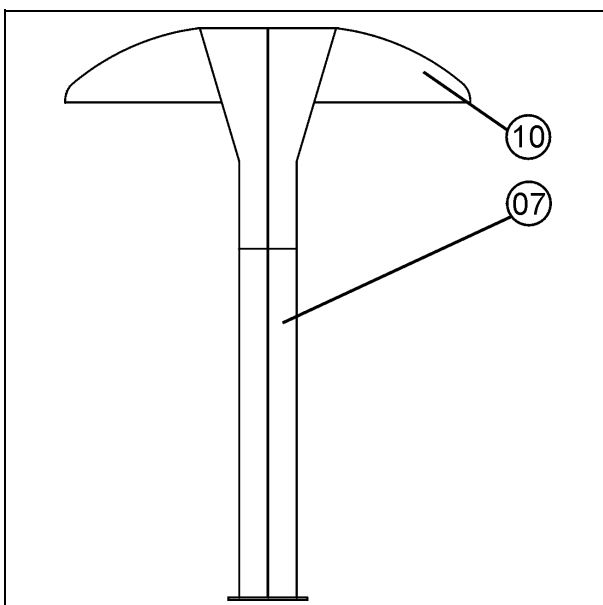


Fig. 7

**Important:**  
 Before placing the screen (10) on the stand pipe (07), seal both pipes with DIRKO sealant.

## 8.5 Shuttering for vertical water supply/ concrete liner pool

Nail the installation kit (13) with fitting (C) securely onto the form wall (W).

Always fasten the installation kit (13) onto the reinforcement with the binding wire in addition.

Before the concrete is brought in, the installation kit (13) must be installed to correct dimensions and securely fastened so it cannot be moved between the form walls.

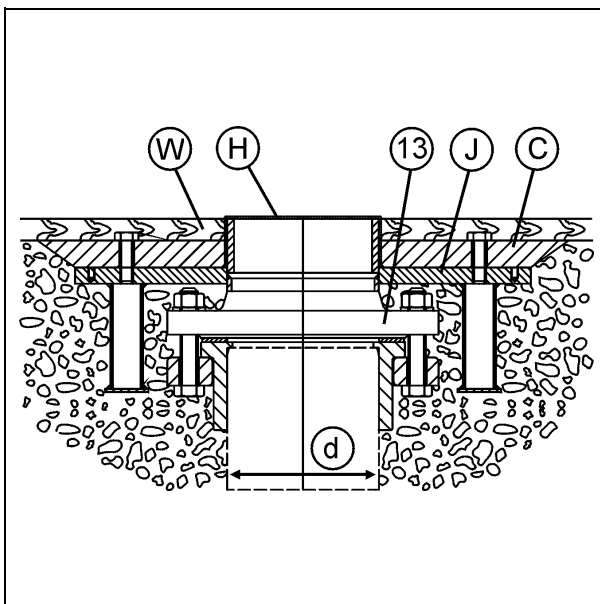


**Note!**

Make certain the installation kit (13) is resting fully against the form wall (W).

Before loosening the form wall (W), the nails that are no longer needed and the protective cap (H) must be removed.

Then remove the fitting (C) from the installation kit (13).



- C*     *Fitting*
- H*     *Protective cap*
- W*     *Form wall*
- 13*    *Installation kit*

*d = DN 125*

Fig. 8

### 8.6 Installation process for vertical water supply / concrete liner pool

see Fig. 7, Fig. 9 and Fig. 10.

Pull the pool liner (L) over the flange (J) of the installation kit (13)

Place the clamp gasket (26) between the pool liner (L) and clamp ring (16).

Use the counter-sunk screws (17) to clamp the clamp ring (16) to the installation kit (13).

Cut out the pool liner (L) along the inside of the clamp ring (16).



**Note!**

The clamp ring (16) must lie neatly and smoothly in place to facilitate clamping without problems.

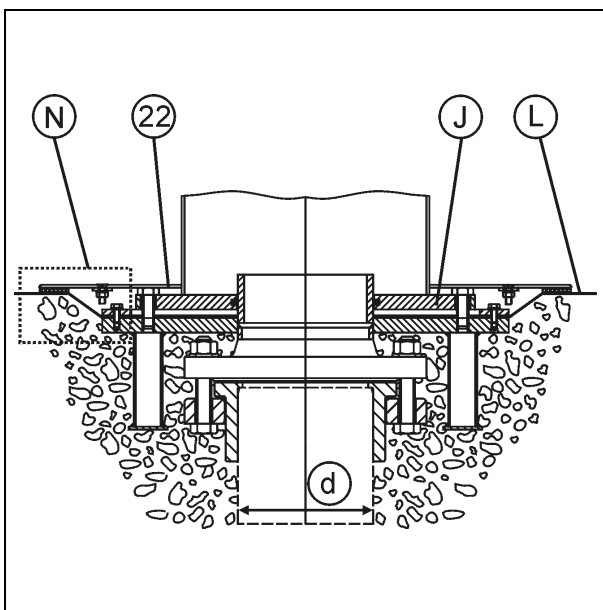


Fig. 9

Place the screen (10) on the stand pipe (07) and adjust it so that the holes in the screen (10) and those in the stand pipe (07) line up.

Fasten with counter-sunk screws (11).

Connect the two tile screens (22) together using shackles (23) and fixing elements (18, 24, 25).

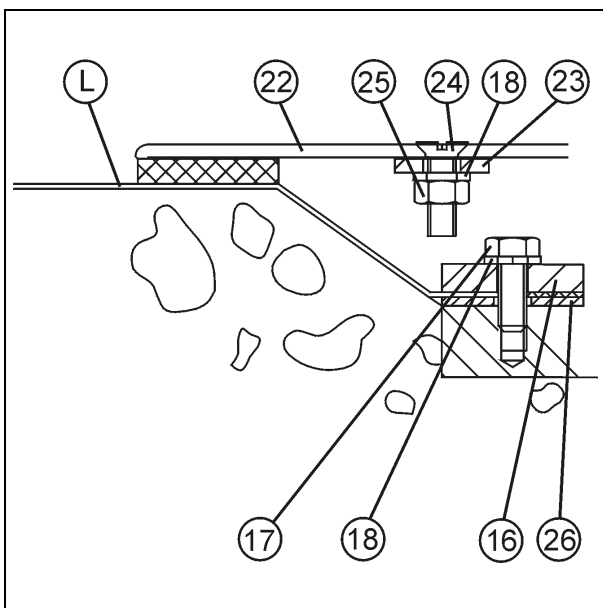


Fig. 10: N Detail

- J Flange
- L Pool liner
- 07 Stand pipe
- 10 Screen
- 11 Counter-sunk screw
- 13 Installation kit
- 16 Clamp ring
- 17 Counter-sunk screw
- 18 Distance washer
- 22 Tile screen
- 23 Shackle
- 24 Screw
- 25 Nut
- 26 Clamp gasket

d= DN 125

## 8.7 Shuttering for vertical water supply/ concrete pool with brush-applied sealant

Fasten the installation kit (19) onto the form wall (W).

Always fasten the installation kit (19) onto the reinforcement with the binding wire in addition.

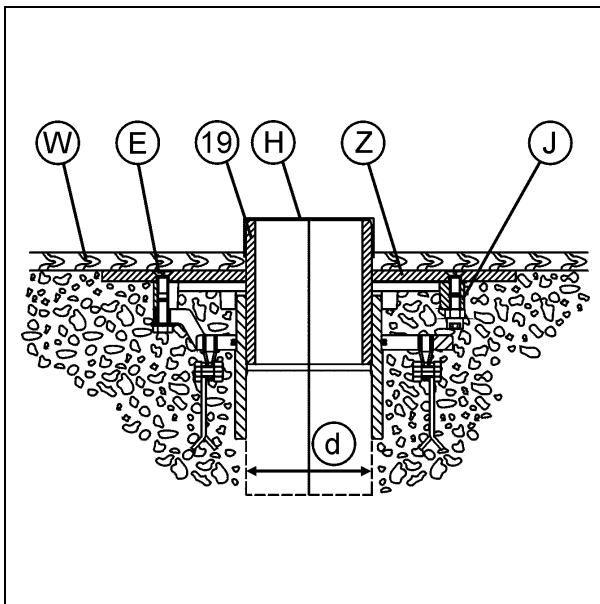
Before the concrete is brought in, the installation kit (19) must be installed to correct dimensions and securely fastened so it cannot be moved between the form walls.



**Note!**

Make certain the installation kit (19) is resting fully against the form wall (W).

After loosening the form wall (W), the protective cap (H), which is no longer needed, must be removed.



*E* Counter-sunk screw

*H* Protective cap

*J* Flange

*W* Form wall

*Z* Flange

*19* Installation kit

*d*= DN 125

Fig. 11

### 8.8 Installation process for vertical water supply/ concrete pool with brush-applied sealant

see Fig. 7, Fig. 12 and Fig. 13.

The swimming pool can be lined with brush-applied sealant (S) up to the counter-sunk screws (E) in the flange (Z).



**Note!**

The counter-sunk screws (E) must not be covered with sealant (S).

Then the pool can be tiled on the inside. Apply a layer of mortar (M) and tiles (F) almost up to the counter-sunk screws (E) in the flange (Z).

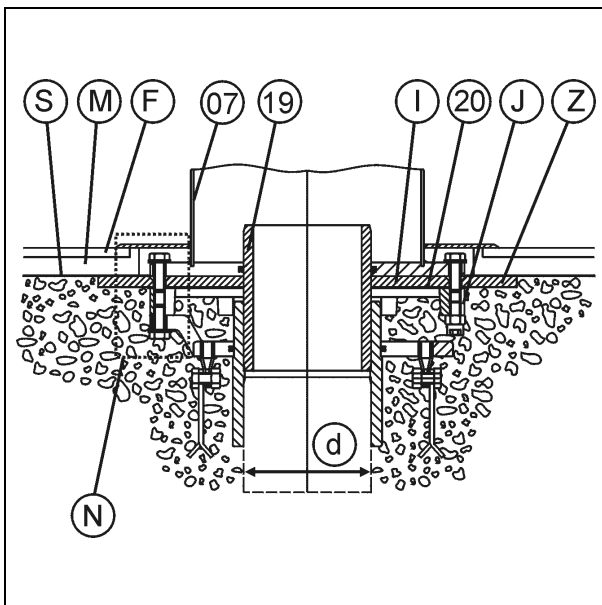


Fig. 12

Remove the counter-sunk screws (E).  
Fasten the stand pipe with foot flange (07) onto the installation kit (19) with hex. socket head cap screws (08) and distance washers (09).  
Pull the screen (12) over the stand pipe (07).  
Place the screen (10) on the stand pipe (07) and adjust it so that the holes in the screen (10) and those in the stand pipe (07) line up.  
Fasten with counter-sunk screws (11).

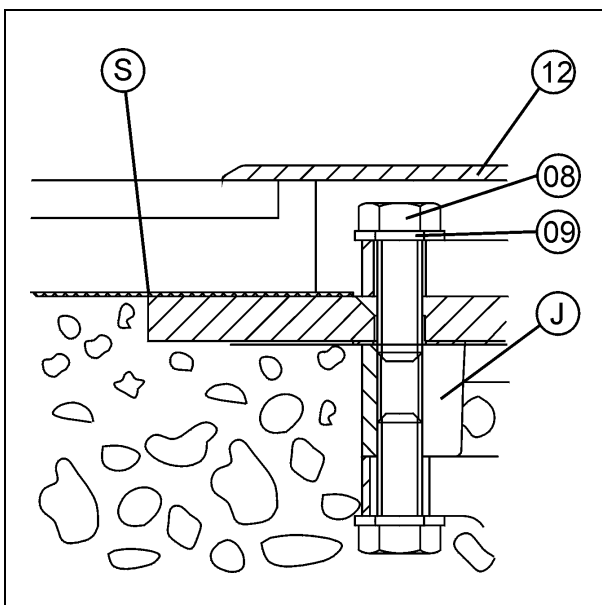


Fig. 13: N Detail

- E Counter-sunk screw
- F Tiles
- M Mortar
- S Brush-applied sealant
- Z Flange
- 07 Stand pipe with foot flange
- 08 Hex. socket head cap screw
- 09 Distance washer
- 10 Screen
- 11 Counter-sunk screw
- 12 Screen
- 19 Installation kit

d= DN 125

## 8.9 Installation process for vertical water supply/ subsequent installation

Drill a core hole with  $\varnothing$  180 mm (f) through the pool wall.

Make a second hole from the inside of the pool with  $\varnothing$  360 mm (g) 150 mm (e) deep from the front edge of the concrete.

Insert the installation kit (21) and fill the hole completely with epoxy resin (T).

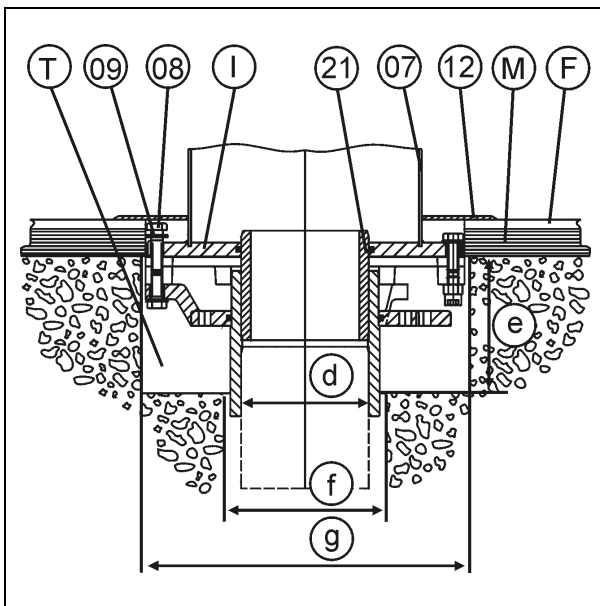


Fig. 14

Fasten the stand pipe with foot flange (07) onto the installation kit (21) with hex. socket head cap screws (08) and distance washers (09).

Pull the screen (12) over the stand pipe (07).

Place the screen (10) on the stand pipe (07) and adjust it so that the holes in the screen (10) and those in the stand pipe (07) line up.

Fasten with counter-sunk screws (11).

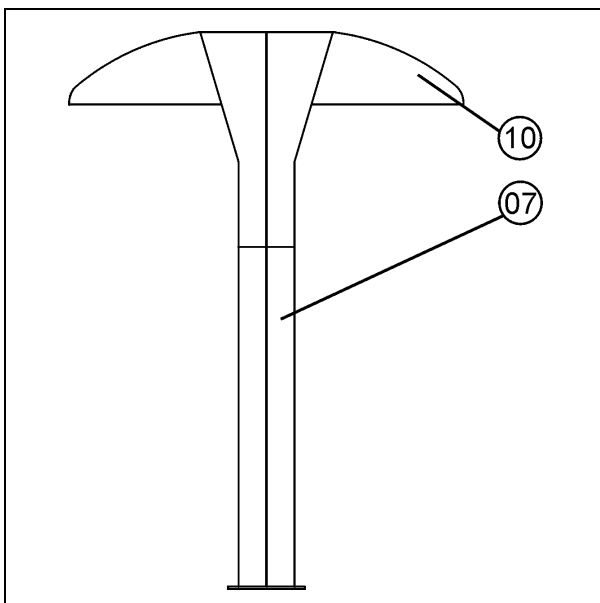


Fig. 15

*F* Tiles  
*M* Mortar  
*T* Epoxy resin

*07* Stand pipe with foot flange  
*08* Hex. socket head cap screw  
*09* Distance washer  
*10* Screen  
*11* Counter-sunk screw  
*12* Screen  
*21* Installation kit

*d* = DN 125  
*e* = 150 mm  
*f* =  $\varnothing$  180 mm  
*g* =  $\varnothing$  360 mm



### Important:

Before placing the screen (10) on the stand pipe (07), seal both pipes with DIRKO sealant.

## 9 Spare parts Mushroom

### 9.1 Concrete tile pool / 90° water supply

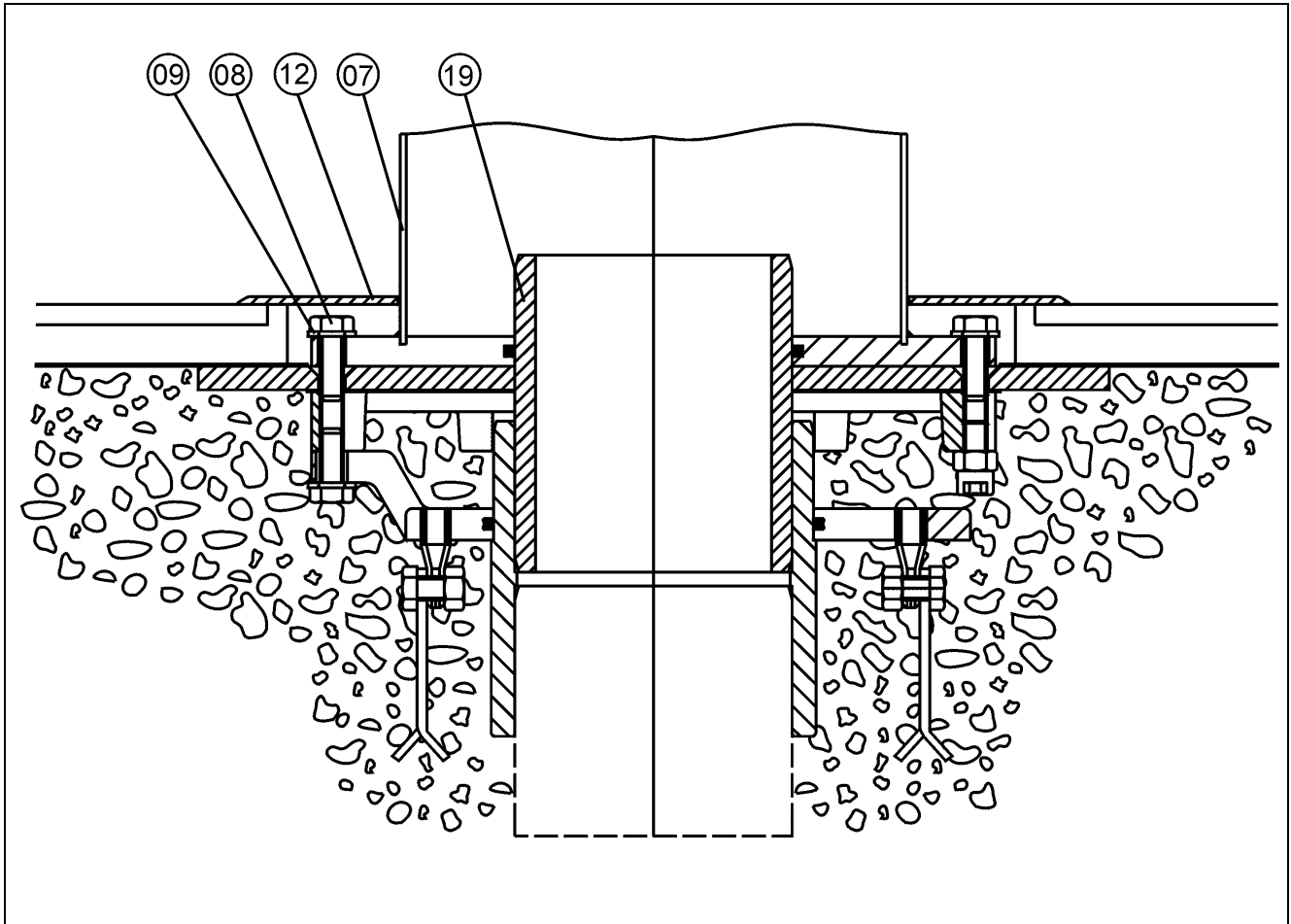


Fig. 16: Concrete tile pool / 90° water supply

Item	Order No.	Description	Pieces	Comment
01	92593	Installation kit complete 90°	1	
02	10925	Locking screws M12	3	
03	12114	Nut M12	3	
04	12380	Distance washer	3	
07	57559	Stand pipe with foot flange	1	
08	10848	Hex. socket head cap screw M12x35	6	
09	12432	Distance washer	6	
10.1	56081	Screen ø 1500 mm	1	
10.2	57560	Screen ø 1800 mm	1	
10.3	58083	Screen ø 2300 mm	1	
11	10564	Counter-sunk screw M8x25	3	
12	47886	Screen	1	

**9.2 Concrete tile pool / vertical water supply**

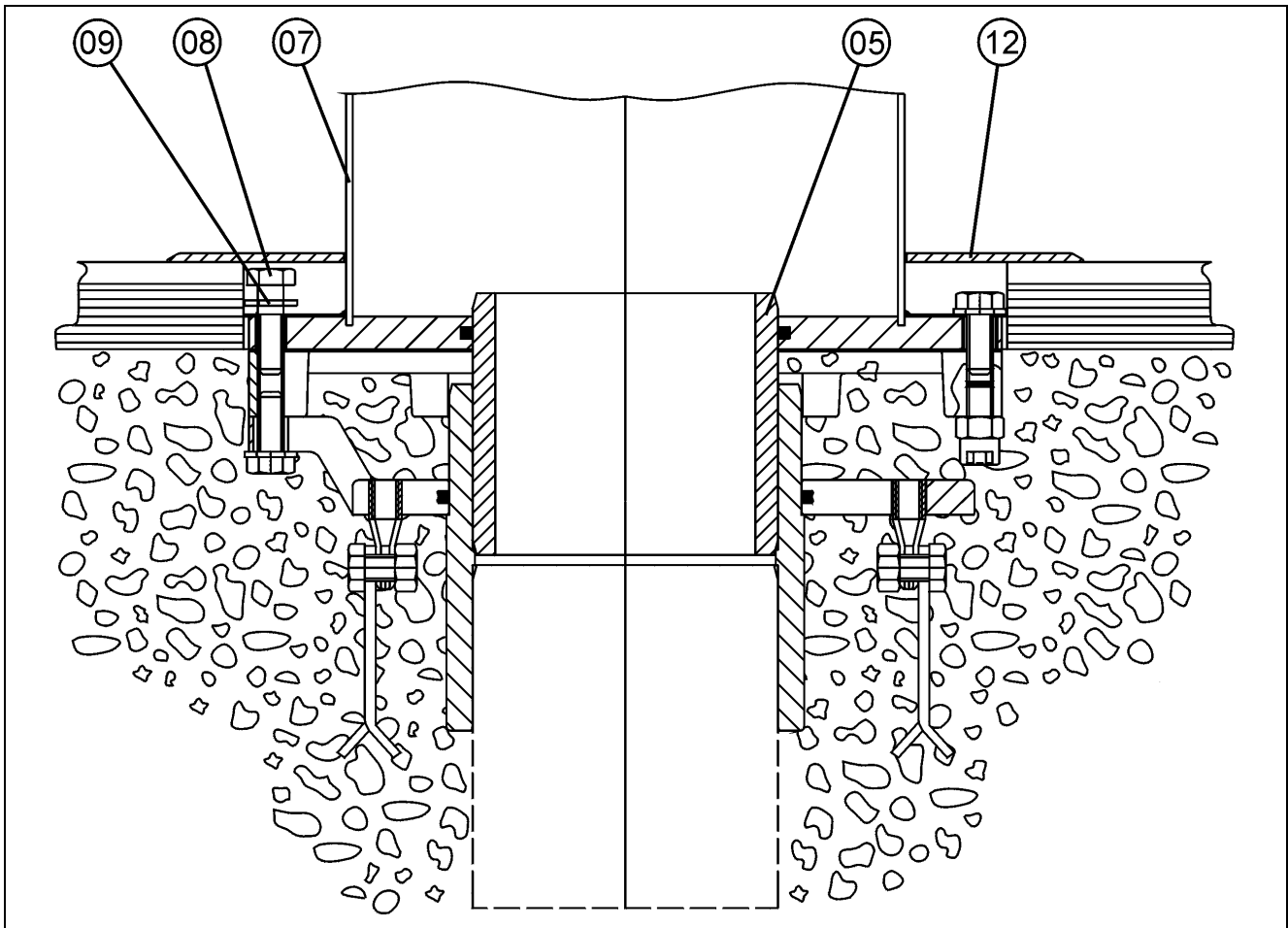


Fig. 17: Concrete tile pool / vertical water supply

Item	Order No.	Description	Pieces	Comment
02	10925	Locking screws M12	3	
03	12114	Nut M12	3	
04	12380	Distance washer	3	
05	91824	Installation kit complete straight	1	
07	57559	Stand pipe with foot flange	1	
08	10848	Hex. socket head cap screw M12x35	6	
09	12432	Distance washer	6	
10.1	56081	Screen ø 1500 mm	1	
10.2	57560	Screen ø 1800 mm	1	
10.3	58083	Screen ø 2300 mm	1	
11	10564	Counter-sunk screw M8x25	3	
12	47886	Screen	1	



### 9.3 Concrete liner pool / vertical water supply

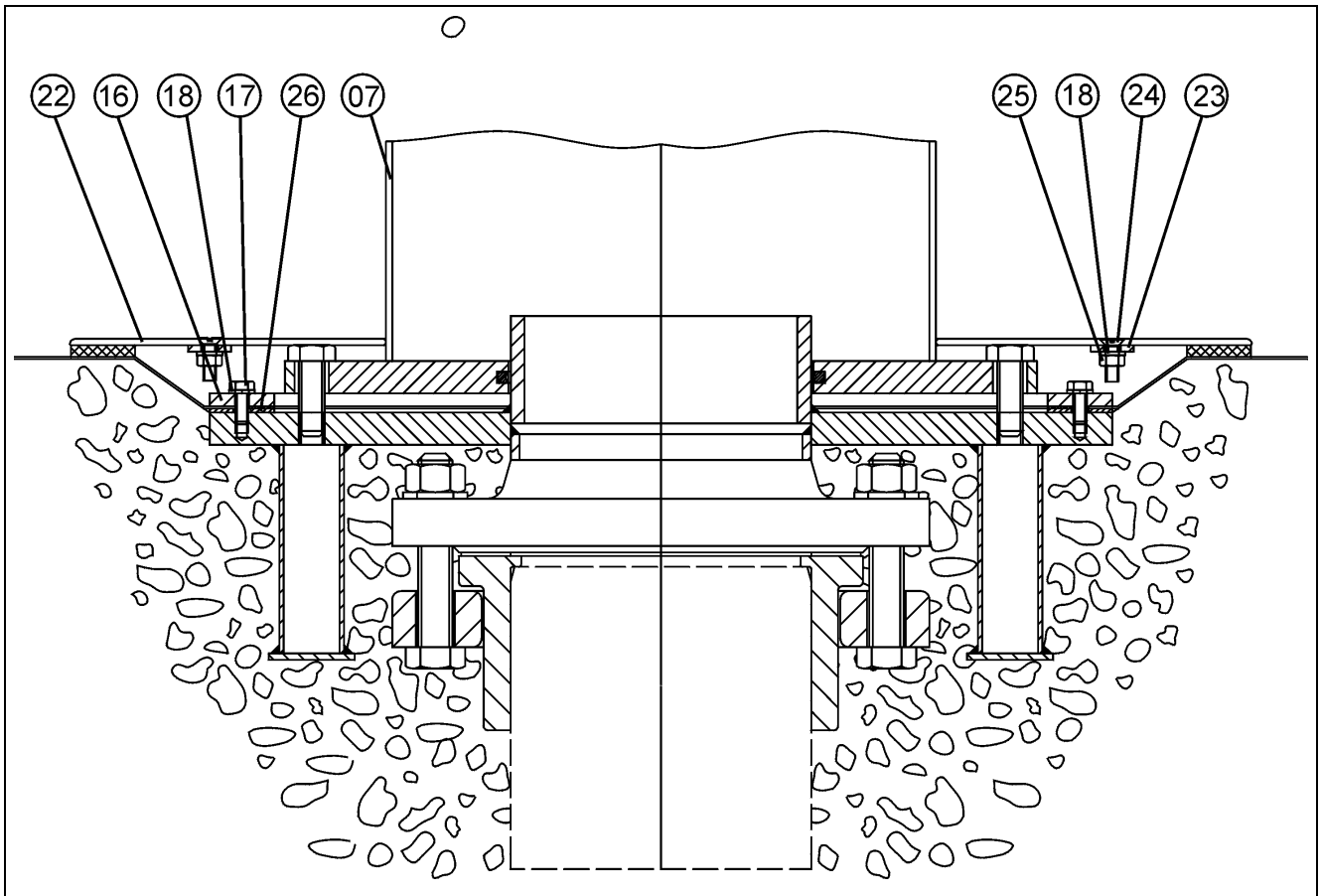


Fig. 18: Concrete liner pool / vertical water supply

Item	Order No.	Description	Pieces	Comment
07	57559	Stand pipe with foot flange	1	
10.1	56081	Screen ø 1500 mm	1	
10.2	57560	Screen ø 1800 mm	1	
10.3	58083	Screen ø 2300 mm	1	
11	10564	Counter-sunk screw M8x25	3	
13	93670	Installation kit complete straight	1	
16	56842	Clamp ring	1	
17	10470	Hex. socket head cap screw M6x16	24	
18	12416	Distance washer 6.4 x12x1.6	28	
21	92594	Installation kit complete straight	1	
22	57362	Tile screen	2	
23	56868	Shackle	2	
24	10448	Counter-sunk screw M6x20	4	
25	12182	Nut M6	4	
26	22116	Clamp gasket	1	

**9.4 Concrete pool with brush-applied sealant / vertical water supply**

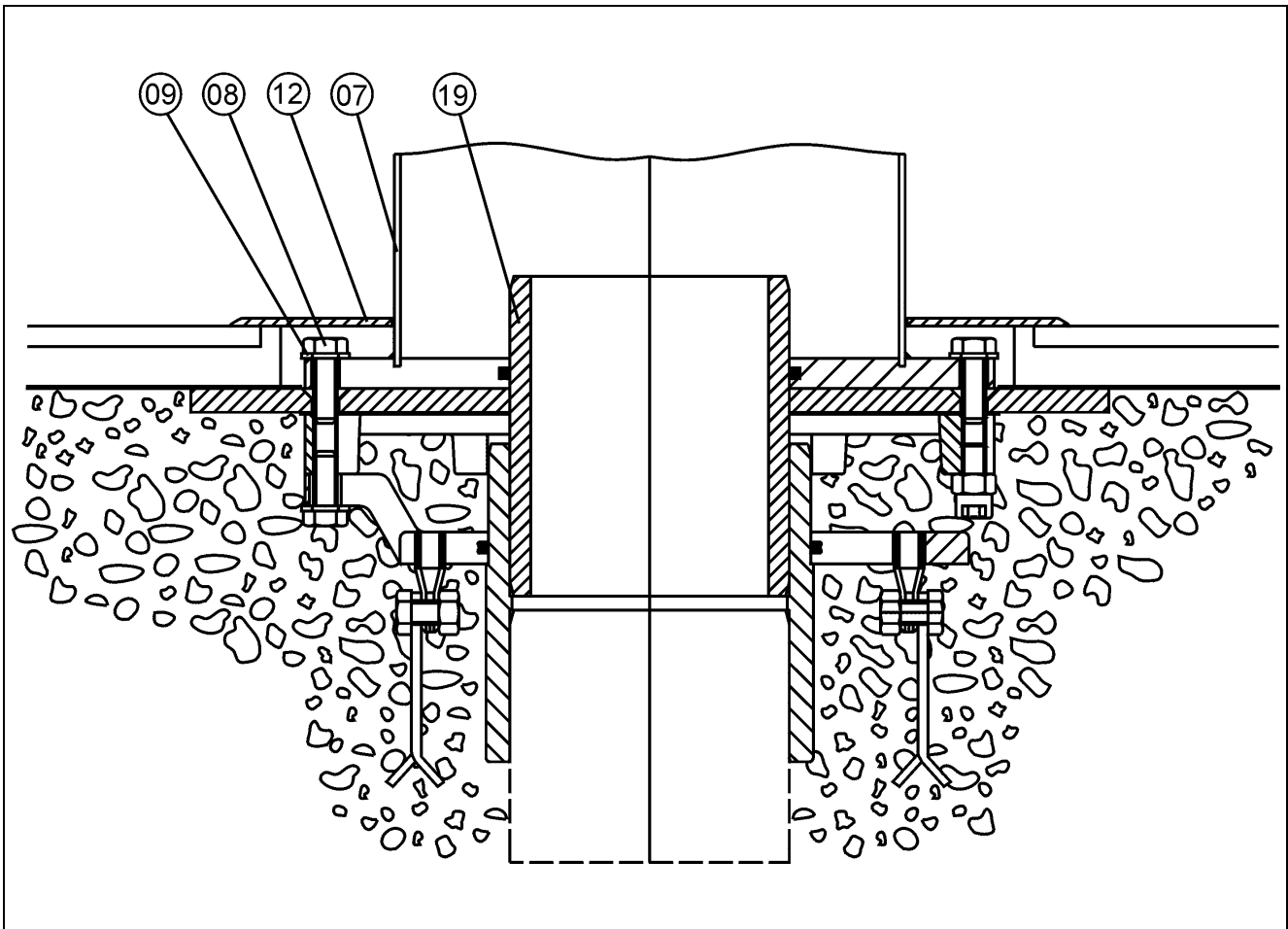


Fig. 19: Concrete pool with brush-applied sealant / vertical water supply

Item	Order No.	Description	Pieces	Comment
07	57559	Stand pipe with foot flange	1	
08	10848	Hex. socket head cap screw M12x35	6	
09	12432	Distance washer	6	
10.1	56081	Screen ø 1500 mm	1	
10.2	57560	Screen ø 1800 mm	1	
10.3	58083	Screen ø 2300 mm	1	
11	10564	Counter-sunk screw M8x25	3	
12	47886	Screen	1	
19	92593	Installation kit complete straight	1	

## 9.5 Subsequent installation / vertical water supply

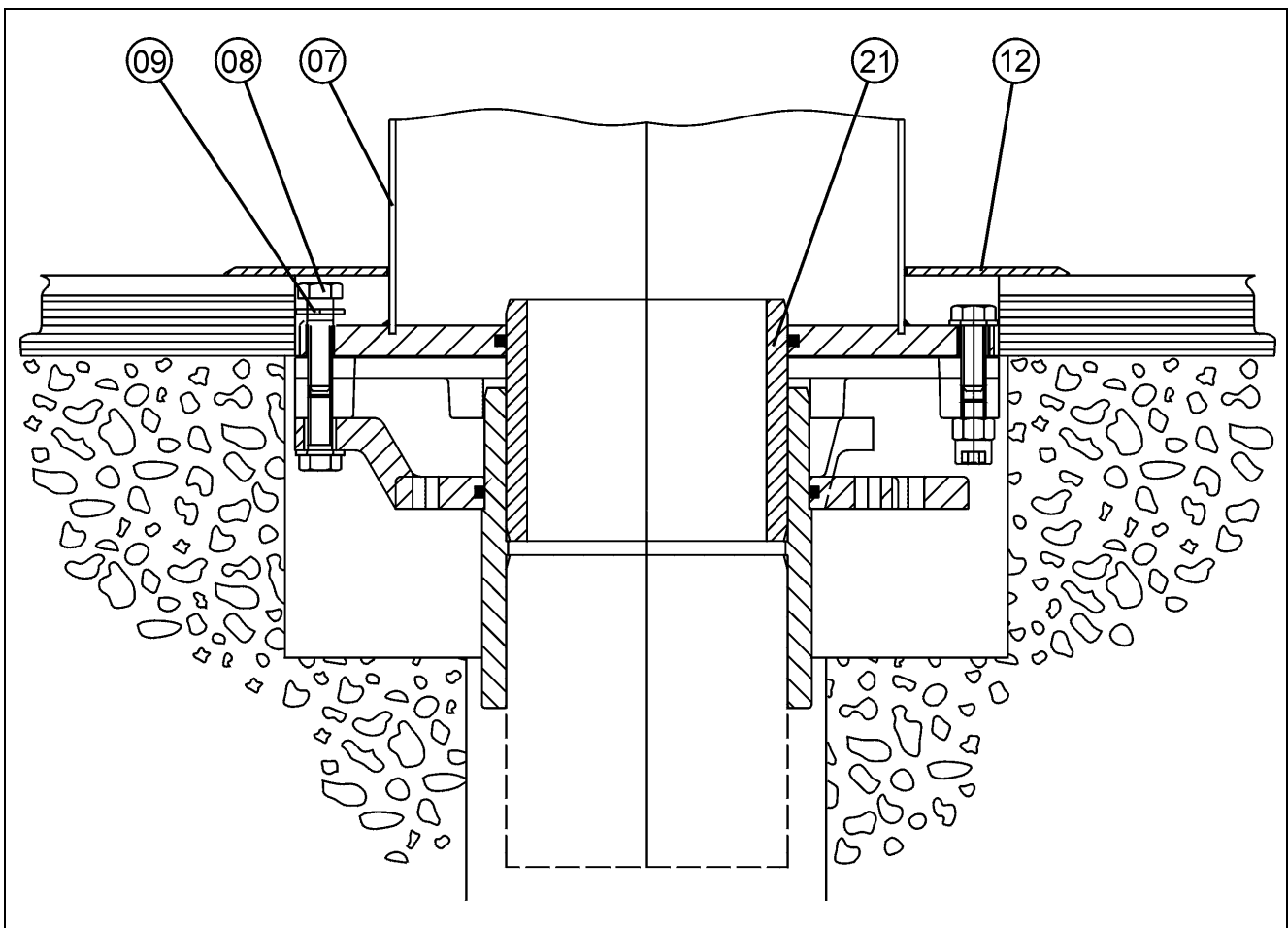


Fig. 20: Subsequent installation / vertical water supply

Item	Order No.	Description	Pieces	Comment
07	57559	Stand pipe with foot flange	1	
08	10848	Hex. socket head cap screw M12x35	6	
09	12432	Distance washer	6	
10.1	56081	Screen ø 1500 mm	1	
10.2	57560	Screen ø 1800 mm	1	
10.3	58083	Screen ø 2300 mm	1	
11	10564	Counter-sunk screw M8x25	3	
12	47886	Screen	1	
21	92594	Installation kit complete straight	1	

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