

fluvo[®]
innovative schwimmbadtechnik

rio water curtains / rio water cannons

GB Operator's Manual

Translation of the original

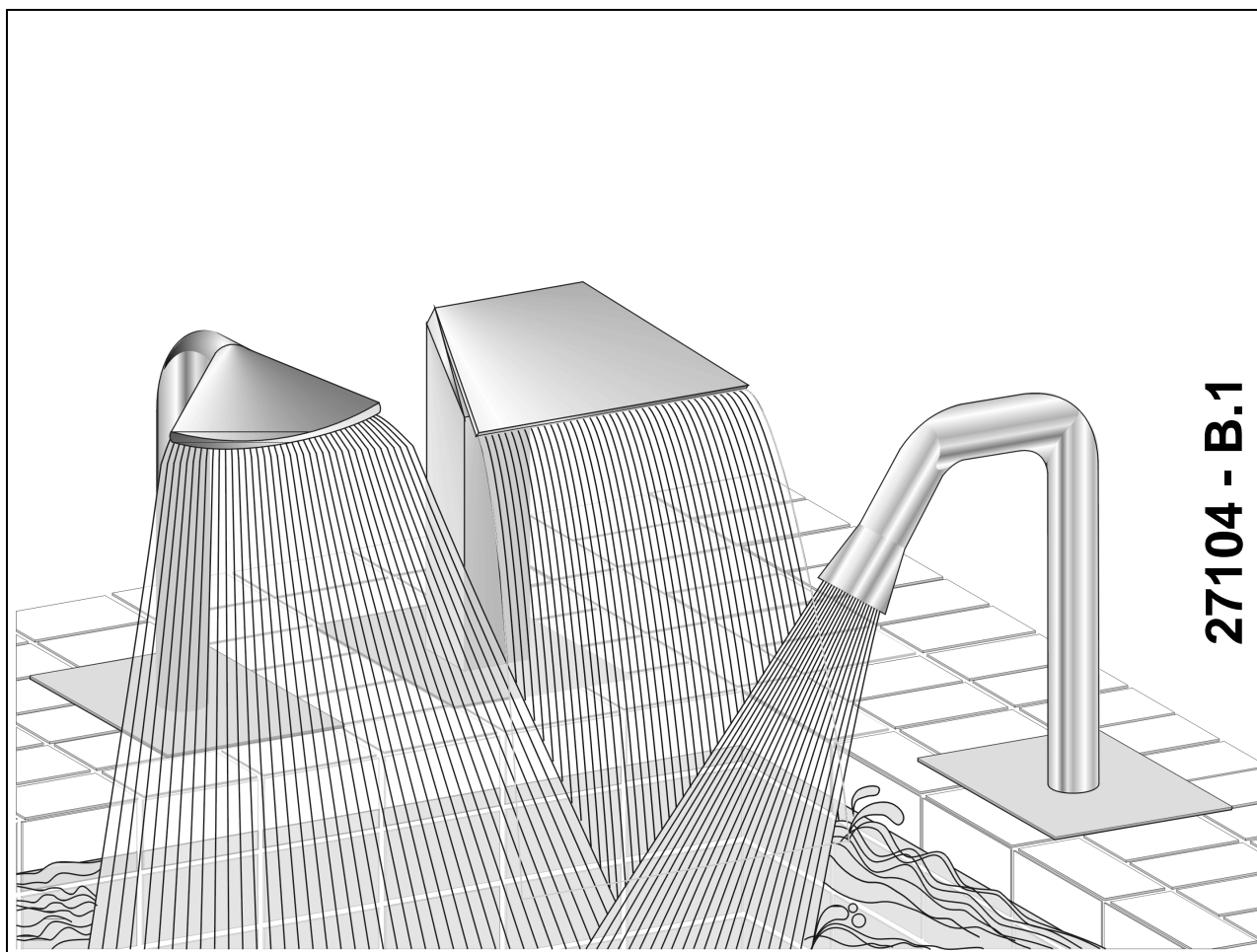


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1 General information / proper use

1.1 General information

As part of its wide assortment of swimming pool accessories, **fluvo** offers rio water curtains and water cannons . They are suitable for installation in large swimming pools as well as private pools and children's wading pools.

Both rio water curtains and rio water cannons are made of stainless steel 1.4571 and can also be white-coated on request. All parts in contact with media are designed for water quality according to DIN 19643.

rio water curtains and water cannons represent the state of the art. They have been manufactured with the greatest care and are subject to continuous quality control.

This Operator's Manual contains important information to ensure that rio water curtains and water cannons are operated safely, properly and economically. Your strict observance is necessary to prevent dangers and ensure a long service life for rio water curtains/water cannons.

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. rio water curtains and water cannons 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 rio water curtains or water cannons and placing them in operation. Make certain you have understood everything.

2.1 Safety instructions for the operator

1. Repairs of any nature must only be made by qualified professionals. The pool must be emptied if necessary to make repairs.
2. The operator must ensure that
 - the Operator's Manual is always available for operating personnel
 - the instructions in the Operator's Manual are observed
3. All parts that come in contact with medium are resistant up to an absolute salt content of 0.75% (4500 mg/l Cl⁻). If higher concentrations of salt are present, please contact the manufacturer.

3 Description of the device / general technical data

The system meets the requirements of **VDE** regulations.

rio water curtains / rio water cannons are delivered in 2 modules:

1. Installation kit
2. Assembly kit

3.1 Technical data

Design	Water curtains	Bell jet	Flat jet	High jet	Tri jet	Round jet
Compressed air supply	DN 50	DN 50	DN 50	DN 50	DN 50	DN 50
Flow rate	42 - 48 m ³ /h	42 - 48 m ³ /h	24 - 42 m ³ /h	24 - 42 m ³ /h	24 - 42 m ³ /h	42 - 48 m ³ /h
Operating pressure	0.4 - 0.6 bar	0.4 - 0.6 bar	0.4 - 0.6 bar	0.4 - 0.6 bar	0.4 - 0.6 bar	0.4 - 0.6 bar
Max. perm. pressure	0.8 bar	0.8 bar	0.8 bar	0.8 bar	0.8 bar	0.8 bar

4 rio water curtains / rio water cannons

4.1 Shuttering / concrete tile pools and concrete liner pools

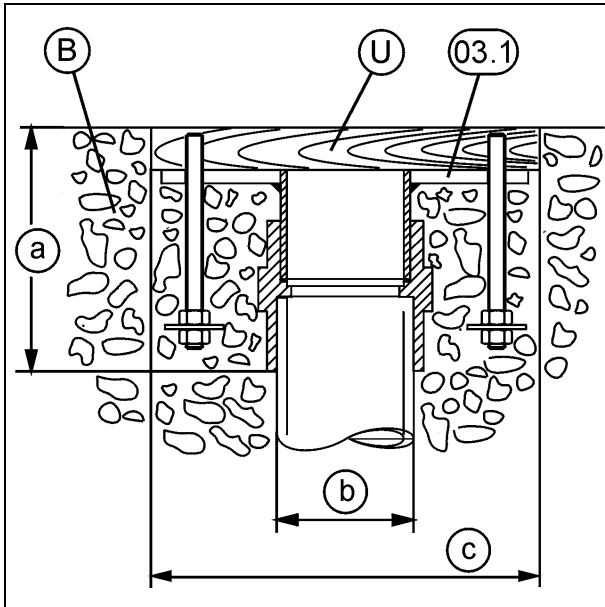


Fig. 1

The installation kit is available in designs for concrete tile pools (03.1) (Fig. 1) and concrete liner pools (03.2) (Fig. 2).

Encase the installation kit (03.1 / 03.2) in concrete so that the top edge is flush with the raw concrete (B).

Make certain as well that the alignment is parallel to the water line.

The maximum distance from the installation kit (03.1 / 03.2) to the edge of the pool when a water curtain is being used is 500 mm. If a water cannon is being used, the maximum distance is 300 mm.

Exception: Cobra midi 360 mm
Cobra mini 220 mm

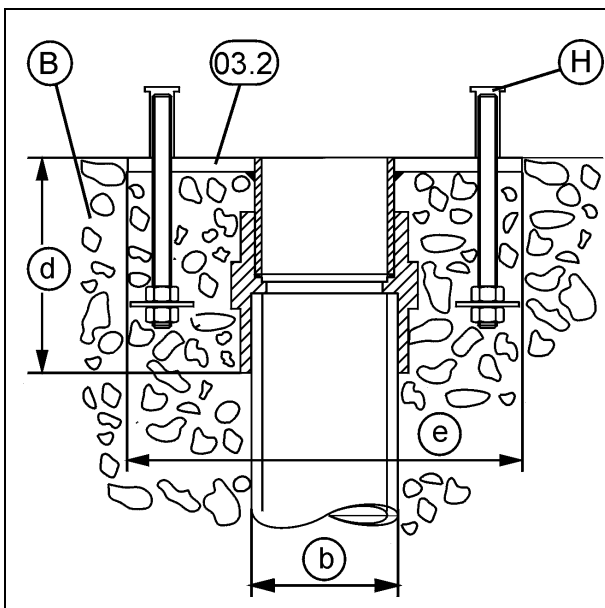


Fig. 2

$a = 113 \text{ mm}$
 $b = \varnothing 63 \text{ mm}$
 $c = q 180 \text{ mm}$
 $d = 93 \text{ mm}$
 $e = q 170 \text{ mm}$

B Raw concrete
H Cover sleeve
U Shuttering

03.1 Installation kit for concrete tile pools

03.2 Installation kit for concrete liner pools



Note:

Always make certain before concrete encasing that the installation kit (03.1 / 03.2) is horizontal, assembled to correct dimensions and secured to prevent it from moving on the form walls or between the form walls. It will not be possible to adjust it later.

In addition, fasten the installation kit onto the reinforcing rods.

4.2 Installation process / concrete tile pools

Apply mortar (M) and tiles (F) up to the installation kit (03.1).

Remove the cover plate (Fig. 1, item U) from the installation kit (03.1), place the clamp gasket (04) and water curtain (01) or jet (02) on the stud bolts (S) and fasten with the nuts (07) included with delivery.

Then position the two tile screens (05) and secure in place with sealing compound.

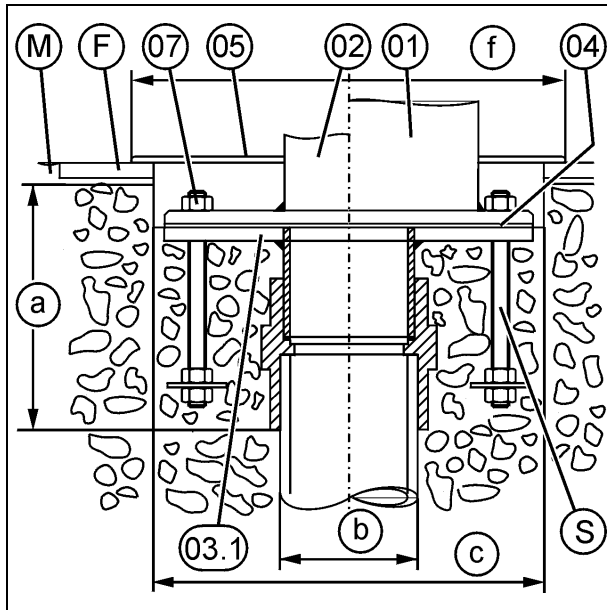


Fig. 3

$a =$	113 mm
$b =$	\varnothing 63 mm
$c =$	q 180 mm
$d =$	93 mm
$e =$	q 170 mm
$f =$	q 200 mm

<i>F</i>	Tiles
<i>M</i>	Mortar
<i>S</i>	Stud bolt

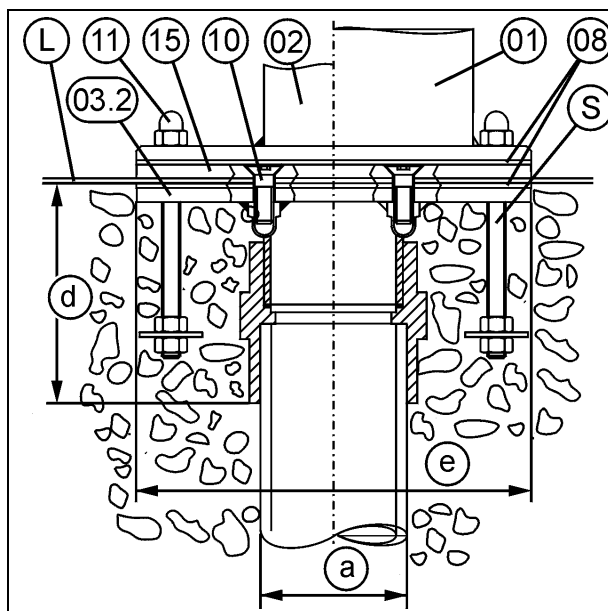
01	Water curtain
02	Jet
03.1	Installation kit
04	Clamp gasket
05	Tile screen
07	Nut

4.3 Installation process / concrete liner pool

Remove the protection film and cover sleeve (Fig. 2, item H) from the installation kit (03.2).

Pull the pool liner (L) over the installation kit (03.2) and mark the holes for the screws (10). Clamp the pool liner (L) in place with the clamp gasket (08) and clamp ring (15) and cut out the hole. The clamp ring (15) must lie neatly and smoothly in place to facilitate clamping without problems.

Place the clamp gasket (08) and water curtain (01) or jet (02) on the stud bolts (S) and fasten with the nuts (11) included with delivery.



$a = 113 \text{ mm}$
 $d = 93 \text{ mm}$
 $e = \varnothing 170 \text{ mm}$

L Pool liner
S Stud bolt

01 Water curtain
 02 Jet
 03.2 Installation kit
 08 Clamp gasket
 10 Screw
 11 Nut
 15 Clamp ring

Fig. 4

4.4 Installation process / subsequent installation

Drill four holes for M8 (D) plugs and one centric hole with a depth of 100 mm and d=90 mm in the subsurface. Insert the plugs (D) in the holes drilled for them and screw in the stud bolts (S) included with delivery.

Then insert the installation kit (03.3) into the core hole and seal with epoxy resin (T).

Make certain as well that the alignment is parallel to the water line.

The maximum distance from the installation kit (03.3) to the edge of the pool when a water curtain (01) is being used is 500 mm. If a water cannon (02) is being used, the maximum distance is 300 mm.

After the epoxy resin (T) has cured, place the clamp gasket (04) and water curtain (01) or jet (02) on the stud bolts (S) and fasten with the nuts (07) included with delivery.

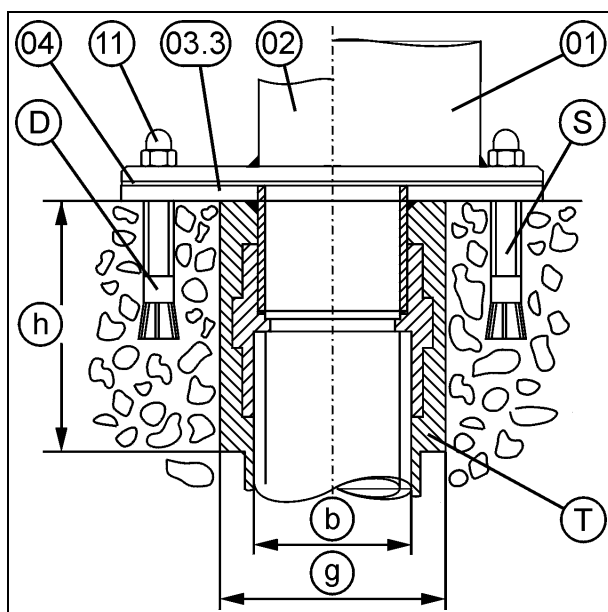


Fig. 5

$b = \varnothing 63 \text{ mm}$
 $f = q 200 \text{ mm}$
 $g = \varnothing 90 \text{ mm}$
 $h = 100 \text{ mm}$

D Plug M8
 F Tiles
 M Mortar
 S Stud bolt
 T Epoxy resin

01 Water curtain
 02 Jet
 03.3 Installation kit
 04 Clamp gasket
 05 Tile screen
 07 Nut

4.5 Installation process / pre-fabricated pools

Use the template included with delivery to drill 8 holes $d=9$ mm and then cut out the inside hole with $d=90$ mm.

Insert the installation kit (03.4) with the clamp gaskets (04 and 12) on the holes provided for them and screw them together with distance washers (13).

Make certain as well that the alignment is parallel to the water line.

The maximum distance from the installation kit (03.4) to the edge of the pool when a water curtain (01) is being used is 500 mm. If a water cannon (02) is being used, the maximum distance is 300 mm.

Place the clamp gaskets (04 and 12) and water curtain (01) or jet (02) on the stud bolts (S) and fasten with the nuts (11) included with delivery.

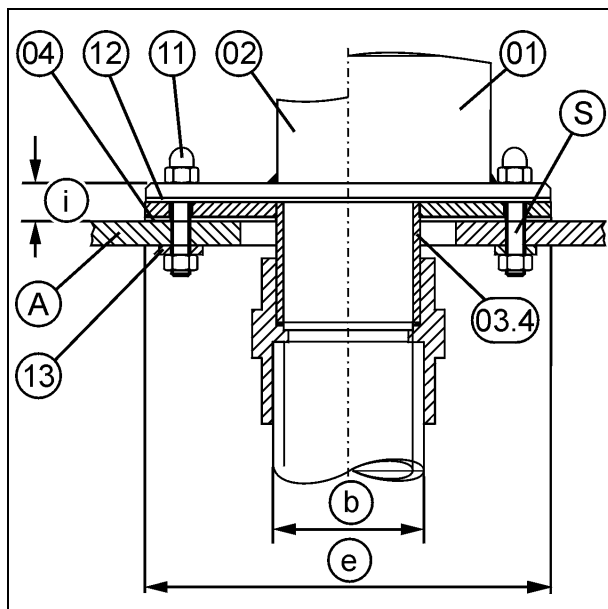


Fig. 6

$b = \quad \varnothing 63 \text{ mm}$
 $e = \quad q 170 \text{ mm}$
 $i = \quad 16 \text{ mm}$

A *Pool wall*
 S *Stud bolt*

01 *Water curtain*
 02 *Jet*
 03.4 *Installation kit*
 04 *Clamp gasket*
 11 *Nut*
 12 *Clamp gasket*
 13 *Distance washer*

5 Spare parts Water curtain and water cannon

5.1 Tiled Concrete Pool

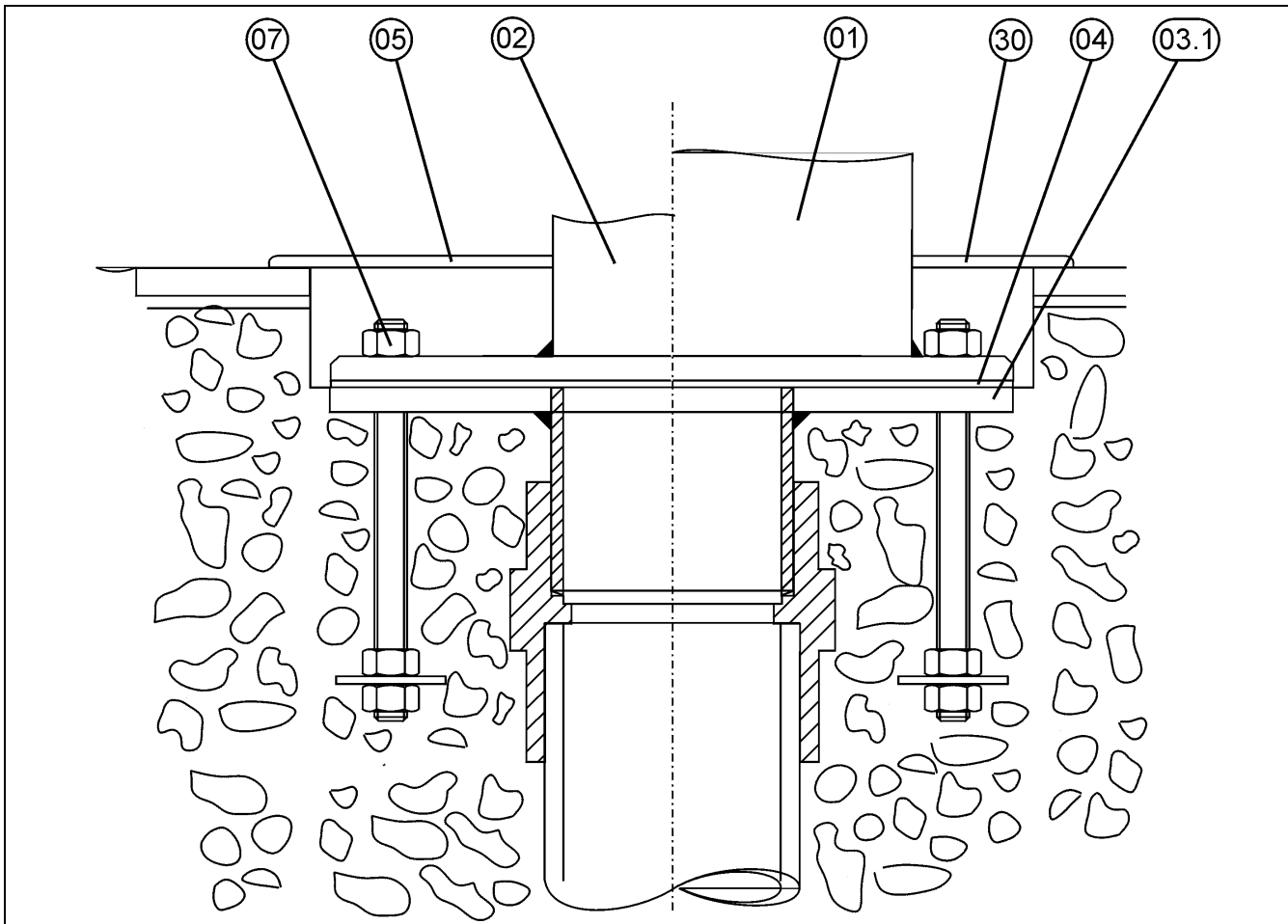


Fig. 7: Tiled Concrete Pool

Item	Best Nr.	Description	Pieces	Comment
1.1	57450	Water curtain straight	1	Matte
1.2	57451	Water curtain straight	1	White
1.3	56137	Water curtain semicircular	1	Matte
1.4	56138	Water curtain semicircular	1	White
1.5	54089	Water curtain wall straight	1	Matte
1.6	54107	Water curtain wall straight	1	White
1.7	59110	Water curtain wall semicircular	1	Matte
1.8	59111	Water curtain wall semicircular	1	White
2.1	57460	Bell jet	1	Matte
2.2	57461	Bell jet	1	White
2.3	57021	Flat jet	1	Matte
2.4	57120	Flat jet	1	White
2.5	57022	High jet	1	Matte

Item	Best Nr.	Description	Pieces	Comment
2.6	57121	High jet	1	White
2.7	57023	Tri jet	1	Matte
2.8	57122	Tri jet	1	White
2.9	57217	Round jet	1	Matte
2.10	57218	Round jet	1	White
3.1	91533	Installation kit complete	1	
4	22191	Clamp gasket	1	
5.1	59922	Tile screen Water cannon	2	Matte
5.2	59923	Tile screen for water cannon	2	White
7	12182	Nut	4	M6
30.1	59924	Tile screen for water curtain	2	Matte
30.2	59925	Tile screen for water curtain	2	White
	93248	Completely preassembled Water curtain straight	1	Matte
	94407	Completely preassembled Water curtain straight	1	White
	93249	Completely preassembled Water curtain semicircular	1	Matte
	93246	Completely preassembled Water curtain semicircular	1	White
	91378	Completely preassembled Water curtain wall straight	1	Matte
	91379	Completely preassembled Water curtain wall straight	1	White
	91380	Completely preassembled Water curtain wall semicircular	1	Matte
	91381	Completely preassembled Water curtain wall semicircular	1	White
	94459	Completely preassembled Bell jet	1	Matte
	94405	Completely preassembled Bell jet	1	White
	94460	Completely preassembled Flat jet	1	Matte
	94406	Completely preassembled Flat jet	1	White
	94461	Completely preassembled High jet	1	Matte
	94455	Completely preassembled High jet	1	White
	94462	Completely preassembled Tri jet	1	Matte
	94456	Completely preassembled Tri jet	1	White
	93250	Completely preassembled Round jet	1	Matte
	93247	Completely preassembled Round jet	1	White

5.2 Concrete Pool with Liner

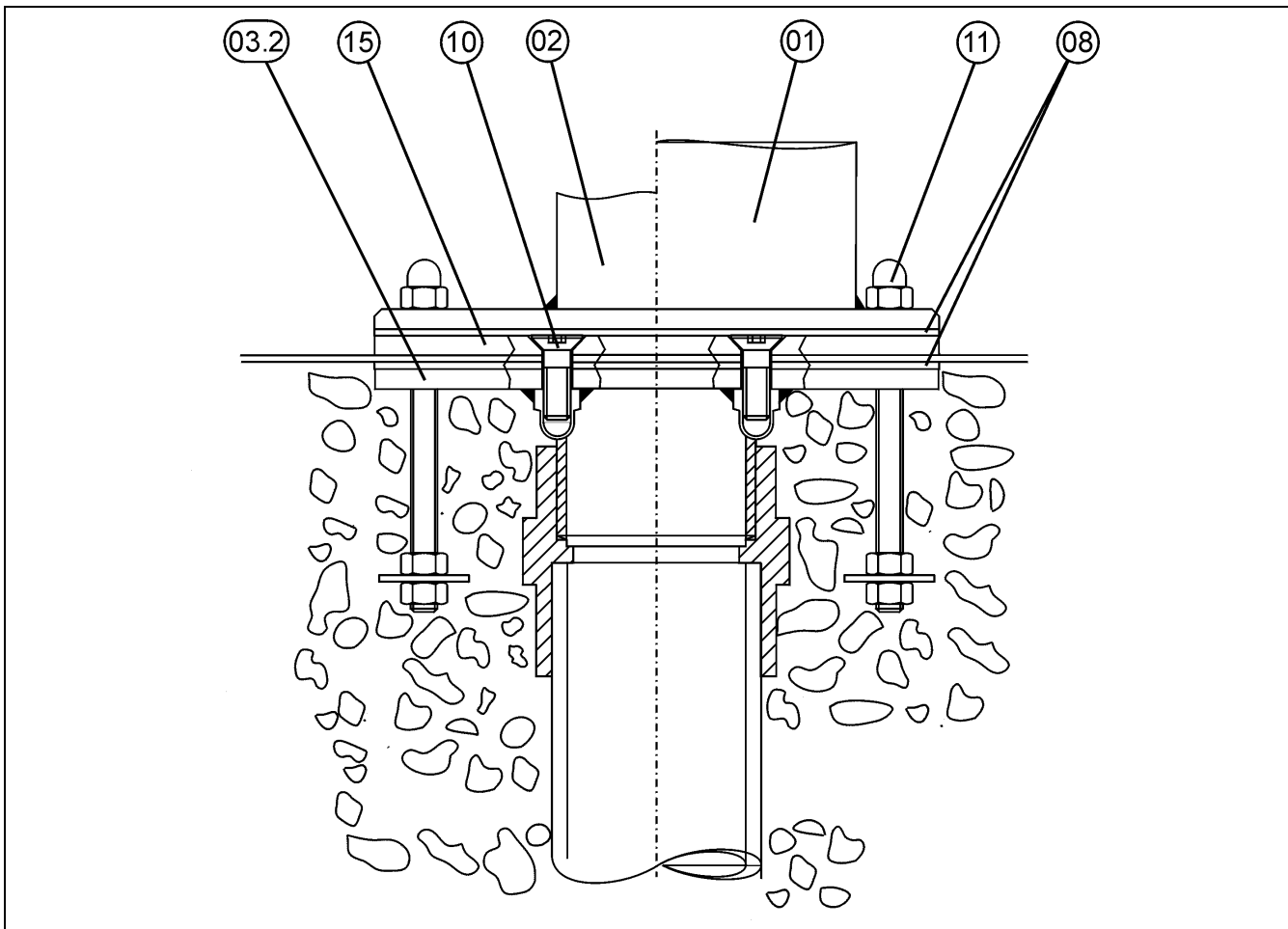


Fig. 8: Concrete Pool with Liner

Item	Best Nr.	Description	Pieces	Comment
1.1	57450	Water curtain straight	1	Matte
1.2	57451	Water curtain straight	1	White
1.3	56137	Water curtain semicircular	1	Matte
1.4	56138	Water curtain semicircular	1	White
2.1	57460	Bell jet	1	Matte
2.2	57461	Bell jet	1	White
2.3	57021	Flat jet	1	Matte
2.4	57120	Flat jet	1	White
2.5	57022	High jet	1	Matte
2.6	57121	High jet	1	White
2.7	57023	Tri jet	1	Matte
2.8	57122	Tri jet	1	White
2.9	57217	Round jet	1	Matte
2.10	57218	Round jet	1	White
3.2	91532	Installation kit, complete	1	

Item	Best Nr.	Description	Pieces	Comment
8	22191	Clamp gasket	2	
10	10134	Screw	8	M8x25
11	12108	Nut	4	M8
15	51442	Clamp ring	1	
	93251	Completely preassembled Water curtain straight	1	Matte
	94419	Completely preassembled Water curtain straight	1	White
	93252	Completely preassembled Water curtain Semicircular	1	Matte
	93244	Completely preassembled Water curtain Semicircular	1	White
	94463	Completely preassembled Bell jet	1	Matte
	94415	Completely preassembled Bell jet	1	White
	94464	Completely preassembled Flat jet	1	Matte
	94417	Completely preassembled Flat jet	1	White
	94465	Completely preassembled High jet	1	Matte
	94457	Completely preassembled High jet	1	White
	94466	Completely preassembled Tri jet	1	Matte
	94458	Completely preassembled Tri jet	1	White
	93253	Completely preassembled Round jet	1	Matte
	93245	Completely preassembled Round jet	1	White

5.3 Retrofitting

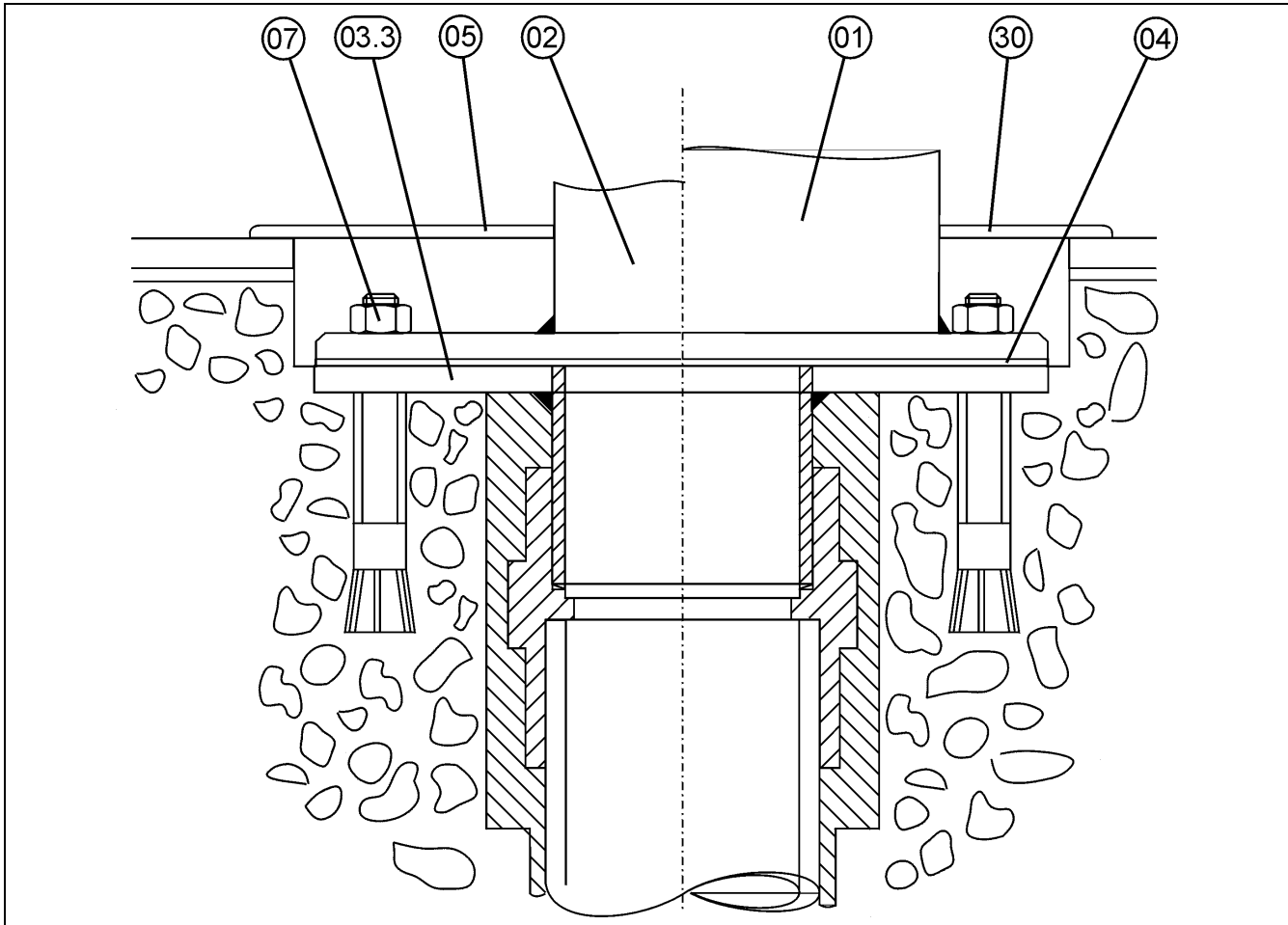


Fig. 9: Retrofitting

Item	Best Nr.	Description	Pieces	Comment
1.1	57450	Water curtain straight	1	Matte
1.2	57451	Water curtain straight	1	White
1.3	56137	Water curtain semicircular	1	Matte
1.4	56138	Water curtain semicircular	1	White
1.5	54089	Water curtain wall straight	1	Matte
1.6	54107	Water curtain wall straight	1	White
1.7	59110	Water curtain wall semicircular	1	Matte
1.8	59111	Water curtain wall semicircular	1	White
2.1	57460	Bell jet	1	Matte
2.2	57461	Bell jet	1	White
2.3	57021	Flat jet	1	Matte
2.4	57120	Flat jet	1	White
2.5	57022	High jet	1	Matte
2.6	57121	High jet	1	White
2.7	57023	Tri jet	1	Matte
2.8	57122	Tri jet	1	White

Item	Best Nr.	Description	Pieces	Comment
2.9	57217	Round jet	1	Matte
2.10	57218	Round jet	1	White
3.3	91513	Installation kit complete	1	
4	22191	Clamp gasket	1	
5.1	59922	Tile screen Water cannon	2	Matte
5.2	59923	Tile screen Water cannon	2	White
7	12182	Nut	4	M6
11	12108	Nut	4	M8
30.1	59924	Tile screen Water curtain	2	Matte
30.2	59925	Tile screen Water curtain	2	White
	93248	Completely preassembled Water curtain straight	1	Matte
	94407	Completely preassembled Water curtain straight	1	White
	93249	Completely preassembled Water curtain semicircular	1	Matte
	93246	Completely preassembled Water curtain semicircular	1	White
	91378	Completely preassembled Water curtain wall straight	1	Matte
	91379	Completely preassembled Water curtain wall straight	1	White
	91380	Completely preassembled Water curtain wall semicircular	1	Matte
	91381	Completely preassembled Water curtain wall semicircular	1	White
	94459	Completely preassembled Bell jet	1	Matte
	94405	Completely preassembled Bell jet	1	White
	94460	Completely preassembled Flat jet	1	Matte
	94406	Completely preassembled Flat jet	1	White
	94461	Completely preassembled High jet	1	Matte
	94455	Completely preassembled High jet	1	White
	94462	Completely preassembled Tri jet	1	Matte
	94456	Completely preassembled Tri jet	1	White
	93250	Completely preassembled Round jet	1	Matte
	93247	Completely preassembled Round jet	1	White

5.4 Pre-fabricated pool

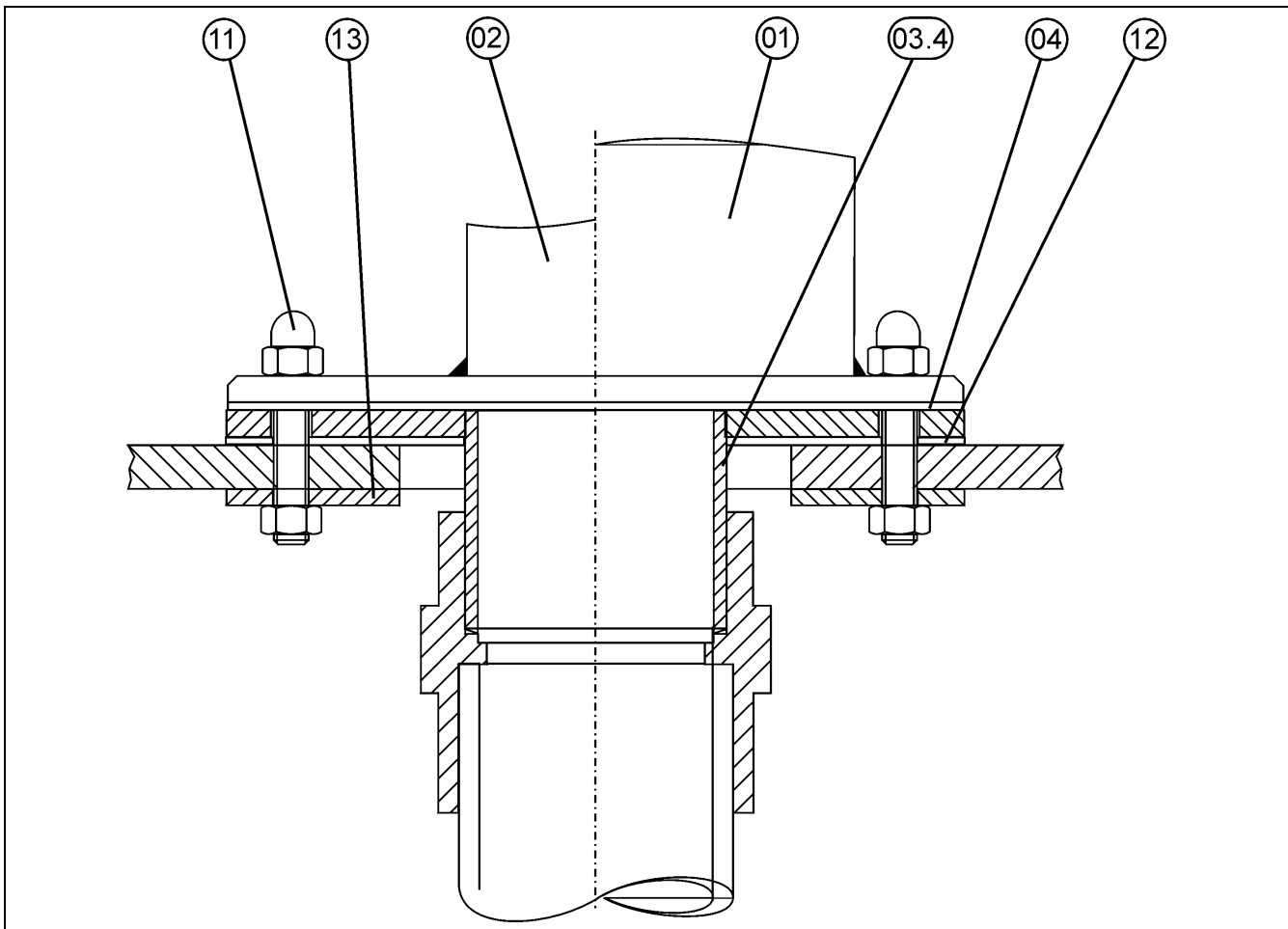
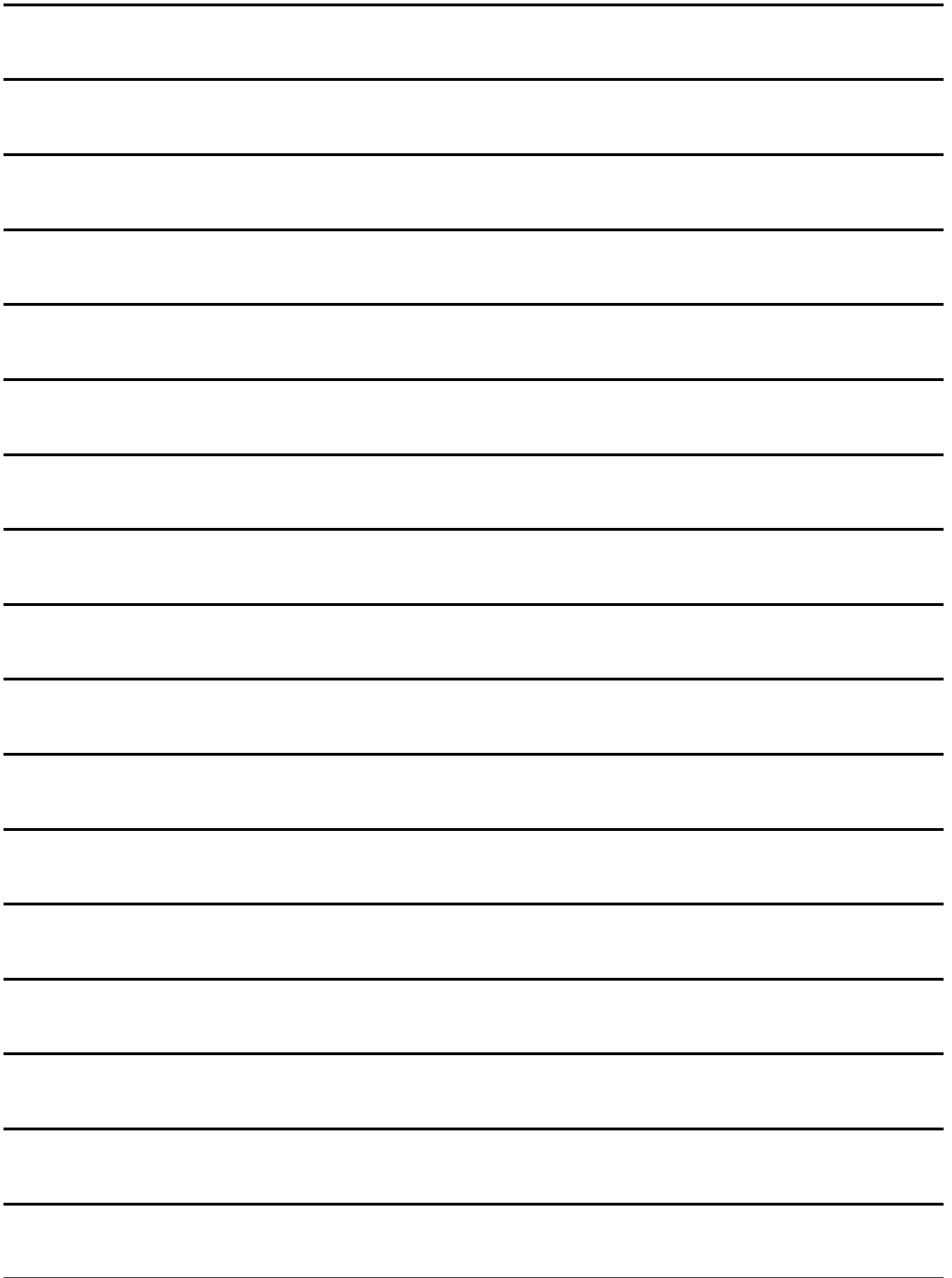


Fig. 10: Pre-fabricated pool

Item	Best Nr.	Name	Pieces	Comment
1.1	57450	Water curtain straight	1	Matte
1.2	57451	Water curtain straight	1	White
1.3	56137	Water curtain semicircular	1	Matte
1.4	56138	Water curtain semicircular	1	White
2.1	57460	Bell jet	1	Matte
2.2	57461	Bell jet	1	White
2.3	57021	Flat jet	1	Matte
2.4	57120	Flat jet	1	White
2.5	57022	High jet	1	Matte
2.6	57121	High jet	1	White
2.7	57023	Tri jet	1	Matte
2.8	57122	Tri jet	1	White
2.9	57217	Round jet	1	Matte

Item	Best Nr.	Name	Pieces	Comment
2.10	57218	Round jet	1	White
3.4	91515	Installation kit complete	1	
4	22192	Clamp gasket	1	
11	12108	Nut	4	M8
12	22191	Clamp gasket	1	
13	12392	Washer	4	
	93251	Completely preassembled Water curtain straight	1	Matte
	94419	Completely preassembled Water curtain straight	1	White
	93252	Completely preassembled Water curtain semicircular	1	Matte
	93244	Completely preassembled Water curtain semicircular	1	White
	94463	Completely preassembled Bell jet	1	Matte
	94415	Completely preassembled Bell jet	1	White
	94464	Completely preassembled Flat jet	1	Matte
	94417	Completely preassembled Flat jet	1	White
	94465	Completely preassembled High jet	1	Matte
	94457	Completely preassembled High jet	1	White
	94466	Completely preassembled Tri jet	1	Matte
	94458	Completely preassembled Tri jet	1	White
	93253	Completely preassembled Round jet	1	Matte
	93245	Completely preassembled Round jet	1	White



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Manual is subject to changes.

rio water curtains / rio water cannons

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