



Technical information
Richter Playground Pumps

Richter Spielgeräte GmbH



Copyright © Richter Spielgeräte GmbH
Last updated: July 2021

Reproduction of this document is subject to permission by Richter Spielgeräte GmbH.
We shall be pleased to send you further copies.

Contents

- **Typology of the suction technology** 2
- **Catalogue page** 3

For order number 5.17500

Playground Pump

- Photo 9
- Detailed view of Playground Pump 10
- Assembly instructions 11-14
- Instructions for wear checks of play equipment 15-16
- Spare parts 17

For order number 5.17730

Playground Pump with Water Reservoir

- Photo 19
- Assembly instructions 20-21
- Instructions for wear checks of play equipment 22-23
- Spare parts 24

For order number 5.17630/5.17640

Playground Pump with integrated connection to mains water in the pillar

- Photo 25
- Assembly instructions 26-28
- Instructions for wear checks of play equipment 29-31
- Spare parts 32-33
- Photo of spare parts 34
- Troubleshooting 35
- Automatic flushing system 36-37

For order number 5.17637/5.17638

Crank Handle Pump made of stainless steel

- Photo 39
- Assembly instructions 40-42
- Instructions for wear checks of play equipment 43-45
- Spare parts 46

For order number 5.17100

External Valve combination

Example: installation situation with pump pedestal

- Photo 47-48
- Assembly instructions 49-51
- Instructions for wear checks of play equipment 52
- Spare parts 53
- Troubleshooting 54

For order number 5.17505/5.17633

Foundation anchor

- Photo 55
- Assembly instructions 56-59

For order number 5.17634/5.17635/5.17636

Winter Lid for Playground Pumps

- Photo 60W

There are **4** different pump “types”:

Typology of the suction technology

1.

**simple suction = traditional pump system
(e.g. from cistern), from page 5**

Order No.	Icon	Product/assembly information
-----------	------	------------------------------

5.17500



Playground Pump hot-dip galvanised
60 kg M 2

2.

**with small water reservoir = combination of 1 + 2, due to fresh
water supply from mains water, from page 15**

Order No.	Icon	Product/assembly information
-----------	------	------------------------------

5.17730



Playground Pump hot-dip galvanised
drinking water to underside of the pump base
70 kg

Pumps for direct connection to mains water, no shaft required

3.

valve combination = connection to mains water, from page 21

Order No.	Icon	Product/assembly information
-----------	------	------------------------------

5.17630



Playground Pump hot-dip galvanised
drinking water up to underside of piston
80 kg

5.17637



Crank Handle Pump completely made of stainless steel, for direct connection
to mains water

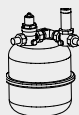
Pumps for direct connection to mains water, no shaft required

4.

**external valve combination = connection to mains water,
from page 35**

Order No.	Icon	Product/assembly information
-----------	------	------------------------------

5.17100



Valve combination for Playground Pump
for external shaft
9 kg

Play value

The element water, with its infinite forms of expression, is defined by its flow, vitality and power. It is only in ideal cases that a natural spring is located at a playground; however every play space needs water, even if it "only" comes out of a pipeline. A water pump with a swipe is especially attractive, where the act of pumping itself becomes a part of the play value, enabling access to the precious liquid. Even small children are able to pump water on the Crank Handle Pump with little effort. A gentle turn of the wheel is all it takes to get involved in the role-playing game with the element of water.

Fundamental characteristics

- Extremely sturdy playground pump
- Special design
- Incentive for playing: pump swipe (can be adjusted in 45° steps during assembly)
- Water is pumped on the Crank Handle Pump by turning the crank handle or rocking it back and forth
- Movement: physical effort



Order No. 5.17637 Crank Handle Pump

**Playground Pumps
Crank Handle Pumps**

Recommended for

- Kindergarten children
- School children
- Water play areas without supervision

Planning information

These two types of pumps can deliver drinking water quality up to the underside of the piston.

Individual solutions for the water supply must be devised, depending on the plans. Up-to-date details on the connection for the water supply and other technical information is available to download as a table at our website

www.richter-spielgeraete.de.



Order No. 5.17630 Playground Pump

© Richter Spielgeräte GmbH 04/20

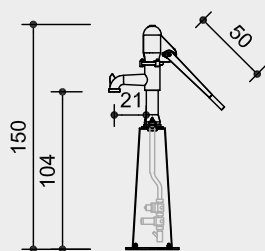


5.17630 / 5.17640

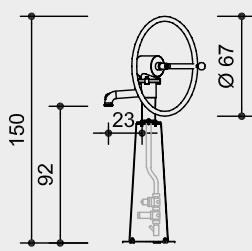


5.17637 / 5.17638

Order No. 5.17630 / 5.17640
Playground Pump with integrated connection to mains water in the pillar
 Drinking water up to underside of piston



Order No. 5.17637 / 5.17638
Crank Handle Pump with integrated connection to mains water in the pillar
 Drinking water up to underside of piston



Safety distance →
 Device dimensions —●—
 Functional distance —|—

Scale 1:50

Safety check according to DIN EN 1176

Components

Pumps for direct connection to mains water:

No underground shaft required for function.

Order No. 5.17630 / 5.17640

- 1 Playground Pump with integrated connection to mains water in the pillar

Order No. 5.17637 / 5.17638

- 1 Crank Handle Pump with integrated connection to mains water in the pillar
- Utility Model**
 20 2020 100 441 Germany

Installation information

Surfacing must be ready to take heavy duty bolts.

Alternatively, the pumps can be mounted on the pedestals

Order No. 5.14190 / 5.19003

or foundation anchors

Order No. 5.17505 / 5.17633.

Order No. 5.17630 / 5.17637

Pump must be drained during frost period; secure or remove handle/crank; we recommend disassembly.

Order No. 5.17640 / 5.17638

It is absolutely essential to disassemble the equipment during the period of frost.

Attention:
Exact measurements may vary;
for all installation dimensions refer to current assembly instructions.

Technical changes reserved.

For use in aggressive environments such as salt or chlorine water, the equipment is also available in marine grade steel (V4A).

Technical information

Order No. 5.17630 Playground Pump

Closed piston suction pump; all top parts made from hot-dip galvanised grey cast iron; cylinder housing, air dome cap, mounting plate, forked lever, plunging valve, gland flange and connecting rod are hot-dip galvanised; cylinder with a liner made of brass alloy and plastic piston (POM); drive shaft made of stainless steel, with replaceable brass bearing, additionally fixed with the gland flange using the shaft collar; secured against being extracted by means of a collar; drive shaft bearing made of brass with lubricating nipples; pump capacity: approx. 0.75 l per stroke, bore 75 mm, pump lift 170 mm the valve combination for direct connection to mains water, Ø 1 inch, and a shut-off valve with backflow preventer (type EA) and drainage are installed in the galvanised pillar made of steel; thread 1 inch; min. 2.5 bar water pressure, max. 6 bar, relief valve prevents swipec from striking back, water requirement approx. 45 l/min

Order No. 5.17640

General pump specification as with **Order No. 5.17630**; plus programmable rinsing device, no connections to power supply required

Order No. 5.17637 Crank Handle Pump

Closed piston suction pump; pump and pillar made of stainless steel; cylinder and crank housing, mounting plate, piston rod and drive shaft made of stainless steel; the drive shaft brass bearing is replaceable, fitted with nipple for lubrication; cylinder with a liner made of brass alloy and plastic piston (POM); crank ring made of stainless steel, knob made of plastic material; the valve combination for direct connection to mains water, Ø 1 inch, and a shut-off valve with backflow preventer (type EA) and drainage are installed in the galvanised pillar made of steel; external thread 1 inch; min 2.5 bar water pressure, max. 6 bar; relief valve prevents swipec from striking back, water requirement approx. 18 l/min

Order No. 5.17638

general pump specification as with **5.17637**; plus programmable rinsing device; no connection to power supply required

Dimensions

(small deviations possible)

Order No. 5.17630 / 5.17640 Playground Pump

Equipment height	1.50 m
Width with horizontal pump swipec	0.95 m
Weight	73 kg

Best.-Nr. 5.17637 / 5.17638 Crank Handle Pump

Equipment height	1.50 m
Width	0.35 / 0.67 m
Weight	70 kg



5.17630 / 5.17640



5.17637 / 5.17638



Order No. 5.17500 Playground Pump

Playground Pumps

Play value

The element water, with its infinite forms of expression, is defined by its flow, vitality and power. And if a playing observer interacts with it, various different sensory impressions are created.

It is only in ideal cases that a natural spring is located at a playground; however every play space needs water, even if it "only" comes out of a pipeline. A water pump with a swipe is especially attractive, where the act of pumping itself becomes a part of the play value, enabling access to the precious liquid. Our robust playground pumps therefore not only serve as a water supply, but also encourage work- and role-playing games and promote communication and cooperation.

Fundamental characteristics

- Sturdy construction
- Special design
- Incentive for playing: pump swipe (can be adjusted in 45° steps during assembly)
- Movement: physical effort



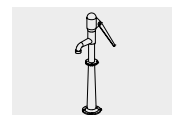
Recommended for

- Kindergarten children
- School children
- Water play areas without supervision

Planning information

Individual solutions for the water supply must be devised, depending on the plans. Up-to-date details on the connection for the water supply and other technical information is available to download as a table at our website www.richter-spielgeraete.de.

The water quality is to be clarified with the operator and the health authorities.

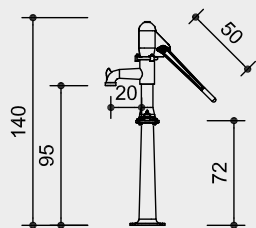


5.17500

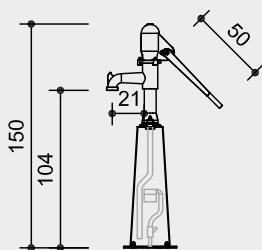


5.17730

Order No. 5.17500
Playground Pump
 Self-priming



Order No. 5.17730
Playground Pump
 with water reservoir in the pillar
 Drinking water to underside of the pump base



Safety distance →
 Device dimensions —●—
 Functional distance —|—

Scale 1:50

Safety check according to DIN EN 1176

Components

Order No. 5.17500
 1 Playground pump

Order No. 5.17730
 1 Playground pump
 with water reservoir in the pillar

Pump Order No. 5.17730 for direct connection to mains water:
 No underground shaft required for proper operation

Installation information

Surfacing must be ready to take heavy duty bolts.

Alternatively, the pumps can be mounted on the pedestals
Order No. 5.14190 / 5.19003
 or foundation anchors
Order No. 5.17505 / 5.17633.

Order No. 5.17500 / 5.17730
 Pump must be drained during frost period; secure or remove handle/crank. We recommend disassembly.

Attention:
Exact measurements may vary; for all installation dimensions refer to current assembly instructions.
 Technical changes reserved.
For use in aggressive environments such as salt or chlorine water, the equipment is also available in marine grade steel (V4A).

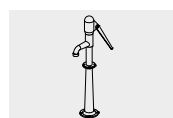
Technical information

Order No. 5.17500
Playground Pump
 Closed piston suction pump; all parts made from hot-dip galvanised grey cast iron; cylinder housing, air dome cap, mounting plate, forked lever, plunging valve, gland flange and connecting rod are hot-dip galvanised; cylinder with a liner made of brass alloy and plastic piston (POM); drive shaft made of stainless steel, with replaceable brass bearing, additionally fixed with the gland flange using the shaft collar; secured against being extracted by means of a collar; drive shaft bearing made of brass with lubricating nipples; pump capacity: approx. 0.75 l per stroke, bore 75 mm, pump lift 170 mm

Order No. 5.17730
Playground Pump
 Pump as before; the water reservoir with float valve is integrated in the galvanised steel pillar; max. 6 bar water pressure; 1/2 inch external thread, pressure-resistant pipeline Ø 3/4 inch, water requirement approx. 15 l/min

Dimensions
 (small deviations possible)

Order No. 5.17500 Playground Pump	
Equipment height	1.40 m
Width with horizontal pump swipec	0.95 m
Weight	55 kg
Order No. 5.17730 Playground Pump	
Equipment height	1.50 m
Width with horizontal pump swipec	0.95 m
Weight	73 kg



5.17500



5.17730



Order No. 5.19003 Pump Pedestal made of wood

**Pump Pedestals
Foundation Anchor
Winter Lid**



Order No. 5.14190 Pump Pedestal made of stainless steel

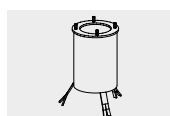
Play value
Our pump pedestals made of larch wood or stainless steel with a ribbed surface make it easier for smaller children to operate the crank or the swipe of our playground pumps.

Fundamental characteristics

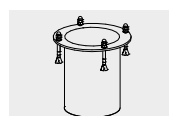
- Sturdy construction
- Minimalist style
- Movement: climbing up

Recommended for

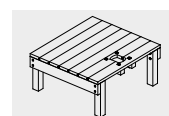
- Kindergarten children
- School children
- Water play areas without supervision



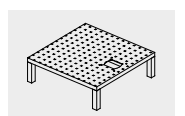
5.17505



5.17633

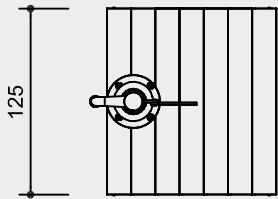
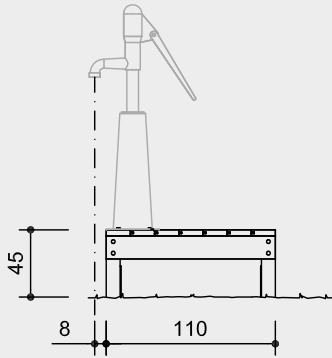


5.19003

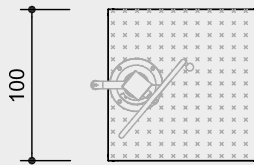
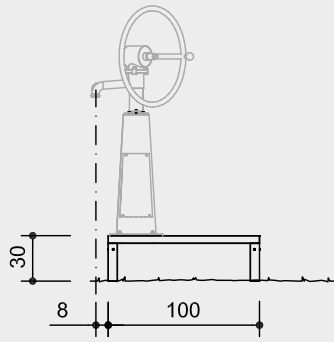


5.14190

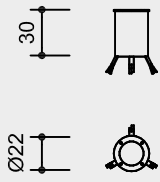
**Order No. 5.19003
Pump Pedestal**



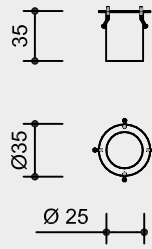
**Order No. 5.14190
Pump Pedestal made of stainless steel**



**Order No. 5.17505
Foundation Anchor**



**Order No. 5.17633
Foundation Anchor**



Safety distance →
Device dimensions —●—
Functional distance —|—

Scale 1:50

Safety check according to DIN EN 1176

Components

Order No. 5.17505

1 Foundation Anchor

Order No. 5.17633

1 Foundation Anchor for pumps

Order No. 5.17634 / 5.17635

1 Winter lid each

Order No. 5.19003

1 Pump pedestal with stand posts and steel feet

Order No. 5.14190

1 Pedestal with 4 support posts made of stainless steel for assembling

Installation information

Surfacing requirements recommendation: sand with drainage or pavement

Order No. 5.17505

foundations 1 item 60 x 60 x 30 cm
Excavation depth 50 cm

Order No. 5.17633

foundations 1 item 60 x 60 x 50 cm
Excavation depth 50 cm

Order No. 5.19003 / 5.14190
corresponding to a fall height of ≤ 0.60 m
(please refer to price list for more detailed information)

foundations 4 items 50 x 50 x 50 cm
Excavation depth 70 cm

The supply line underneath the pedestals is to be faced on site.

Technical information

Order No. 5.19003 Pump Pedestal
Equipment made of mountain larch

Core-free

Sawn-timbers core-free, thus decreasing occurrences of cracking and undesired changes in shape



Ground anchor

All parts used for anchoring to the ground are made of hot-dip galvanised steel or stainless steel



For more detailed explanation of the quality characteristics see price list.

**Order No. 5.14190
Pump Pedestal made of stainless steel**

Equipment made of stainless steel, glass-bead blasted, surface made of embossed sheet metal, support posts 60 / 60 cm for assembling

For use in aggressive environments such as salt or chlorine water, the equipment is also available in marine grade steel (V4A).

Order No. 5.17505 Foundation Anchor
Foundation Anchor

for **Order No. 5.17500** made of galvanised steel

Order No. 5.17635 Winter Lid

Winter Lid for **Order No. 5.17505**, made of stainless steel

Order No. 5.17633 Foundation Anchor

Foundation Anchor made of galvanised steel for **Order No. 5.17630 / 5.17730**

Order No. 5.17634 Winter Lid

Winter Lid for **Order No. 5.17633**, made of stainless steel

Dimensions

(small deviations possible)

Order No. 5.17505

Height 0.30 m
Diameter 0.22 m
Weight 7.5 kg

Order No. 5.17633

Height 0.35 m
Diameter 0.35 m
Weight 7.5 kg

Order No. 5.17634

Diameter 0.34 m
Thickness 2.5 mm
Weight 2 kg

Order No. 5.17635

Diameter 0.22 m
Thickness 2.5 mm
Weight 1 kg

Order No. 5.19003

Width 1.25 m
Depth 1.10 m
Max. height 0.45 m
Weight 95 kg

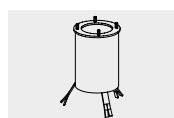
Order No. 5.14190

Width 1.00 m
Depth 1.00 m
Max. height 0.30 m
Weight 50 kg

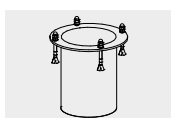
Attention:

Exact measurements may vary; for all installation dimensions refer to current assembly instructions.

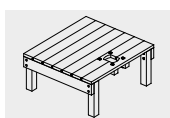
Technical changes reserved.



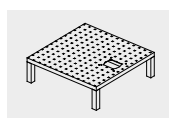
5.17505



5.17633



5.19003



5.14190

5.17500 Playground Pump



Detailed view – 5.17500 Playground Pump



Special information**A Safety information**

Certified by TÜV Süd Product Service GmbH in compliance with EN 1176.

Please do not alter any parts of the equipment or the construction itself since this may affect the safety standards and your guarantee.

We reserve the right to make technical alterations! For further information please call your local agent.

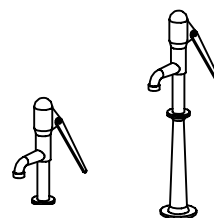
B Decommissioning

Pay attention to the following information when decommissioning the playground pump:

1. **Long-term decommissioning, e. g. during the winter (danger of frost)**
Prior to the period of frost, any water-conducting elements must be drained. Remove the pump swipe in order not to expose the pump parts to excessive wear and tear caused by trying to operate the pump without water. Before recommissioning the pump, please pay attention to point 5 on page 4.
2. **Short-term decommissioning**
The pump swipe may be removed or secured by a chain.

C Water supply (on site)

1. **Drive pipe with tip and side intake holes**
 - is driven directly into the ground
 - no pressure mains required
 - if there is enough water and its quality is sufficient, it is possible to directly tap it from the groundwater
 - suction height up to 6 m, recommendation: 2.50 m max to ensure smooth operation
2. **Reservoir, pond**
In the case of a reservoir or when the water may be contaminated, we recommend using a **filter (order No. 0.97805)**.

**Playground Pump
Order No. 5.17500****Top part of pump
Order No. 5.17510****Components**

Number of parts: 1

1 box

Total weight (incl. box): 55 kg/40 kg

Pump: 40 kg

Top of Pump: 25 kg

The materials required for the installation, such as connecting tubes, ductworks and shut-off cock depend on local conditions and therefore are not included in delivery.

We recommend the use of the Foundation Anchor for Pump Order No. 5.17505.

Pump specifications

- closed piston suction pump, hot-dip galvanised
- pump capacity: bore 75 mm, pump lift 170 mm, approx. 0.75 l/lift

Recommended assembly tools and materials

Set of carpenter's tools
Set of ratchets
Set of spanners
Rubber mallet

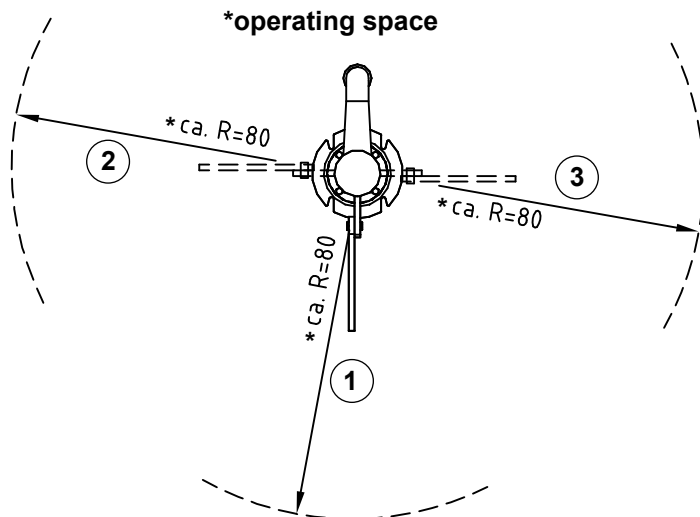
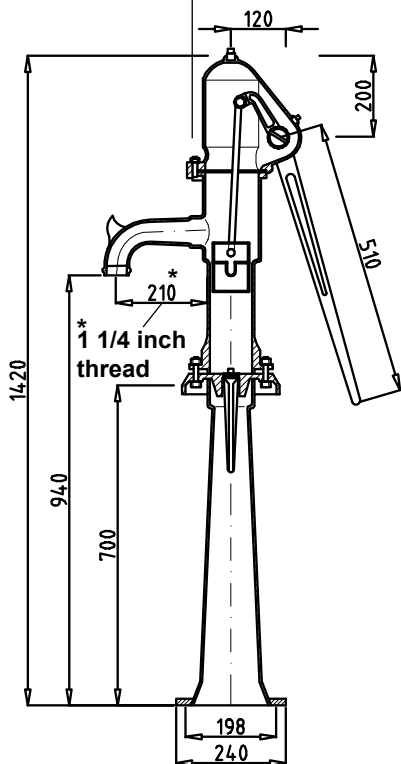
Possible operating positions of the pump

By loosening the 3 hook bolts, the top part of the pump can be rotated to the desired operating position.

Drawing not to scale
all dimensions in mm

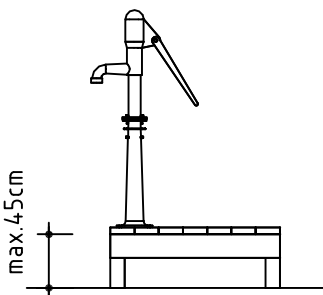
① - ③

these are the possible operating positions

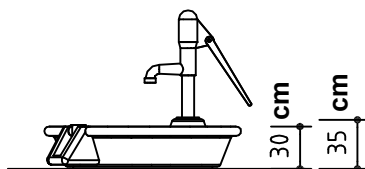


Possible pump assembly situations

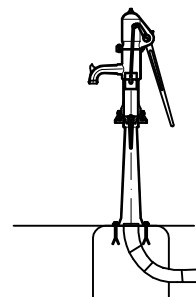
A on Pump Pedestal
Order No. 5.19000



B Water Basins
made of concrete
Order No. 5.22000,
5.22100, 5.24200,
5.24400



C on concrete base
50 x 50, depth 50 cm
natural stone or similar

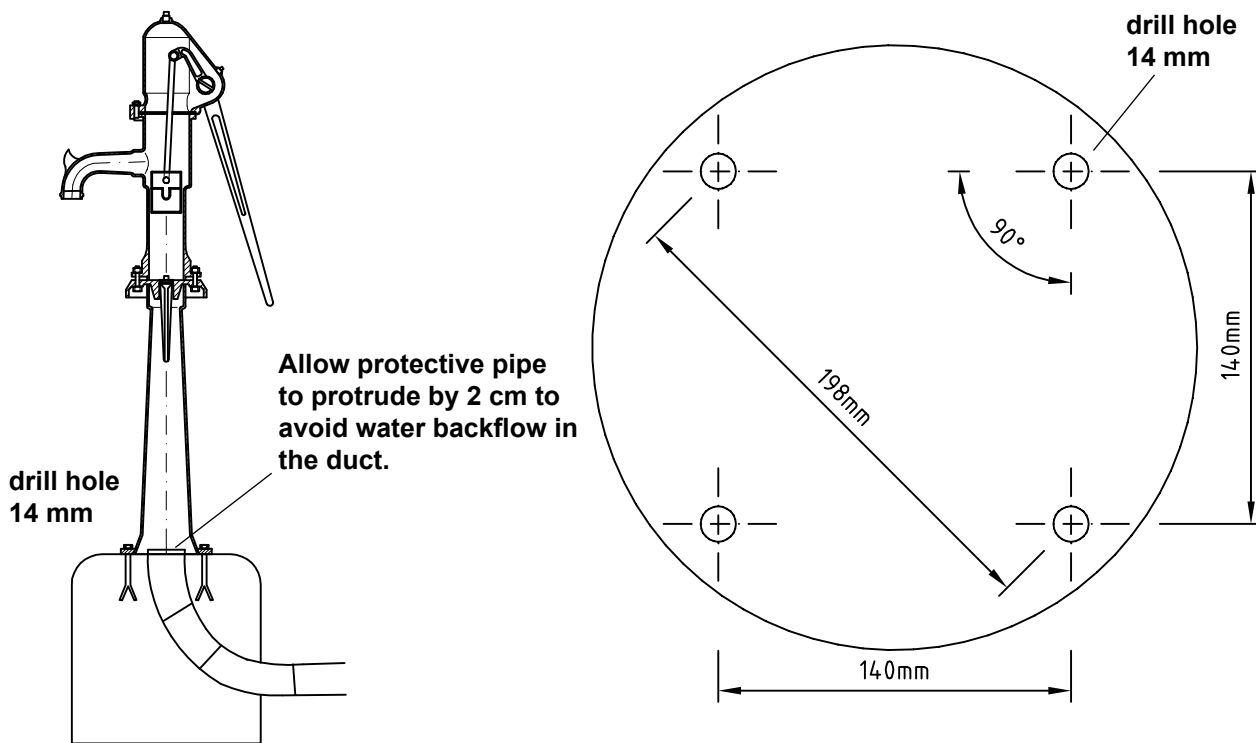


In the case of situation **A + B**, the holes for fastening the pump pedestal are pre-drilled.

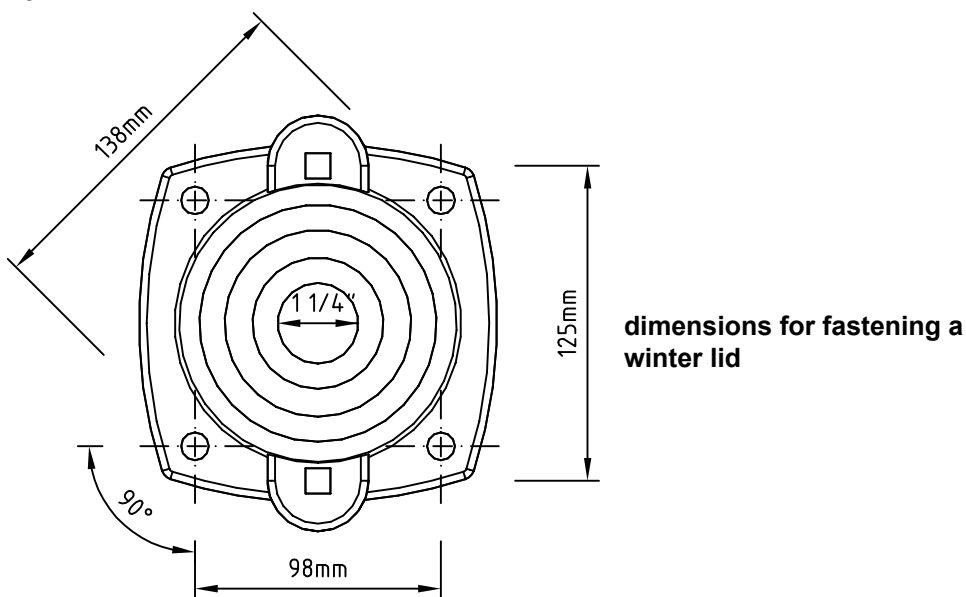
Situation **C** is to be constructed on site.

Assembly situation C requires the following dimensions:

circle for column



circle for pump



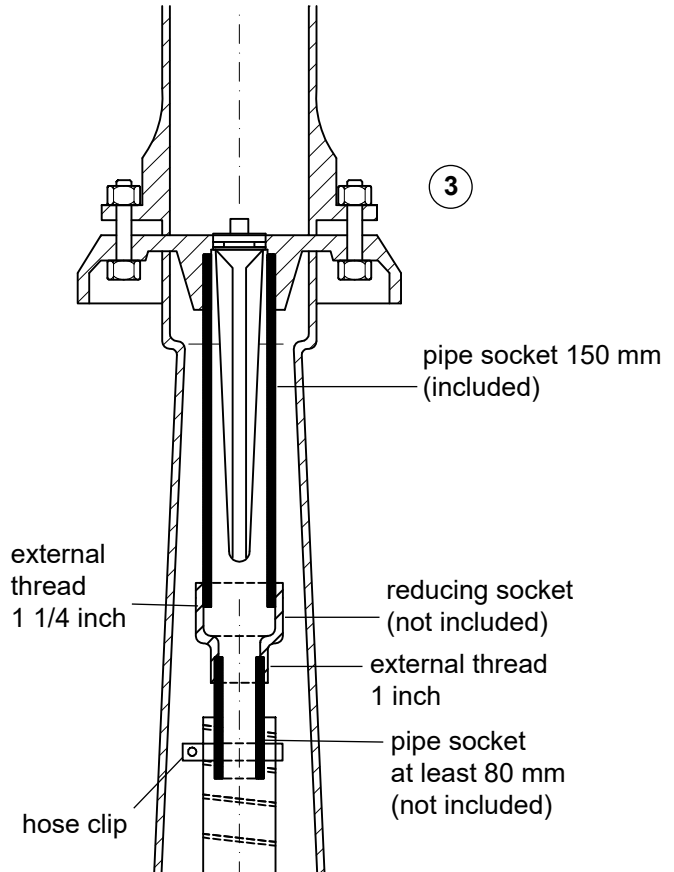
Sequence of assembly operations

1. Depending on the pump installation situation, either mount pump pedestal/ round water basin or build concrete base or similar (on site).

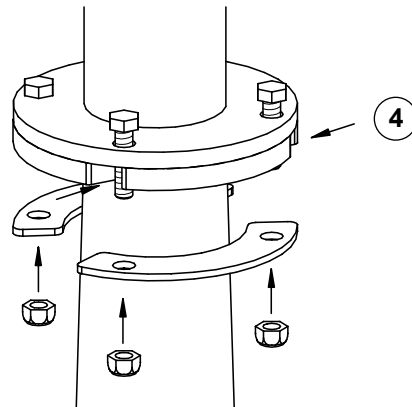
Note

The supply line must be completely clean, rinse thoroughly.

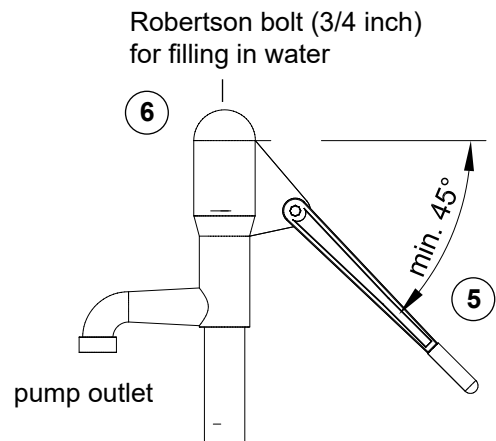
2. Fasten pump column. (In the case of a pedestal or similar, the pump can be fastened using through-bolts, in the case of concrete with heavy duty bolts.)
3. To cover the plunging valve, fasten pipe socket, length 150 mm (included), to the top part of the pump and attach spiral hose (e.g. Heliflex 38 x 3 mm) using a hose clip. Push spiral hose through the reservoir lid and shorten hose as necessary (approx. 20 cm above reservoir floor). Using a reducing socket (not included) you can reduce the external thread from 1 1/4 inch to 1 inch. In this case, connect a pipe socket, length 80 mm (not included) to the external thread and then the spiral hose using a hose clip.



4. Screw on top part of the pump; be sure to fasten the washer plates in the direction of the slots.
5. Install pump swive. Make sure that the swivel points downwards at least 45° in the energised position (rest position). Make sure that it is firmly seated!



6. Before commissioning, fill the pump with drinking water, either through the Robertson bolt (see detailed diagram B) or the pump outlet (insert water hose). Adhere to hygienic standards. This step must also be performed when decommissioning the pump for a short time (if the column was drained after turning it off) or when decommissioning the pump for a longer period. Keep pump swive in the energised position while filling. If necessary, repeat this filling procedure until the pump is fully operational.



Instructions for wear checks of play equipment

Playground

Date of installation

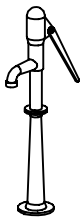
Checks depend on the type of equipment. Any equipment with moving parts must be checked at least twice a year, static equipment at least once a year.

Intervals for maintenance work and checks generally depend on

- location
- kind of use
- frequency of use
- possible vandalism

For more details see also "General instructions for maintenance of playgrounds".

Playground Pump
Order No. 5.17500/5.17510/5.17515

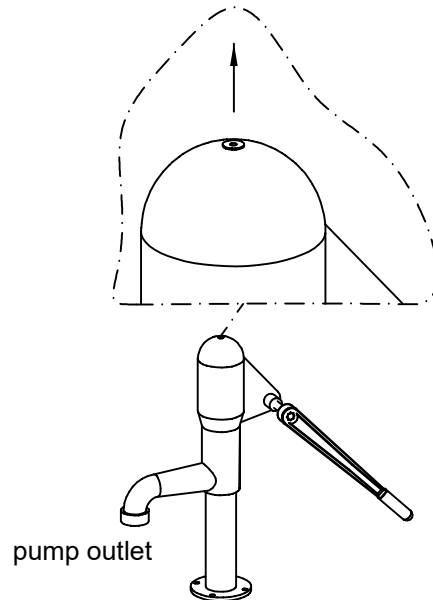


Long-term decommissioning

Pay attention to the following notes regarding long-term decommissioning, e.g. during the winter.

Drain supply lines and dismantle pump including column completely. Before commissioning, fill the pump with drinking water, either through the Robertson bolt (see sketch) or the pump outlet (insert water hose). **This step must also be performed when decommissioning the pump for a short term (if the column was drained after turning it off).** Keep pump swipec in a tightened position (min. 45° downwards) position while filling. Repeat this filling procedure until the pump is fully operational.

Robertson bolt 3/8 inch for filling in water



Short-term decommissioning

Pay attention to the following notes regarding short-term decommissioning:

Dismantle pump swipec or secure with a chain.

Important!

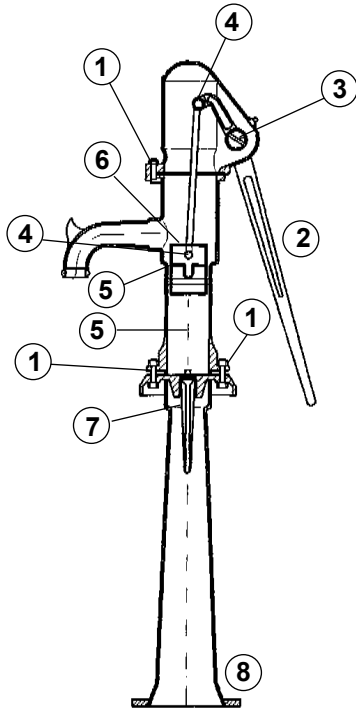
Under no circumstances simply disconnect from water supply since during dry operation the pump is exposed to extreme wear and tear. Also, the pump swipec may strike back if the safety valve fails (risk of injury). In addition, the equipment would be vulnerable to vandalism.

For spare parts refer to page 3.

Instructions for wear checks of play equipment

The equipment must be checked for correct operation and safety, especially the points listed below:

Proof of maintenance



1. Check that all bolts are tight (25 Nm max.).
2. Check that pump swive moves smoothly and is securely connected – must not spring back, tighten nuts if necessary.
3. Check shaft bearing for wear and tear and grease using existing grease nipple. Replace brass bearing, if necessary.
4. Check that the bolts used to fasten the piston rod are tight.
5. Check brass sleeve and plastic piston for wear and tear.
6. Re-grease Quad-Rings of the plastic piston using appropriate fitting grease, replace if necessary.
7. Check seal of plunging valve, valve must move smoothly.
8. Check for stability.

Special notes, e.g. for repairs

Repair not carried out, it is still possible to play on equipment

Repair not carried out, equipment is taken out of action

All work carried out, everything is in order

Maintenance carried out by:




..... **Date**

**Spare Parts
Playground Pump
Order No. 5.17500**





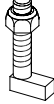







Please note that the safety standards of the equipment must not be affected. Therefore, when carrying out repairs it is helpful to **only use original parts.**

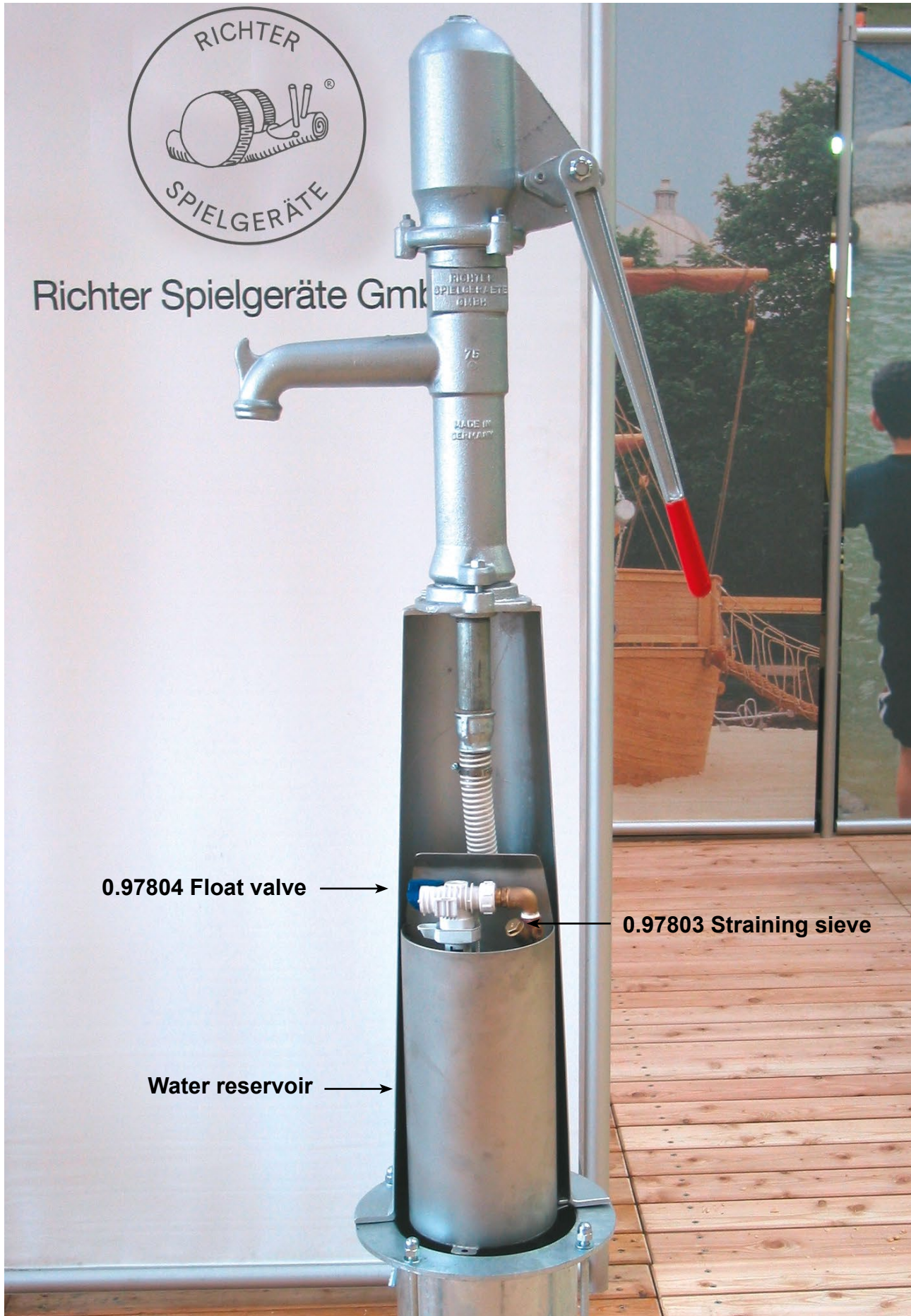
Order No. Spare part

0.97600	cylinder, hot-dip galvanised, with brass sleeve
	
0.97610	mounting plate, hot-dip galvanised
	
0.97630	air dome cap, hot-dip galvanised, with 2 brass bearings
	
0.97633	Robertson bolt 3/8 inch
	
0.97634	Robertson bolt 3/8 inch
	
0.97639	spanner
	
0.97643	forked lever, hot-dip galvanised
	
0.97642	shaft made of stainless steel
	
0.97661	gland flange, machined for bearing and collar of shaft
	
0.97791	brass bearing, big
	
0.97670	spring dowel for forked lever
	
0.97710	pump swipe made of grey cast iron
	
0.97730	plastic piston with grooved ring
	
0.97729	2 Quad-Rings for plastic piston with 1 tube of fitting grease
	
0.97732	brass sleeve for plastic piston 73 mm
	
0.97740	piston rod, galvanised
	
0.97750	plunging valve, hot-dip galvanised, with seal
	

Order No. Spare part

0.97760	rubber seal for plunging valve
	
0.97770	rubber seal for mounting plate
	
0.97780	rubber seal for air dome cap
	
0.97800	column, hot-dip galvanised
	
0.97810	stainless steel hook bolt with nut
	
0.97861	spiral tube
	
0.97862	hose clip
	
0.97862	runout filter
	
0.97805	suction basket, brass, with check
	
0.97728	grooved ring for plastic piston with 1 tube of fitting grease
	

5.17730 Playground Pump with Water Reservoir



Special information

Certified by TÜV Süd Product Service GmbH in compliance with EN 1176:2017.

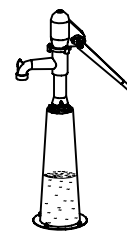
Please do not alter any parts of the equipment or the construction itself since this may affect the safety standards and your guarantee.

We reserve the right to make technical alterations! For further information please call your local agent.

Pump specifications

- * closed piston suction pump, hot-dip galvanised
- * pump capacity: bore 75 mm, stroke 170 mm, approx. 0.75 l per stroke
- * connection line 3/4 inch, water reservoir 1/2 inch external thread, pump outlet 1 1/4 inch internal thread
- * water requirement: at least 15 l/min
- * water pressure: max. 6 bar

**Playground Pump
Order No. 5.17730
with integrated water reservoir
in the column**
for drinking water
up to underside of pump base



Components

Number of parts: 1

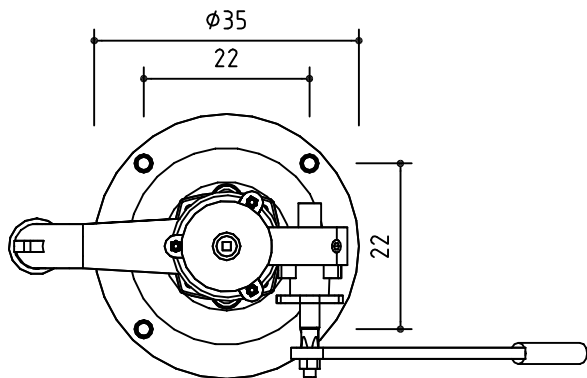
1 box

The materials required for the installation, such as connecting tubes, ductworks, or shaft for shut-off cock, if applicable, depend on local conditions and therefore are not included in delivery.

Weight: approx. 73 kg
size of box: approx. 1.60 x 0.45 x 0.65 m

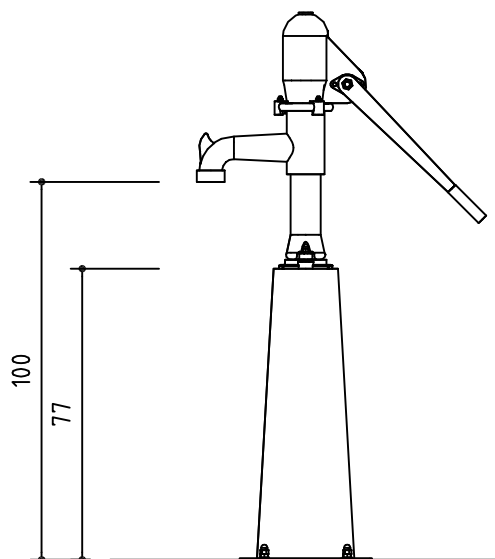
Top elevation

scale 1:10
all dimensions in cm



Side elevation

scale 1:20
all dimensions in cm



Sequence of assembly operations

Work to be carried out on site

1. Define the site of the pump.
2. Provide water supply. **The connection line to mains water should have a diameter of 3/4 inch (at least 1/2 inch).**
We also recommend connecting a backflow preventer or pipe disconnecter. If the water pressure exceeds 3.5 bar, a pressure reducer is to be provided on site (pay attention to local water works regulations).

3. Provide for shut-off valve at the incoming supply line in the shaft.
Recommendation: use dirt filter. Installing a dirt filter between the water connection and valve combination will extend the service life of the valves and pump.

4. Depending on the pump installation situation, either mount pump pedestal or build concrete base or similar (on site). When using a concrete base, allow for empty conduit, ø approx 150 mm, or use foundation anchor (order No. 5.17633) with winter lid (order No. 5.17634).

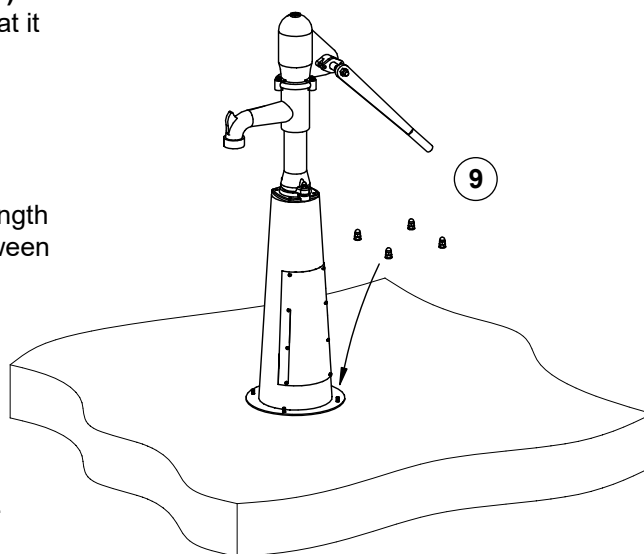
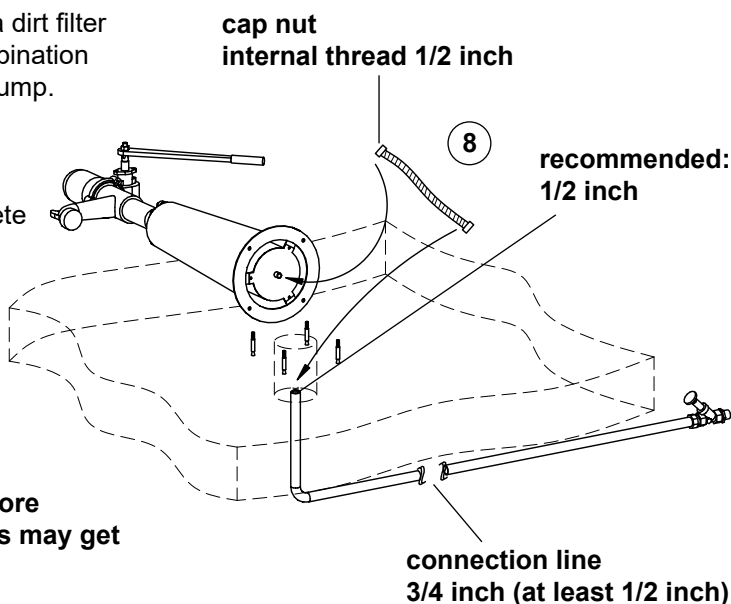
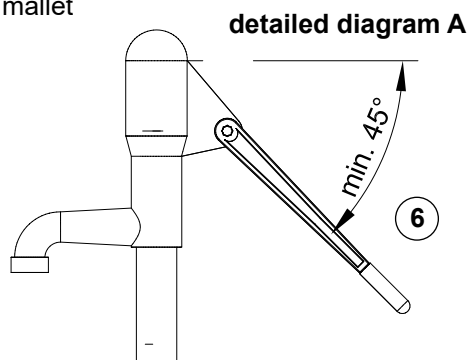
Assembly of pump:

5. **Important**
Thoroughly rinse the water supply line before connecting the pump. Otherwise the valves may get damaged.
6. Install pump swipe. We recommend that the swivel points downwards at least 45° (detailed diagram A) in the energised position (rest position). Make sure that it is firmly seated!
7. For assembly and disassembly lay column down on its side.
8. Use a pre-fabricated (if possible) pressure hose (length approx. 30 cm) pressed with 1/2 inch cap nuts between the water reservoir and mains water supply line.
9. Erect pillar. Pay attention that the flexible hose is installed properly (do not kink!) Then fasten pillar in such a way that the pillar can be removed either for repair or for dismantling and storing **protected from frost** during the winter.

Note

Where temperatures may fall below freezing, it is imperative the pump including column be removed. When decommissioning for a short time, remove pump swipe and secure with a chain. Under no circumstances simply disconnect from water supply since during dry operation the pump is exposed to extreme wear and tear. If the safety valve is broken, the pump swipe may strike back (risk of injury) and vandalism is encouraged.

Recommended assembly tools and materials
set of carpenter's tools
set of ratchets
set of spanners
rubber mallet



Instructions for wear checks of play equipment

Playground

Date of installation

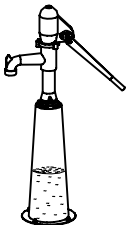
Checks depend on the type of equipment. Any equipment with moving parts must be checked at least twice a year, static equipment at least once a year.

Intervals for maintenance work and checks generally depend on

- location
- kind of use
- frequency of use
- possible vandalism

For more details see also "General instructions for maintenance of playgrounds".

Playground Pump
drinking water
up lower edge of pump base
order No. 5.17730



Long-term decommissioning

Pay attention to the following notes regarding long-term decommissioning, e.g. during the winter.

Drain supply lines and remove pump including column completely. Before commissioning, fill the pump with drinking water, either through the Robertson bolt (see sketch) or the pump outlet (insert water hose). **This step must also be performed when decommissioning the pump for a short term (if the column was drained after turning it off).** Keep pump swipe in a horizontal position while filling. Repeat this filling procedure until the pump is fully operational.

Short-term decommissioning

Pay attention to the following notes regarding short-term decommissioning:

Remove pump swipe or secure with a chain.

Important!

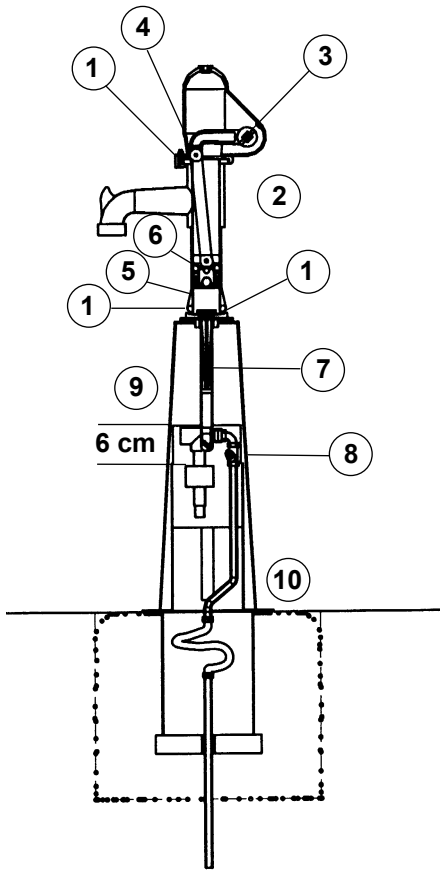
Under no circumstances simply disconnect from water supply since during dry operation the pump is exposed to extreme wear and tear. Also, the pump swipe may strike back if the safety valve fails (risk of injury). In addition, the equipment would be vulnerable to vandalism.

For spare parts refer to page 3.

Instructions for wear checks of play equipment

The equipment must be checked for correct operation and safety, especially the points listed below:

Proof of maintenance



1. Check that all bolts are tight (25 Nm max.).
2. Check that pump swive moves smoothly and is securely connected – must not spring back, tighten nuts if necessary.
3. Check shaft bearing for wear and tear and grease using existing grease nipple. Replace brass bearing, if necessary.
4. Check that the bolts used to fasten the piston rod are tight.
5. Check brass sleeve and plastic piston for wear and tear.
6. Lip seal of the plastic piston using appropriate fitting grease, replace if necessary.
7. Check seal of plunging valve, valve must move smoothly.
8. Open service lid every 6 months and clean the sieve if soiled; in the cases of heavy soiling clean each month.
9. Check the floating valve for leakage, check the level of the float in the container (water level should be approx. 6 cm below the top edge of the container).
10. Check for stability.

Special notes, e.g. for repairs

Repair not carried out, it is still possible to play on equipment

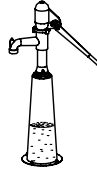
Repair not carried out, equipment is taken out of action

All work carried out, everything is in order

Maintenance carried out by:







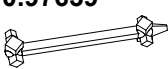

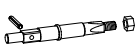







..... **Date**

Spare Parts Playground Pump Order No. 5.17730









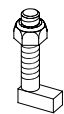

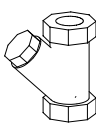



Please note that the safety standards of the equipment must not be affected. Therefore, when carrying out repairs it is helpful to **only use original parts.**

Order No. Spare part

- 0.97600 cylinder, hot-dip galvanised
brass sleeve

- 0.97806 outlet sieve

- 0.97610 mounting plate, hot-dip galvanised

- 0.97630 air dome cap, hot-dip galvanised;
with 2 brass bearings

- 0.97633 Robertson bolt 3/8 inch

- 0.97634 Robertson bolt 3/4 inch

- 0.97639 spanner

- 0.97643 forked lever, hot-dip galvanised

- 0.97642 shaft made of stainless steel

- 0.97661 gland flange, machined for
bearing and collar of shaft

- 0.97791 brass bearing, big

- 0.97792 brass bearing, small

- 0.97670 spring dowel for forked lever

- 0.97710 pump swipe made of grey cast iron

- 0.97730 plastic piston with grooved ring

- 0.97727 retaining ring for plastic piston


Order No. Spare part

- 0.97728 grooved ring for plastic piston

- 0.97760 rubber seal for plunging valve

- 0.97750 plunging valve, hot-dip galvanised
with seal

- 0.97732 brass sleeve
for plastic piston 73 mm

- 0.97740 piston rod, galvanised

- 0.97770 rubber seal for mounting plate

- 0.97780 rubber seal for air dome cap

- 0.97798 column, hot-dip galvanised

- 0.97810 stainless steel hook bolt with nut

- 0.97862 hose clip

- 0.97803 straining sieve

- 0.97804 float valve


5.17630 Playground Pump with integrated connection to mains water in the pillar



Special information

Certified by TÜV Süd Product Service GmbH in compliance with EN 1176.

Please do not alter any parts of the equipment or the construction itself since this may affect the safety standards and your guarantee.

We reserve the right to make technical alterations! For further information please call your local agent.

Technical information on the pump

- closed piston suction pump, hot-dip galvanised
- pump capacity: bore 75 mm, stroke 170 mm, approx. 0.75 litres per stroke
- connection line – valve combination 1 inch pump outlet 1 1/4 inch
- water requirement: at least 45 l per minute (at least 2.5 bar)
- shut-off valve with backflow preventer type EA and drainage inside the pump base
- water pressure 2,5 - 6 bar

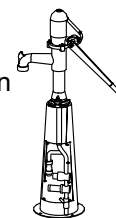
Playground Pump

for direct connection to pressure line drinking water up to lower edge of piston

Order No. 5.17630

Order No. 5.17640

with programmable rinsing device



Components

Number of parts: 1

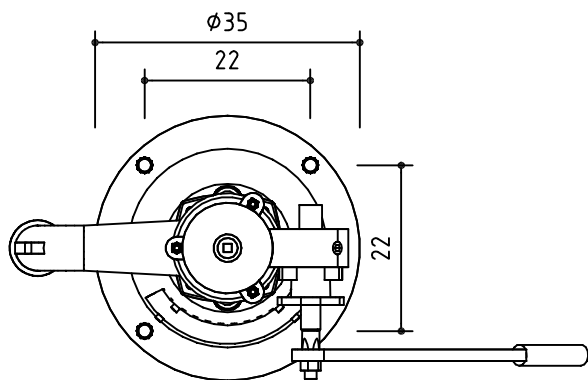
1 box (with instructions for programmable rinsing device if applicable)

The materials required for the installation, such as connecting tubes, empty conduits or shaft for the shut-off cock, if applicable, depend on local conditions and therefore are not included in delivery.

Weight: approx. 76 kg
size of box: approx. 1.60 x 0.45 x 0.65 m

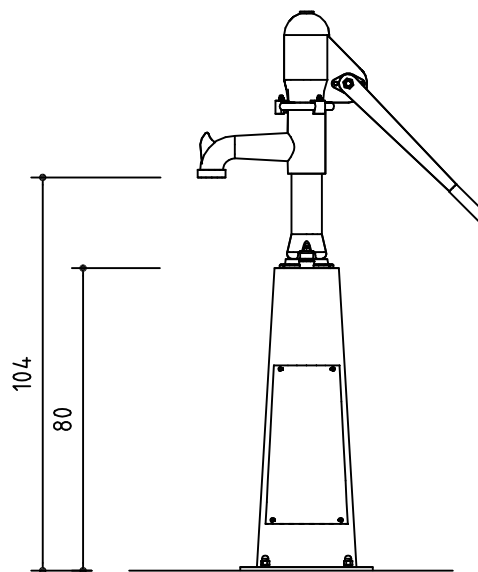
Top elevation

scale 1:10
 all dimensions in cm



Side elevation

scale 1:20
 all dimensions in cm



Recommended assembly tools and materials

- set of ratchets
- set of spanners
- rubber mallet

Sequence of assembly operations

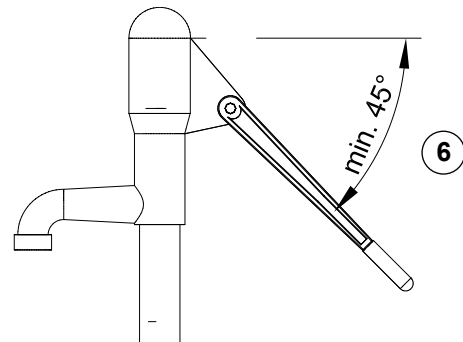
Work to be carried out on site

1. Define the site of the pump.
2. Provide water supply. **The connection line to mains water should have a diameter of 1 inch (at least 3/4 inch).**
We always assume that a pipe disconnector has been installed upstream of the pump system in the supply line. If the water pressure exceeds 3.5 bar, a pressure reducer is to be provided on site (pay attention to local water works regulations).
3. Provide for shut-off valve at the incoming supply line in the shaft.
Recommendation: Use a dirt filter. Installing a dirt filter between the water connection and valve combination will extend the service life of the valves and pump.
4. Depending on the pump installation situation, either mount pump pedestal or build concrete base or similar. When using a concrete base, allow for empty conduit, \varnothing approx 150 mm, or use foundation anchor (**order No. 5.17633**) with winter lid (**order No. 5.17634**).

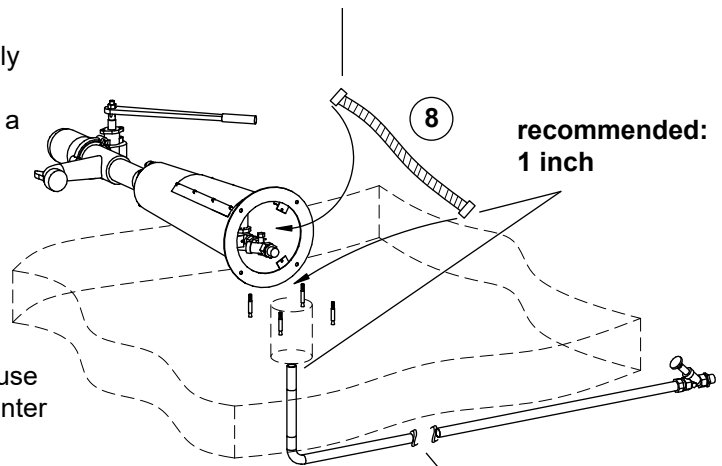
Assembly of pump:

5. **Important**
Thoroughly rinse the water supply line before connecting the pump. Otherwise the valves may get damaged.
6. Install pump swipe. We recommend that the swivel points downwards at least 45° (**see detailed diagram A**) in the energised position (rest position). Make sure that it is firmly seated!
7. For assembly and disassembly lay pillar down on its side.
8. Use a pre-fabricated (if possible) pressure hose (length approx. 30 cm) pressed with 1 inch cap nuts between the valve combination and mains water supply line.
9. Erect pillar. Pay attention that the flexible hose is installed properly (do not kink!) Then fasten pillar in such a way that the pillar can be removed either for repair or for dismantling and storing **protected from frost** during the winter.

detailed diagram A

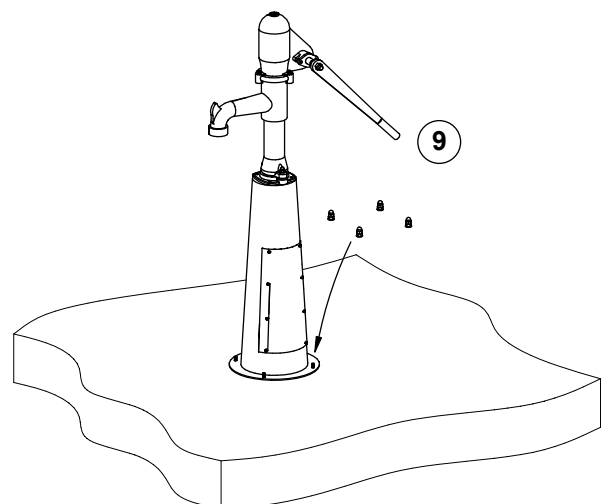


**cap nut
1 inch internal thread**



**recommended:
1 inch**

**connection line
1 inch (at least 3/4 inch)**



Note

Where temperatures may fall below freezing, it is imperative the pump including pillar be removed. If a programmable rinsing device is fitted, the time switch is particularly vulnerable to frost damage as it cannot be drained. When decommissioning the equipment for a short time, remove pump swipe or secure it with a chain. Under no circumstances simply disconnect from water supply since during dry operation the pump is exposed to extreme wear and tear. If the safety valve is broken, the pump swipe may strike back (risk of injury) and vandalism is encouraged.

Pressure surges in the water pipe

To avoid disruptive, sudden noises in the water pipe, please ensure you strictly comply with the recommended pipe diameters.

One reason for pipe knocking could be the use of pipes with a diameter that is too small, also in the tapped pipe.

Incorrect planning and/or installation could lead to extensive damage to pipe components (valves, backflow preventer, etc.) throughout the entire distribution system. If water pipes are already installed, it is important you check whether it is possible to guarantee sufficient supply to the water play equipment. (For example decalcification systems could be a reason for the water supply being insufficient.)

Insufficient supply of water could be the reason for mutual disturbance when operating several play installations simultaneously. If in doubt, we recommend you seek professional advice prior to installation.

Instructions for wear checks of play equipment

Playground.....

Date of installation

Checks depend on the type of equipment. Any equipment with moving parts must be checked at least twice a year, static equipment at least once a year.

Intervals for maintenance work and checks generally depend on

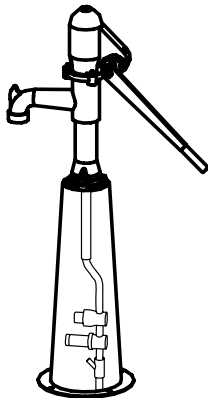
- location
- usage
- frequency of use
- possible vandalism

For more details see also "General instructions for maintenance of playgrounds".

Playground Pump

drinking water up to underside of piston

Order No. 5.17630/5.17640



Long-term decommissioning

Pay attention to the following notes regarding long-term decommissioning, e.g. during the winter:

Drain supply lines and remove pump including pillar completely. If a programmable rinsing device 5.17640 is fitted, the time switch is particularly vulnerable to frost damage as it cannot be drained. Store the pump protected from frost.

Short-term decommissioning

Pay attention to the following notes regarding short-term decommissioning:

When decommissioning for a short time, remove pump swipe/ handwheel and secure with a chain.

Important!

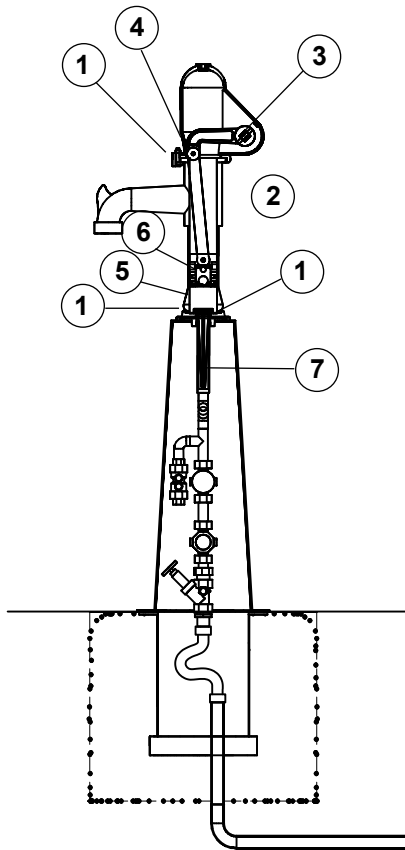
Under no circumstances simply disconnect from water supply since during dry operation the pump is exposed to extreme wear and tear. Also, the pump swipe may strike back if the safety valve fails (risk of injury). In addition, the equipment would be vulnerable to vandalism.

For spare parts refer to page 4 – 5.

Instructions for wear checks of play equipment

The equipment must be checked for correct operation and safety, especially the points listed below:

Proof of maintenance



Top part of the pump

1. Check that all bolts are tight (2.5 Nm max.).
2. Check that pump swivel/handle moves smoothly and is securely connected (must not spring back), tighten nuts if necessary.
3. Check shaft bearing for wear and tear and grease using existing lubricating nipple. Replace brass bearing, if necessary.
4. Check that the bolts used to fasten the piston rod are tight.
5. Check brass sleeve and plastic piston for wear and tear.
6. Regrease grooved ring of the plastic piston using appropriate valve grease, replace if necessary.
7. Check seal of plunging valve, valve must move smoothly.

Special notes, e.g. for repairs

Repair not carried out, it is still possible to play on equipment

Repair not carried out, equipment is taken out of action

All work carried out, everything is in order

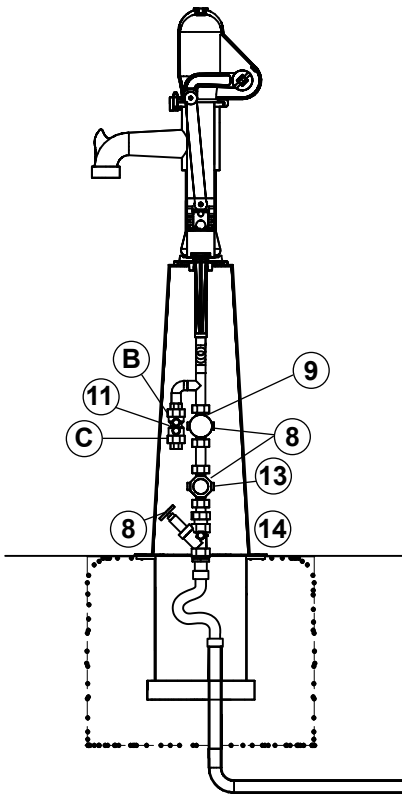
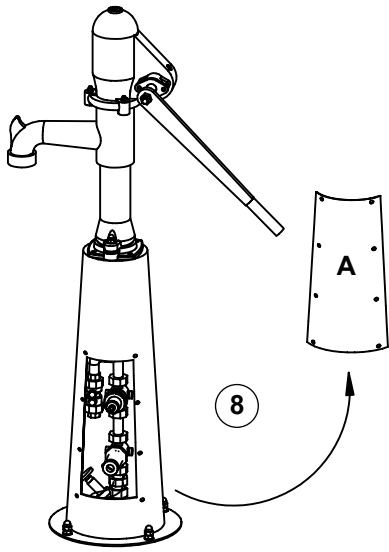
Maintenance carried out by:

..... Date

Instructions for wear checks of play equipment

The equipment must be checked for correct operation and safety, especially the points listed below:

Proof of maintenance



Valve combination

8. Open **service lid A** and close shut-off valve in the pillar; clean sieves in the pressure reduction valve every 6 months, clean membrane valve and safety valve if soiled, clean monthly if water is very contaminated.
9. If the pump is dripping continuously, disassemble membrane valve completely, clean sieve and valve seat (rubber flat gasket) and re-assemble. Check once again. If it is still dripping, the membrane valve unit must be replaced.
10. Check all screw fittings for leakages.
11. Check for leakages and the functioning of the safety valve by closing the shut-off valve and pumping vigorously – it should be possible to hear clear sucking sounds. The pump swipe should not strike back. If it does, replace the functional part within the relief valve. To do this, loosen **cap nut B**, remove the relief valve (11), loosen **cap nut C** and remove the sinter metal filter. Push the functional part out of the housing (push in the **direction C to B**). Install repair set for the functional part in reverse order. Check relief valve for proper operation as described above.
12. The sinter metal filter on the safety valve must be replaced once a year; to do this, loosen **cap nut C**, remove filter and screw in a new filter.
13. Check pressure reducer; it must be set to 1-½ bar.

Structural stability

14. Check pump for stability.

Special notes, e.g. for repairs

Repair not carried out, it is still possible to play on equipment

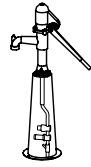
Repair not carried out, equipment is taken out of action

All work carried out, everything is in order

Maintenance carried out by:

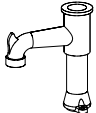














..... Date

Spare parts
Playground Pump
Order No. 5.17630/5.17640













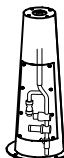
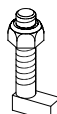


Please note that the safety standards of the equipment must not be affected. Therefore, when carrying out repairs it is helpful to **only use original parts**.

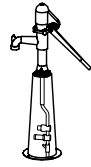
Order No. Spare part

0.97600	cylinder, hot-dip galvanised with brass sleeve
	
0.97806	outlet sieve
	
0.97807	relief valve
	
0.97808	sinter metal filter
	
0.97809	Reepair kit for relief valve
	
0.97610	mounting plate, hot-dip galvanised
	
0.97630	air dome cap, hot-dip galvanised with 2 brass bearings
	
0.97633	Robertson bolt 3/8 inch
	
0.97634	Robertson bolt 3/4 inch
	
0.97639	spanner
	
0.97643	forked lever, hot-dip galvanised
	
0.97642	stainless steel shaft
	
0.97661	gland flange, machined for bearing and collar of shaft
	
0.97791	brass bearing, big
	
0.97792	brass bearing, small
	

Order No. Spare part

0.97670	Spring Dowel for forked lever
	
0.97710	Pump swipe made of grey cast iron
	
0.97730	Piston from POM, incl. 1 tube
	
0.97727	retaining ring for plastic piston
	
0.97728	grooved ring for plastic piston
	
0.97729	2 Quad-Rings for plastic piston with 1 tube of valve grease
	
0.97732	brass sleeve for plastic piston 73 mm
	
0.97740	piston shaft, galvanised
	
0.97750	plunging valve, hot-dip galvanised with seal
	
0.97760	rubber seal for plunging valve
	
0.97770	rubber seal for mounting plate
	
0.97780	rubber seal with air dome cap
	
0.97795	pillar with integrated pressure connector
	
0.97810	stainless steel hook bolt with nut
	

**Spare parts
Playground Pump
Order No. 5.17630/5.17640**

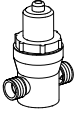


Please note that the safety standards of the equipment must not be affected. Therefore, when carrying out repairs it is helpful to **only use original parts**.

Order No. Spare part

Order No. Spare part

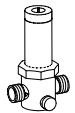
0.97820 membrane valve – new



0.97822 cartridge for membrane valve



0.97830 pressure reducer

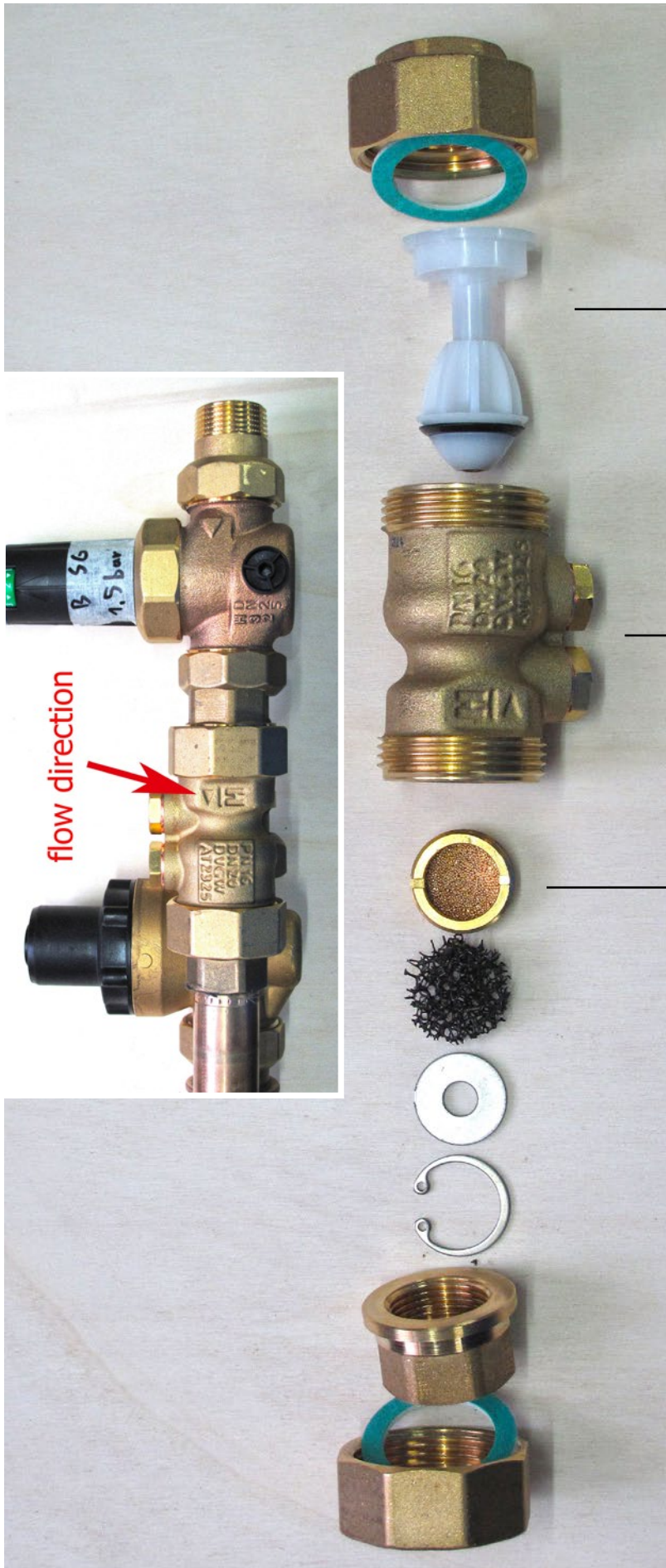


0.97862 hose clip



5.17630 Playground Pump with integr. connection

Detailed view – Relief valve Playground Pump 5.17630



0.97809 repair set for relief valve

0.97807 relief valve

0.97808 sinter metal filter

Troubleshooting for Playground Pump, order No. 5.17630

Problem

Remedy

Pump does not convey

1. Membrane valve is soiled or seals poorly or cartridge inside the membrane valve is broken.
2. Water pressure downstream from pressure reduction valve too high or too low.

Disassemble membrane valve and clean:
Stop water supply. Unscrew black cap and pull out cartridge from the housing using a pipe wrench. Rinse cartridge and housing with water. Assemble in reverse order. If the pump still does not convey, replace cartridge, order No. 0.97822. Refit cap and restore water supply. Check the pump for leakage.

Set water pressure to 1.5 bar by adjusting the blue adjusting wheel on the pressure reducer.

Pump does not suck

1. Grooved ring inside the pump is worn or piston is worn heavily.
2. Relief valve does not seal properly.
3. Membrane valve does not open (after longer period without operation).
4. Water supply (water supply disconnected).

Replace grooved ring; if necessary, replace piston.

Remove sinter metal filter from relief valve. Check position of white sealing piston, replace relief valve (**order No. 0.97807**) if necessary.

Refer to "A 1 Remedy".

Check.

Pump swipe strikes back

1. Sinter metal filter inside the relief valve is clogged or relief valve broken.
2. Water supply (water supply disconnected).

Replace sinter metal filter, order No. 0.97808. Check relief valve for proper operation.

Attention: to prevent the pump swipe from striking back during operation, the sinter metal filter must be replaced once a year.

Check.

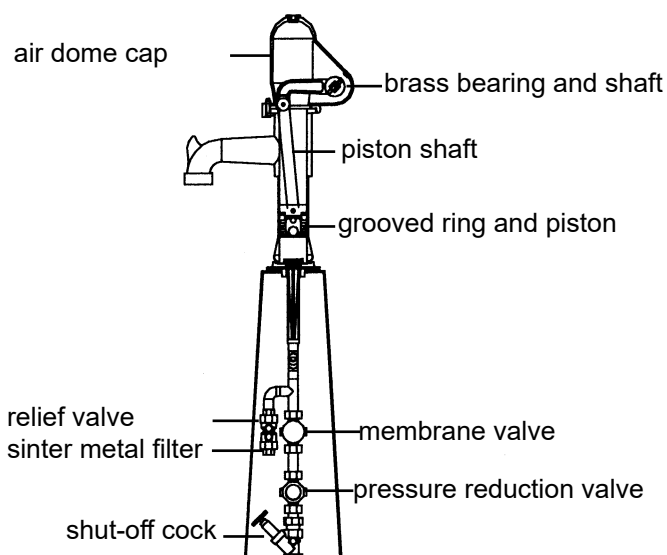
Pump does not move smoothly or locks

1. The pump piston lacks grease, or foreign matters (sand, stones) are present in the pump.
2. Brass bearing of pump shaft lacks grease or shaft is locked.
3. Fine sieves inside the valves are soiled or membrane valve is locked.

Loosen the 3 hook bolts of the air dome cap, pull out air dome cap with piston rod and piston. Grease piston, remove foreign matter as required.

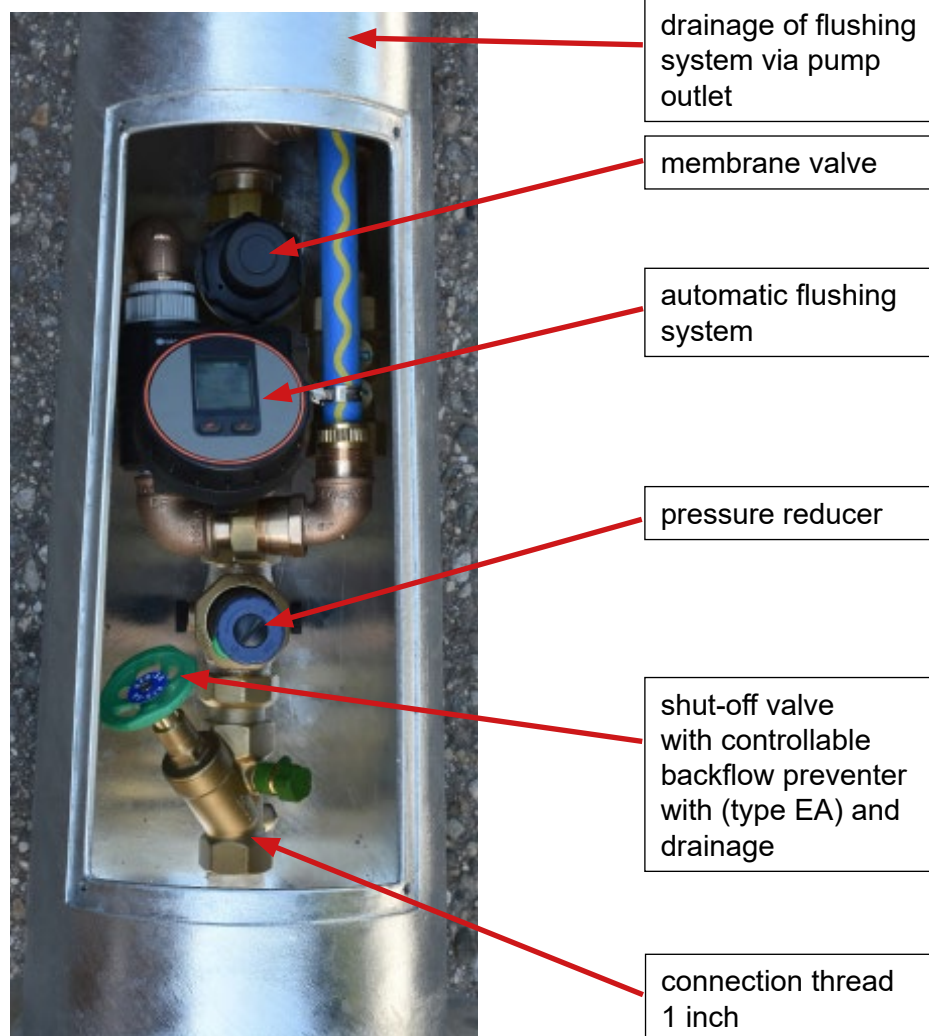
Grease bearing with commercially available bearing grease, replace brass bearing and shaft if necessary.

Refer to "A 1 Remedy".



Status: 13.03.2018

5.17640 Playground Pump with automatic flushing system for direct connection to mains water



drainage of flushing system via pump outlet

membrane valve

automatic flushing system

pressure reducer

shut-off valve with controllable backflow preventer with (type EA) and drainage

connection thread 1 inch

The purpose of the automatic flushing system is to prevent water from remaining in the line between the water supply and the pump over a longer period of time, where it may become contaminated. Depending on the water line length and diameter, the flushing period will be adjusted in such a way that the water in the entire system is fresh at any time.

Automatic flushing system:

- flushing period adjustable depending on the length and diameter of the line to be drained.
- available intervals: every 4, 6, 8, 12 or 24 hours; either every day or every 2 or 3 days, flushing period adjustable from 1 sec to 99 min
- power supply through batterie (independent, no mains connection required!): battery power supply (self-contained, no connection to power mains required): 9 V alkali-manganese (alkaline) type IEC 6LR61, service life of approx. 1 year.

Please also pay attention to the catalogue page, the assembly instructions and the maintenance instructions for 5.17630; the pumps are identical in construction except for the additional flushing system.

The water supply line must have a diameter of 1 inch.
Water pressure: 2.5 bar (min) to 6.0 bar (max).

A shut-off valve with a controllable backflow preventer (type EA) with drainage is installed in the pillar.
Please consult an expert for drinking water installations to determine if additional safety equipment is necessary for the main supply line, taking into account the regulations prescribed by the water supply companies! The water quality should be clarified with the health authorities in terms of evaluation of hazards.

The connection between the pump and the water supply using a flexible pressure-proof water hose (minimum 1" / about 0.30 m long / internal thread 1"), connecting material and supply line, clamps, fittings and shut-off valves are to be provided on site; accommodating the technical installations in a separate chamber (e.g. concrete well) is recommended (take into account frost resistance).

Discharge per stroke approx. 0.75 l, flow rate approx. 45 l/minute.

Pressure reducer in the pump is preset to 1.2 to 1.5 bar (must not be changed!).

Note

Where temperatures may fall below freezing, it is imperative the pump including pillar be removed. Supply lines which are not installed frost-proof must be shut off and drained.

5.17637 Crank Handle Pump, made of stainless steel for direct connection to mains water



Special information

Certified by TÜV Süd Product Service GmbH in compliance with EN 1176.

Please do not alter any parts of the equipment or the construction itself since this may affect the safety standards and your guarantee.

We reserve the right to make technical alterations! For further information please call your local agent.

Technical information on the pump

- closed piston suction pump, material: hot-dip galvanised
- pump capacity: drill hole 75 mm, approx. 0.3 l per stroke (per revolution)
- connection line 1 inch – valve combination 1 inch external thread, pump outlet 1 1/4 inch internal thread
- water requirement: approx. 18 l per minute (at least 2.5 bar)
- shut-off valve with backflow preventer (type EA) and drainage within the pump base
- water pressure 2.5 – 6 bar

Crank Handle Pump

for direct connection to mains water, drinking water up to underside of piston

Order No. 5.17637

Order No. 5.17638

with programmable rinsing device



Components

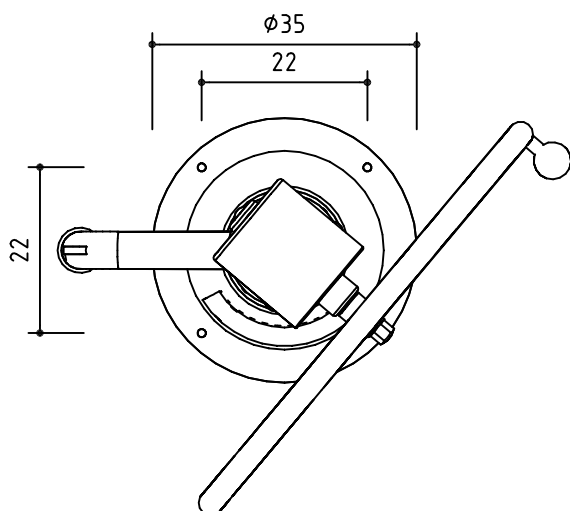
Number of parts: 1
1 box (with instructions for programmable rinsing device if applicable)

The materials required for the installation, such as connecting tubes, empty conduits or shaft for shut-off cock, if applicable, depend on local conditions and therefore are not included in delivery.

Weight: approx. 40 kg
Dimensions of box: approx. 1.60 x 0.45 x 0.65 m

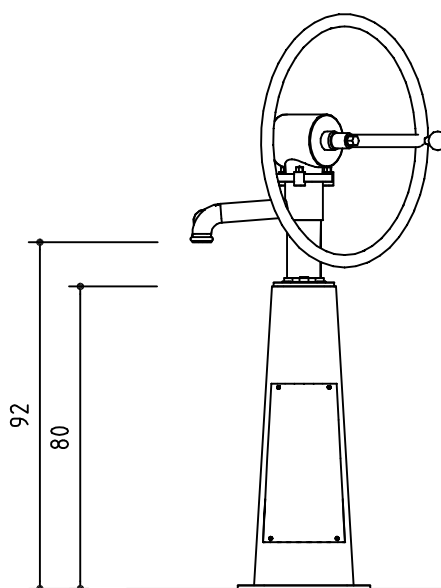
Top elevation

scale 1:10
all dimensions in cm



Side elevation

scale 1:20
all dimensions in cm



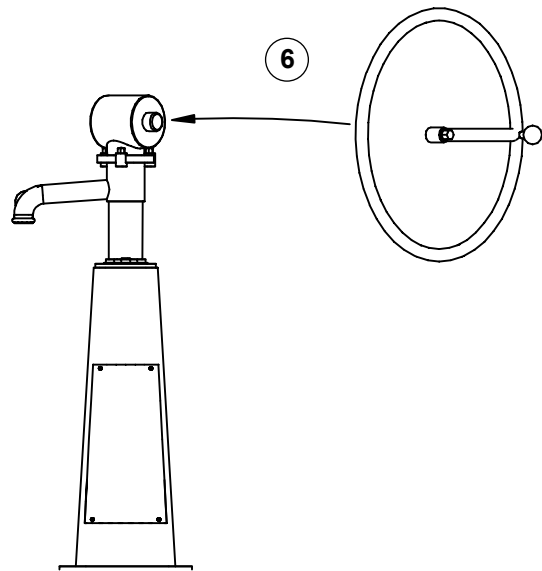
Recommended assembly tools and materials

- set of plumber's tools
- set of ratchets
- set of spanners
- rubber mallet

Sequence of assembly operations

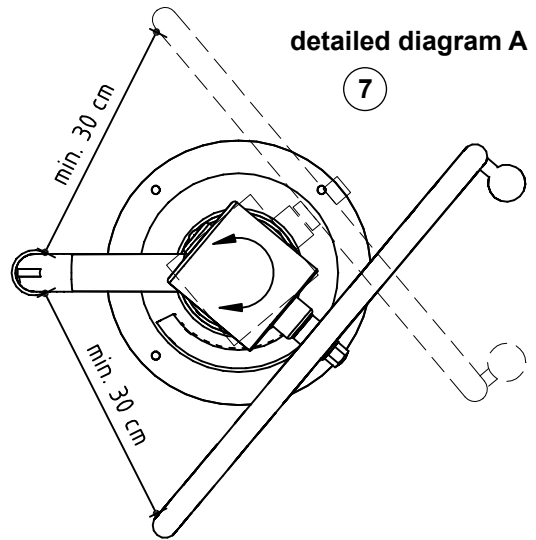
Work to be carried out on site

1. Define the site of the pump.
2. Provide water supply. **The connection line to mains water should have a diameter of 1 inch.** We also recommend connecting a backflow preventer or pipe disconnecter (pay attention to local water works regulations).
3. Provide for shut-off valve at the incoming supply line (in the shaft or basement).
Recommendation: use dirt filter. Installing a dirt filter between the water connection and valve combination will extend the service life of the valves and pump.
4. Depending on the pump installation situation, either mount pump pedestal or build concrete base or similar. When using a concrete base, allow for empty conduit, \varnothing approx 150 mm, or use foundation anchor (**order No. 5.17633**) with winter lid (**order No. 5.17634**).

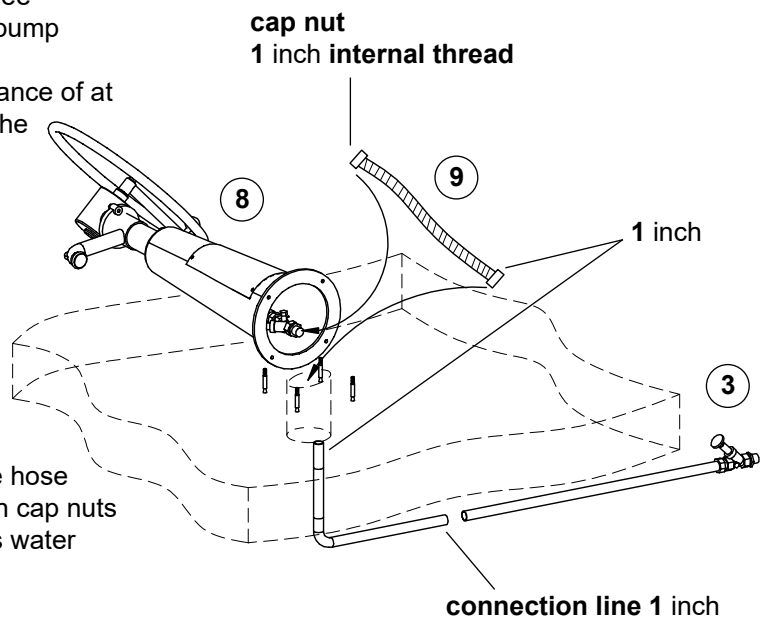


Assembly of pump:

5. **Important:** Thoroughly rinse the water supply line before connecting the pump. Otherwise the valves may get damaged.
6. Attach the handwheel to the pump.
7. Depending on the play situation, the handwheel together with the pump head can be turned to another position. To do this, loosen the three clamping screws on the flange under the pump head.
For safety reasons, we recommend a distance of at least 30 cm between the handwheel and the outlet (**see also detailed diagram A**).

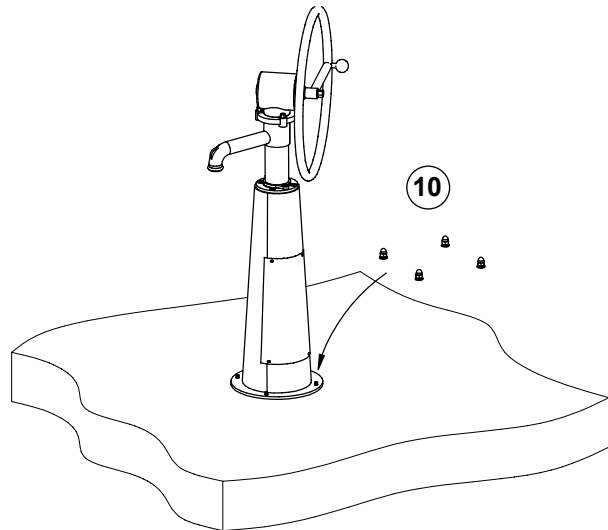


8. For assembly and disassembly lay pillar down on its side.



9. Use a pre-fabricated (if possible) pressure hose (length approx. 30 cm) pressed with 1 inch cap nuts between the valve combination and mains water supply line.

10. Erect pillar. Pay attention that the flexible hose is installed properly (do not kink!) Then fasten pillar in such a way that the pillar can be removed either for repair or for dismantling and storing **protected from frost** during the winter.



Note

Where temperatures may fall below freezing, it is imperative the pump (**No. 5.17637**) including pillar be drained. If a programmable rinsing device (**No. 5.17638**) is fitted, the time switch is particularly vulnerable to frost damage as it cannot be drained. Therefore, it is imperative the pump be dismantled. When decommissioning the equipment for a short time, remove the pump swipe or secure it with a chain. Under no circumstances simply disconnect from water supply since during dry operation the pump is exposed to extreme wear and tear. In addition, the equipment would be vulnerable to vandalism. If the relief valve is defective, the handwheel may jerk unexpectedly (risk of injury).

Pressure surges in the water pipe

To avoid disruptive, sudden noises in the water pipe, please ensure you strictly comply with the recommended pipe diameters.

One reason for pipe knocking could be the use of pipes with a diameter that is too small, also in the tapped pipe.

Incorrect planning and/or installation could lead to extensive damage to pipe components (valves, backflow preventer, etc.) throughout the entire distribution system. If water pipes are already installed, it is important you check whether it is possible to guarantee sufficient supply to the water play equipment. (For example decalcification systems could be a reason for the water supply being insufficient.)

We always recommend installing a separate water supply for water play equipment to prevent impacting domestic installations.

Insufficient supply of water could be the reason for mutual disturbance when operating several play installations simultaneously.

If in doubt, we recommend you seek professional advice prior to installation.

Instructions for wear checks of play equipment

Playground.....

Date of installation

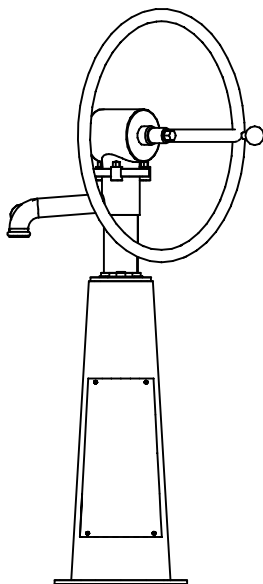
Checks depend on the type of equipment. Any equipment with moving parts must be checked at least twice a year, static equipment at least once a year.

Intervals for maintenance work and checks generally depend on

- location
- usage
- frequency of use
- possible vandalism

For more details see also "General instructions for maintenance of playgrounds".

Crank Handle Pump
drinking water up to underside of piston
Order No. 5.17637



Long-term decommissioning

Pay attention to the following notes regarding long-term decommissioning, e.g. during the winter:

Drain supply lines. Where temperatures may fall below freezing, it is imperative the pump (**No. 5.17637**) including pillar be drained. If a programmable rinsing device (**No. 5.17638**) is fitted, the time switch is particularly vulnerable to frost damage as it cannot be drained. Therefore, it is imperative the pump be dismantled. Store the pump protected from frost.

Short-term decommissioning

Pay attention to the following notes regarding short-term decommissioning:

Remove pump handwheel or secure it with a chain.

Important!

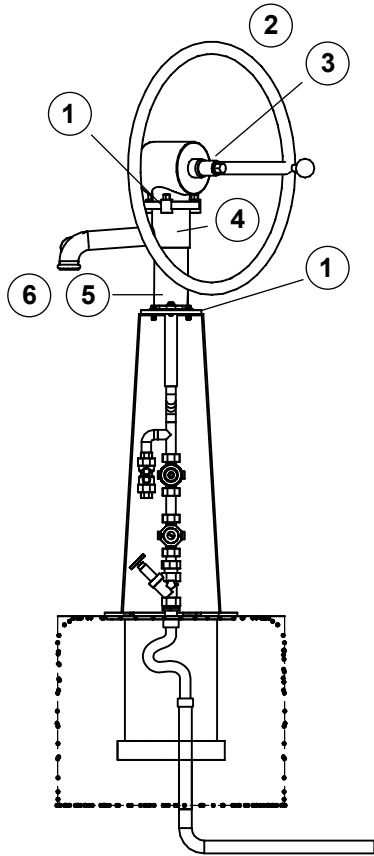
Under no circumstances simply disconnect from water supply since during dry operation the pump is exposed to extreme wear and tear. In addition, the equipment would be vulnerable to vandalism. If the relief valve is defective, the handwheel may jerk unexpectedly (risk of injury).

Spare parts see page 4

Instructions for wear checks of play equipment

The equipment must be checked for correct operation and safety, especially the points listed below:

Proof of maintenance



Top part of the pump

1. Check that all bolts are tight (2.5 Nm max.).
2. Check that handwheel moves smoothly and is securely connected; retighten nuts if necessary.
3. Check shaft bearing for wear and tear and grease using existing lubricating nipples. Replace brass bearing, if necessary.
4. Check that the bolts used to fasten the piston rod are tight.
5. Check brass sleeve and plastic piston for wear and tear.
6. Re-grease grooved ring of the plastic piston using appropriate valve grease, replace if necessary.

Special notes, e.g. for repairs

Repair not carried out, it is still possible to play on equipment

Repair not carried out, equipment is taken out of action

All work carried out, everything is in order

Maintenance carried out by:

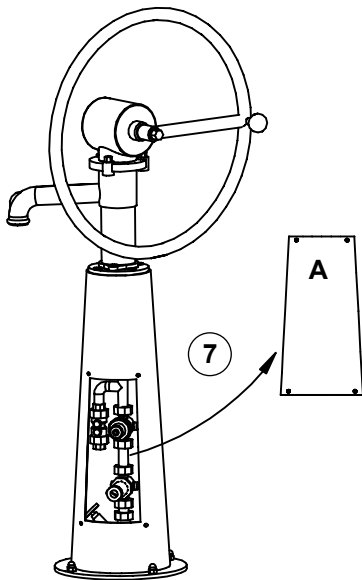
..... **Date**

Instructions for wear checks of play equipment

The equipment must be checked for correct operation and safety, especially the points listed below:

Proof of maintenance

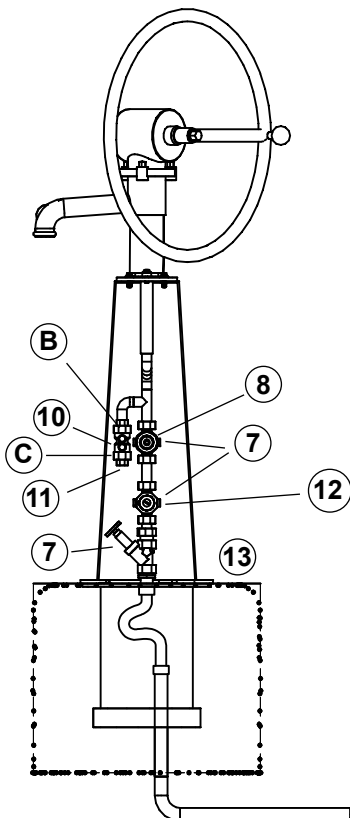
Valve combination



7. Open **service lid A** and close shut-off valve in the pillar; clean sieves in the pressure reduction valve every 6 months, clean membrane valve and safety valve if soiled, clean monthly if water is very calcareous.
8. If the pump is dripping continuously, disassemble membrane valve completely, clean sieve and valve seat (rubber flat gasket) and re-assemble. Check once again. If it is still dripping, the membrane valve unit must be replaced.
9. Check all screw fittings for leakages.
10. Check the relief valve for leakages and proper operation by closing the shut-off valve and pumping vigorously – there must be a distinct suction noise at the relief valve. The pump swive must not strike back. If it does, replace the functional part within the relief valve. To do this, loosen **cap nut B**, remove the relief valve (10), loosen **cap nut C** and remove the sinter metal filter. Push the functional part out of the housing (push in the **direction C to B**). Install repair set for the functional part in reverse order. Check relief valve for proper operation as described above.
11. The sinter metal filter on the relief valve must be replaced once a year; to do this, loosen **cap nut C**, remove filter and screw in a new filter.
12. Check pressure reducer; it must be set to 1-½ bar.

Structural stability

13. Check pump for stability.



Repair not carried out, it is still possible to play on equipment

Repair not carried out, equipment is taken out of action

All work carried out, everything is in order

Maintenance carried out by:


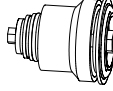

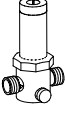


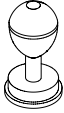
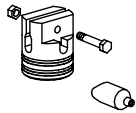


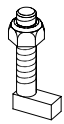
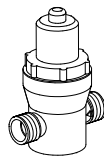
..... Date

5.17637 Crank Handle Pump

Special notes, e.g. for repairs

**Spare Parts
Crank Handle Pump
Order No 5.17637**

Please note that the safety standards of the equipment must not be affected. Therefore, when carrying out repairs it is helpful to **only use original parts.**

Order No. Spare part	Order No. Spare part
<p>0.97806 outlet sieve</p> 	<p>0.97822 cartridge for membrane valve</p> 
<p>0.97807 relief valve</p> 	<p>0.97830 pressure reducer</p> 
<p>0.97808 sinter metal filter</p> 	<p>0.97862 hose clip</p> 
<p>0.97809 repair set for relief valve</p> 	
<p>0.97730 plastic piston with grooved ring</p> 	
<p>0.97727 retaining ring for plastic piston</p> 	
<p>0.97728 grooved ring for plastic piston</p> 	
<p>0.97810 stainless steel hook bolt with nut</p> 	
<p>0.97820 membrane valve – new</p> 	

5.17100 External Valve combination



5.17140 External Valve combination with water computer



Special information

A Safety information

Certified by TÜV Süd Product Service GmbH in compliance with EN 1176.

Please do not alter any parts of the equipment or the construction itself since this may affect the safety standards and your guarantee.

We reserve the right to make technical alterations! For further information please call your local agent.

B Decommissioning

Pay attention to the following information when decommissioning the playground pump:

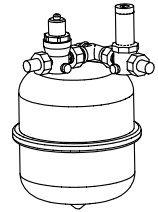
long-term decommissioning, e.g. during the winter (danger of frost)

Prior to the period of frost, any water-conducting elements must be drained. If the valve combination has not been installed frost-proof, it must be removed and stored protected from frost during the period of frost.

C Water supply

- valve arrangement with pressure compensating tank, connected directly to pressure mains
- shaft with internal diameter of 1.00 m, height 0.80 m, necessary, distance from the pump no greater than 6.00 m, install frost-proof, max. delivery height 2.50 m
- pressure mains 1 inch
- hygienically safe construction
- water pressure 2.5–6 bar

**Valve combination
Order No. 5.17100**



Components

Number of parts: 1

weight: 9 kg

The materials required for the installation, such as connecting tubes, shaft, shut-off cock etc., depend on local conditions and therefore are not included in delivery.

Technical Information

- required amount of water depends on installed equipment
- external thread on piece of equipment 1 inch
- components measures: approx. 40 x 45 x 50 cm, space requirements for access have to consider

Recommended assembly tools and materials

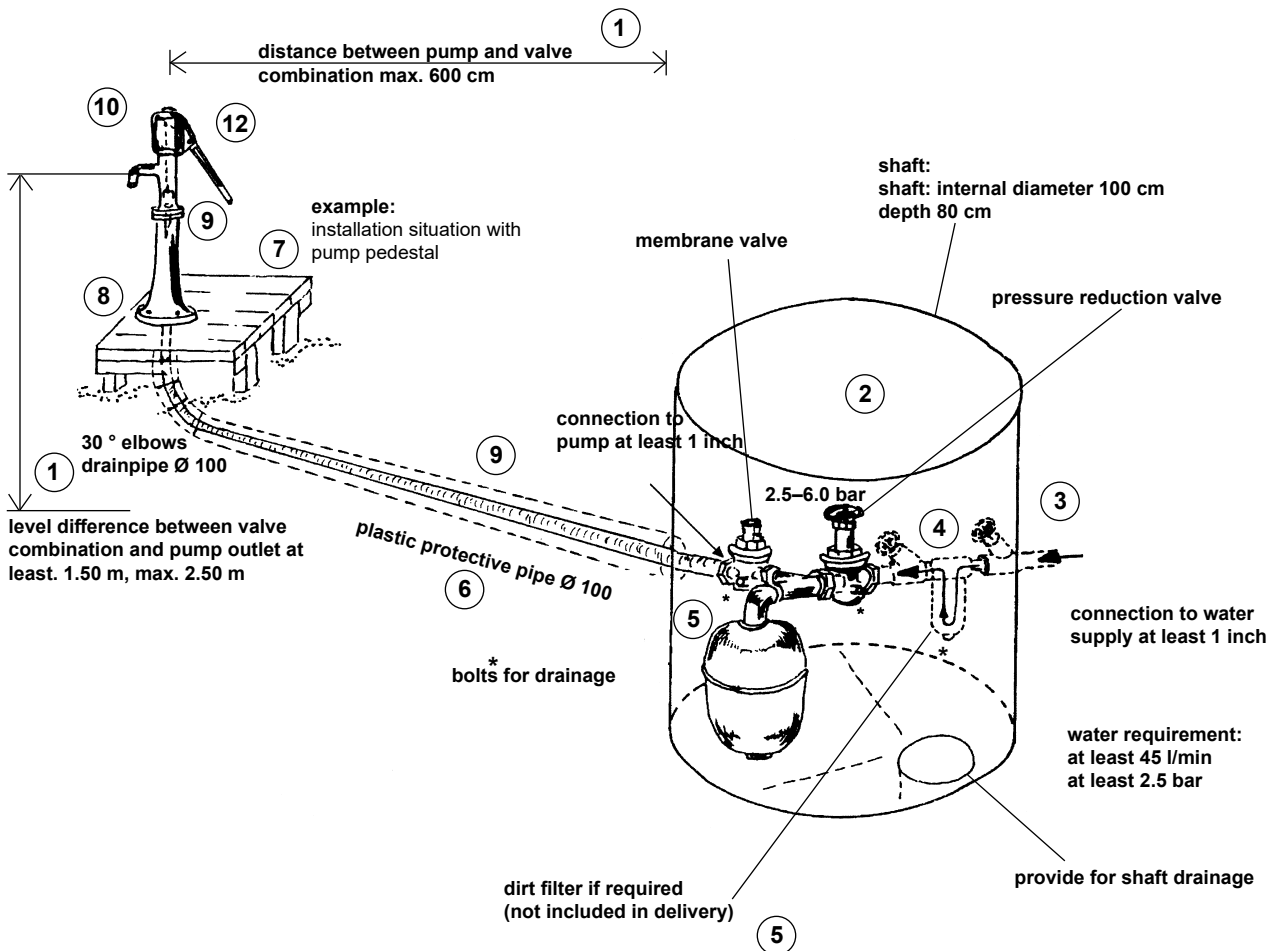
- set of carpenter's tools
- set of ratchets
- set of spanners
- rubber mallet

Sequence of assembly operations

Example: installation situation with pump pedestal

1. Define location for valve combination (basement, shaft or similar) and pump, taking into account distance and level difference according to the sketch.
2. If necessary, build shaft (on site) for installation of the valve combination. The shaft must be frost-proof. Shaft drainage must be provided for.
3. Provide connection to mains water (on site). **The connection to mains water must have a diameter of at least 1 inch.** We also recommend connecting a backflow preventer or pipe disconnecter (pay attention to local water works regulations).
4. Provide for shut-off valves, type EA, (not included in delivery) at the incoming supply line in the shaft.
5. Install valve combination, paying attention to the direction of water flow (arrow on the valve). We recommend installing a dirt filter (not included) between water connection and valve combination.
6. Lay plastic protective pipe (drainpipe) Ø 110 and 30° elbows (not included) for inserting the spiral hose (protection).
7. Depending on the pump installation situation, either mount pump pedestal/round water basin or build concrete base or similar (on site).
8. Fasten the pump column to the pedestal.
9. Provide connection between pump and valve combination. We recommend a commercially available suction and pressure proof spiral hose.

Note: The supply line and connecting line between the valve combination and pump must be completely clean, rinse thoroughly.



Water supply

Situated in the inlet for the valve combination is the pressure reduction valve. It has the task of keeping the water pressure and the water amount constantly stable. When the pump is inactive the pressure compensating tank fills with water. A rubber nitrogen-filled bladder tensions as a result of the water pressure. During pumping (intake) some of the water which has been sucked up by the pump is sucked out of the container. The tension is released from the rubber bladder. The other part of the water mass flows directly over the pressure reduction valve from the water pipes. This is repeated during each pump action.

The special pressure compensating tank with a volume of 12 l has, at the same time, the task of maintaining a constant water flow. Due to the sudden motion of the water intake through the piston pump, strong pressure surges in the supply installation are avoided.

Situated in the outflow for the valve combination is the membrane valve. This valve is especially adapted for the pump, pressure reduction valve and pressure compensating tank. The action of moving the pump swive downwards triggers the piston to move upwards and the resulting vacuum causes the membrane valve to open again. In this way the children get to experience a "like pumping" process.

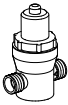
Provided that suitable hose materials (suction and pressure-proof) are used, the drinking water quality from the pipes is maintained up until it leaves the pump.

Spare Parts
Valve combination
Order No. 5.17100

Please note that the safety standards of the equipment must not be affected. Therefore, when carrying out repairs it is helpful to **only use original parts.**

Order No. Spare part

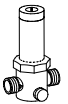
0.97820 membrane valve



0.97822 cartridge for membrane valve



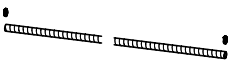
0.97830 pressure reducer



0.97850 pressure compensating tank



0.97860 spiral hose



0.97862 hose clip

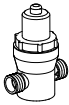


Spare Parts
Valve combination
Order No. 5.17100

Please note that the safety standards of the equipment must not be affected. Therefore, when carrying out repairs it is helpful to **only use original parts.**

Order No. Spare part

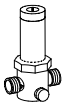
0.97820 **membrane valve**



0.97822 **cartridge for membrane valve**



0.97830 **pressure reducer**



0.97850 **pressure compensating tank**



0.97860 **spiral hose**



0.97862 **hose clip**



Troubleshooting for pumps with external valve combination (shaft)

POSSIBLE PROBLEM

REMEDIES

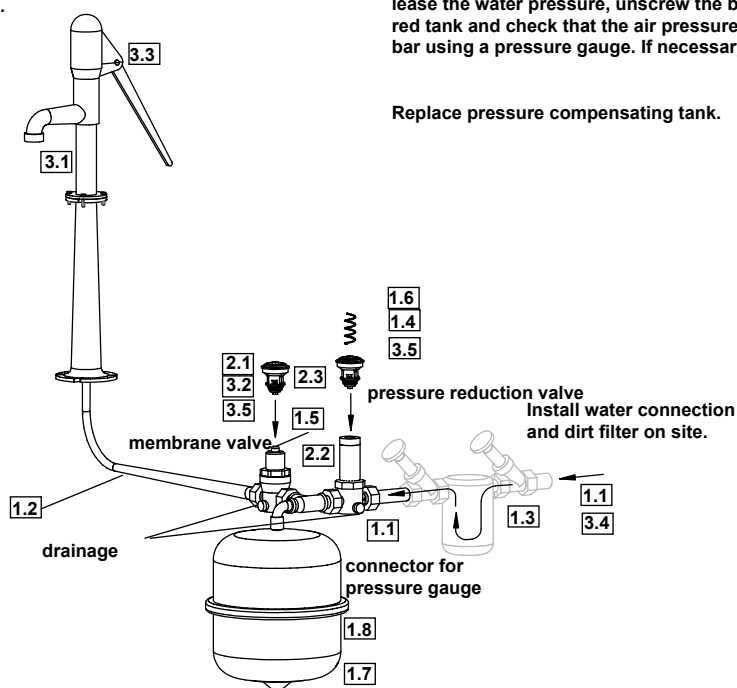
1. Pump swipe strikes back

- 1.1 The water pressure is too low, the required amount of water of 45 l/min at 2.5 bar is not supplied.
- 1.2 The pipeline from the valve combination to the pump is bent or the pipe diameter is too small (level difference and length requirements were not adhered to, see assembly instructions).
- 1.3 Dirt filter, if present, is soiled, water valves are not fully opened.
- 1.4 Sieves in the pressure reduction valve or on the pressure side are soiled.
- 1.5 Sieves in the membrane valve on the low pressure side are soiled.
- 1.6 Water pressure downstream from pressure reduction valve is too high or too low.
- 1.7 Upstream pressure at the pressure compensating tank is below 1.2 bar or above 1.6 bar (1.4 bar).

- Adjust supply line to the amount of water required.
- Replace pipeline.
- Replace filter, check water valves.
- Clean sieves in the pressure reduction valve.
- Clean sieves in the membrane valve (low-pressure side), pay attention to correct assembly.
- Readjust the water pressure at the blue adjusting wheel (2.5–3.0 bar)
- Adjust the upstream pressure at the pressure compensating tank. Release the water pressure, unscrew the beige-coloured screw cap on the red tank and check that the air pressure is between approx 1.4 bar ±0.1 bar using a pressure gauge. If necessary, pump in more air.

- 1.8 There is a hole in the rubber bladder or in the pressure compensating tank.

Replace pressure compensating tank.



2. Water is running continuously

- 2.1 Membrane valve (5171 low pressure side) is soiled or does not stop the water flow properly, rubber washer broken.
- 2.2 Upstream water pressure behind pressure reduction valve too high or too low (approx. 2.5 to 3 bar)
- 2.3 There is a hole in the membrane valve or pressure reduction valve.

- Disassemble membrane valve completely & clean, apply generous amount of valve grease to rubber washers (commercially avail. valve grease).
- Re-adjust upstream water pressure on the pressure reduction valve using a pressure gauge (approx. 2.5–3 bar).
- Clean membrane valve (refer to 2.1) or replace.

3. Pump does not move smoothly

- 3.1 The piston in the pump is worn out (tilted).
- 3.2 Membrane valve is stuck after longer period without operation.
- 3.3 Brass bearing needs greasing
- 3.4 Local water supply not sufficient (at least 45 l/min)
- 3.5 Valves soiled

- Replace piston.
- Clean membrane valve (refer to 2.1).
- Grease brass bearing via lubricating nipple.
- Repair water supply.
- Clean valves.

If the pump cannot be repaired on site, we recommend exchanging the defective part (pump or valve combination) and sending it to our workshop. In this case, you will be provided with a fully reconditioned piece of equipment. Please ask for exchange costs, as required.

Foundation anchor

5.17505 for Playground Pump 5.17500

5.17633 for Playground Pump 5.17730/5.17630

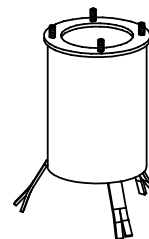


5.17505 Foundation anchor

En-EN 16.05.2018

COPYRIGHT © RICHTER SPIELGERÄTE GMBH

Foundation Anchor
Order No. 5.17505



Components

Number of parts: 1

1 foundation anchor

Special information

Please do not alter any parts of the equipment or the construction itself since this may affect the safety standards and your guarantee.

We reserve the right to make technical alterations!
For further information please call your local agent.

Weight: approx. 7.5 kg

Required space including operational space

0.60 m x 0.60 m

Ground elevation

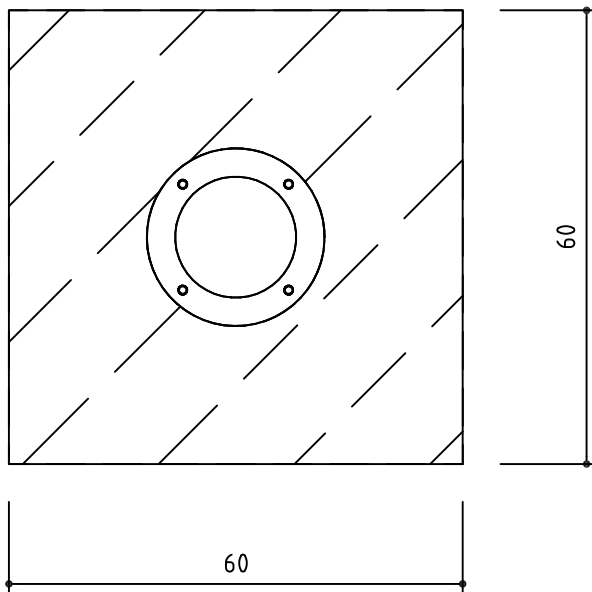
scale 1:10
all dimensions in cm

Foundations

quality of concrete C25/30

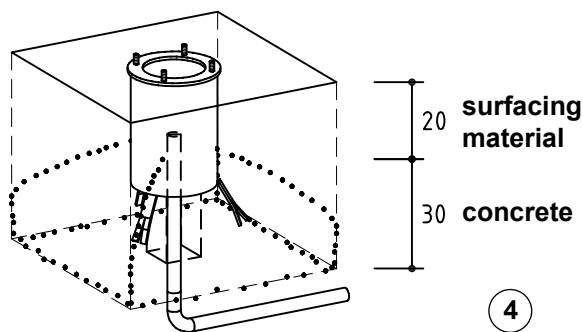
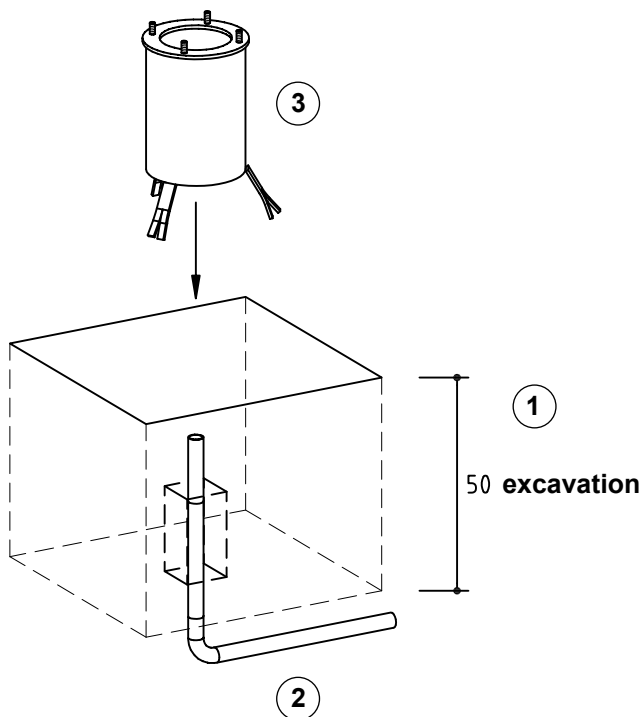
1 item 60 cm x 60 cm x 30 cm
excavation depth 50 cm

foundations —●—
operational space —|—



Sequence of assembly operations

1. Locate the site and dig out holes for the foundations and the water pipe. Excavation depth = 50 cm.
2. Lay a supply pipe with a diameter of 1 inch (at least 3/4 inch). The upper end of the pipe must be 15 cm below the upper edge of the play surfaces. Furthermore, the pipe must be centered.
3. Insert foundation anchor. The anchor must be flush with ground level. The water pipe must be in the center of the foundation anchor.
4. Fill with concrete and thereby compile a gap for the supply line. **Please take into account the special sheet: Notes on the construction of foundations.**



5.175633 Foundation anchor

Foundation Anchor
Order No. 5.17633



Components

Number of parts: 1

1 foundation anchor

Special information

Certified by TÜV Product Service GmbH in compliance with EN 1176.

Please do not alter any parts of the equipment or the construction itself since this may affect the safety standards and your guarantee.

We reserve the right to make technical alterations! For further information please call your local agent.

Recommended assembly tools and materials

Polystyrene block approx. 40 x 40 x 20 cm, with cut-out

Material to place underneath

Weight: approx. 7.5 kg

En-EN 15.07.2016

Required space including operational space

60 cm x 60 cm

foundations —●

Ground elevation

scale 1:10

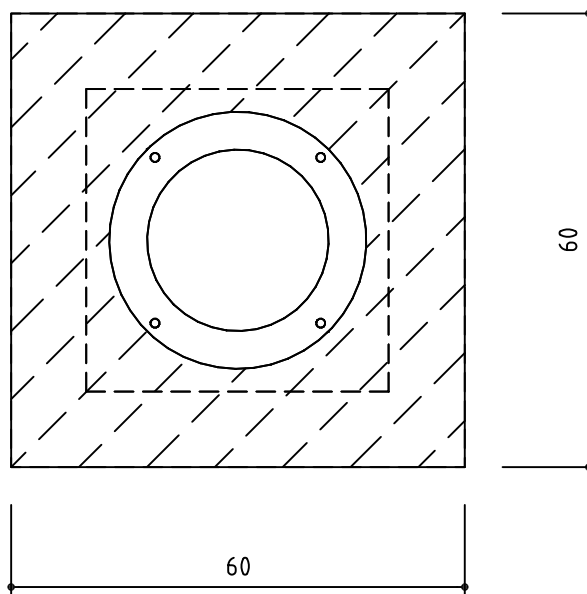
all dimensions in cm

Foundations

quality of concrete C25/30

1 item 60 x 60 x 50 cm

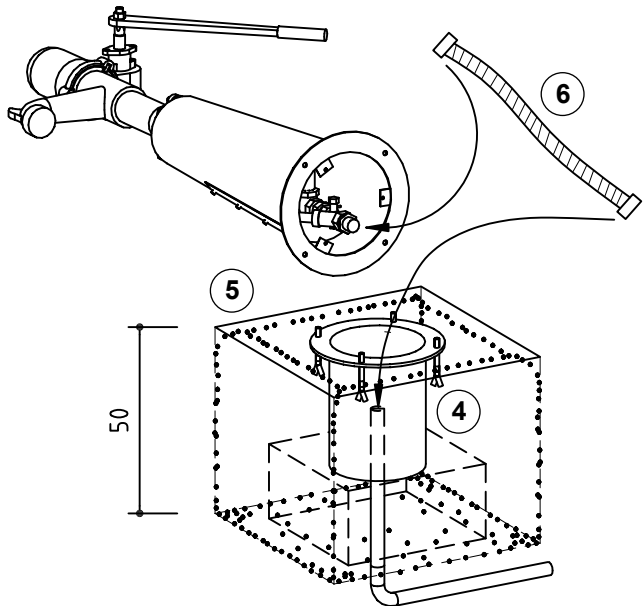
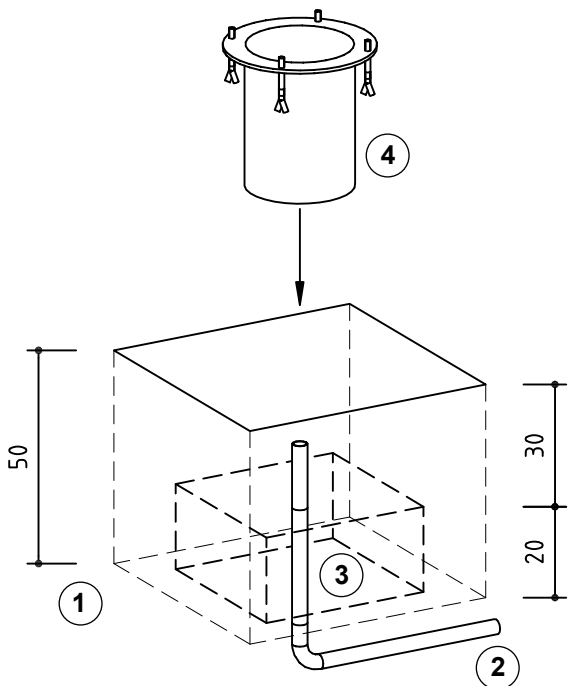
excavation depth 50 cm



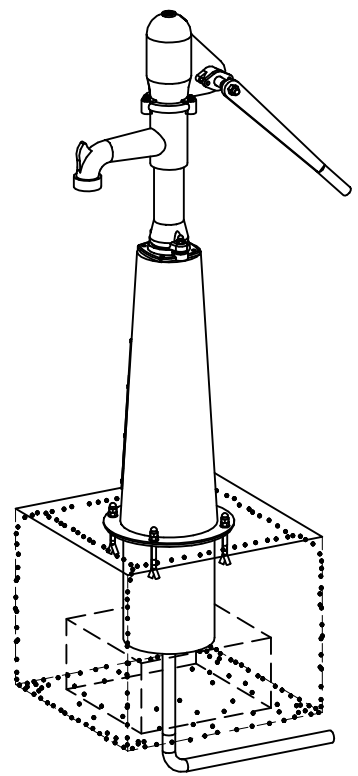
COPYRIGHT © RICHTIGER SPIELGERÄTE GMBH

Sequence of assembly operations

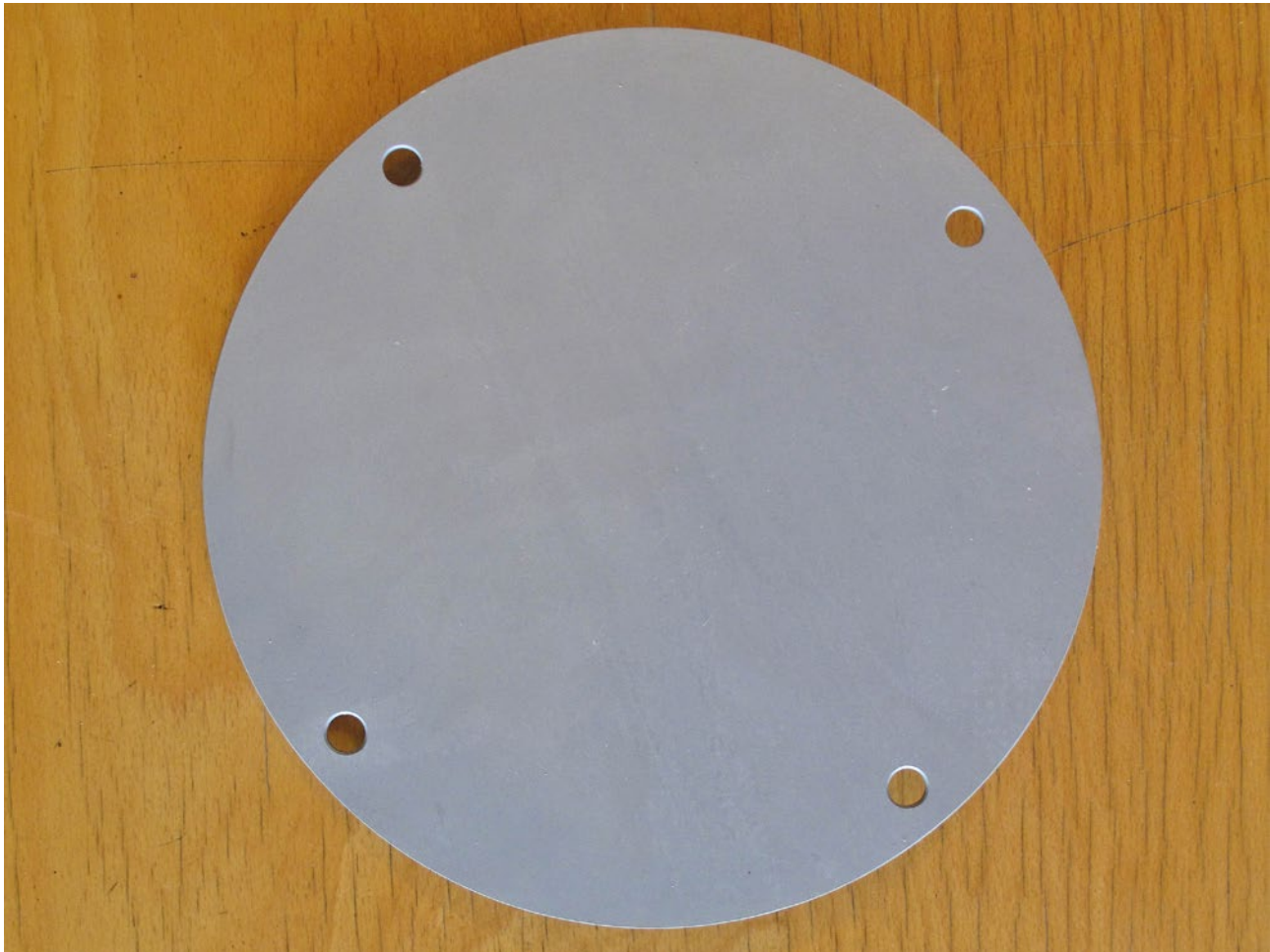
1. Locate the site and dig out holes for the foundations and the water pipe. Excavation depth = 50 cm.
2. Lay a supply pipe with a diameter of 1 inch (at least 3/4 inch). The upper end of the pipe must be 15 cm below the upper edge of the foundation. Furthermore, the pipe must be centered.
3. Set polystyrene block (on site, approx. 40 x 40 x 20 cm) with cut-out depending on pipe diameter used onto the water pipe (the water supply must reach at least 15 cm into the foundation anchor).



4. Insert foundation anchor. The anchor must be flush with ground level, push into polystyrene block, if required. The water pipe must be in the center of the foundation anchor.
5. Fill with concrete and level horizontally. **Please take into account the special sheet: Notes on the construction of foundations.**
6. After the concrete has set, assemble the pump. Connect pump with flexible hose (armoured hose) to the water supply line. Tighten bolts.



Winter Lid for Playground Pumps



Order No.	
5.17634	Winter Lid for Playground Pumps 5.17630/5.17730 and Foundation anchor 5.17633
5.17635	Winter Lid for Playground Pump 5.17500 and anchor 5.17505
5.17636	Winter Lid for upper part of Playground Pump 5.17510

Contact

If you have any further questions, please don't hesitate to contact

E-mail: export@richter-spielgeraete.de

Spare parts ordering

Vertrieb Richter Spielgeräte GmbH
Simsseestraße 29 · 83112 Frasdorf
Germany

E-mail: export@richter-spielgeraete.de
www.richter-spielgeraete.de

Phone: +49 8052 - 17980 · Fax: +49 8052 - 4180

Personal notes

A large rectangular area filled with a fine grid pattern, intended for taking personal notes. The grid consists of small, uniform squares covering the majority of the page's content area.