DESIGN RATIONALE - LANDSCAPE ARCHITECTURE

Project: **SUIR ISLAND GARDENS**

Project no.: **Ti.02**

Prepared on behalf of: **TIPPERARY COUNTY COUNCIL**

Prepared by: **DERMOT FOLEY LANDSCAPE ARCHITECTS**

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ISSUED FOR: INFORMATION/BILLING/**PLANNING**/TENDER/CONSTRUCTION

Contents:

1 Introduction

The proposed public realm works on Suir Island comprises the development of approximately 0.9ha of public gardens and public landscaped areas. The works include:

- Renovation of existing gardens,
- Provision of lawns and landscape planting to include the provision of trees, hedges and shrubs,
- Seating and picnic areas,
- Hard and soft pathways,
- New entrance gate with adjoining wall cladding,
- Children's play areas with associated equipment,
- Securing of Suir Island House (A Protected Structure) with decorative steel plates at ground floor level,
- Feature lighting to include internal and external lighting of Suir Island House (A Protected Structure),
- Signage,
- Ancillary site development works that shall include site drainage, provision of water supply for the play area and for wash down purposes, provision of electrical supply for the feature lighting, and removal and reconstruction of approximately 19 metres of boundary wall.
- All associated site and landscaping works

The objective of this report is to describe the proposed landscape and external works as part of the Suir Island Gardens development. This report should be read in conjunction with documents issued and included in this submission by Dermot Foley Landscape Architects (DFLA), Punch Civil & Structural Engineers, Fallon Design Services Engineers and Arbor Care Ltd.

Dermot Foley Landscape Architects attended meetings and discussed proposals for the landscape, open space, play strategy, tree retention, materials and planting strategies with Tipperary County Council. Comments received were, where possible and in line with the overall landscape strategy, incorporated into the formal gardens design proposals.

Dermot Foley Landscape Architects visited the site on various occasions from March to July 2021 in order to observe conditions on site, such as existing vegetation, conditions under foot, boundaries and other items which would have a bearing on the design process.

Arbor Care Ltd. were commissioned before the design process began to carry out a Tree Survey. The Tree Survey was used as an important tool in the design process. These documents are included separately as part of this submission.

The following additional documents have been issued by Dermot Foley Landscape Architects as part of this submission:

No.	Scale	Size	Title
2001	1:250	A1	Site Layout Plan
2002	1:1000	A3	Site Location Plan
2003	1:250	A1	Proposed Site Boundaries
2300	1:250	A1	Proposed Tree Retention and Removal Plan
2400	1:100	A1	Landscape Sections
2401	1:50	A3	Entrance Gate Elevation
2500	1:20	A1	Typical Landscape Details
2700	1:250	A1	Proposed Works in SAC Zone

2 Landscape Appraisal

2.1 General

Suir Island Gardens are located in the centre of Clonmel. The ruins of Suir Island House (a protected structure) is located at the southwestern corner of the island and centrally within the subject site. The site is replete with remnants of industrial and architectural heritage such as walls, steps, paving slab details, gate piers and other fragments, all of which enhance the site's character.

Suir Island is set in the River Suir, within walking distance from Clonmel town centre. Suir Island has an attractive backdrop of the Comeragh Mountains. The site is prone to flooding. The eastern end of the island experiences regular flooding and under more extreme conditions the Suir Island Gardens site can be submerged.

The site has been recently cleared to facilitate conservation works. The headrace and tailrace are partially watered with vegetation re-colonising on the drier areas following the site clearance.

Figure 1: View from the west looking across the former headrace, with evidence of emerging vegetation. Suir Island House is on the RHS in the background. A large lime (Tilia x europea) tree is visible to the left of the house.

2.2 History

Industry at Suir Island dates back to the 18th Century with mills, factories, warehouses and other structures occupying a significant portion of the island. Today remnants of these structures contribute to the island's particular and unique character. Suir Island House is listed on the National Inventory of Archaeological Heritage. Tipperary County Council commissioned Blackwood Associates to produce 'Built Heritage Conservation Action Plan for Suir Island' and this has been revised in developing the design proposals.

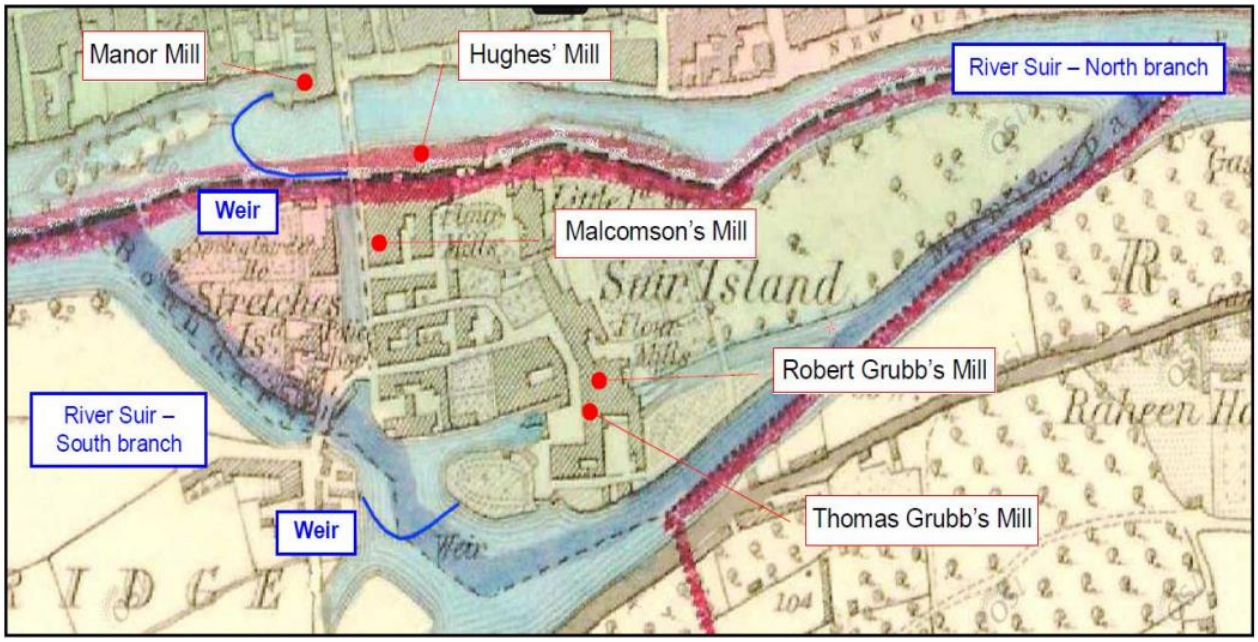


Figure 2: Map of mills and other structures on Suir Island, extracted from the 2014 Blackwood Associates Report.

2.3 Existing Boundaries

The site boundaries vary in character. The southern boundary comprises trees and shrubs, wilder riparian vegetation and stone walls of varying height and condition. The walls are generally in good condition with the exception of a number of limited areas where trees may have caused damage over time or where the structure of the wall has been compromised due to flooding or settlement. This southern boundary adjoins the River Suir, and is the most publicly visible or apparent boundary of the site. It is visible from Raheen Road. Water sports take place at this boundary along the Clonmel Slalom course. Generally, the eastern boundary is well stocked with trees and vegetation forming a woodland. The eastern end of the northern boundary, between the site and the existing car park, is formed by the tailrace and flood relief embankment. The western end of the northern boundary is formed by the headrace and bounded by a flood relief concrete wall with palisade security fence. Access to the site is located in the centre of the northern boundary. The western boundary incorporates an access and egress point from the River Suir, with a concrete landing area, steps and boulders to protect against the worst impacts of the river.

Figures 3-6: (clockwise from top left) Concrete wall and palisade security fence (northern boundary); looking south at the entrance to the site at the northern boundary; looking north to the embankment at the northern boundary with car park hidden behind the embankment; looking east along the tailrace adjacent to the embankment.

3 Landscape Strategy

3.1 General

The proposals for the development of Suir Island Gardens integrate the proposed development with the surrounding context and generate a newly accessible public open space. The following principles and elements underlie the landscape strategy:

- Facilitate an integrated access from the island to the new Suir Island Gardens
- Interpretation and presentation of Suir Island House within the gardens, with door and window openings used as frames for creative steelwork
- Innovative and creative play areas for children
- Creative lighting and the facilitation of events
- Comfortable and high-quality seating and picnic area
- Interpretive and interactive elements
- Possibilities for education and observation of wildlife
- Seating and picnic areas designed for all age groups and abilities
- Use of planting to define areas and spaces
- Increased quantum of native plant species
- Flood resistant materials
- Retention of existing ground levels

3.2 Retention of Existing Trees

Arbor care Ltd., retained by Kenneth Hennessy Architects on behalf of Tipperary County Council, carried out a tree survey of the entire Suir Island in 2017. The survey was completed in accordance with BS 5837:2012. Notable trees within the site for the proposed Suir Island Gardens include a mature lime (tree number 2022) and a mature oak (tree number 2204). DFLA visited the site in spring (March 2021) and summer (July 2021) to review trees both out of leaf and in leaf. Selective removal has occurred for conservation and maintenance works since the tree survey was completed, including the felling of tree number 2213 which is located adjacent to Suir Island House. Suir Island benefits from the existing vegetation which has been planted or has emerged largely through periods of neglect. Of the emergent vegetation, native species are proposed to be retained where possible and non-native species removed or retained in the short-term and then removed. Localised pockets of invasive species are currently being managed by Tipperary County Council. Refer to drawing *2300 Proposed Tree Retention and Removal Plan* prepared by DFLA and included in this submission.

An emphasis has been placed on maximising tree retention across the site as well as encouraging and facilitating, where appropriate, the emergence of native vegetation.


Figures 7 & 8 (left to right): large lime tree (Tilia x europea) by the gated entrance of the site, at the millrace; yew tree (Taxus baccata) holm oak (Quercus ilex) at west end of site.

3.3 Existing Woodland

The site has been left undisturbed for a period of time, allowing a relatively rich vegetation to colonise portions of the site. Much of this vegetation is not included on the tree survey by virtue of its small size. There is evidence of stress to certain trees caused possibly by recurring flooding. Nevertheless, it is proposed to retain the small areas of existing woodland and alignments of trees and other vegetation where possible. There is an opportunity for play to be integrated into the existing woodland creating an additional sub space within Suir Island Gardens to be used for playful exploration.

Figure 9: The character of the existing woodland to the east of the site.

Figure 10: Early concept sketch showing play elements nestled amongst the existing woodland.

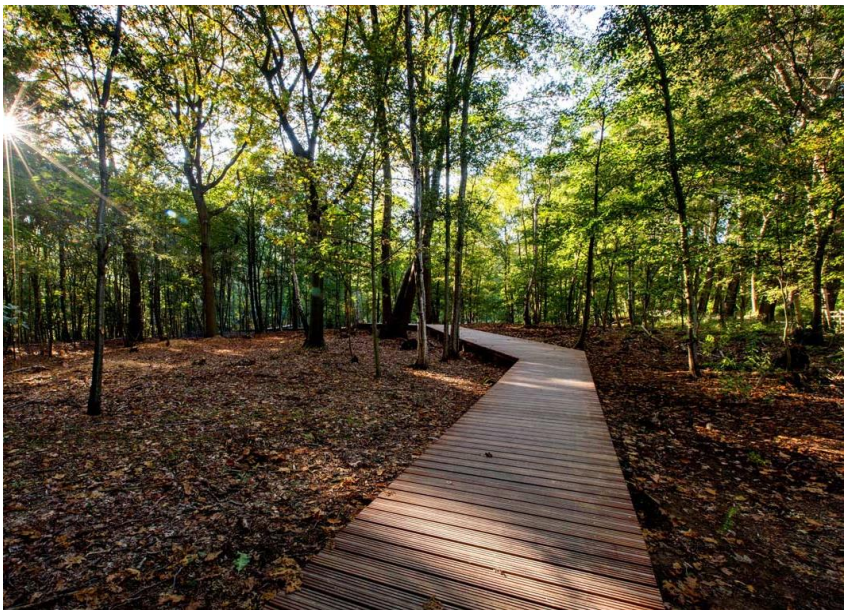


Figure 11 & 12: Precedent images showing potential character of the existing woodland areas (from left to right) - The Bluff wartime landscape in Belgium; Wild Play garden, Australia illustrating the character of the proposed natural play equipment.

3.4 Open Lawn

The proposed open lawn position is determined by the existing stone walls, Suir Island House, proposed pedestrian routes around the island, views and flooding history. Furthermore, the location ensures that the space is activated and used to its maximum potential. The landscape elements are arranged in such a way as to utilise as much of the space as possible. A soft meandering footpath is proposed to the north of the open lawn with a number of seating nodes, taking advantage of the south facing aspect. The soft meandering

footpath meets the hard standing pedestrian route situated along the south of the site. The space encourages both passive and active forms of recreation.

Figure 13: St. Audoen's Park, by DFLA, view showing open lawn area with path and historical building on the site.

3.5 Site Entrance

The entrance to Suir Island Gardens is accessed through the adjoining car park opposite Hughes Mill. This is the sole pedestrian access onto the island. The entrance is gated for security purposes and locked at night. A single hinged gate is proposed, refer to drawing *2401 Entrance Gate Elevation* by DFLA included as part of this submission. Additionally, flood gates can be fitted when necessary to the existing entrance. The proposals for the entrance to the Gardens is to match the character of the existing stone walls seen throughout the gardens, creating the immediate threshold and distinction of the island. The entrance is a key node within the overall landscape. It forms the start of the heritage information which will form a feature along the routes through the site. The use of subtle paving details, seating, and other outdoor furniture along with selected locations for more elaborate signage will create an homage to the history of the site.

Figure 14-16: Reference images of Fern Hill Gardens, Dublin 18, illustrating natural stone cladding on walls at the gated entrance of the park.

3.6 Play

The opportunities for play at Suir Island Gardens will be integrated into the entire scheme both naturally as well as by design. The proposals include the use of water in play such as water taps, dams and water mill to recognise the island's history. Water play is essential to creating a playful exploration of Suir Island Gardens which will engender an understanding of the site's heritage. A limited number of robust, easily maintainable play elements that emhasise the importance and playful quality of water is proposed. A number of small play elements spread across the entire site, using natural materials to create climbing, swinging and balancing play complementary to the natural materials on the site. The proposed location for destination play is positioned centrally from the river's edge with additional open space for children to be able to run freely and explore the gardens in a secure setting while being passively monitored. The backdrop of Suir Island House (a protected structure) and the proposed stone walls will create a sheltered and secure space.

These interactive play areas will be located in the main destination for play, as well as being informally located throughout various locations within Suir Island Gardens. The main destination for the play area is located to the east of the Suir Island House offset either side from the River Suir and the tailrace.

Furthermore, a trail of natural play is proposed in the woodland area, with equipment integrated into grass / bark areas. Play equipment includes climbing structures, trails of timber logs and balancing equipment. The proposed play equipment will be designed and manufactured in accordance with standards EN 1176 and EN 1177. Impact absorbing surface for specific fall heights from play equipment is proposed to mimic bark and is located where it is required. A full schedule of all play equipment is outlined as part of drawing 2001 Site Layout Plan, prepared by Dermot Foley Landscape Architects and included in this submission.



Figures 17-19: Reference images of interactive water play from Richter- Speilgeraete playground equipment.

Figure 20: Diagram indicating the proposed locations for destination play, open space, open lawn and woodland for Suir Island Gardens.

Figure 21: Reference image of water play integrated into natural stone, above flood level, in Nagold Garden Exhibition in 2012.

Figures 22 - 25: reference images of natural play, proposed for woodland trail, (clockwise from top left): interactive outdoor magnifier ;timber logs ; rotating balance beam; Sketch axonometric view showing existing woodland with proposed natural play.

3.7 Proposed Boundaries

Refer to *Drawing 2003 Proposed Site Boundaries* prepared by Dermot Foley Landscape Architects, included as part of this submission, which illustrates proposed and existing boundaries retained. The strategy involves the retention of existing boundaries where possible and their modification to render them more appropriate to the proposed use. The northern boundary will be retained as existing with the exception of the entrance to the island which will have a notable change in appearance to match the character of the existing stone walls seen throughout the gardens, creating the immediate threshold and distinction of the island. The eastern boundary is proposed to be retained as existing, with management of vegetation as required. The southern boundary adjoining the River Suir is proposed to retain all existing trees where possible. The western boundary will be retained as the formal access and egress point to the River Suir, comprised of a concrete landing area, steps and boulders.

4 Planting

A significant band of tree planting is proposed along the former headrace and will continue to the north side of the house at the entrance which will form a dense green canopy to the approach of the northern boundary. The management of the lawn areas, with carefully selected areas left unmown during summer months will create a series of sub-spaces that will have seasonal effect. The riverbank vegetation will be protected and managed to maximise biodiversity and prevent disturbance of vegetation and fauna. Drawing 2001 Site Layout Plan, prepared by Dermot Foley Landscape Architects includes a schedule of proposed planting and illustrates the location and extent of mown grass, managed long grass and tree planting as well as existing trees to be retained and managed.

4.1 Tree Planting

A total of 40 new individual trees are proposed in order to compensate for the removal of 8 of the existing trees on site. They will also improve the species mix on site. The proposed tree species are selected for longevity, suitability to local soil conditions and microclimate and biodiversity (native species). Proposed tree sizes range from semi-mature (35-40cm girth) specimen trees to multi-stemmed tree planting. Typical species proposed are illustrated on the following pages:

Figure 26-33: A selection of proposed tree species (clockwise from top left) - Alnus glutinosa (alder), Salix caprea (goat willow), Prunus yedoensis (Yoshino Cherry), *Betula pendula (birch), Pyrus calleryana (Callery pear), Tilia cortada (linden) Quercus robur (oak) and Salix fragilis (Crack willow).*

4.2 Groundcover and Bulb Planting

Low planting is utilised to make and reinforce sub-spaces within the larger landscape spaces, for visual screening, visual interest, ecological purposes and to guide or direct people's movement. The low planting is conceived as a subtle layering of greens within the open spaces.

Figures 34 – 38 (clockwise from top left): Precedent images showing native/exotic shade tolerant species for groundcover planting under the tree canopy, including Darmera, Luzula, Dryopteris and Asplenium, Hemerocalis sp and Helleborus spp.

Deschampsia cespitosa

Juncus effusus

Luzula sylvatica

Libertia grandiflora

Polystichum setiferum

Primula vulgaris

Figures 39-44 : Typical damp tolerant species.

5 Hard Landscape Materials and Finishes

The selection of paving and other landscape materials is determined by proposed function, longevity and durability. The extent of materials and the locations where a transition is made from one material to another are determined by drainage and other sustainability issues. Paving materials where practical are proposed to be constructed in a way which is sensitively integrated with lawn and soft landscape, in order to minimise the impact of hard landscape surfaces. Primary pedestrian circulation is proposed as a durable, limited range of neutral materials with robust construction. Secondary pedestrian routes are proposed to be of ‘flexible’ construction and in some cases a mix of paving and lawn.

Engraved paving details illustrating the island’s heritage is proposed throughout the design. A range of paving details and finishes are proposed throughout the development. The integration of interpretive and interactive elements in the paving will further aid understanding of the site’s rich history and heritage.

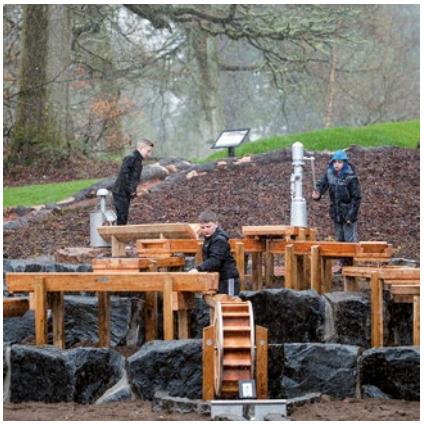
Figures 45 - 47: (top) – Large slab engraving at St. Audoen's Park by DFLA , (bottom) bespoke furniture and details in Peace Park by DFLA.

Figures 48 - 50(clockwise from top left): A range of paving details– resin bonded surface; natural stone integrated in lawn; insitu concrete integrated into lawn in Knockrabo by DFLA.

End

APPENDIX

Sample Play Equipment Specification



Play value
It is attractive both for children and older people to put something into motion by means of visible power. When it is possible to change this power by mechanical influence, the attraction is even greater. The element of water as a power source is of great importance. Therefore, water wheels are always an important component of a water play installation. Both Mill Wheels are propelled by the weight of the water. However, it is important to know about the clearly visible and recognisable relationship and to have the possibility to change something.

Fundamental characteristics
- Unique by its original mill wheel design
- Incentive for playing: recognize

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

Barrier-free
- Independent play

Order No. 5.15813 Mill Wheel made of wood

Order No. 5.15820 Mill Wheel made of stainless steel, Photo © Daniel Perales

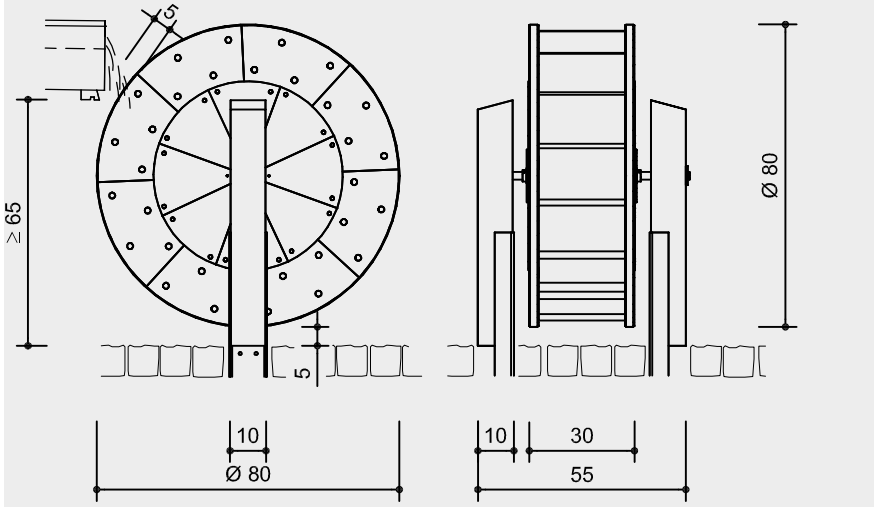
Mill Wheel made of wood
Mill Wheel made of stainless steel

5.15813

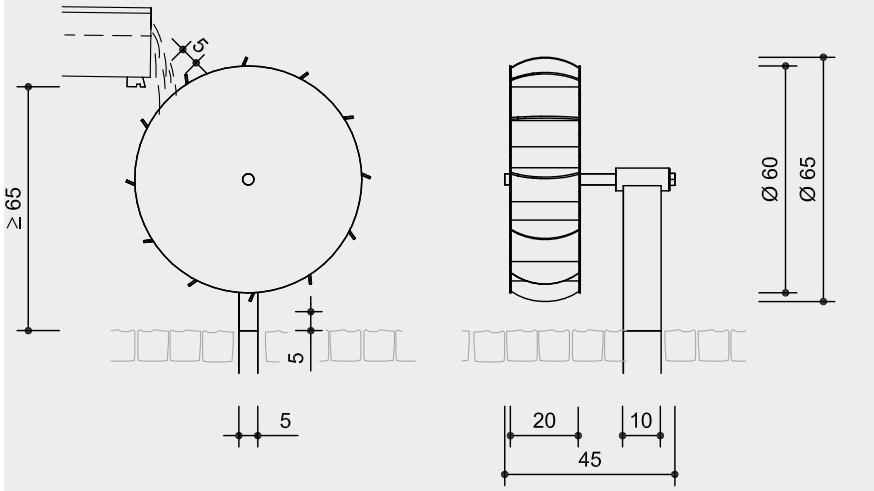
5.15820

Order No. 5.15813
Mill Wheel made of wood

Safety distance
Device dimensions
Functional distance



Order No. 5.15820
Mill Wheel made of stainless steel



Scale 1:20

Safety check according to DIN EN 1176

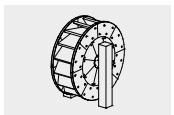
Components
1 Part each

Installation information

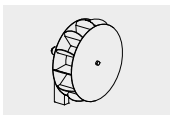
Surfacing requirements
Recommendation: sand with drainage or paving stone with gully and a corresponding surface design;
The Mill Wheels are only designed for overshot operation. Please refer to drawing for required minimum height difference.

Foundations
Order No. 5.15813
Mill Wheel made of wood
1 item 50 x 90 x 50 cm
Excavation depth 70 cm
Order No. 5.15820
Mill Wheel made of stainless steel
1 item 50 x 50 x 50 cm
Excavation depth 70 cm

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



5.15813



5.15820

Technical information

Order No. 5.15813
Mill Wheel made of wood
Equipment made of non-impregnated 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

Roller bearings
Roller bearings made of stainless steel for rotating elements, easy to maintain and exchange, sealed

Craftsman-like water wheel construction with grooved and slitted wood connections

Shaft, hub and hoop made of stainless steel, glass bead blasted

Order No. 5.15820
Mill Wheel made of stainless steel
Equipment made of stainless steel, glass bead blasted, thickness of material 3 mm; easy-grip contact surfaces

Roller bearings
Roller bearings made of stainless steel for rotating elements, easy to maintain and exchange, sealed

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

Dimensions
(small deviations possible)

Order No. 5.15813
Mill Wheel made of wood

Height	0.85 m
Width	0.55 m
Diameter of wheel	0.80 m
Weight	50 kg

Order No. 5.15820
Mill Wheel made of stainless steel

Height	0.70 m
Width	0.45 m
Diameter of wheel	0.65 m
Weight	27 kg

For use in aggressive environments such as salt or chlorine water, the Mill Wheel made of stainless steel (Order No. 5.15820) is also available in marine grade steel (V4A).

Photo © Monica Bedmar

Photo © Anton Donikov

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

Photo © Monica Bedmar

Order No. 5.17637 Crank Handle Pump

Order No. 5.17630 Playground Pump, Photo © Paul Upward

Playground Pumps
Crank Handle Pumps

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

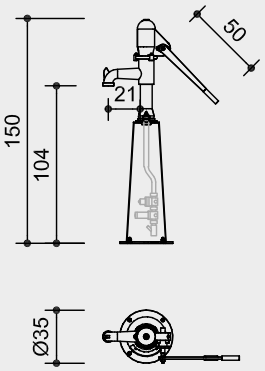
Planning information
These two types of pumps can deliver drinking water quality up to the underside of the piston.

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**.

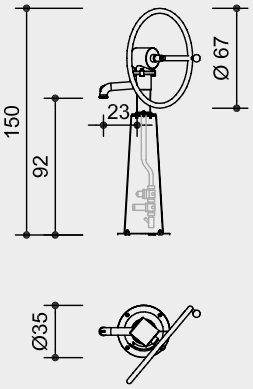
5.17630 / 5.17640

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

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.

Pumps for direct connection to mains water:
No underground shaft required for function.

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 swipe from striking back, water requirement approx. 45 l/min

Order No. 5.17640
General pump specification as **Order No. 5.17630**; but in addition with 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 pillar made of stainless steel; external thread 1 inch; min 2.5 bar water pressure, max. 6 bar; relief valve prevents swipe from striking back, water requirement approx. 18 l/min

Order No. 5.17638
General pump specification as **Order No. 5.17637**; but in addition with programmable rinsing device; no connection to power supply required

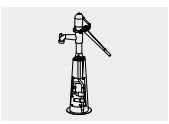
Dimensions
(small deviations possible)

Order No. 5.17630 / 5.17640
Playground Pump

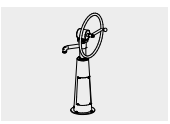
Equipment height	1.50 m
Width with horizontal pump swipe	0.95 m
Weight	73 kg

Order No. 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

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

Photo © Monica Bedmar

Order No. 5.17630 Playground Pump

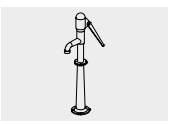
Order No. 5.17500 Playground Pump

Playground Pumps

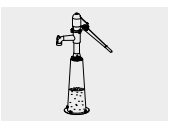
Recommended for
- Kindergarten children
- School children
- Water play areas without supervision

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.

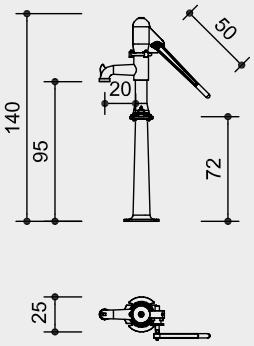


5.17500

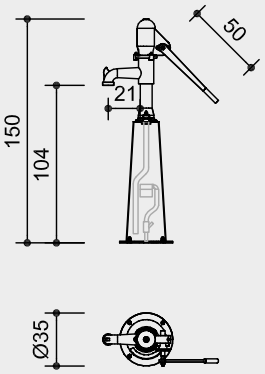


5.17730

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

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.

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

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
General pump specification as **Order No. 5.17500**; 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)

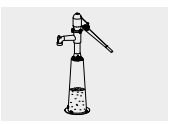
Order No. 5.17500
Playground Pump

Equipment height	1.40 m
Width with horizontal pump swipe	0.95 m
Weight	55 kg

Order No. 5.17730
Playground Pump

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

5.17500



5.17730

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.

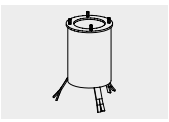
Fundamental characteristics
- Sturdy construction
- Minimalist style
- Movement: climbing up

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

Order No. 5.14190 Pump Pedestal made of stainless steel

Order No. 5.19003 Pump Pedestal made of wood, Photo © Monica Bedmar

Foundation Anchor
Winter Lid
Pump Pedestals



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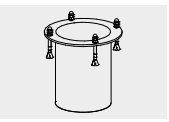

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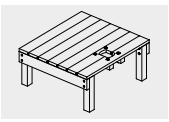

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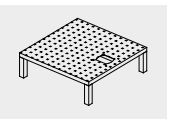
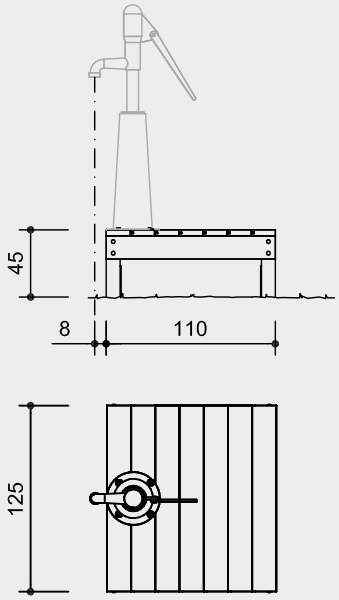
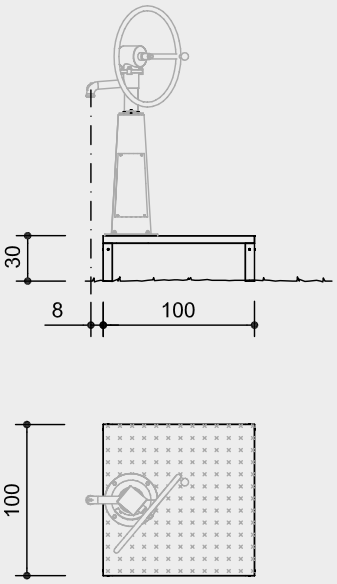


5.14190

Order No. 5.19003
Pump Pedestal



Order No. 5.14190
Pump Pedestal made of stainless steel



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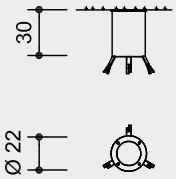
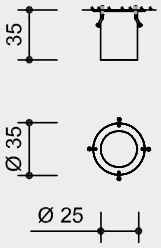
Foundation Anchor



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

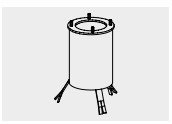
Order No. 5.17634 / 5.17635
1 Winter lid each

Order No. 5.19003
1 Pump pedestal with stand posts and steel feet

Order No. 5.14190
1 Pedestal with stand 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.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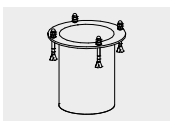
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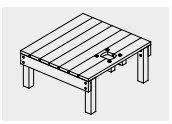
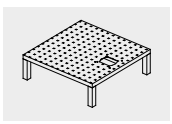

5.19003


5.14190

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

Order No. 5.17635 Winter Lid
made of stainless steel for Playground Pump **Order No. 5.17500** and Foundation Anchor **Order No. 5.17505**

Order No. 5.17633 Foundation Anchor
made of galvanised steel for Playground Pump **Order No. 5.17630 / 5.17730**

Order No. 5.17634 Winter Lid
made of stainless steel for Playground Pump **Order No. 5.17630 / 5.17730** and Foundation Anchor **Order No. 5.17633**

Dimensions

(small deviations possible)

Order No. 5.17505 / 5.17633	
Height	0.30 / 0.35 m
Diameter	0.22 / 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	65 kg

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

Order No. 5.20910 Damming Wedge

Order No. 5.20900 Dam of Wood

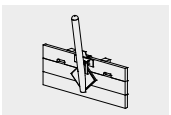
Play value
Water play installations become even more attractive when they help to experience water in different ways. Children particularly enjoy damming water. On one hand, they are momentarily the „Master" of the element water when stemming the flood water and on the other hand, they experience, through play, the water power when opening the lock of the dam.

Fundamental characteristics
- Different ways of damming and collecting water
- Incentive for playing: technical appearance

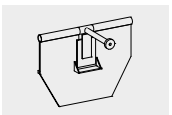
Recommended for
- Kindergarten children
- School children
- Water play areas without supervision

Order No.. 5.20905 Water Flap

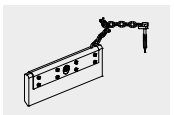
Dam of Wood
Water Flap
Damming Wedge



5.20900



5.20905

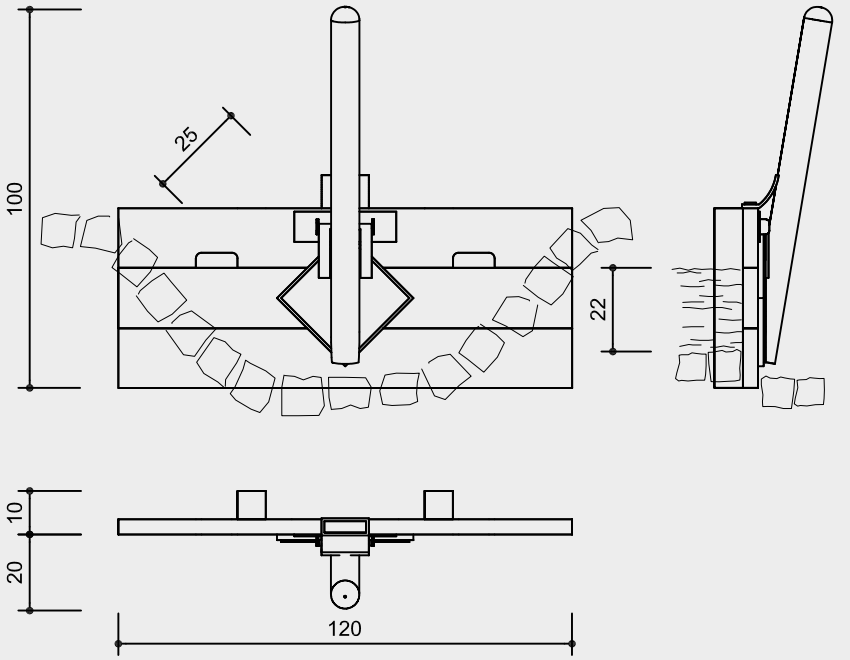


5.20910 / 5.20915

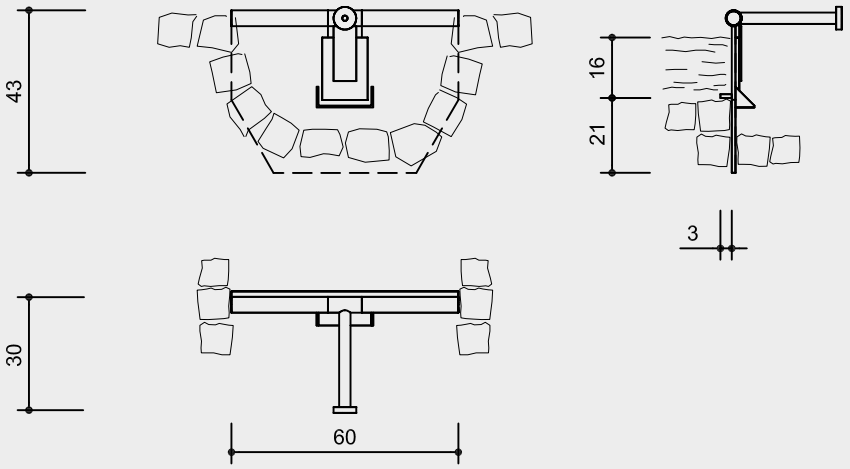
Design G. Beltzig / J. O. Gaier

Order No. 5.20900
Dam of Wood

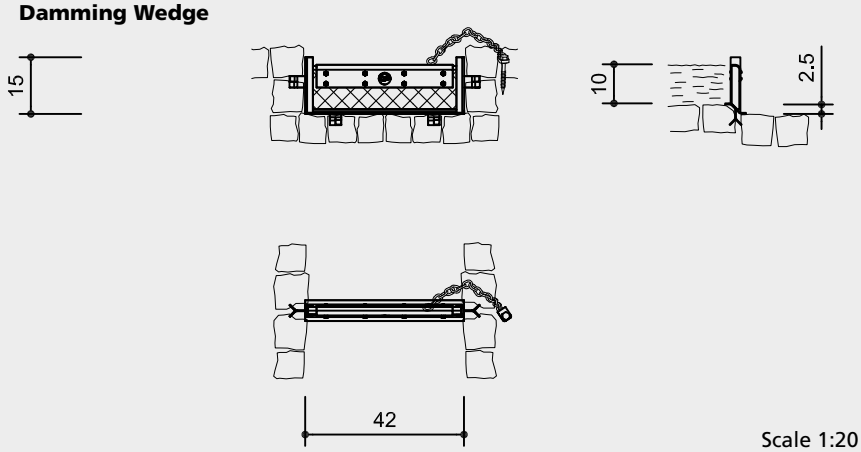
Safety distance
Device dimensions
Functional distance



Order No. 5.20905
Water Flap

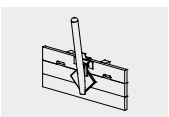


Order No. 5.20910
Damming Wedge

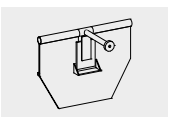


Scale 1:20

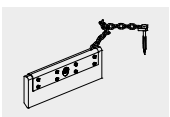
Safety check according to DIN EN 1176



5.20900



5.20905



5.20910 / 5.20915

Technical information

Order No. 5.20900 Dam of Wood
Equipment made of larch

Tongue and groove
Tongue and groove planks made of 4 cm solid wood, highly resilient, no trickling of dust / sand, protection against direct rain

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

Metal parts made of stainless steel, glass bead blasted
Seal made of 15 mm rubber plate, opening sealed with sealing tape

Order No. 5.20905 Water Flap
Equipment made of stainless steel, glass bead blasted
seal of 10 mm rubber plate

Order No. 5.20910 Damming Wedge
Damming wedge made of industrial rubber, holding device and guide frame made of stainless steel, glass bead blasted
chain made of stainless steel with swivel

Dimensions
(small deviations possible)

Order No. 5.20900 Dam of Wood	
Height	1.00 m
Width	1.20 m
Damming height	0.22 m
Weight	27 kg
Order No. 5.20905 Water Flap	
Height	0.43 m
Width	0.60 m
Damming height	0.16 m
Weight	20 kg
Order No. 5.20910 / 5.20915 Damming Wedge	
Height of wedge	0.15 m
Width	0.42 m
Length of chain	0.30 m
Height of threshold	0.025 m
Damming height	0.10 / 0.20 m
Weight	3 kg

Components

Order No. 5.20900 / 5.20905
1 Part each

Order No. 5.20910 / 5.20915
1 Damming Wedge
1 Guide Frame

Installation information
Surfacing requirements
Recommendation:
surface of reinforced watercourse
Foundations depending on installation situation; the Dam of Wood is bricked in the channel and can be installed optionally in flow direction or against flow direction.

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 Order No. 5.20905 Water Flap and Order No. 5.20910 / 5.20915 Damming Wedge also available in marine grade steel (V4A).

Order No. 5.28032 Sickle Gate

Order No. 5.28035 Rotating Gate

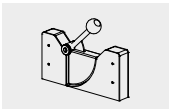
Play value
Experience the power of water – this can be achieved particularly well by damming water and then opening the floodgates. It is most fun when natural materials such as mud, leaves and small sticks are used to dam the water. However, this is often not possible or desired. Therefore, complementary elements such as locks or flaps are required.

Fundamental characteristics
- Easy handling
- Sturdy construction

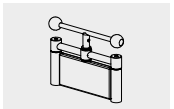
Recommended for
- Kindergarten children
- Supervised play areas such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision such as playgrounds, parks or similar

Order No. 5.28035 Rotating Gate, Photo © Daniel Perales

Sickle Gate
Rotating Gate



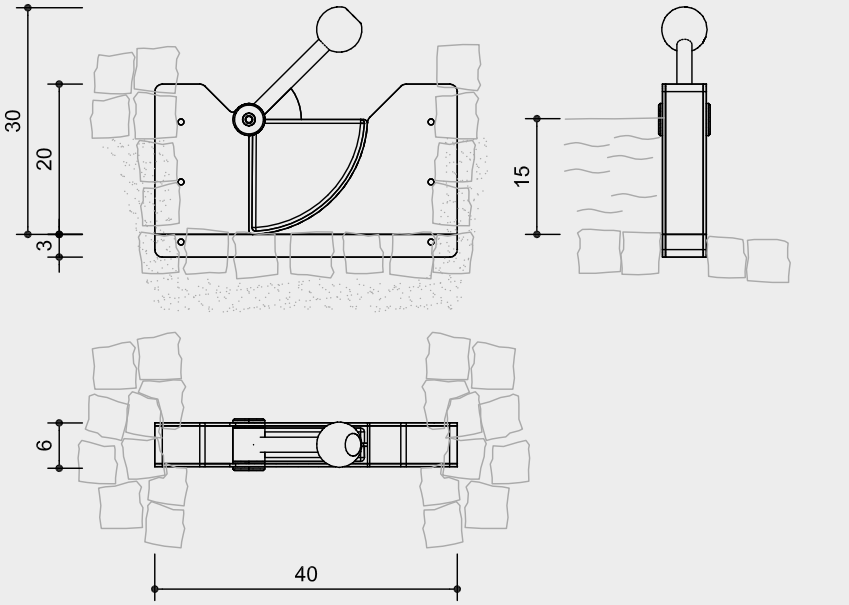
5.28032



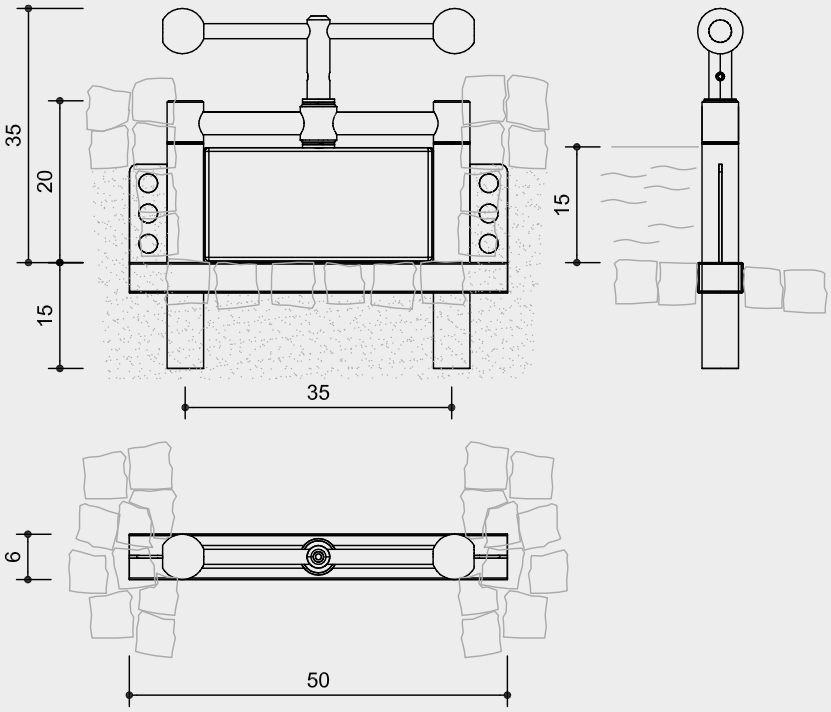
5.28035

Order No. 5.28032
Sickle Gate

Safety distance
Device dimensions
Functional distance

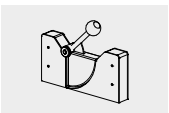


Order No. 5.28035
Rotating Gate



Scale 1:10

Safety check according to DIN EN 1176



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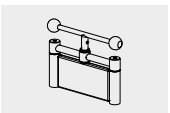


5.28035

Technical information

Cover plates made of stainless steel, glass-bead blasted

Order No. 5.28032
Sickle Gate
Body, gate, ball head and plain bearing made of impact-resistant, coloured-through PUR plastic parts, black

Order No. 5.28035
Rotating Gate
Plain bearings, gates and ball heads made of impact-resistant, coloured-through PUR plastic parts, black

Dimensions
(small deviations possible)

Order No. 5.28032
Sickle Gate

Height	0.30 m
Width	0.40 m
Damming height	0.15 m
Weight	10 kg

Order No. 5.28035
Rotating Gate

Height	0.35 m
Width	0.50 m
Damming height	0.15 m
Weight	9 kg

Components

Order No. 5.28032
Sickle Gate
1 Sickle Gate
Registered Design
40 2020 202 219.9 Germany

Order No. 5.28035
Rotating Gate
1 Rotating Gate
Registered Design
40 2020 202 215.6 Germany

Installation information

Surfacing requirements
Recommendation: surface of reinforced watercourse

All equipment can be easily installed into any artificial watercourse.

Foundations
According to installation situation.

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).

Play value
Children particularly enjoy damming water. Opening the flaps gives them the opportunity to learn about the power of water in a playful way. It is most fun when natural materials such as mud, leaves and small sticks are used to dam the water. However, this is often not possible or desired. Therefore, complementary elements such as locks or flaps are required.

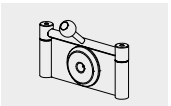
Fundamental characteristics
- Easy handling
- Sturdy construction

Recommended for
- Kindergarten children
- Supervised play areas, such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision, such as playgrounds, parks or similar

Order No. 5.28033 Round Flap

Order No. 5.28034 Rectangular Flap

Round Flap
Rectangular Flap



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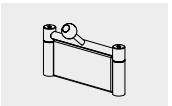
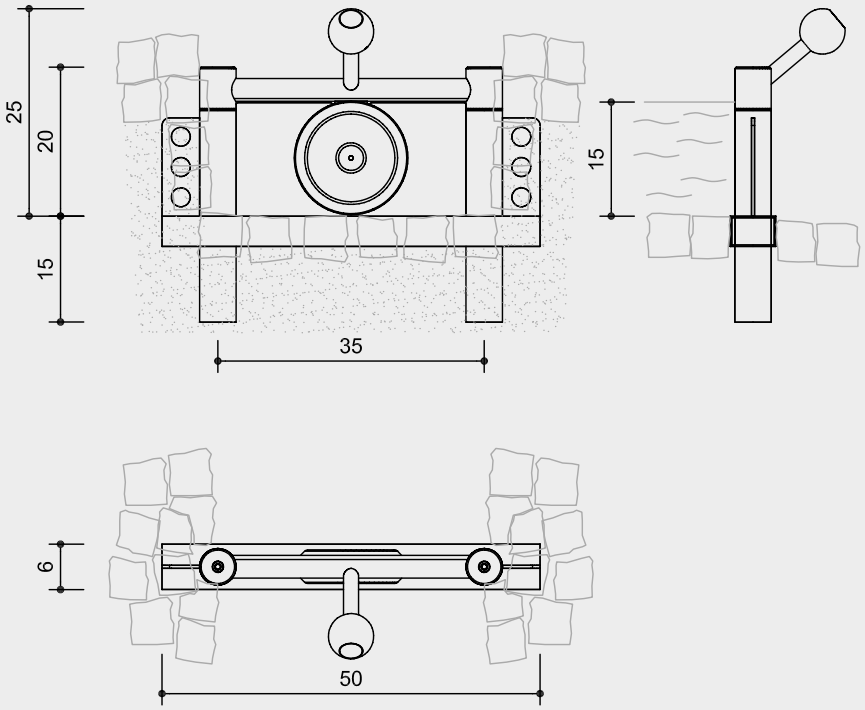


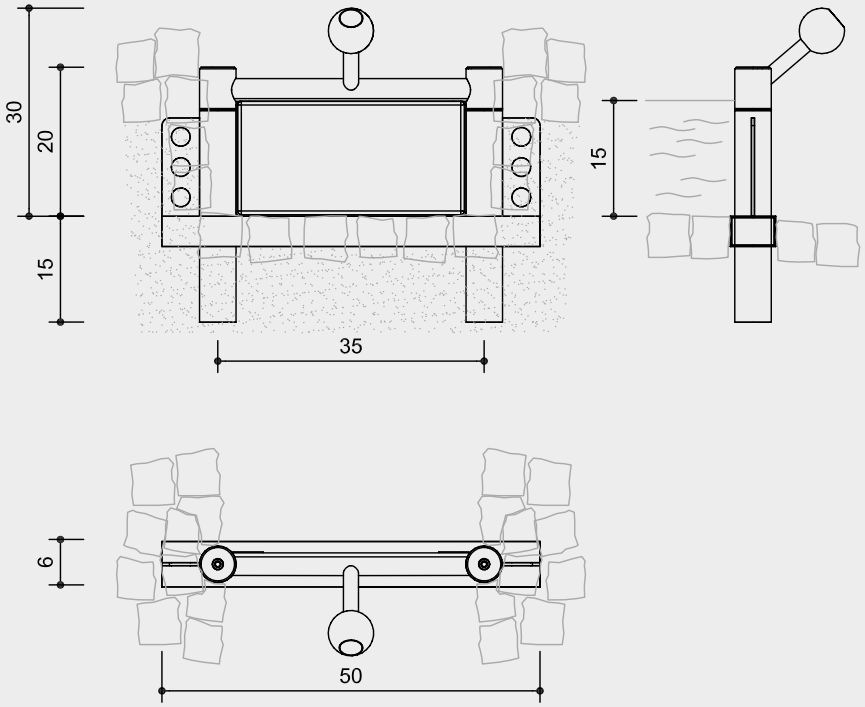
5.28034

Order No. 5.28033
Round Flap

Safety distance
Device dimensions
Functional distance

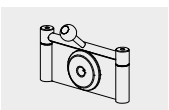


Order No. 5.28034
Rectangular Flap

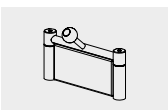


Scale 1:10

Safety check according to DIN EN 1176



5.28033



5.28034

Technical information

Rotating frames made of stainless steel, glass-bead blasted

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

Roller bearings
Roller bearings made of stainless steel for rotating elements, easy to maintain and exchange, sealed

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

Flaps and ball heads made of impact-resistant, coloured-through PUR plastic parts, black

Dimensions
(small deviations possible)

Order No. 5.28033
Round Flap

Height	0.25 m
Width	0.50 m
Damming height	0.15 m
Weight	9 kg

Order No. 5.28034
Rectangular Flap

Height	0.30 m
Width	0.50 m
Damming height	0.15 m
Weight	9 kg

Components

1 Part each
Registered Design
40 2020 202 215.6 Germany

Installation information

Surfacing requirements
Recommendation: Surface of reinforced watercourse

All equipment can be easily installed into any artificial watercourse.

Foundations
According to installation situation.

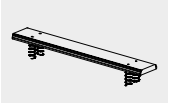
Attention:
Exact measurements may vary; for all installation dimensions refer to current assembly instructions.
Technical changes reserved.
For use in aggressive environments such as salt or chlorine water, the equipment is also available in marine grade steel (V4A).

Play value
Children love situations in which they can show their skill. The Totter Beam is an amusing activity that inspires competitiveness. When children move around, their activity sets the beam in motion and the shaking and tottering leads to someone not being able to hold on, especially if another participant is determined to help out. It's harmless fun that many can take part in.

Totter Beam

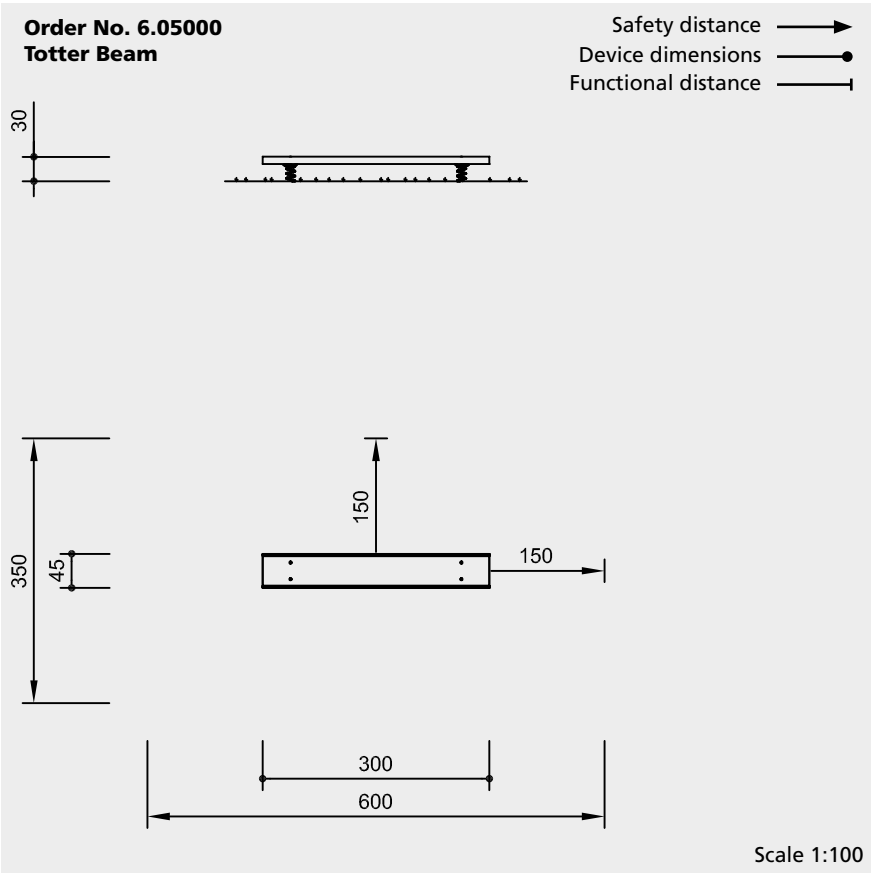
Fundamental characteristics
- Incentive for playing: board mounted on springs, curiosity
- Movement: balance, moving one's centre of gravity, bouncing, wobbling

Recommended for
- Kindergarten children
- School children
- Supervised play areas, such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision, such as playgrounds, parks or similar



6.05000

Order No. 6.05000
Totter Beam



Safety check according to DIN EN 1176

Components

1 Totter Beam with 4 springs
4 Foundation irons

Installation information

Surfacing requirements
corresponding to a fall height of ≤ 0.60 m
(please refer to price list for more detailed information)

Foundations
2 items 30 x 40 x 25 cm
Excavation depth 30 cm

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

Technical information

Equipment made of non-impregnated 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

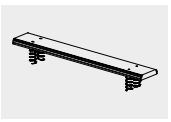
For more detailed explanation of the quality characteristics see price list.

Coated springs,
Standard colour red

Dimensions

(small deviations possible)

Height	0.30 m
Length	3.00 m
Width	0.45 m
Weight	100 kg



6.05000

Play value
Round spring platforms are mounted on strong, low springs. It is not only fun to jump on them, but one can jump off the disc in any direction, as from a spring-board. The momentum which is enforced by the springs propels the jumping child quite far. Jumping from one disc to the other represents a special sequence of movements and a challenge for small children.

Photo © Daniel Perales

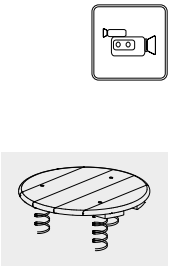
Photo © Barbara Evripidou

Jumping Disc

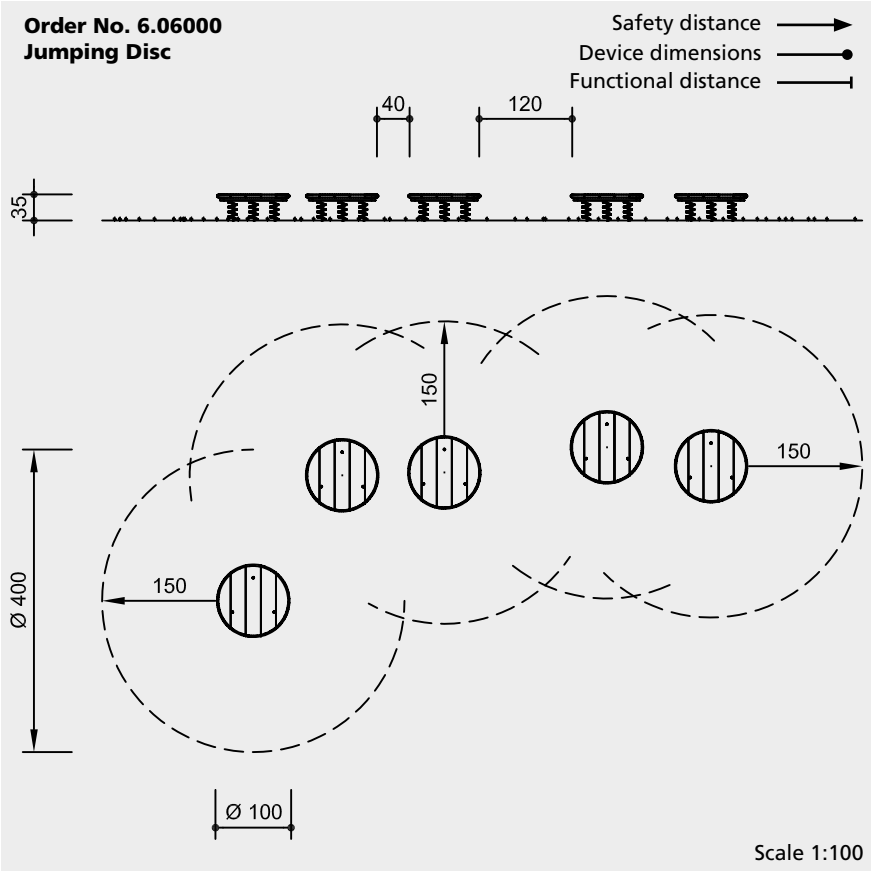
Fundamental characteristics
- Wooden surface with natural structure for a good grip
- Incentive for playing: round, low wooden plate, springs
- Movement: jumping up and down, jumping off, hopping

Recommended for
- Kindergarten children
- School children
- Supervised play areas, such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision, such as playgrounds, parks or similar
- Swimming pools without supervision, such as outdoor pools, adventure pools or similar

Planning information
The installation of at least two Jumping Discs is recommended.



6.06000



Safety check according to DIN EN 1176

Components

1 Disc complete with 3 springs
1 Pre-fabricated concrete foundation

Installation information

Surfacing requirements
corresponding to a fall height of ≤ 0.60 m
(please refer to price list for more detailed information)

Foundations
Excavation for pre-fabricated concrete foundation Ø 1.00 m x 0.15 m
For installation in loose material, an additional anchorage in concrete is necessary on-site.

Attention:
Exact measurements may vary, for all installation dimensions refer to current installation instructions.
Technical changes reserved.

Technical information

Equipment made of non-impregnated mountain larch

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

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

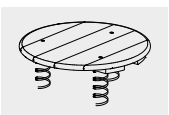
Top of 45 mm boards, screwed together with expansion joints

Coated springs,
Standard colour red

Fastening elements galvanised

Dimensions
(small deviations possible)

Height	0.35 m
Diameter	1.00 m
Weight	170 kg



6.06000

Order No. 6.81000 Straight Balancing Beam

Order No. 6.51501 Rotating Beam with steel posts

Play value
The Rotating Beam is balancing equipment with a higher degree of difficulty, which requires strong, swift physical movement in order to retain balance. It stimulates children to play competitively and in groups. A 5-m-long horizontal balancing beam with rotating ends is fixed about 30 cm above the ground to supporting wooden posts. The Rotating Beam is also interesting equipment when installed alongside paths.
The Balancing Beam is a piece of gymnastic equipment that promotes body awareness and balance and above all also allows small children to experience a sense of achievement without any danger.

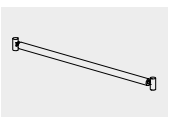
Fundamental characteristics
- The bearings of the beam are fitted eccentrically in order to prevent the beam from rotating too quickly. The length of the beam ensures this effect
- Incentive for playing: due to its position, almost as if by chance
- Movement: balance, body coordination

Recommended for
- Kindergarten children
- School children
- Young people
- Supervised play areas, such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision, such as playgrounds, parks or similar
- Swimming pools without supervision, such as outdoor pools, adventure pools or similar

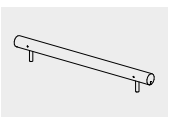
Order No. 6.81000 Straight Balancing Beam, Photo © Lucia Bartl

Rotating Beam
Straight Balancing Beam

Order No. 6.51500 Rotating Beam



6.51500

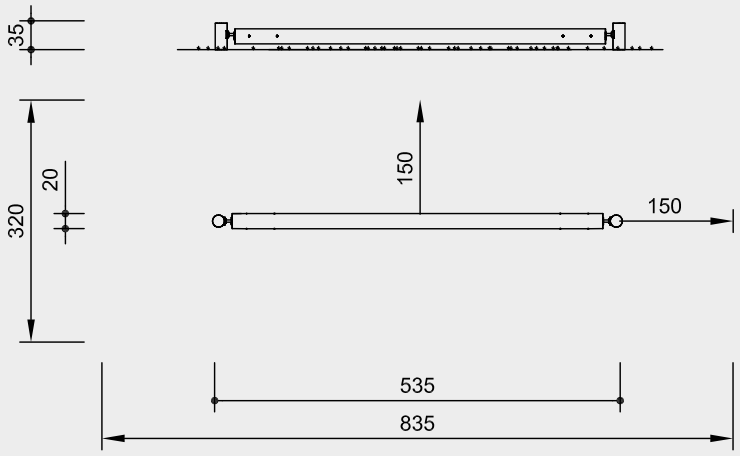


6.81000

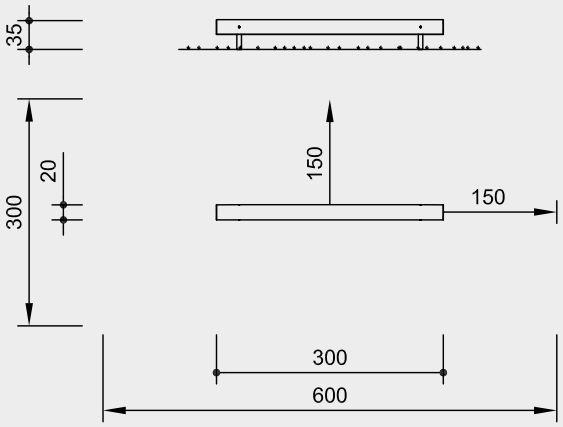
Design J. Krause

Order No. 6.51500
Rotating Beam

Safety distance
Device dimensions
Functional distance



Order No. 6.81000
Straight Balancing Beam



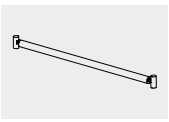
Scale 1:100

Safety check according to DIN EN 1176

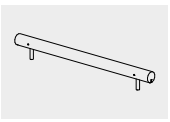
Components

Order No. 6.51500
Rotating Beam
1 Rotating beam
2 Stand posts made of robinia

Order No. 6.81000
Straight Balancing Beam
1 Balancing beam
2 hot-dip galvanised steel feet



6.51500



6.81000

Installation information

Surfacing requirements
corresponding to a fall height of ≤ 0.60 m
(please refer to price list for more detailed information)

Foundations
Order No. 6.51500
Rotating Beam
2 items 60 x 60 x 60 cm
Excavation depth 80 cm
Order No. 6.81000
Straight Balancing Beam
2 items 50 x 50 x 40 cm
Excavation depth 60 cm

Attention:
Exact measurements may vary; for all installation dimensions refer to current assembly instructions.
Technical changes reserved.
The stand posts of the rotating beams are also available made of galvanised steel (Order No. 6.51501).

Technical information

Equipment made of non-impregnated mountain larch

Order No. 6.51500
Rotating Beam
Stand posts made of robinia

Peeled white
Palisades peeled white means that bark, cambium and sapwood are removed, the natural shape of the trunk is preserved and can be experienced

Relief cut
Targeted relief cut as an effective measure against cracks caused by drying. The cut defines the position of the stress equalization in the trunk and minimises natural cracking

Roller bearings
Roller bearings made of stainless steel for rotating elements, easy to maintain and exchange, sealed

Order No. 6.81000
Straight Balancing Beam

Peeled white
Palisades peeled white means that bark, cambium and sapwood are removed, the natural shape of the trunk is preserved and can be experienced

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

Relief cut
Targeted relief cut as an effective measure against cracks caused by drying. The cut defines the position of the stress equalization in the trunk and minimises natural cracking

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

Dimensions

(small deviations possible)

Order No. 6.51500
Rotating Beam

Height	0.35 m
Length	5.35 m
Length of beam	4.90 m
Diameter	0.20 m
Weight	150 kg

Order No. 6.81000
Straight Balancing Beam

Height	0.35 m
Length of beam	3.00 m
Diameter	0.20 m
Weight	60 kg