



Acoustic and Play

# Richter Spielgeräte GmbH



## **Acoustic and Play**

Richter Spielgeräte GmbH has been designing play areas for over 50 years. What is especially important to us is that our equipment promotes the conscious use of our senses.

This theme catalogue offers comprehensive information on the subject of "acoustic effects" and "hearing". Children in particular very much enjoy creating sounds generated by movements they can make themselves. For older people, hearing represents a very special way of connecting to their environment.

The concept "hearing – listening – belonging" makes it clear that the ear, like no other organ, ensures a sense of belonging.

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## Planning Information

Creating environmental structures for people places high demands on planners, amongst others.

Although equipment with acoustic effects may be very interesting for this, even greater care is required for the planning than might be the case for non-acoustic equipment. The reason for this is that the effect can be extremely versatile, ranging from simple noise to tuned harmonies, from loud to soft, from high to low.

Children have great fun triggering acoustic effects through physical activities, for example. In the process, their main concern is not how harmonious, pleasant or even disturbing these sound effects might be to other people. Being used to normal playground equipment, it is also not important to them that sound equipment is often more prone to damage than what they are used to.

This means that not every type of equipment is suitable for every play space. Regardless of the question of need, factors such as vulnerability to wilful destruction or disturbance by noise can have an influence on where it can be used.

To avoid any unpleasant surprises, we have therefore carried out a rough assessment of all equipment with acoustic effects in terms of noise levels and susceptibility to vandalism.

The assessment of the acoustic effects is based on the following three levels:

- strong,
- medium,
- soft.

Notes that are loud, high, hard or shrill are considered to be more annoying than deep, quiet, soft and gentle notes, which are perceived as pleasant.

For assessing vulnerability to vandalism we have chosen the following terms:

- vulnerable (like a musical instrument),
- slightly vulnerable (depending on location, particularly in areas that are obscured from view),
- not vulnerable (comparable to play-ground stability).

Some things that we adults perceive as destruction, children simply consider a part of play and often take place without the intention of destroying anything.

The numerous options to combine our acoustic devices open up wonderful and unique spaces of wellbeing through the creation of clouds of sound.

Immanuel Kant was quoted as saying: "Not seeing separates us from things, not hearing separates us from people".

### Explanation of following icons



#### Videos

You can find videos on our website for the equipment marked with this icon.



#### Young People

The equipment marked with this icon is also especially suited for young people.



#### Inclusion

The equipment marked with this symbol is barrier-free accessible and especially suitable for integrative playspaces.



## Quality Criteria

For additional explanations of the quality criteria please refer to our price list.



### 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



### Bevel cut

Vertical stand posts with bevelled end grain section as constructive wood preservation measure



### Perforated

The earth / air zone of the wood is perforated by numerous small bore holes to ensure that the impregnating agent penetrates this particularly endangered zone



### Fürstenberg Permador System

In special cases we use the patented Fürstenberg Permador System as an additional protection against rot



### Core-free

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



### Claddings

Claddings made of mountain larch (4 – 5 cm). Peeled white by hand, natural tree surface remains tangible and perceptible



### Tongue and groove

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



### Laminated wood beams

Laminated wood beams made of non-impregnated larch, glued according to EN 14080:2013; for very large timber cross-sections; comparatively low shrinkage, almost completely free of cracks



### Hardwood rungs

Climbing rungs made of hardwood (ash) Ø 4.2 cm, milled and mortised, secured against twisting, easy to grip and not cold for children to touch



### Plywood

Plywood made of mountain larch, three-layer (3 cm) or five-layer (4 cm). High dimensional stability, waterproof, glued according to DIN EN 13353:2011



### One-piece construction

Total construction of the slide made of 2 mm stainless steel, drawn in box form, surface glass bead blasted, without welding seam between sliding surface and side cheek



### Swing seat

Ergonomically shaped swing seat made of rubber with soft shock absorbing edge. Durable due to strong profiled steel insert



### Pendulum seat

Pendulum seat with a large rubber surface. Soft, protective edge and steel insert



### Impact absorbing

The anti-slip swing platform is covered by a special tyre-like element for impact absorption



### Richter Hercules type rope

Richter Hercules type rope, a combination of galvanised six-strand steel cables and polyester yarn, diameter > 20 mm, laid and glued with very good abrasion resistance, strong sheathing even in the case of damage by puncturing



### Hercules rope

Hercules rope, for spliced net connections. A compound of steel rope for the core and polyester or polyamide yarn for the sheath. High abrasion resistance, 4 or 6 strands



### Aluminium rope pressing

Aluminium rope pressing, cylindrically pressed, with rounded ends



### S-connectors

S-connectors Ø 8.1 mm, made of high-quality stainless steel, rounded



### Swing joint

Drop-forged, hot-dip galvanised swing joint with sintered bush and integrated swivel



### Universal joint

Drop-forged, hot-dip galvanised universal joint, consists of two sintered bushes, for free swinging in any direction



### Rotating rope connection

Rotatable fitting without dangerous openings, with sintered bush with integrated swivel to ensure the rope untwists



### Rope connection fixed

Fixed rope connection without dangerous openings. Screw connection adjustable and countersunk in the wood



### Rope connection with joint

Close-fitting connection with joint, without dangerous openings, with sintered bush and adjustable screw connection



### Ball joint rope connection

Close-fitting rope connection with ball joint, without dangerous openings for free swinging in any direction, rotatable suspension with combination of plain bearings and roller bearings, adjustable screw connection



### Double rope connection

Connection for complicated swing and swivel motion



### Profiled washer

Profiled washer for covering protruding screw heads according to standard, improved pressure distribution and protection against water. Impedes loosening the bolt



### Adjustable

Adjustable two-piece bolt connection, easy to maintain, no projecting threads



### Interlocking

Interlocking connection, with milled metal rings or serrated disc dowels, to reinforce the bolt connection under high loads transverse to the grain direction of the wood



### End grain connector

End grain connector as special fitting for the adjustable connection of horizontal and vertical timber



### Sintered bush

For all reciprocating movements we use sintered plain bearings which are self-lubricating in use and can easily be exchanged if necessary



#### Steel reinforced rubber belt

Two-way steel reinforced rubber belt, total thickness approx. 11 mm, nearly indestructible



#### Large gated cableway

The large gated cableway covers the required safety distances. The cableway carriage comes to a smooth stop due to the difference in height of the gates and the cable slack



#### Tensioning device

Tensioning device enables one person to release and re-tension. Large winch radius and anti-kink function protect the rope



#### Cableway carriage

Our cableway carriage is designed as a sandwich construction. The „encapsulated“ running mechanism ensures quiet operation. The installation of the carriage is possible without dismantling the rope



#### Special steel cable

High density steel cable made of high-strength and hot-dip galvanized wire. Stable in length, durable and allows a smooth ride of the cableway carriage



#### Ground anchor

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



#### HPL ground anchor

Foundation anchor made of phenol resin paper-based laminates



#### Cross beam made of steel

Swing cross beam made of hot-dip galvanized steel. Optimized swing geometry with rigid corner connections, thus allowing for smaller foundations and easier foundation covering



#### Chains

Chains made of hot-dip galvanized steel (1.4301 / 1.4571 at extra charge) welded before galvanising, short-linked, without eyelets on the connecting parts, easy to exchange and shorten



#### Stainless Chains

Chains made of steel with high corrosion resistance. Short-linked, without eyelets on the connecting parts, easily replaceable and simple shortening



#### Distance fitting

Screw connection with distance fitting to avoid entrapment areas



#### 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



#### Fastening of rope

Fastening of rope / net by means of adjustable chain fixation, easy assembly and maintenance

## Richter Wood Quality Criteria for Larch Wood

### Origin

Exclusive use of mountain larch (bot. *larix decidua*) from the Alps. It grows 800 - 1800 m above sea level and comes from sustainable forestries. Our wood is PEFC certified according to CFCs 2002:2013/PEFC D 1003:2013. This certificate confirms that the sawn and round timber that is produced and sawn comes from sustainable forestry. Further information can be viewed on our website.

According to an official ranking, larch is a moderately rot-resistant type of wood - considerably less durable than robinia.

However, there are different kinds of larch. The larch which we use for our production grows in the mountains at a height of more than 800 m above sea level. Therefore, it has considerably better wood physical properties (and thus should actually be called *larix decidua montania*).

This advantages of this mountain grown larch are considerable:

- Less resin galls
- Less splinters
- Closer year rings
- Higher stability and predominantly enhanced durability.

### Felling time

Our larch trees are felled in winter so that the cut wood can dry before fertile fungus spores, which can lead to early decomposition, appear.

### Corning

During the natural ageing process of the tree, core materials are deposited in the wood. This corning is responsible for the rot-resistance of the mountain larch. Good corning and therefore suitability for ground insertion is recognisable to our colleagues by the red colour of the wood.

### Sapwood

According to our wood quality criteria, timbers of mountain larch are delivered almost sapwood free.

### Year rings

Wood with close year rings is more resistant to rot. Wood intended for ground insertion and for horizontal beams has particularly close rings. Our poles have at least 8 year rings in the outer 2 centimetres.

### Evenness

We ensure that poles inserted into the ground and horizontal beams have centred rings so that close ring wood lies near the outer edge. We do not permit an eccentricity of the piths of greater than 3 cm.

### Fungal attack

Occasionally even a standing tree is attacked by fungus. Such wood only gives limited durability, which is why we carefully sort it out.

### Wood moisture

Wood-destroying fungi require high levels of moisture in the wood. We increase the lifespan of our wood through natural open-air drying. Advanced drying in the poles is demonstrated by the appearance of splits. Our sawn timber is already dried to around 15 - 20% of original wood moisture before it is used for construction.

Since 1989 we have manufactured much of our wooden play equipment of unimpregnated mountain larch. Our play equipment made of unimpregnated poles of mountain larch stands as a rule on steel feet. For short vertical pole length we do without steel feet construction more and more. For square timbers inserted into the ground we use oak core timber. The end-grained timber surfaces are cut on the cross and covered with paraffin wax.

All equipment printed in red in our price list is made from unimpregnated mountain larch which has been selected according to the eight Richter quality criteria.



Photo © Anton Donikov

**In the Playground ...**





### Play value

The Sound Cushions provide an attractive activity for nearly all ages. Tones are produced by hopping on, or running over the cushions. Surprising tone sequences are produced, interrupted by amusing squeaks. This is a game for children and adults. As installation takes place using ground anchors rather than foundations, the tones can be changed any time. New sequences of movement are then required together with new tones and noises.



Photo © Ayumi Nakanishi



Photo © Anton Donikov

### Sound Cushions

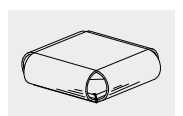
#### Fundamental characteristics

- Incentive for playing: „funny“ cushions on the ground, curiosity
- Movement: jumping, hopping, running

#### Recommended for

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

Acoustic effect	medium / pipes
Vandalism	slightly vulnerable

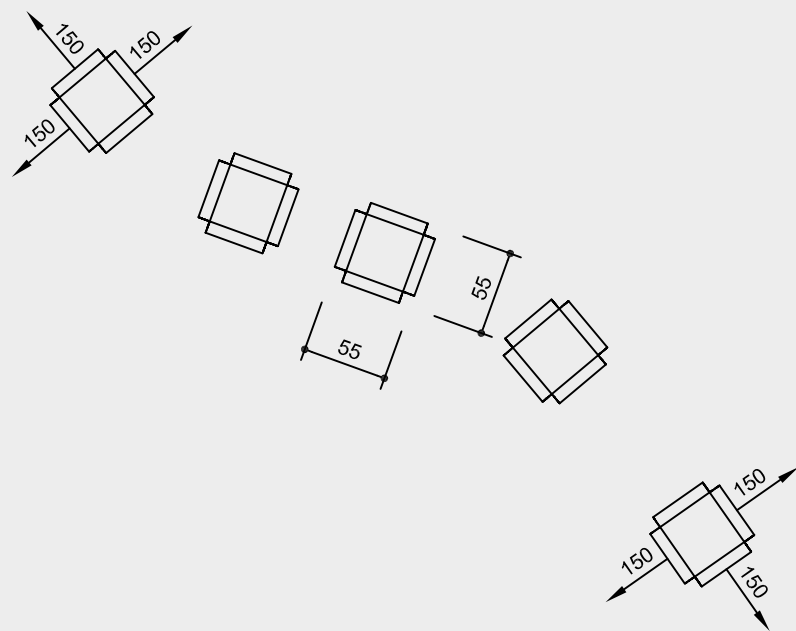


9.02410



**Order No. 9.02410**  
**Sound Cushions**  
 Installation example

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



Scale 1:50

Safety check according to DIN EN 1176

**Components**

- 1 Hopper
- 2 Foundation irons

**Installation information**

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

Foundations  
 Excavation per item approx. 60 x 20 cm,  
 40 cm deep (only necessary to immobilise  
 the equipment)

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

**Technical information**

Hopping surface made of textile-  
 reinforced rubber belt, thickness 8 mm

**Ground anchor**

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



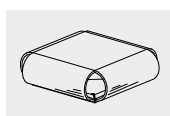
**For more detailed explanation of the  
 quality characteristics see price list.**

Air spring with pipe, for installation in  
 groups pentatonically tuned

**Dimensions**

(small deviations possible)

Height	0.15 m
Length	0.55 m
Width	0.55 m
Weight	25 kg



**9.02410**

### Play value

The Wind Pipes are a simple sound equipment which enables the person „playing them“ to experience physically the relation of cause and effect. The three, ground level integrated see-saw beams can be moved independently from each other. Due to the movement of the beams, the air pressure which is required for playing the pipes is produced. By means of shifting the weight or moving from one beam to the other, different simple sequences of notes are produced. Six different notes are possible. Children enjoy very much making „music“ with the whole body or producing „beautiful“ (dreadful) sequences of notes by using the see-saw effect of the beams.

### Fundamental characteristics

- Unique and original
- Combination of see-sawing and experience of sound
- Incentive for playing: surprising element on the ground
- Movement: shifting one's weight

### Recommended for

- Kindergarten children
- School children
- Young people
- Adults
- Older people
- Supervised play areas, such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

- Independent play

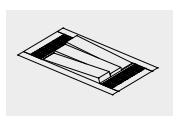
### Planning information

To prevent the underground parts of the mechanism from being damaged, we strongly advise against installing the equipment in sand.

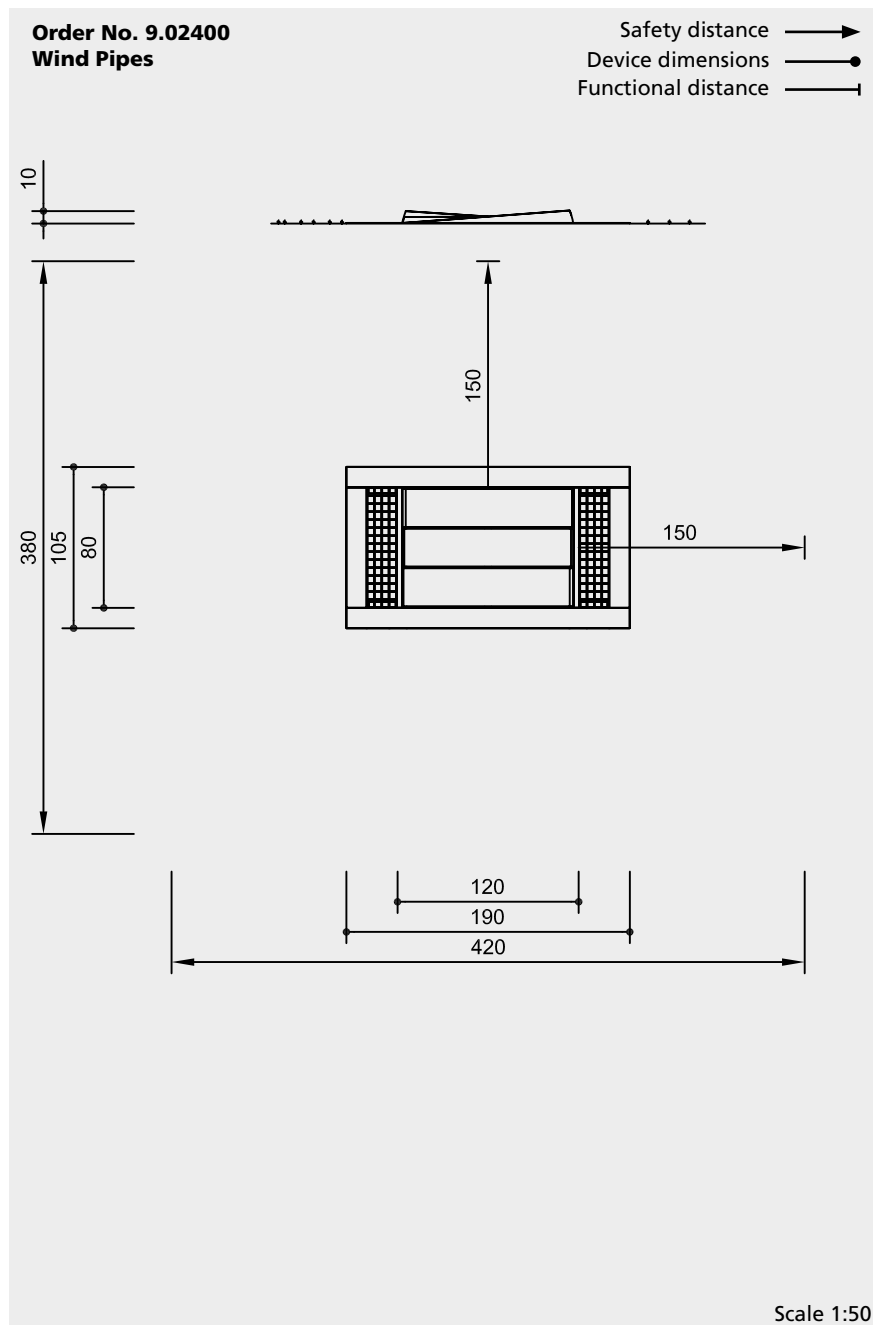


### Wind Pipes

Acoustic effect	medium / pipes
Vandalism	not vulnerable
Supervision	recommended



9.02400



Safety check according to DIN EN 1176

### Components

- 1 Complete equipment with 3 see-saw beams and 6 piston pumps with musical pipes

### Installation information

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

#### Foundations

Excavation: 125 x 220 x 63 cm  
1 box foundation 125 x 220 x 50 cm with a wall thickness of 30 cm on the short side and 20 cm on the long side

#### 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



#### Sintered bush

For all reciprocating movements we use sintered plain bearings which are self-lubricating in use and can easily be exchanged if necessary



#### 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.**

Piston pumps with pipes mounted under the see-saw beam

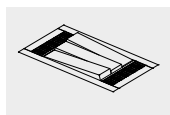
Pipes are tuned to the pentatonic scale

Ventilation from hot-dip galvanised grille

#### Dimensions

(small deviations possible)

Length	1.90 m
Width	1.05 m
See-saw beams	10 / 26 cm
Weight	180 kg



9.02400





### Play value

By turning the individual rollers, different sounds are generated. Participants can balance by standing on the rollers or sit on the ropes pushing the rollers with their feet. Sounds are generated in an amusing way on the sound roller while sense of balance is improved.

### Fundamental characteristics

- Experience of sound for sensitive perception
- Incentive for playing: rollers, holding ropes
- Movement: movement of feet, holding on, hanging

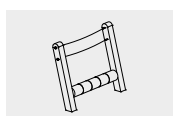
### Recommended for

- 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

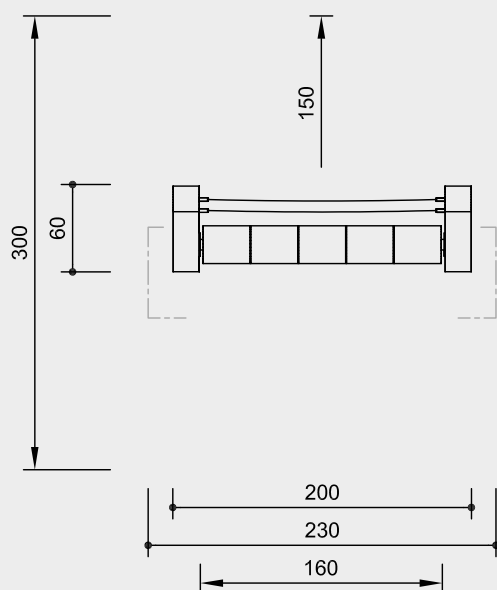
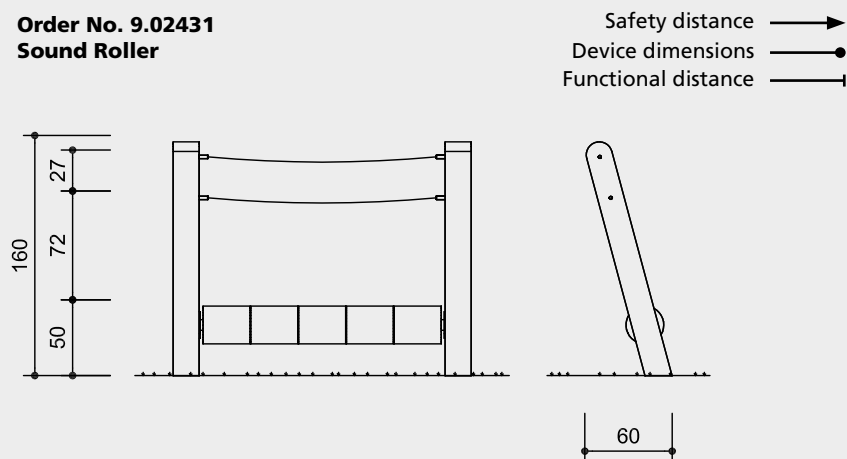


**Sound Roller**

Acoustic effect	soft clanging
Vandalism	not vulnerable



**9.02431**

**Order No. 9.02431**  
**Sound Roller**


Scale 1:50

Safety check according to DIN EN 1176

**Components**

- 2 Support posts with steel feet and 2 ropes
- 1 Axle with 5 rollers on bearings

**Installation information**

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

Foundations  
 1 item 60 x 60 x 60 cm  
 Excavation depth 80 cm

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

**Technical information**

Support posts made of square timber 18 / 18 cm, non-impregnated mountain larch

**Core-free**

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


**Richter Hercules type rope**

Richter Hercules type rope, a combination of galvanised six-strand steel cables and polyester yarn, diameter > 20 mm, laid and glued with very good abrasion resistance, strong sheathing even in the case of damage by puncturing


**Aluminium rope pressing**

Aluminium rope pressing, cylindrically pressed, with rounded ends


**Rope connection fixed**

Fixed rope connection without dangerous openings. Screw connection adjustable and countersunk in the wood


**Profiled washer**

Profiled washer for covering protruding screw heads according to standard, improved pressure distribution and protection against water. Impedes loosening the bolt


**Sintered bush**

For all reciprocating movements we use sintered plain bearings which are self-lubricating in use and can easily be exchanged if necessary


**Ground anchor**

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

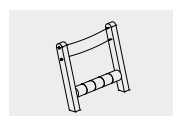


**For more detailed explanation of the quality characteristics see price list.**

**Dimensions**

(small deviations possible)

Height	1.60 m
Length	2.00 m
Depth	0.60 m
Weight	250 kg


**9.02431**



### Play value

Three wooden columns with pump handles are placed around a central post. Raising and lowering the levers produces air pressure which drives sound elements. Pumping produces different triads. Playing together with the Wind Pump produces elementary experience of rhythm and tone using simple hand movements. This attractive play equipment is an appealing enhancement of parks and leisure areas. It is just as suited as a central feature of play areas.



### Wind Pumps

#### Fundamental characteristics

- Unique and original
- Harmonic design
- Incentive for playing: interesting installation, curiosity
- Movement: pumping

#### Recommended for

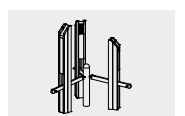
- School children
- Supervised play areas, such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision, such as playgrounds, parks or similar

#### Barrier-free

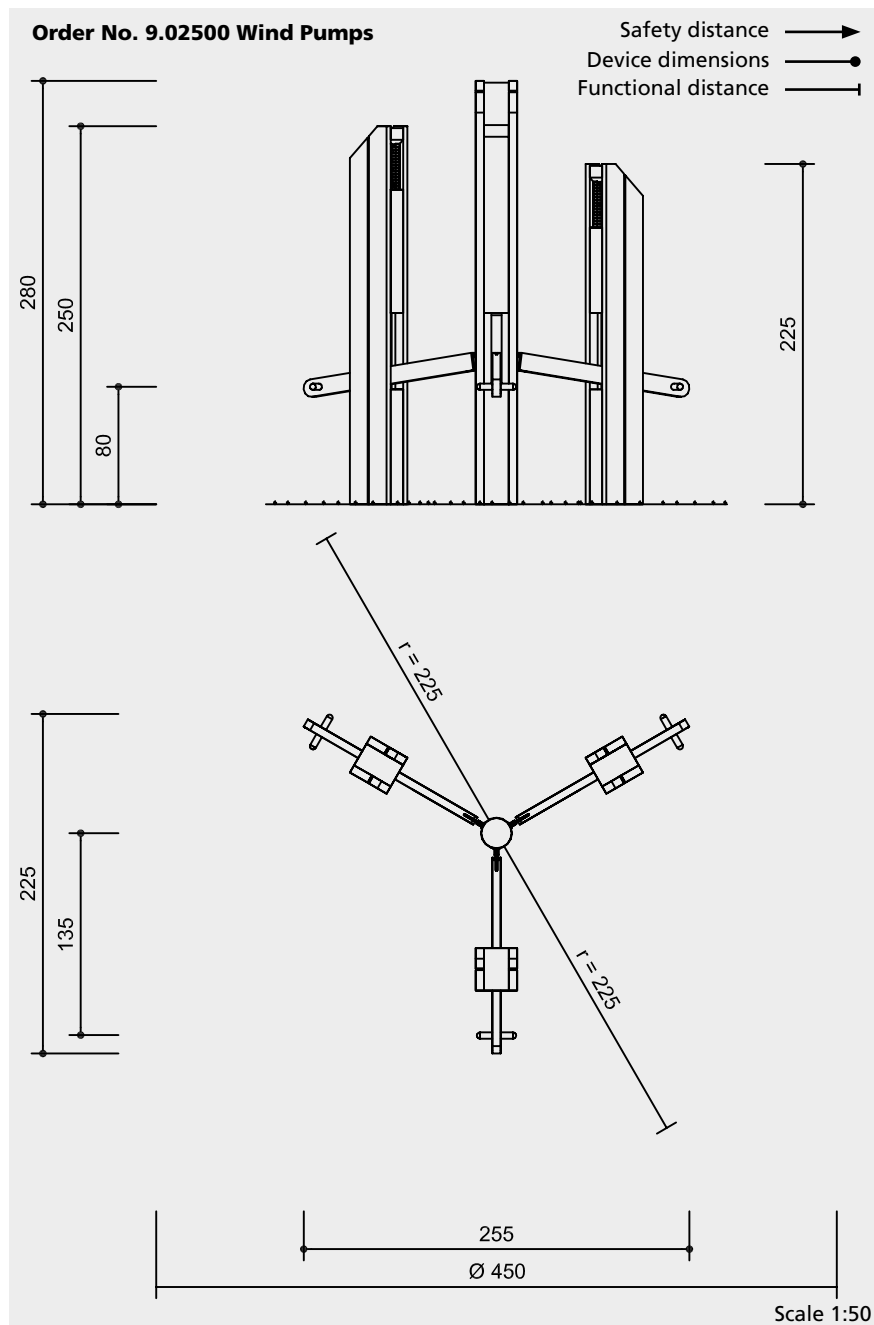
- Independent play



Acoustic effect	strong / pipes
Vandalism	not vulnerable



9.02500



Safety check according to DIN EN 1176

### Components

- 3 Individual pumps with integrated sound elements and steel feet
- 1 Central column with 3 levers and steel foot

### Installation information

Surfacing requirements  
no requirements

Foundations  
4 items 50 x 50 x 60 cm  
Excavation depth 80 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

#### 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



#### 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.**

1 piston pump per column each  
with 2 pipes, tuned to the pentatonic scale

Hot-dip galvanised fittings

#### Dimensions

(small deviations possible)

Height	2.80 m
Weight	300 kg



9.02500



### Play value

The play possibilities of Sea Roarer are not apparent until the user steps onto the stainless steel platform and discovers the pivotally rotating movements it allows. These movements are fun, and increased play value is achieved when users interact with each other. Gradually the players become conscious of a special sound. Concentration turns more and more to listening and exploring how the movement controls the sound – they discover the roar of the sea. Below the surface are many little balls, which move when the position of the standing plate is changed. The balls roll over a membrane producing a sound which is similar to that of the sea rolling in and out of the shore. The senses of balance and hearing are both challenged and stimulated, heightening the awareness of the senses through play activity.

Another exciting acoustic phenomenon can be experienced with our piper. Two sound tubes together make up a set. One serves as a pump while the other determines the pitch of the tone. The movable metal rod is used to draw air upwards into the sound element and to push it downwards. The second sound element then simultaneously generates a piping sound. Different chord progressions can be generated depending on the speed of the pump and how the tone pitch is controlled.

### Fundamental characteristics

- Unique and original
- High-quality design appeals to the senses
- Incentive for playing: appealing design, curiosity
- Movement: balancing, experiencing one's whole body



Order No 9.02660 Piper



Order No. 9.02652 Sea Roarer free-standing



Order No. 9.02650 Sea Roarer

### Recommended for

- 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

### Barrier-free

- Special exercise experience
- Independent play (piper)

### Sea Roarer Sea Roarer free-standing Piper

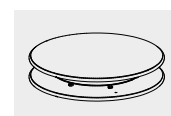


Acoustic effect

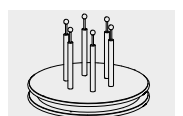
soft to strong  
depending on  
usage

Vandalism

not vulnerable



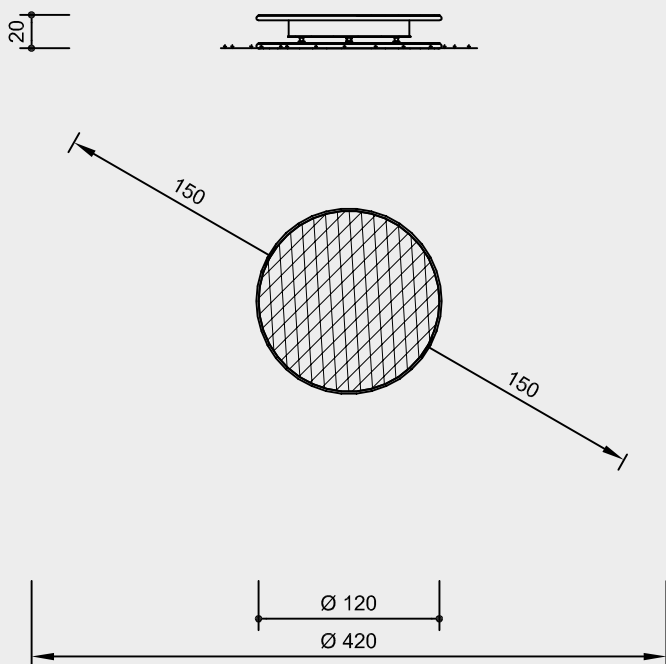
9.02650 / 9.02652



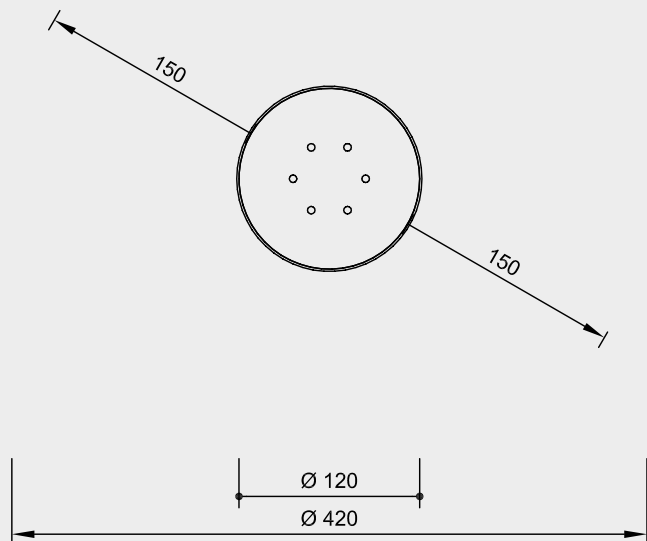
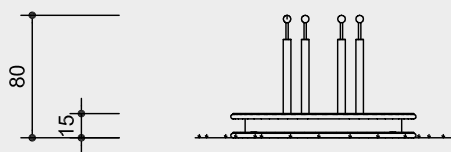
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**Order No. 9.02650 / 9.02652**  
**Sea Roarer**

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

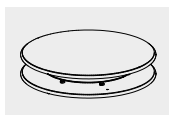


**Order No. 9.02660**  
**Piper**

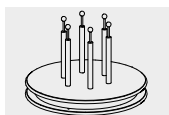


Scale 1:50

Safety check according to DIN EN 1176



9.02650 / 9.02652



9.02660

**Technical information**

Equipment entirely made of stainless steel, glass bead blasted, with sound elements

**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. 9.02652**

**Sea Roarer free-standing**

Rubber buffer made of hard rubber abrasion-resistant

**Order No. 9.02660**

**Piper**

Pipes made of phenolic resin, different colour pairs

**Dimensions**

(small deviations possible)

**Order No. 9.02650 / 9.02652**

**Sea Roarer**

Height	0.20 m
Diameter	1.20 m
Weight	130 / 120 kg

**Order No. 9.02660**

**Piper**

Height	0.15 m
Height incl. pipes	0.80 m
Diameter	1.20 m
Weight	70 kg

**Components**

**Order No. 9.02650**

**Sea Roarer**

- 1 Piece of equipment
- 3 Foundation irons

**Order No. 9.02652**

**Sea Roarer free-standing**

- 1 Piece of equipment
- 6 Rubber buffers

**Order No. 9.02660**

**Piper**

- 1 Piece of equipment
- 3 Foundation irons

**Installation information**

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

Foundations

**Order No. 9.02650 / 9.02660**

3 items 40 x 40 x 35 cm  
Excavation depth 40 cm

**Attention:**

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

Technical changes reserved.



### Play value

The Phones are an attractive play item which confront people with the physical phenomena of sound waves and sound wave transmission during play. Children are fascinated when they can actually hear the voice of their play partner clearly at a distance of approximately 15 m. This telephone can also be incorporated in role play and becomes particularly interesting when bushes or trees obscure the view to give an illusion of a big distance to be bridged.

### Fundamental characteristics

- Agreeable design
- Enables communication over a big distance
- Movement: bending, stretching

### 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

### Barrier-free

- Independent play



Order No. 9.02710 Phones in Concrete



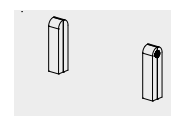
Order No. 9.02700 Phones in Wood

### Phones in Wood Phones in Concrete

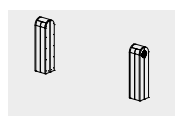
Acoustic effect	soft
Vandalism	not vulnerable



9.02700

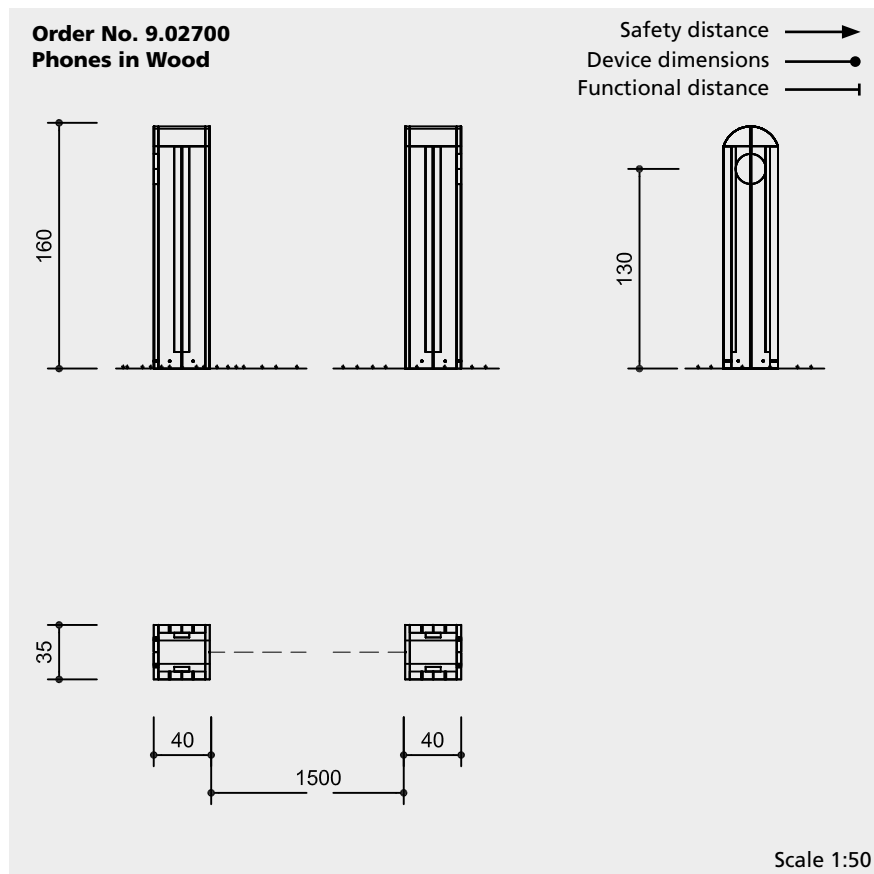


9.02710



9.02720





Safety check according to DIN EN 1176

#### Components

2 Phones  
17 m plastic pipe and accessories  
2 Foundation frames

#### Installation information

Surfacing requirements  
no requirements

Foundations

##### **Order No. 9.02700 / 9.02720** **Phones in Wood**

2 items 60 x 60 x 35 cm  
Excavation depth 40 cm

##### **Order No. 9.02710** **Phones in Concrete**

no foundation work necessary  
Excavation 60 x 55 x 55 cm  
A well-compacted soil with good carrying capacity is required, if necessary use gravel or, respectively, a blinding layer.

Groundwork necessary for connection pipe

The distance between the two phones should be approx. 15 m, max. 17 m.

#### Attention:

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

#### Technical information

##### **Order No. 9.02700 / 9.02720** **Phones in Wood**

#### 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.**

Mouthpieces closed with communication grille of stainless steel, connected with plastic pipes

##### **Order No. 9.02710** **Phones in Concrete**

Each column is cast as 1 part of vibrated concrete C 30/37

Mouthpieces closed with communication grille of stainless steel, connected with plastic pipes

#### Dimensions

(small deviations possible)

##### **Order No. 9.02700** **Phones in Wood**

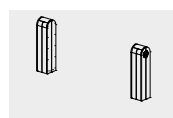
Height	1.60 m
Mouthpiece	1.30 m
Width	0.35 m
Depth	0.40 m
Weight	150 kg

##### **Order No. 9.02710** **Phones in Concrete**

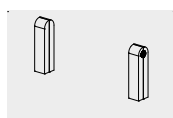
Height	1.50 m
Mouthpiece	1.30 m
Width	0.35 m
Depth	0.40 m
Weight	720 kg

##### **Order No. 9.02720** **Phones in Wood for kindergartens**

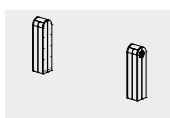
Height	1.20 m
Mouthpiece	0.90 m
Width	0.35 m
Depth	0.40 m
Weight	130 kg



9.02700



9.02710



9.02720



### Play value

Our Ear and Speaking Trumpets are an attractive piece of play equipment, which can be used in lots of different ways. The transmission of voices and sound through the funnels begins with listening to a gentle sound and then becomes intriguing when you become aware of the amplification effect. In order to achieve good results, the "trumpets" must face each other precisely. Since the trumpets can be rotated 360° and swivelled vertically, it is possible to mount several of them at different heights. For speaking and listening, two of them have to be adjusted individually so that they are precisely in line with each other. The funnels can be integrated into role playing games in countless ways - small and big children alike are fascinated by being able to communicate with each other over a certain distance.

### Recommended for

- School children
- Young people
- Adults
- Older people
- Supervised play areas such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision such as kindergartens, schools, after school programmes or similar

### Barrier-free

- Special version for wheelchair users optional

### Ear and Speaking Trumpet

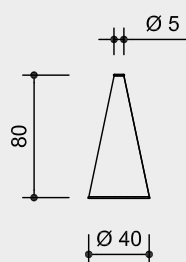
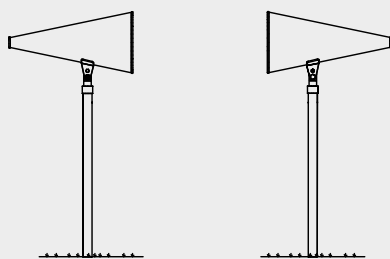
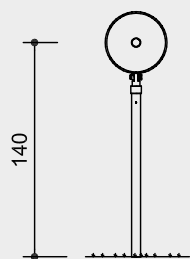
Acoustic effect	soft
Vandalism	not vulnerable
Supervision	not required
Explanation Board	recommended
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not required
Installation in concrete	possible



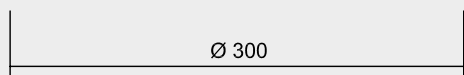
9.03000

**Order No. 9.03000**  
**Ear and Speaking Trumpet**  
 Example with 2 trumpets

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



Distance between ear and speaking trumpets 15–40 cm



Scale 1:50

**Technical information**

Equipment made of stainless steel

**Sintered bush**

For all reciprocating movements we use sintered plain bearings which are self-lubricating in use and can easily be exchanged if necessary



**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.**

Funnel-shaped opening, rotating mechanism (PE), can be swivelled vertically

**Dimensions**

(small deviations possible)

Height	1.40 m
Depth	0.80 m
Weight of trumpet with support post	22 kg

**Components**

Depends on number of pieces ordered

Minimum number = 2 trumpets for dowelling, incl. 4 heavy duty anchors each

**Installation information**

Recommended space including safety distances  
 Circle diameter = 300 cm per "trumpet"

Foundations

**Order No. 9.03000**  
**Ear and Speaking Trumpet**  
 1 item 40 x 40 x 40 cm for each "trumpet"  
 Excavation depth 60 cm

**Note**

No obstacle (other devices) may be positioned in the direct line between the two devices as this would greatly impair the function of the device.

**Attention:**

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



**9.03000**



### Play value

Sound, like light and heat, can be made to focus. What is spoken at normal volume into the focal point of the reflector can be picked up in a second reflector placed opposite about 30 to 40 m away, as well as at all points between the two reflectors. Sound waves, like light and heat waves, can be concentrated onto one particular spot. The Parabolic Reflector provides experience of physical phenomena.

### Fundamental characteristics

- Incentive for playing: large reflectors
- Movement: listening

### Recommended for

- Schoolchildren
- Young people
- Adults
- Older people
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

- Independent play



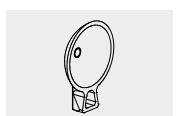
Photo © Daniel Perales



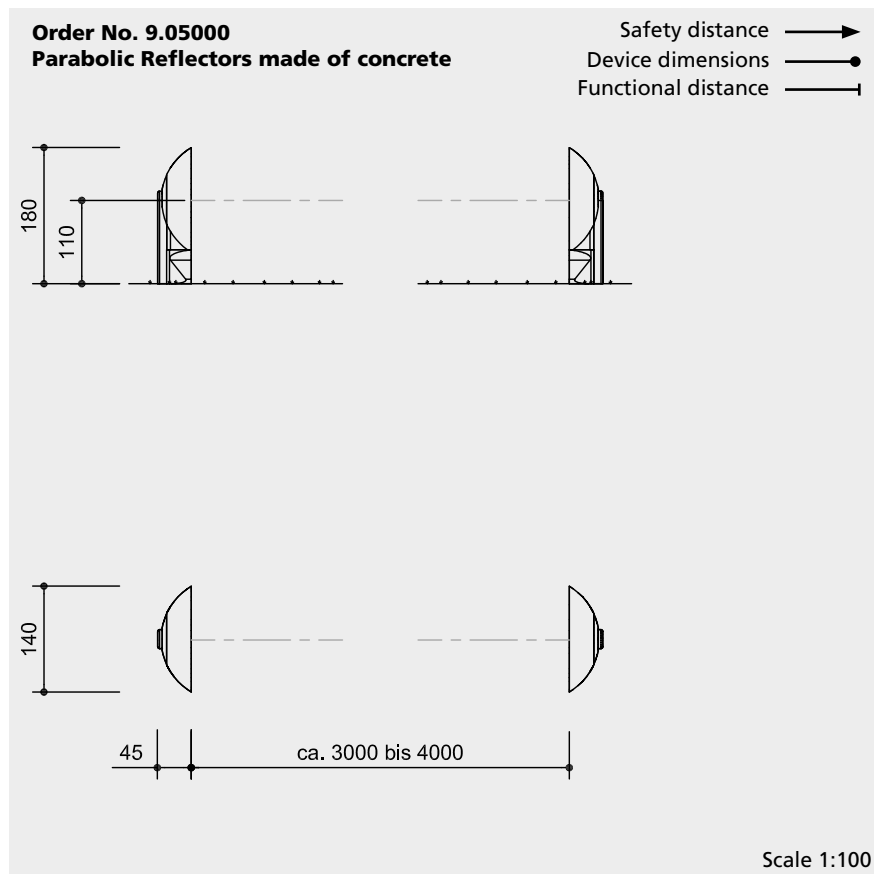
Photo © Daniel Perales

### Parabolic Reflectors made of concrete

Acoustic effect	soft
Vandalism	not vulnerable



9.05000



Safety check according to DIN EN 1176

#### Components

- 2 Concrete Parabolic Reflectors with stand feet
- 2 Pylon frames
- 2 Foundation irons

#### Installation information

Surfacing requirements  
 no requirements

Foundations  
 each item 50 x 50 x 80 cm  
 Excavation depth 80 cm  
 optical measurement with levelling instrument recommended

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

#### Technical information

Each reflector is cast as 1 part of vibrated concrete C 30/37, steel-reinforced

#### 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.**

#### Dimensions

(small deviations possible)

Height	1.80 m
Diameter	1.40 m
Weight per reflector	520 kg



**9.05000**



### Play value

The Dance Chimes connect movement with experience of sounds. People of nearly all ages enjoy producing bright tones by hopping, jumping, or even dancing. Few play items produce so much smiling as this one. Both the spectators and listeners feel a moment of lightness, joy and harmony. The strong motivation produced by the Dance Chimes helps people to overcome physical inhibitions and to harmonise uncoordinated movements. However, even arbitrary hopping produces pleasant sounds which are pentatonic sequences rather than normal tones. Nine brass tiles are arranged in a square with a sound element under each. These are set into vibration by the energy of motion and thus produce ringing tones. The Dance Chimes are also valuable as therapeutic equipment for people with a variety of functional limitations and they are a very attractive and demanding play offer for young children.

### Fundamental characteristics

- Unique and original
- High-quality, sturdy construction
- Incentive for playing: surprising element on the ground, curiosity
- Movement: jumping, hopping, dancing



Special version with perforated plate  
Photo © Daniel Perales

### Dance Chimes

#### 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

#### Barrier-free

- Independent play

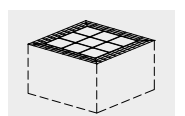


Acoustic effect

medium /  
tubular bells

Vandalism

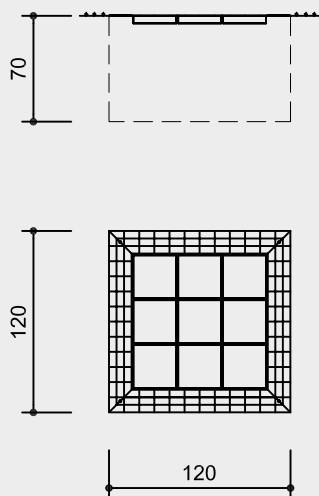
not vulnerable



9.06000

**Order No. 9.06000**  
**Dance Chimes**

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



Scale 1:50

Safety check according to DIN EN 1176

**Components**

- 1 Dance Chimes unit completely mounted in a corrosion protected steel housing, with 9 sound elements, pentatonically tuned and tiles of brass with sensitive hammer mechanism

**Installation information**

**Surfacing requirements**

- Firm ground, asphalt, concrete, paving or slabs
- The housing is lowered into the ground so that the brass tiles are level with the surrounding surface
- To prevent spontaneous resonance, any hollow areas around the housing should be filled with sand

A foundation ist not necessarily required. Ground which is able to take a load and which is well compressed covered with gravel or a blinding layer is sufficient.

**Excavation:**

Pit 1.40 x 1.40 m  
at least 0.70 m deep  
with drainage

**Attention:**

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

Technical changes reserved.

**Equipment also available with elec-  
trical Order No. 9.06102 or mechani-  
cal Order No. 9.06106 shut-off device  
(see also price list)**

**Technical information**

We are continuously asked if the price demanded for this equipment is not a little high. Consequently, we feel obliged to explain the sales price of this equipment. Its price is calculated no differently to any of our others. Even careful re-calculation has revealed no undue costs. All who see the high quality material, the complicated mechanism, and the clean finish understand the real value of the equipment. In your interests, its price-value relationship has been double checked and we can therefore say with a clear conscience that the Dance Chimes are worth the money.

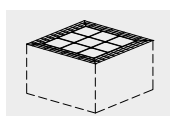
In order for play, dance and music to form an inseparable, mutually reinforcing entity, the following and further mechanical aspects are necessary, to guarantee problem-free operation:

- Sophisticated bearings
- Precise movement, which guarantees parallel movement and thus prevents any slippage
- Return mechanism which presses the foot plate into its original position
- Buffers which prevent metal-on-metal contact
- Pentatonically-tuned tone elements which always produce a harmonious sound
- The high-quality brass foot plates which become more attractive the more they are used
- The hot-dip galvanised housing which protects the various tone elements.

**Dimensions**

(small deviations possible)

height	0.70 m
length	1.20 m
width	1.20 m
weight	450 kg



**9.06000**



### Play value

This special **instrument** invites people to make music by playing the keys. It is available in two versions: The diatonic version is better suited to playing known melodies, while the pentatonic version is a motivation for free improvisation. This attractive play equipment is an appealing enhancement for any park and can serve as the exciting central feature of a play space.

Sound tubes are mounted on metal bars. They make sounds when they are hit by a small hammer activated by a pedal. Nearly everyone enjoys making sounds and therefore, this **wall** made from bars is very attractive both for young and older people. Due to the tubes of different lengths, the sound wall is a real music instrument which can produce a melody when „played“.

### Fundamental characteristics

- Unique and original
- Incentive for playing: curiosity, percussion keys, sound elements
- Experiencing sound, making music
- Movement: beating

### Recommended for

- Kindergarten children
- School children
- Young people
- Adults
- Older people
- Supervised play areas, such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

- Independent play

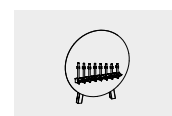


Order No. 9.05500 / 9.05510 Instrument, Photo © Iliya Varlamov

**Instrument  
Sound Wall**



Acoustic effect	medium
Vandalism	not vulnerable



**9.05500 / 9.05510**

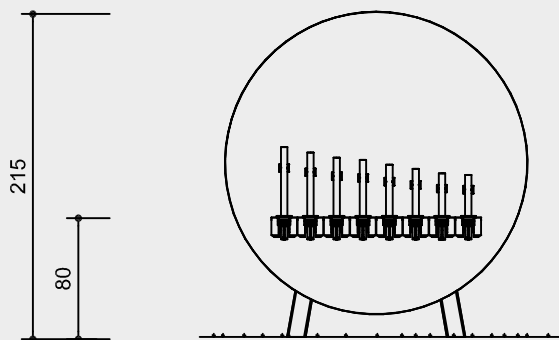


**9.06710**

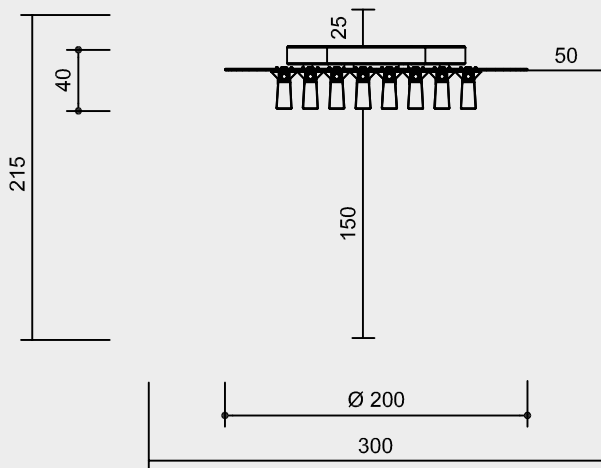


**Order No. 9.05500 / 9.05510**

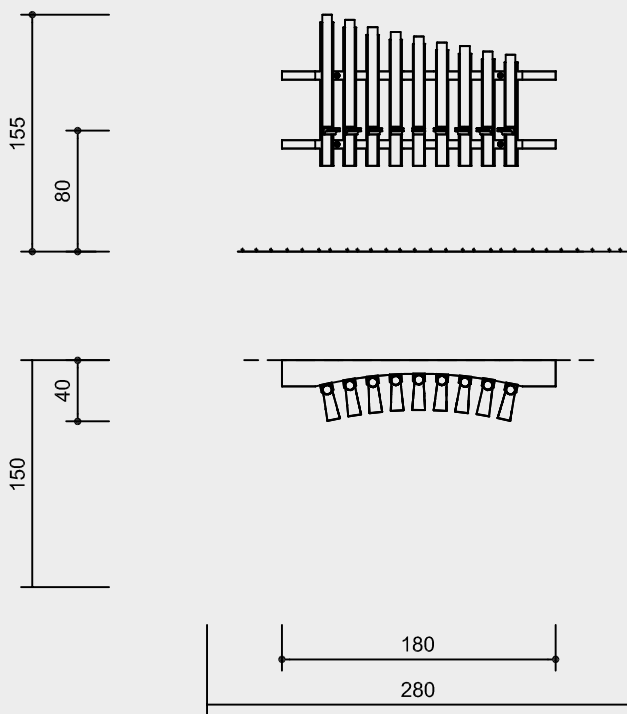
**Instrument**



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

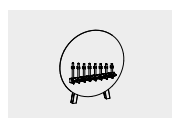


**Order No. 9.06710**  
**Sound Wall**

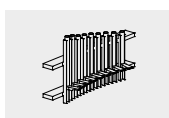


Scale 1:50

Safety check according to DIN EN 1176



**9.05500 / 9.05510**



**9.06710**

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

## Technical information

**Order No. 9.05500 / 9.05510**  
**Instrument**

Equipment made of stainless steel,  
sanded  
Sound tubes of hot-dip galvanised,  
weldless steel, mounted in stainless steel  
profiles  
Percussion mechanism is dampened by  
robust rubber buffers  
Percussion keys made of anodise  
aluminium

**Order No. 9.06710 Sound Wall**

Sound tubes of hot-dip galvanised,  
weldless steel, mounted in varnished  
U-profiles

## 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.**

Tuned to a pentatonic scale (in groups)  
Percussion mechanism is dampened by  
robust rubber buffers in every direction  
Percussion keys made of oak

## Dimensions

(small deviations possible)

**Order No. 9.05500 / 9.05510**  
**Instrument**

Height	2.15 m
Diameter	2.00 m
Width	0.40 m
Weight	450 kg

**Order No. 9.06710 Sound Wall**

Width	1.80 m
Length of Sound elements	0.75 – 1.00 m
Weight	180 kg

## Components

**Order No. 9.05500 / 9.05510**  
**Instrument**

1 Disc  
1 Support frame

**Order No. 9.05500**

tuned to a pentatonic scale

**Order No 9.05510**

tuned to a diatonic scale

Also available for wall attachment.

**Order No. 9.06710 Sound Wall**

1 Sound Wall with 9 notes for  
attachment

The sound wall is also  
available with stand posts for in-situ  
concrete, **Order No 9.06720.**

## Installation information

Surfacing  
no requirements

Foundations

**Order No. 9.05500 / 9.05510**  
**Instrument**

2 items 60 x 60 x 40 cm  
Exavation depth 60 cm



Photo © Mary Noble Ours

### Play value

Stainless steel sheets are curved into a U shape and then welded in this shape to a hollow tube, which serves as a resonator. When the U-shaped steel sheets are hit with a beater, a warm lively sound is created. The resonator is not just open at the top of the hollow tube but also at the bottom. If this opening is closed off with the hand, the sound volume can be increased or decreased and the resonance of the sound in the air can be experienced. This tuning makes it possible for everybody to immediately create pleasant sounds, without any disharmony.

### Fundamental characteristics

- Unique and original
- Exclusive design
- Incentive for playing: form, beater

### Recommended for

- 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

### Barrier-free

- Independent play



Photo © Iliya Varlamov

### Ferraphone

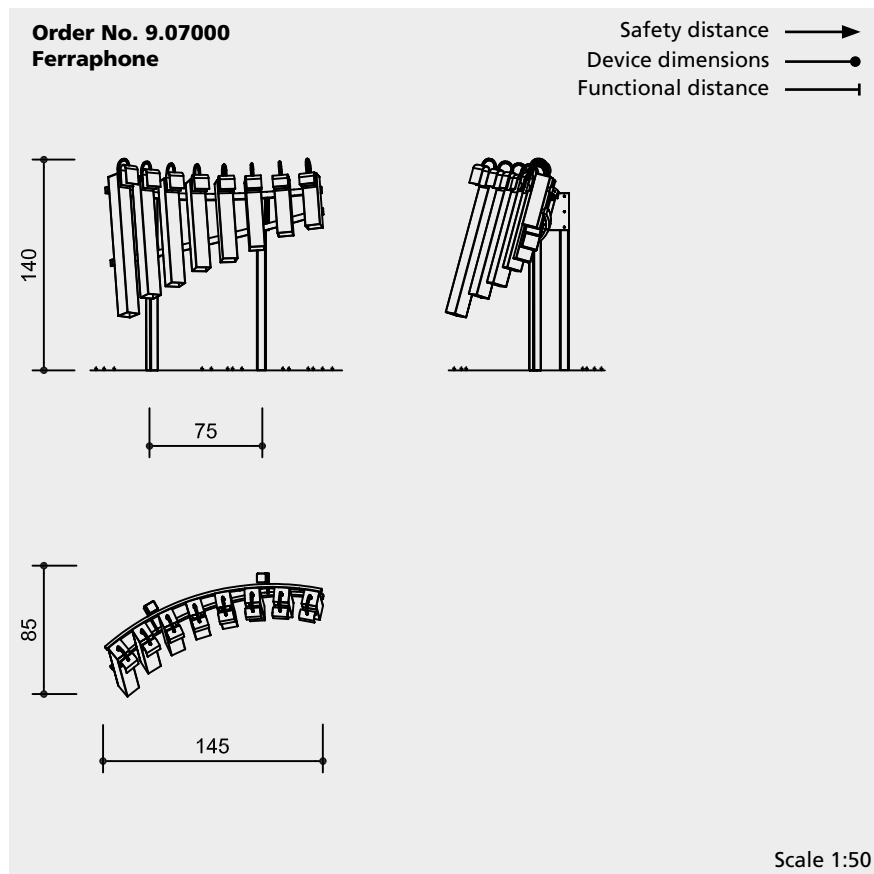


Photo © Valentin Luthiger

Acoustic effect	soft
Vandalism	not vulnerable



9.07000



Safety check according to DIN EN 1176

#### Components

- 1 Ferraphone for dowelling  
with 2 beaters,  
incl. 4 heavy duty anchors

#### Installation information

Surfacing requirements  
no requirements

Foundations  
1 item 120 x 50 x 30 cm  
Excavation depth 50 cm  
for fixation with bolts

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

#### Technical information

Equipment 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



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

Beater with rubber head, suspension  
made of stainless steel cable

#### Dimensions

(small deviations possible)

Height	1.40 m
Width	1.45 m
Depth	0.85 m
Weight	85 kg



**9.07000**





Order No. 9.08500 Kling Klang Disc with support post

### Play value

The Kling Klang Disc is a play offer for people of all age groups. By turning of the disc, the spheres start moving and touch the obstacles inside, thus producing an amiable „kling-klang“ sound. It is not only fun to discover the different nuances of sound, but also to observe the way of the rolling spheres. The Kling Klang Disc is available for wall attachment or with support post.

### Fundamental characteristics

- Unique and original
- Pleasant design
- Visual and aural experience
- Incentive for playing: turning disc, spheres, curiosity
- Experience: sounds, cause and effect

### Recommended for

- 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

### Barrier-free

- Independent play



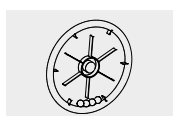
Order No. 9.08000 Kling Klang Disc for wall attachment, Photo © Daniel Perales

### Kling Klang Disc for wall attachment Kling Klang Disc with support post



Order No. 9.08500 Kling Klang Disc with support post,  
Photo © Daniel Perales

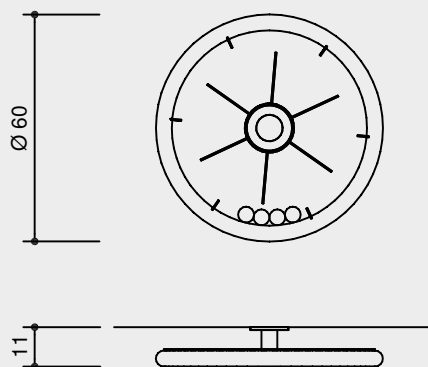
Acoustic effect	soft
Vandalism	not vulnerable



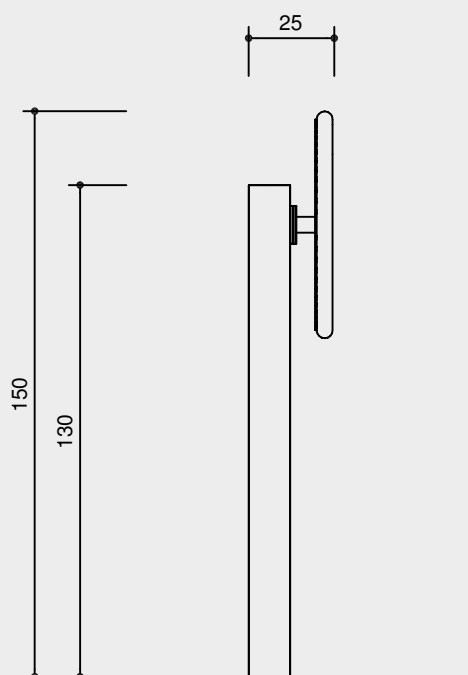
9.08000 / 9.08500

**Order No. 9.08000**  
**Kling Klang Disc for wall attachment**

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



**Order No. 9.08500**  
**Kling Klang Disc with support post**



Scale 1:20

Safety check according to DIN EN 1176

**Components**

**Order No. 9.08000**

1 Kling Klang Disc

**Order No. 9.08500**

1 Kling Klang Disc  
 1 Support post for dowelling,  
 incl. 4 heavy duty anchors

**Installation information**

Recommended space  
 diameter 1.50 m

Foundations

**Order No. 9.08500**

**Kling Klang Disc  
 with support post**

1 item 50 x 50 x 40 cm

Excavation depth 60 cm, for dowelling

**Attention:**

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

Technical changes reserved.

**Technical information**

Sound disc made of stainless steel,  
 glass bead blasted

**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.**

**Order No. 9.08500**

**Kling Klang Disc  
 with support post**

As above, but in addition with

**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.**

Transparent cover disc made of Makrolon

Spheres made of hard plastic

**Dimensions**

(small deviations possible)

**Order No. 9.08000**

**Kling Klang Disc for wall attachment**

Diameter 0.60 m

Depth 0.11 m

Weight 30 kg

**Order No. 9.08500**

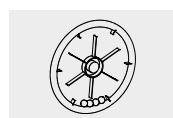
**Kling Klang Disc with support post**

Diameter 0.60 m

Depth 0.25 m

Height of support post 1.30 m

Weight 100 kg



9.08000 / 9.08500





Photo © Daniel Perales

**... and „everywhere“**







Order No. 10.11010 Impulse Spheres with Frame made of stainless steel



Order No. 10.11010 Impulse Spheres with Frame made of stainless steel

### Play value

Nine freely suspended spheres are hung in a row, touching each other. If the first one is pulled back and released to collide with the others, something truly amazing can be experienced. The impact force of the sphere travels unseen through the whole row of spheres until it finds its opposite number, the last sphere, which is forced outwards and, with almost equal energy, returns to collide with the row of spheres. The procedure is repeated until the force is dissipated. One or more spheres can be used to create endless variations and number games in a variety of rhythms. The laws of elasticity and energy can be experienced.

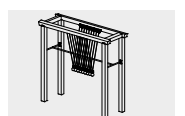
### Recommended for

- Kindergarten children
- School children
- Young people
- Adult
- Senioren



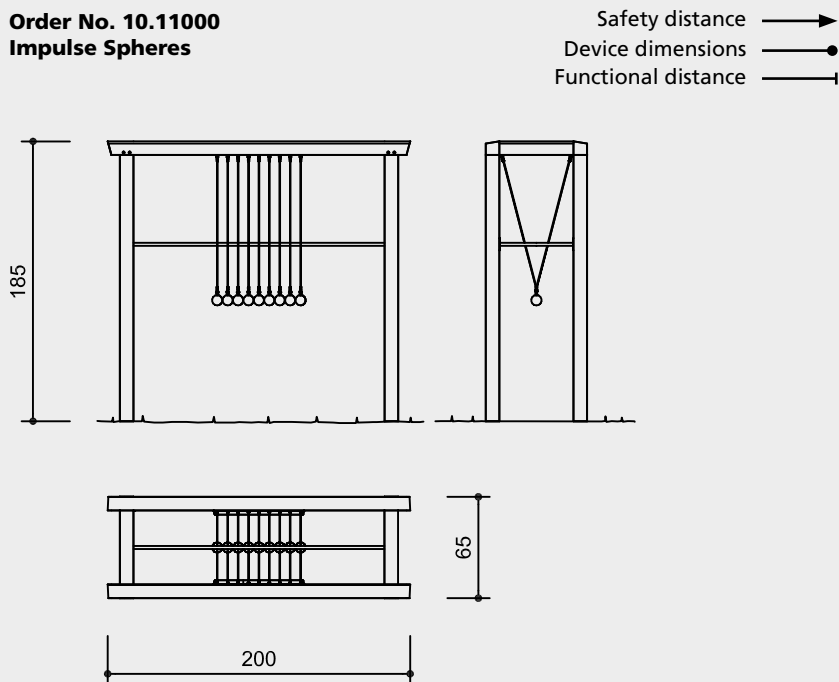
**Impulse Spheres**  
**graubner** Play Stations for  
Developing the Senses

Acoustic effect	medium
Vandalism	slightly vulnerable
Supervision	not necessary
Explanation Board	recommended
Installation	indoors and outdoors
Safety check (EN 1176)	has been completed
Installation in concrete	possible



10.11000

**Order No. 10.11000**  
**Impulse Spheres**



Scale 1:50

Safety check according to DIN EN 1176

**Components**

- 1 Complete piece of equipment  
Frame made of oak  
with 9 stainless steel spheres

**Trademark**

30 2005 500 000 Germany  
40-0682207 South Korea

Explanation board on request

**Installation information**

Recommended space  
4.05 x 3.00 m

Foundations  
2 items 40 x 100 x 40 cm  
Excavation depth 60 cm

**Attention:**

**Exact measurements may vary;  
for all installation dimensions refer  
to current assembly instructions.**  
Technical changes reserved.  
**Frame also available in stainless  
steel, see Order No. 10.11010 in  
pricelist.**

**Technical information**

Frame made of oak

**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.**

Only wood joints in accordance with  
traditional carpentry

Suspended on stainless steel cable

Fastening of suspension frame using  
adjustable attachments

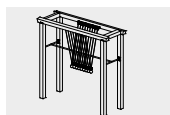
High-quality, specially hardened stainless  
spheres (Ø 70 mm), for optimum impulse

Angle and limiting bar made of stainless  
steel

**Dimensions**

(small deviations possible)

Height	1.85 m
Length	2.00 m
Width	0.65 m
Weight	110 kg



**10.11000**



### Play value

If you place your head in the stone's hollow and hum different notes, it is possible to find the note at which resonance occurs, and this causes a pleasant gently vibrating sensation throughout your body. You are transported into your own private world.

### Recommended for

- School children
- Young people
- Adults
- Older people
- Public play areas without supervision, such as playgrounds, parks or similar

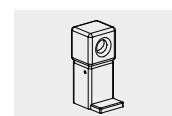
### Barrier-free

- Independent play

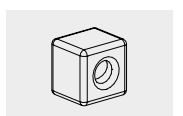


### Small Singing Stone graubner Play Stations for Developing the Senses

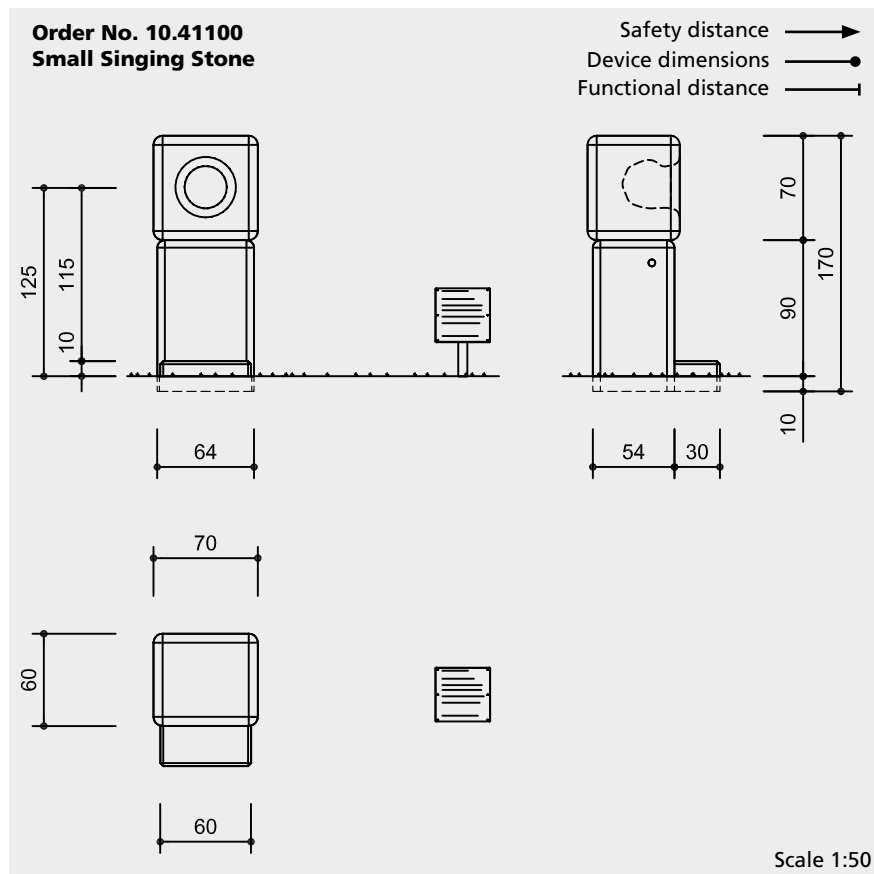
Acoustic effect	soft
Vandalism	not vulnerable
Supervision	not necessary
Explanation Board	included
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible



10.41100



10.41300



#### Technical information

Hewn cubic monolithic basalt lava singing stone and pedestal with textured surface and strongly rounded edges

Specially formed cavity (singing hollow) with undercut for optimum resonance effect, with water outlet

Board and support for Explanation Board made of stainless steel

#### Dimensions

(small deviations possible)

#### Order No. 10.41100 Small Singing Stone

Height	1.70 m
Height stone	0.70 m
Height step	0.10 m
Width stone	0.60 m
Weight	1440 kg

#### Order No. 10.41300 Small Singing Stone

Height stone	0.70 m
Width stone	0.60 m
Weight	570 kg

#### Components

##### Order No. 10.41100

- 1 Small Singing Stone with 2 anchor irons
- 1 Pedestal
- 1 Step
- 1 Explanation Board with support for dowelling, incl. 4 heavy duty anchors

##### Order No. 10.41300

- 1 Small Singing Stone with 2 anchor irons
- 1 Explanation Board with support for dowelling, incl. 4 heavy duty anchors

#### Trademark

30 2005 500 000 Germany  
40-0682207 South Korea

#### Installation information

Recommended space  
4.00 x 3.00 m

##### Foundations

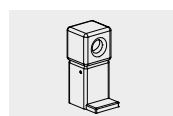
##### Order No. 10.41100

**Small Singing Stone**  
1 item 100 x 80 x 60 cm  
Excavation depth 70 cm  
Recess 5 x 5 x 20 cm  
Explanation Board  
1 item 40 x 40 x 40 cm  
Excavation depth 60 cm

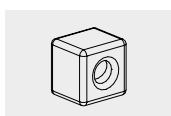
#### Attention:

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

Technical changes reserved.



10.41100



10.41300





### Play value

If you put your head into the hollow of this giant stone, which weighs tonnes, and hum different notes, you can retreat into a separate, complete world. You can discover „your“ note where resonance occurs and this causes a gentle sensation throughout your whole body. The organic and striking six to eight sided column shape is like a natural monument, something which is nowadays difficult to find.

### Recommended for

- School children
- Young people
- Adults
- Older people
- Supervised play areas such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

- Independent play



Photo © Daniel Perales



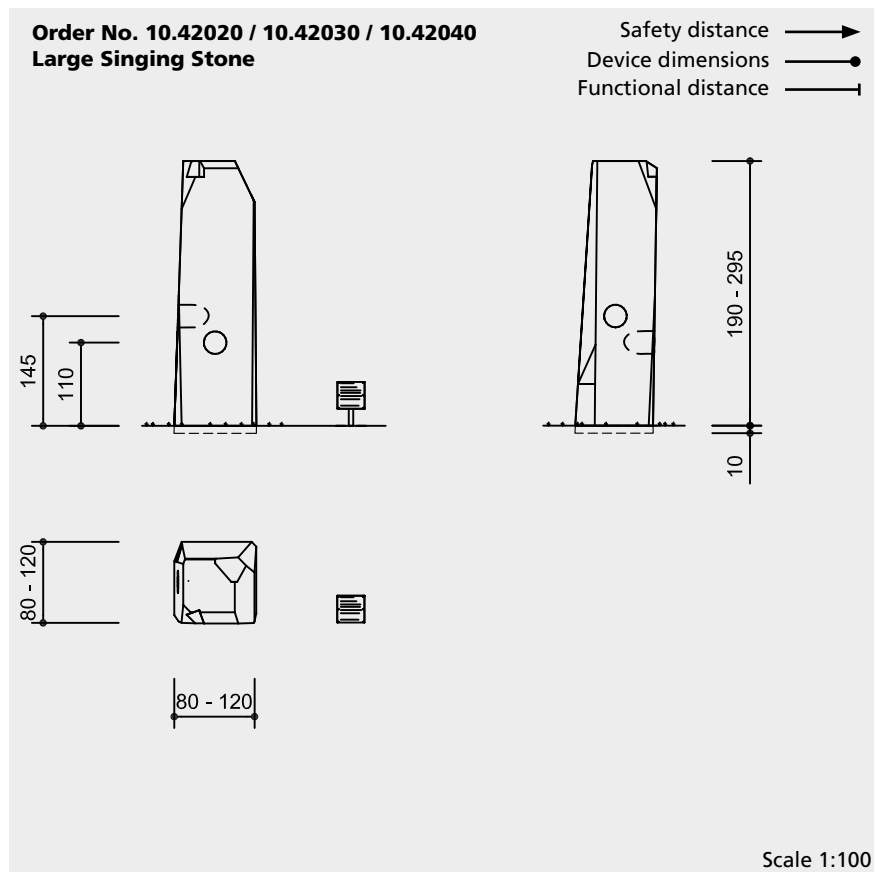
### Large Singing Stone graubner Play Stations for Developing the Senses

Acoustic effect	soft
Vandalism	not vulnerable
Supervision	not necessary
Explanation board	included
Installation	outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible



10.42020 / 10.42030 / 10.42040





### Technical information

Naturally formed basalt column. Each stone has its own individual shape. The side edges haven't been created by a stone mason but have existed in this shape for hundreds of years in stone formations. Traces of water and sediments can be seen clearly.

Specially formed cavities (singing hollows) with undercut for optimum resonance effect, with water outlet

Stable due to a precisely worked base

Board and support for Explanation Board made of stainless steel

### Dimensions

(small deviations possible)

Base side of length 0.80 - 1.20 m  
Height

### Order No.

**10.42020** 2.00 - 2.49 m

**10.42030** 2.50 - 2.90 m

**10.42040** 2.91 - 3.05 m

Singing hollows height 1.10 / 1.45 m

Weight depends on size 3 - 8 t

### Components

- 1 Large Singing Stone with 2 singing hollows and 1 anchor iron
- 1 Explanation Board with support for dowelling, incl. 4 heavy duty anchors

### Trademark

30 2005 500 000 Germany  
40-0682207 South Korea

### Installation information

Recommended space  
4.00 x 3.00 m

### Foundations

1 item 130 x 130 x 70 cm

Recess 5 x 5 x 50 cm

### Blinding layer

1 item 130 x 130 x 5 cm

Total excavation depth 80 cm

### Explanation Board

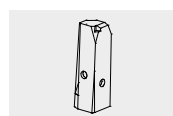
1 item 40 x 40 x 40 cm

Excavation depth 60 cm

### Attention:

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

Technical changes reserved.



**10.42020 / 10.42030 / 10.42040**

### Play value

It is a well-known fact that, together with the eyes, the ears perceive a great amount of sensory impressions. However, not many of us know how many interesting sounds can be produced by tapping a stone.

The ear helps us to „see“ the invisible characteristics of the stone such as hardness, mass and elasticity. Experience of sound is experience of contact. The vibration of the stone is not only conveyed by the eardrum but also via the human skin and - in the case of the Tuning Stone, intensively by the hands. The Tuning Stone is similar to a large tuning fork. The stone has two vertical cuts running down two-thirds of its length, and the split elements can be vibrated. This is achieved by lightly tapping the stone with the flat of the hand or by rubbing the stone firmly with water. This requires a number of attempts and some practice. The participant must achieve an empathy with the stone in order to find the correct frequency, and this enables a special connection to be made with the otherwise cold material.

### Recommended for

- School children
- Young people
- Adults
- Older people
- Supervised play areas such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

- Independent play



Photo © Valentin Luthiger

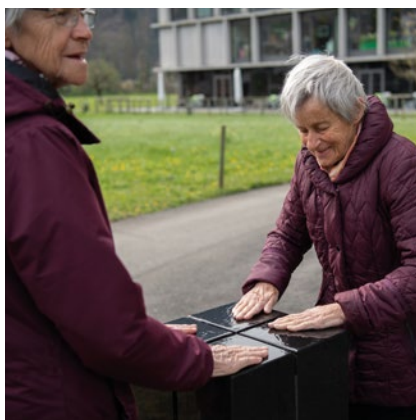


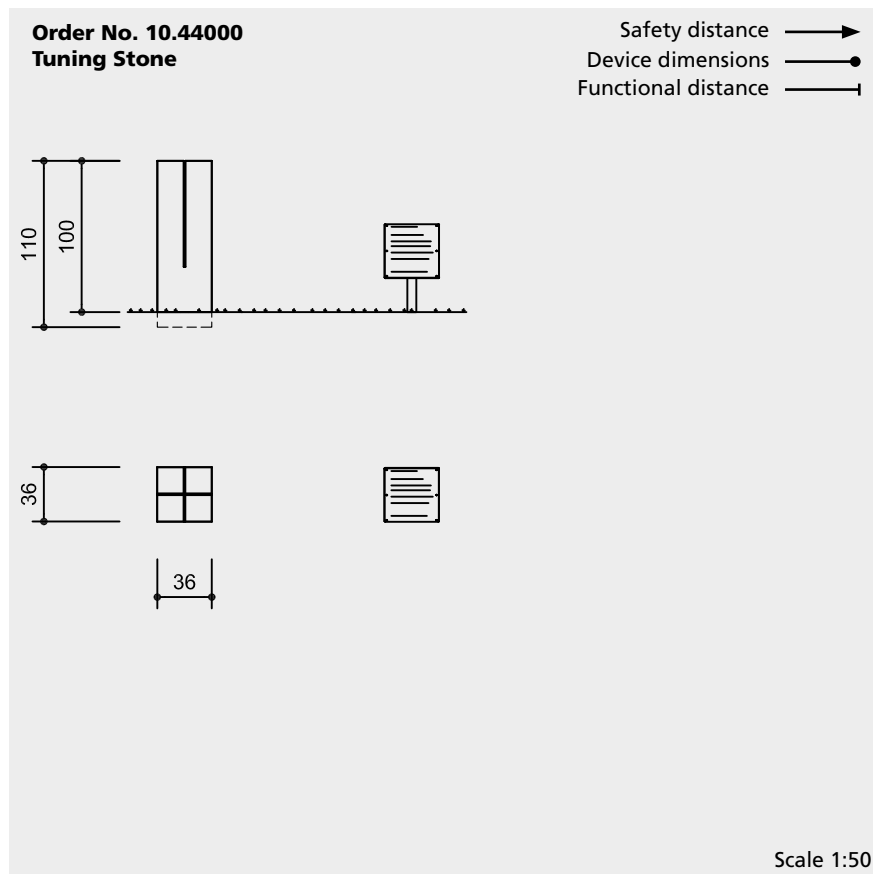
Photo © Valentin Luthiger

### Tuning Stone graubner Play Stations for Developing the Senses

Acoustic effect	soft
Vandalism	not vulnerable
Supervision	recommended
Explanation Board	included
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible



10.44000



### Technical information

Black granite block, polished outer surfaces

A long series of tests was necessary to find a highly dense stone that would produce such a sound phenomenon. The stone blocks are individually chosen, sawn, smoothed and polished.

Board and support for Explanation Board made of stainless steel

### Dimensions

(small deviations possible)

Total height	1.10 m
Width	0.36 m
Depth	0.36 m
Weight	440 kg
with packaging material	463 kg

### Components

- 1 Tuning Stone with 1 anchor iron
- 1 Explanation Board with support for dowelling, incl. 4 heavy duty anchors

#### Trademark

30 2005 500 000 Germany  
40-0682207 South Korea

### Installation information

Recommended space  
Circle diameter 3.00 m

Foundations  
1 item 80 x 80 x 60 cm  
Excavation depth 70 cm  
Recess 5 x 5 x 20 cm  
Explanation Board  
1 item 40 x 40 x 40 cm  
Excavation depth 60 cm

#### Attention:

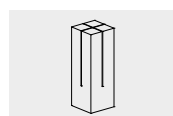
**Exact measurements may vary;  
for all installation dimensions refer  
to current assembly instructions.**

Technical changes reserved.

#### Tip

Place close to water so that the hands, or rather the stone, can be wetted.

We recommend our Water Dish with stand post (**Order No. 10.44001**).



**10.44000**





Photo © Daniel Perales

### Play value

With this stone you can create wonderful notes which resemble the heavenly sounds of a harp. The precisely measured, deep cuts enable the stone to produce a full range of tones. The shorter the cut, the higher the tone. Different notes up to an octave apart can be created.

### Recommended for

- School children
- Young people
- Adults
- 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

### Barrier-free

- Independent play



Photo © Daniel Perales



Photo © Daniel Perales

### Stone Harp graubner Play Stations for Developing the Senses

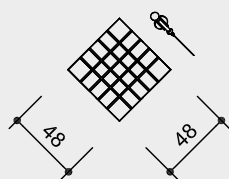
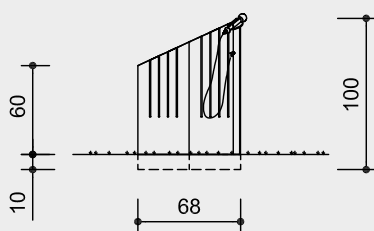
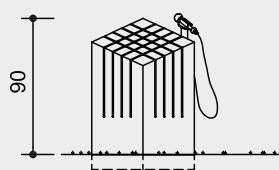
Acoustic effect	soft
Vandalism	slightly vulnerable
Supervision	not necessary
Explanation board	not necessary
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible



10.45000

**Order No. 10.45000**  
**Stone Harp**

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



Scale 1:50

**Technical information**

Highly-dense black granite  
with polished outer surfaces

The top surface is angled in order to  
create different sounds,  
cuts are regularly spaced

Stand post for beater made of stainless  
steel

Beater of black synthetic material,  
suspension made of stainless steel cable

**Dimensions**

(small deviations possible)

Total height	1.00 m
Width	0.48 m
Depth	0.48 m
Weight	600 kg

**Components**

- 1 Stone Harp with 1 anchor iron
- 1 Beater with stand post  
for dowelling and attachment,  
incl. heavy duty anchor

**Trademark**

30 2005 500 000 Germany  
40-0682207 South Korea

Explanation board on request

**Installation information**

Recommended space  
3.00 x 3.00 m

**Foundations**

**Stone Harp**

1 item 80 x 80 x 50 cm  
Excavation depth 60 cm  
Recess 5 x 5 x 20 cm

**Stand post for beater**

1 item 40 x 40 x 40 cm  
Excavation depth 50 cm

**Attention:**

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

Technical changes reserved.



**10.45000**



### Play value

Stones are not mute. Being able to generate a sound from the oversized stones of the giant xylophone is a moving experience. Tapping the solid, heavy granite, marble or volcanic stone with a rubber beater produces a wealth of sounds and harmonies which has an exciting effect on people. Stonemasons recognise stones and their internal characteristics by their sound. Density, hardness and homogeneity of stones are shown during tapping by differing pitch and tonal quality.



The Stone Xylophones are created from specially chosen blocks of black granite. This ensures a high-quality sound and break-resistance.

### Recommended for

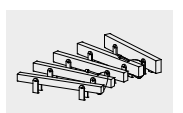
- School children
- Young people
- Adults
- Supervised play areas such as kindergartens, schools, after school programmes or similar
- Public play areas without supervision such as playgrounds, parks or similar

### Barrier-free

- Independent play

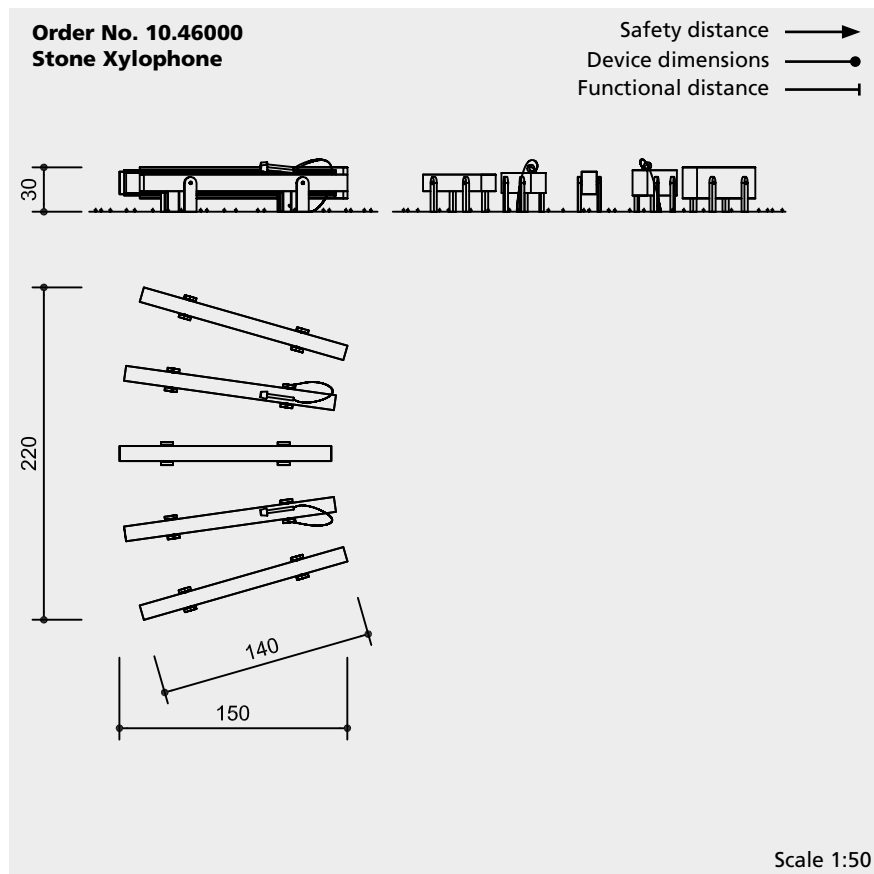
Acoustic effect	medium
Vandalism	not vulnerable
Supervision	not necessary
Explanation Board	recommended
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible

**Stone Xylophone**  
**graubner** Play Stations for  
 Developing the Senses



10.46000





## Technical information

The selected granite stones must be very sturdy and yet produce a good sound.

The stones are polished on all sides and tuned to each other.

Beater made of black synthetic material, suspension made of stainless steel cable

## 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.**

## Dimensions

(small deviations possible)

Height	0.30 m
Length	1.40 m
Width	2.20 m
Weight	490 kg

## Components

- 5 Stones with supporting constructions for dowelling and 2 beaters, incl. 12 heavy duty anchors

## Trademark

30 2005 500 000 Germany  
40-0682207 South Korea

Explanation board on request

## Installation information

Recommended space  
4.00 x 3.00 m

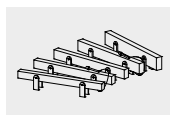
## Foundations

1 item 50 x 250 x 30 cm  
Excavation depth 40 cm  
1 item 40 x 200 x 30 cm  
Excavation depth 40 cm

## Attention:

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

Technical changes reserved.



**10.46000**

### Play value

Tone is not just a noise but a sound which the ear perceives as pure and of constant pitch. Each material has its own sound pattern. Metal bars create a particularly high-quality sound if bent into a triangle, and make especially pure vibrations audible. Familiar physical properties are transformed into amazingly simple aspects of life. An increase in the triangle size increases the quantity of upper vibrations clearly and noticeably. It is a learning experience for children and adults and this knowledge reinforces their experiences.

### Recommended for

- Kindergarten children
- School children
- Young people
- Adults
- Older people
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

- Independent play



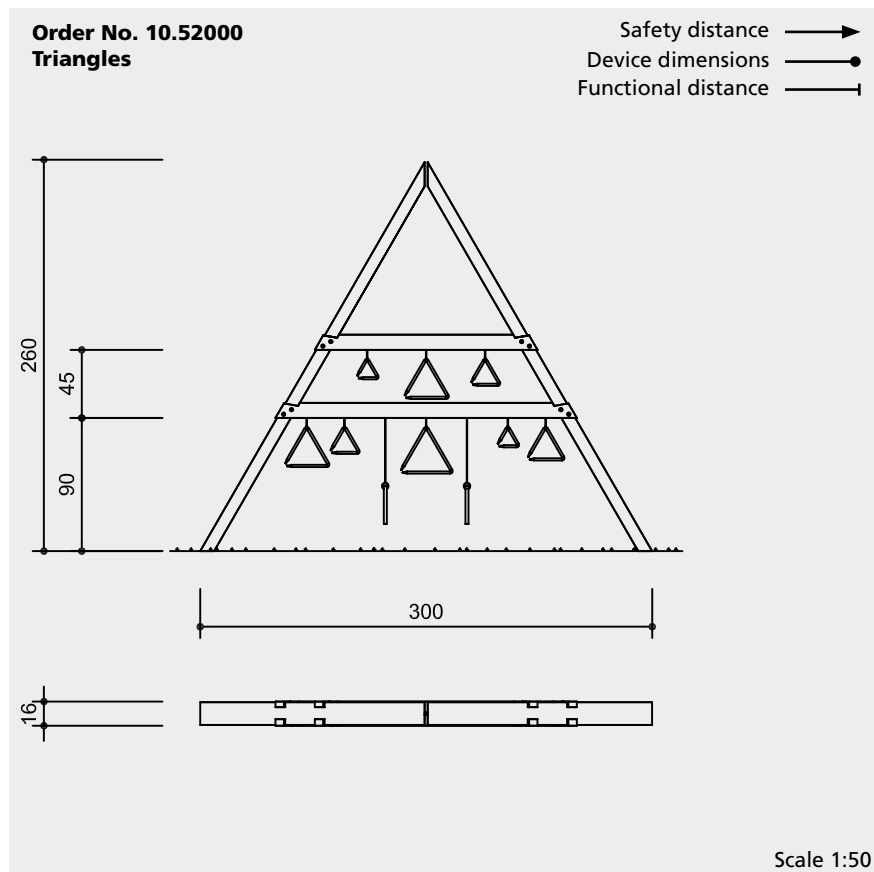
Special version made of stainless steel

Acoustic effect	medium
Vandalism	slightly vulnerable
Supervision	not necessary
Explanation Board	not necessary
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	not necessary

### Triangles graubner Play Stations for Developing the Senses



10.52000



## Technical information

Frame made of oak

### 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.**

Wooden joints in traditional carpentry quality

Special hardened stainless steel triangles

Beater and cables made of stainless steel

### Dimensions

(small deviations possible)

Height	2.60 m
Width	3.00 m
Depth	0.16 m
Weight	100 kg

## Components

- 1 Support frame with 8 triangles with 5 different tones and 2 beaters

### Trademark

30 2005 500 000 Germany  
40-0682207 South Korea

Explanation board on request

## Installation information

Recommended space  
5.00 x 2.50 m

Foundations  
2 items 60 x 40 x 40 cm  
Excavation depth 60 cm

### Attention:

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



**10.52000**



### Play value

The skin can also perceive sound. Sound waves, especially those from gongs, are not only perceived by the ear but also by the skin. Every material has its own typical sound. In order to create this sound, the material needs to be made into a typical form. The gong, along with the triangle and bells, is a special design for metal.



Photo © Igral Baikal

### Recommended for

- School children
- Young people
- Adults
- Older people
- Supervised play areas such as kindergartens, schools, after school programmes or similar
- Public play areas without supervision such as playgrounds, parks or similar

### Barrier-free

- Independent play

Acoustic effect	strong; not suitable for residential areas
Vandalism	slightly vulnerable
Supervision	not necessary
Explanation Board	not necessary
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible

**Gong**  
**graubner** Play Stations  
for Developing the Senses



10.52160

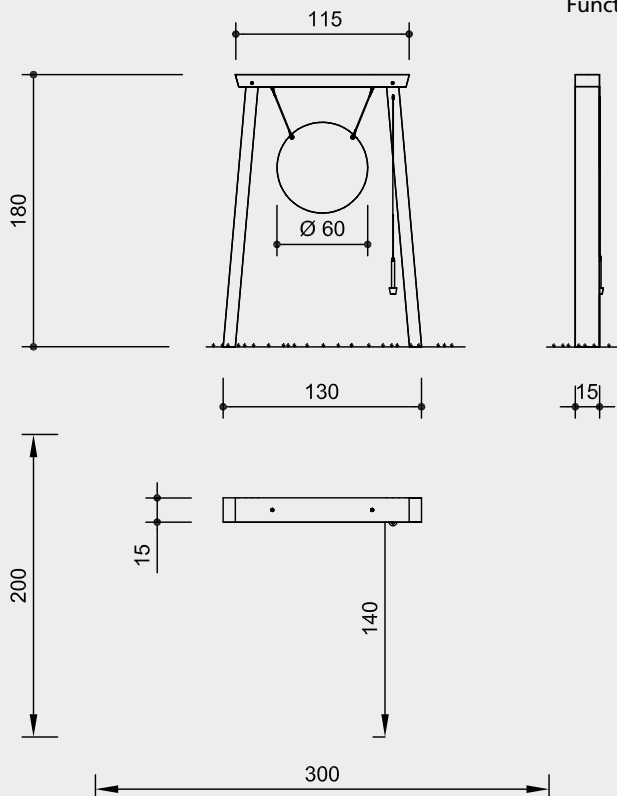


10.52180

### Order No. 10.52160

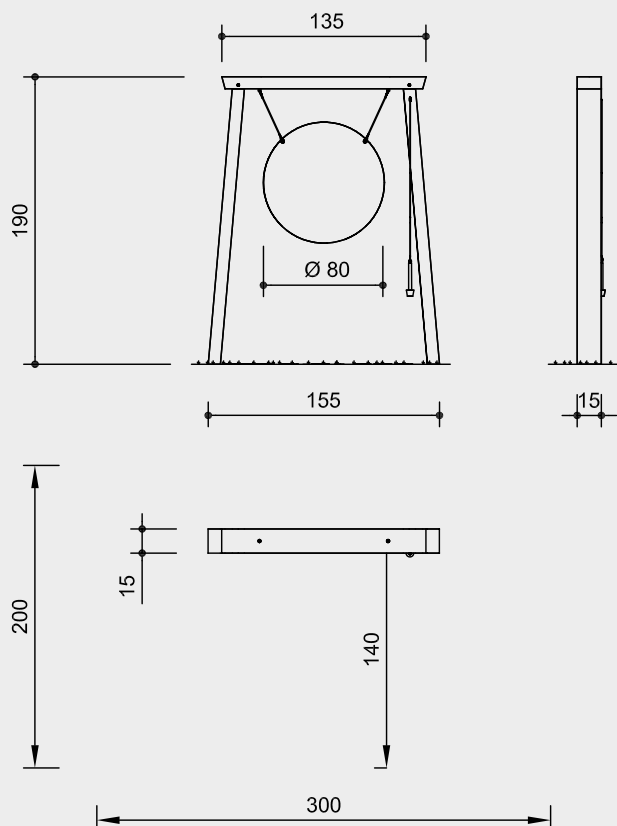
Gong (Diameter 0.60 m)

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



### Order No. 10.52180

Gong (Diameter 0.80 m)



Scale 1:50

### Technical information

Frames made of oak

#### 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.**

Gong made of V2A 4 mm thick with 2 holes for suspension.

Beater with rubber head, suspension made of stainless steel cable

### Dimensions

(small deviations possible)

#### Order No. 10.52160

Height	1.80 m
Width	1.15 / 1.35 m
Depth	0.16 m
Gong diameter	0.60 m
Weight	75 kg

#### Order No. 10.52180

Height	1.90 m
Width	1.35 / 1.55 m
Depth	0.16 m
Gong diameter	0.80 m
Weight	100 kg

### Installation information

Recommended space  
3.00 x 2.00 m

Foundations  
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.

### Components

1 Support frame with 1 gong  
and 1 beater

#### Trademark

30 2005 500 000 Germany  
40-0682207 South Korea

Explanation board on request



10.52160



10.52180





Photo © Daniel Perales

### Play value

The force and rhythm with which the Metal Gongs are struck gives rise to different sounds and resonances. Each metal disc produces a particular range of sound. Together they make melodic games and sound experiments possible. There are e.g. calming sounds which find resonance in particular areas of the body, head, neck, chest or stomach, depending on pitch. The type of percussion, with a percussion beater or by hand, produces sounds which generate melodic patterns and rhythms. Several people can play simultaneously and create music by listening to each other.

### Recommended for

- Kindergarten children
- School children
- Young people
- Adults
- Older people
- Supervised play areas, such as kindergartens, schools, after-school programmes or similar
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

- Independent play



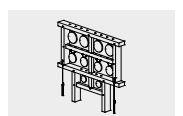
Photo © Daniel Perales



Photo © Daniel Perales

### Metal Gongs graubner Play Stations for Developing the Senses

Acoustic effect	soft
Vandalism	slightly vulnerable
Supervision	not necessary
Explanation Board	not necessary
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible

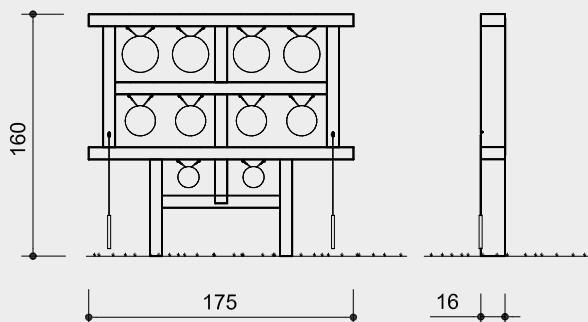


10.52200



**Order No. 10.52200**  
**Metal Gongs**

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



Scale 1:50

**Technical information**

Frame made of oak

**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.**

High-quality metal discs in brass, suspension made of stainless steel cable

Beater made of white synthetic material, suspension made of stainless steel cable

**Dimensions**

(small deviations possible)

Height	1.60 m
Width	1.75 m
Depth	0.16 m
Weight	120 kg

**Components**

- 1 Support frame with 10 metal discs and 2 beaters

**Trademark**

30 2005 500 000 Germany  
40-0682207 South Korea

Explanation board on request

**Installation information**

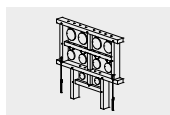
Recommended space  
3.00 x 2.00 m

**Foundations**

1 item 150 x 60 x 55 cm  
Excavation depth 75 cm

**Attention:**

**Exact measurements may vary;  
for all installation dimensions refer  
to current assembly instructions.**  
Technical changes reserved.  
**Equipment also available with steel  
feet.**



**10.52200**

### Play value

Just like a harp, you can pluck the strings and create harmonic, relatively deep and long-lasting multiphonic notes. The vibration of the strings and the ensuing sound can literally be seen with the eyes. The spectrum of notes extends over a complete octave. The tensioned stainless steel plate makes the tensile force created by the nine strings visual and has the effect of amplifying the sound.

### Recommended for

- School children
- Young people
- Adults
- Older people
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

- Independent play

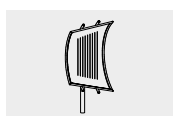
### Note

To achieve a good sound quality, this equipment must be tuned after installation and the pitch must be checked at regular intervals.



### Sound Chord graubner Play Stations for Developing the Senses

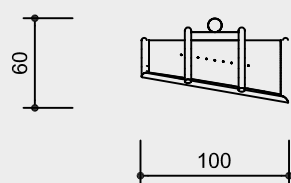
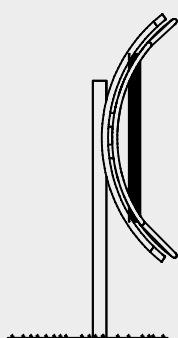
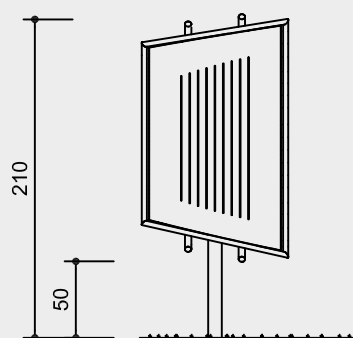
Acoustic effect	soft
Vandalism	vulnerable in non-supervised areas
Supervision	not necessary
Explanation Board	not necessary
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible



10.52300

**Order No. 10.52300**  
**Sound Chord**

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



Scale 1:50

**Technical information**

Equipment and strings made of stainless steel

**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.**

**Dimensions**

(small deviations possible)

Height	2.10 m
Width	1.00 m
Depth	0.60 m
Weight	120 kg

**Components**

- 1 Complete piece of equipment with 9 strings, for dowelling, incl. 4 heavy duty anchors

**Trademark**

30 2005 500 000 Germany  
40-0682207 South Korea

Explanation board on request

**Installation information**

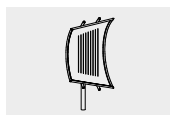
Recommended space  
2.50 x 2.00 m

Foundations  
1 item 60 x 60 x 50 cm  
Excavation depth 70 cm

**Attention:**

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

Technical changes reserved.



**10.52300**





### Play value

If the respective shape and alloy is used for metal pipes to create the perfect sound then they are called Tubular Chimes. They have been specially tuned for optimal sound with 1 major and 1 minor note around a common central note. Tubular Chimes are, like other orchestral instruments, tuned precisely. No other instrument can produce such a fine and lasting sound.

### Recommended for

- Kindergarten children
- School children
- Young people
- Adults
- Older people
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

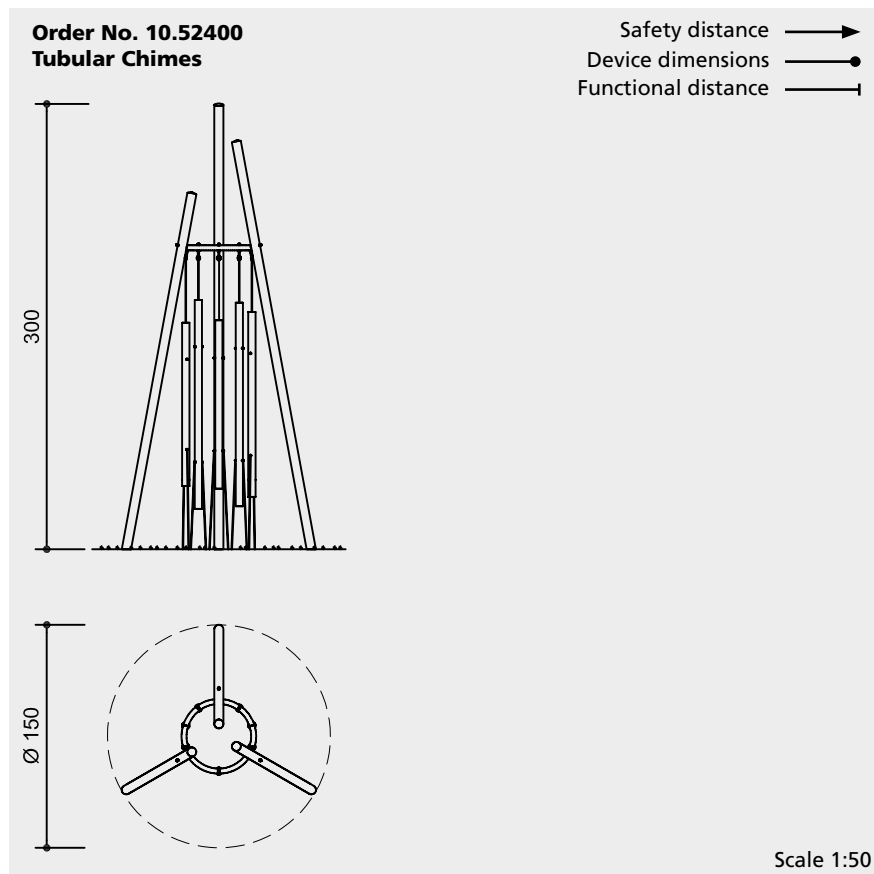
- Independent play

### Tubular Chimes graubner Play Stations for Developing the Senses

Acoustic effect	medium to strong
Vandalism	slightly vulnerable
Supervision	not necessary
Explanation Board	not necessary
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible



10.52400



## Technical information

Supporting tubes, ring, foot plates and base plate made of stainless steel

### 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.**

Tuned brass sound tubes

Tensioning cable made of stainless steel

Beater made of plastic, suspension made of stainless steel cable

### Dimensions

(small deviations possible)

Height	3.00 m
Diameter	1.50 m
Sound tubes diameter	48 x 4 mm
Weight	90 kg

## Components

- 3 Supporting tubes on foot plates for dowelling
- 1 Ring with 5 sound tubes and tensioning cables on base plate, each to be screwed in, incl. 14 heavy duty anchors
- 2 Beaters

### Trademark

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40-0682207 South Korea

Explanation board on request

## Installation information

Recommended space  
Circle diameter 3.00 m

Foundations  
1 item triangular,  
Length of the edge 175 cm,  
20 cm high,  
Excavation depth 30 cm

### Attention:

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

Technical changes reserved.



**10.52400**

### Play value

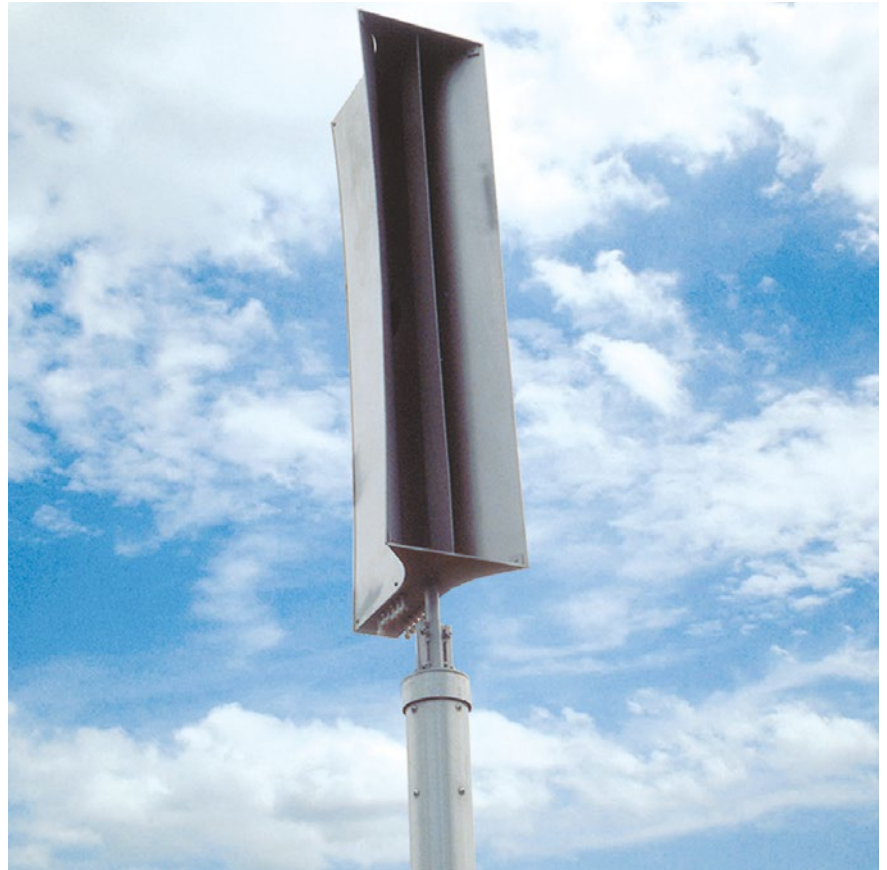
Eddy currents which can be observed in water can also be found in a similar form in the air. These invisible phenomena are transformed into a soft heavenly sound by the Wind Harp which is also called the Aeolian Harp. Air is not only the carrier for the sound, but the air vortexes themselves produce sounds. The Aeolian Harp is a stringed instrument resembling a trapezoidal zither which is referred to in many ancient songs and tales. The instrument is turned into the direction of the wind so that it produces sounds. It is a particularly interesting aspect that when the wind is stronger more overtones are produced.

### Recommended for

- School children
- Young people
- Adults
- Older people
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

- Independent play



*Special version*

Acoustic effect	strong in wind; not suitable for residential areas
Vandalism	not vulnerable
Supervision	not necessary
Explanation Board	included
Installation	outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible

**Wind Harp**  
**graubner** Play Stations  
for Developing the Senses

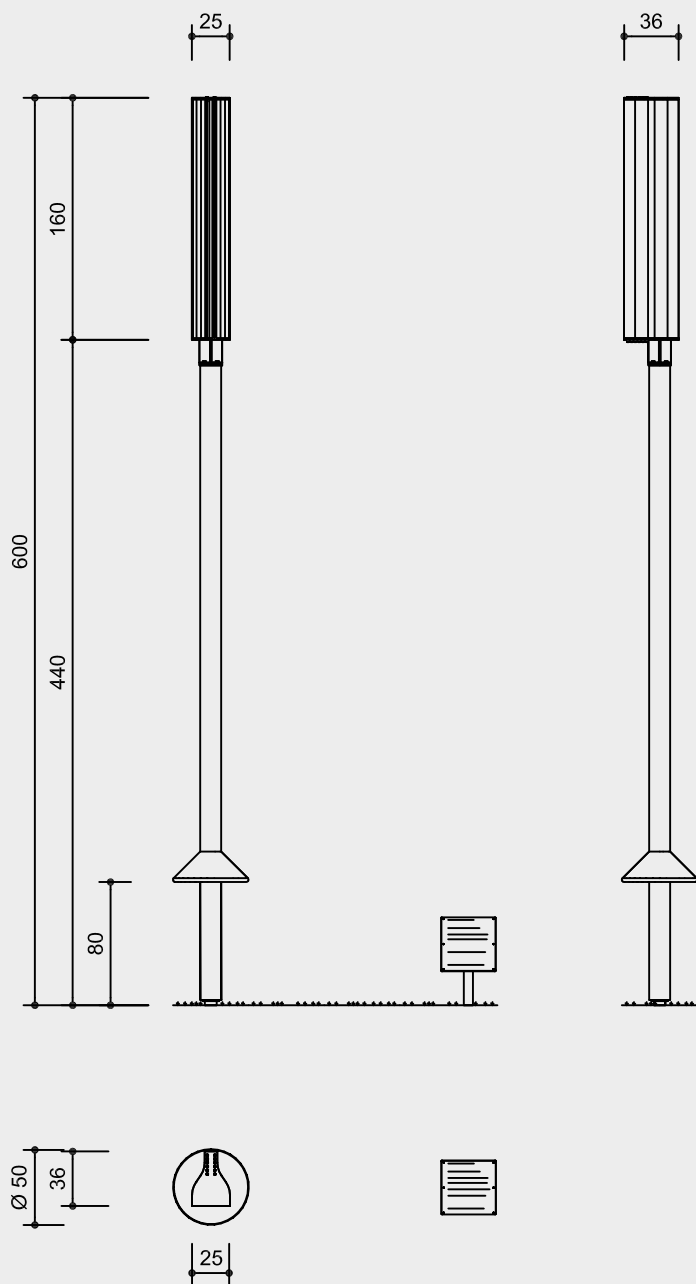


10.52500



**Order No. 10.52500**  
**Wind Harp**

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



Scale 1:50

**Technical information**

Rotating, stainless steel mast, with ball bearings for turning the wind harp into the wind direction

Resonance body made of stainless steel supported on bearings with air baffles to improve the air flow and with a resonance effect for the vibrations produced

**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.**

Resonance body with 12 strings

Support for Explanation Board made of stainless steel

**Dimensions**

(small deviations possible)

Total height	6.00 m
Resonance body	1.60 x 0.25 x 0.36 m
Weight	200 kg

**Components**

- 1 Complete piece of equipment with steel mast and foundation anchor
- 1 Explanation Board with support for dowelling, incl. 4 heavy duty anchors

**Trademark**

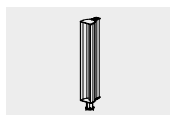
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40-0682207 South Korea

**Installation information**

Recommended space  
Circle diameter 3.00 m

Foundations  
1 item 130 x 130 x 70 cm, reinforced  
Blinding layer 5 cm  
Excavation depth 115 cm  
Explanation Board  
1 item 40 x 40 x 40 cm  
Excavation depth 60 cm

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



**10.52500**

### Play value

The Dendrophone is made up of harmoniously tuned sound boards which have been arranged like an oversized xylophone. If the lengths of the sound elements are changed different tones are produced and these are tuned and amplified with resonators. Hitting it, either with a percussion beater or by hand, produces warm sounds and these can be made into melodies and rhythms. Several people can play on the equipment at the same time and create music together.

### Recommended for

- Kindergarten children
- School children
- Young people
- Adults
- Public play areas without supervision such as playgrounds, parks or similar

### Barrier-free

- Independent play



Photo © Daniel Perales



Order No. 10.53002 Dendrophone - double field, Photo © Daniel Perales



Photo © Daniel Perales

**Dendrophone - single field**  
**Dendrophone - double field**  
*graubner* Play Stations  
 for Developing the Senses

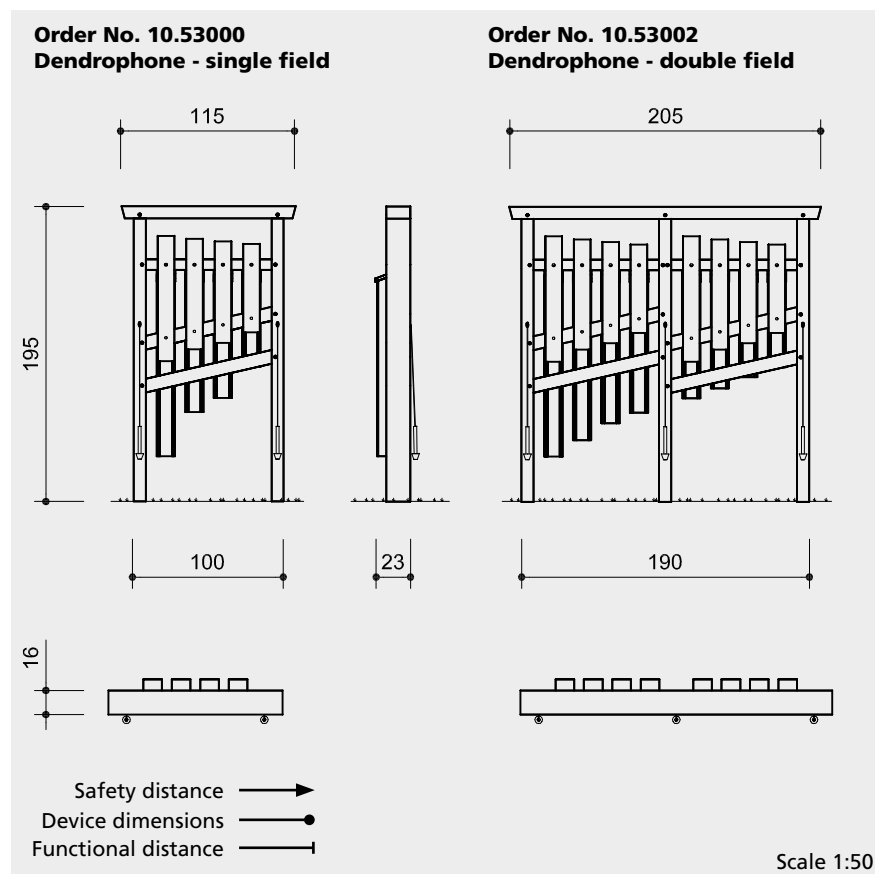
Acoustic effect	soft
Vandalism	slightly vulnerable
Supervision	not necessary
Explanation Board	not necessary
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible



10.53000



10.53002



## Technical information

Frame made of oak

### 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.**

Carefully chosen tuned sound boards made of cherry wood

The vertical resonators are designed to create optimal sound with each sound board

Only wood joints in accordance with traditional carpentry

Beater with rubber head, suspension made of stainless steel cable

### Dimensions

(small deviations possible)

#### Order No. 10.53000

##### Dendrophone - single field

Height	1.95 m
Width	1.15 / 1.00 m
Depth	0.23 m
Weight	75 kg

#### Order No. 10.53002

##### Dendrophone - double field

Height	1.95 m
Width	2.05 / 1.90 m
Depth	0.23 m
Weight	140 kg

## Components

### Order No. 10.53000

- 1 Single field with 4 sound boards and 2 beaters

### Order No. 10.53002

- 1 Double field with 8 sound boards and 3 beaters

### Trademark

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Explanation board on request

## Installation information

Recommended space

### Dendrophone - single field

2.50 x 2.10 m

### Dendrophone - double field

2.50 x 3.00 m

Foundations

### Order No. 10.53000

#### Dendrophone - single field

2 items 40 x 40 x 40 cm

Excavation depth 60 cm

### Order No. 10.53002

#### Dendrophone - double field

3 items 40 x 40 x 40 cm

Excavation depth 60 cm

### Attention:

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

Technical changes reserved.

**Equipment also available with steel feet.**



10.53000



10.53002





Order No. 10.53102 Tubular Dendrophone - double field



Order No. 10.53100 Tubular Dendrophone - single field

### Play value

The Tubular Dendrophone creates music to listen to and feel, with harmoniously tuned wooden pipes which are both sound and resonance elements. If you place your hand on a ringing sound pipe it sends the vibration of the wood through your body. The sound of the wood combines with the resonance of the enclosed air in the pipes.

### Recommended for

- Kindergarten children
- School children
- Young people
- Adults
- Older people
- Supervised play areas such as kindergartens, schools, after school programmes or similar
- Public play areas without supervision such as playgrounds, parks or similar

### Barrier-free

- Independent play



Special version

### Tubular Dendrophone - single field Tubular Dendrophone - double field

*graubner* Play Stations  
for Developing the Senses

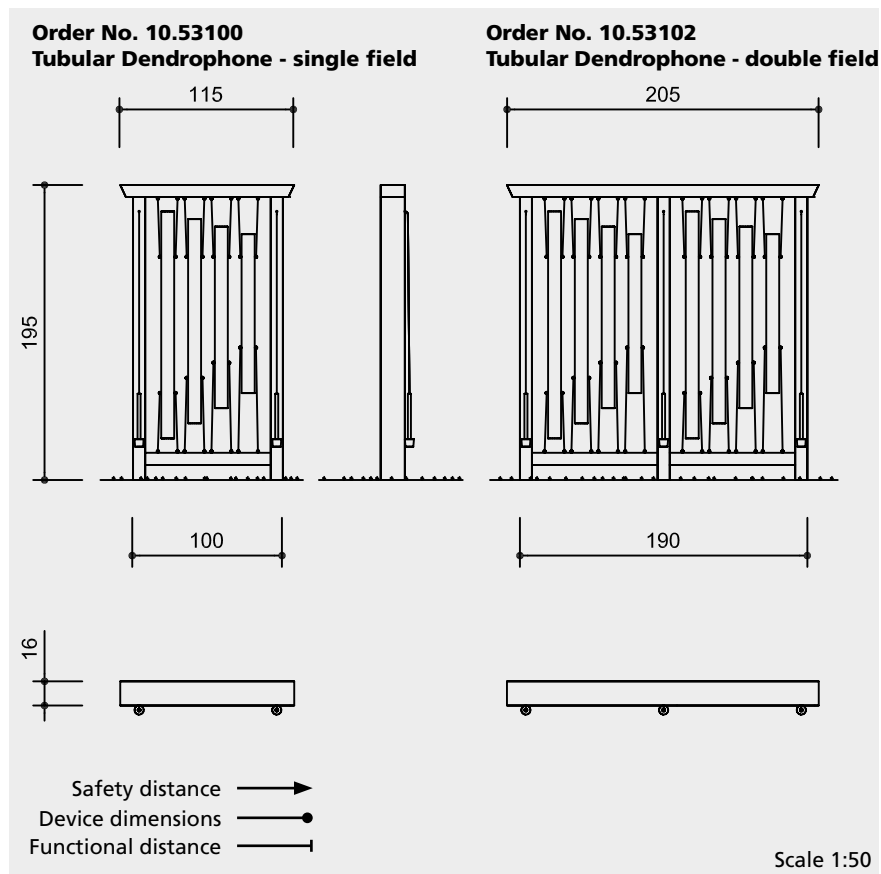
Acoustic effect	soft
Vandalism	slightly vulnerable
Supervision	not necessary
Explanation Board	not necessary
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible



10.53100



10.53102



## Technical information

Frame made of oak

### 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.**

Binary sound tubes of milled and turned cherry wood bonded together

Special suspension with low vibration absorption made of stainless steel and brass

Beater with rubber head, suspension on a stainless steel cable

### Dimensions

(small deviations possible)

#### Order No. 10.53100

##### Tubular Dendrophone - single field

Height	1.95 m
Width	1.15 / 1.00 m
Depth	0.16 m
Weight	85 kg

#### Order No. 10.53102

##### Tubular Dendrophone - double field

Height	1.95 m
Width	2.05 / 1.90 m
Depth	0.16 m
Weight	160 kg

## Components

### Order No. 10.53100

- 1 Single field with 4 sound tubes and 2 beaters

### Order No. 10.53102

- 1 Double field with 8 sound tubes and 3 beaters

### Trademark

30 2005 500 000 Germany  
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Explanation board on request

## Installation information

Recommended space

### Tubular Dendrophone - single field

2.50 x 2.10 m

### Tubular Dendrophone - double field

3.00 x 2.50 m

Foundations

### Order No. 10.53100

#### Tubular Dendrophone - single field

2 items 40 x 40 x 40 cm

Excavation depth 60 cm

### Order No. 10.53102

#### Tubular Dendrophone - double field

3 items 40 x 40 x 40 cm

Excavation depth 60 cm

### Attention:

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

Technical changes reserved.

**Equipment also available with steel feet.**



10.53100



10.53102





### Play value

The Sound Arch which consists of 5 wooden sound tubes can be played from both sides at the same time. This has the effect of particularly encouraging the participants to play together and listen to each other.

### Recommended for

- Kindergarten children
- School children
- Young people
- Adults
- Older people
- Supervised play areas such as kindergartens, schools, after school programmes or similar
- Public play areas without supervision such as playgrounds, parks or similar

### Barrier-free

- Independent play

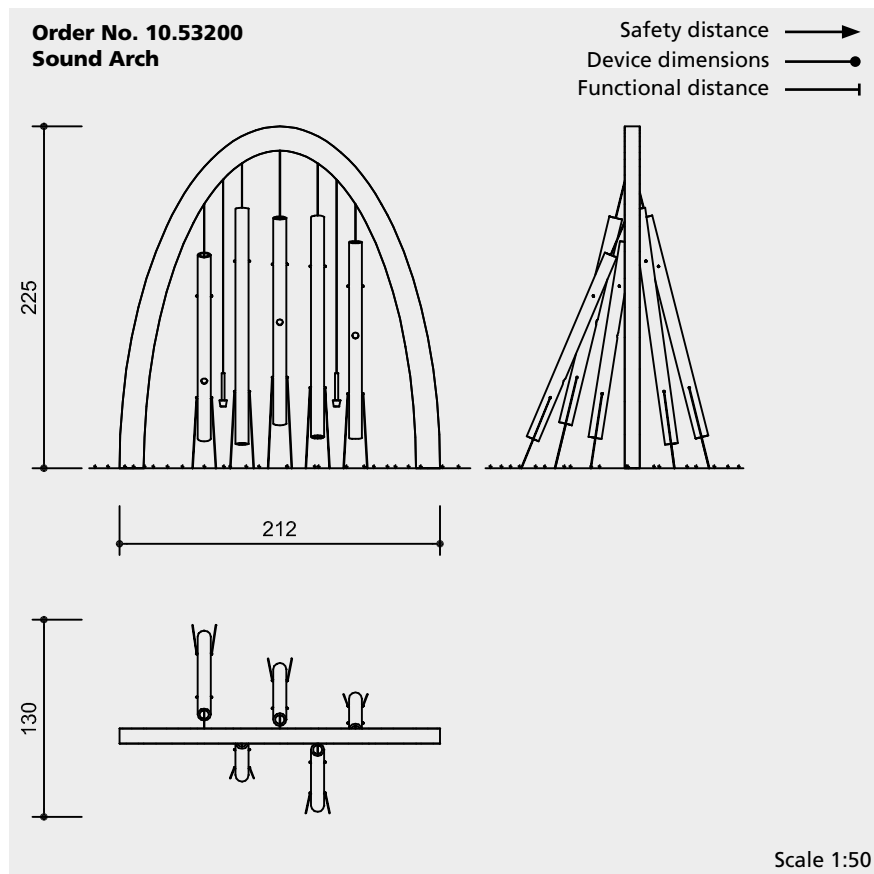
### Sound Arch graubner Play Stations for Developing the Senses

Acoustic effect	soft
Vandalism	slightly vulnerable
Supervision	not necessary
Explanation Board	not necessary
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible



10.53200





## Technical information

### 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.

Binary sound tubes of milled and turned cherry wood bonded together

Special suspension with low vibration absorption made of stainless steel and brass

Beater with rubber head, suspension made of stainless steel cable

### Dimensions

(small deviations possible)

Height	2.25 m
Width	2.12 m
Depth	1.30 m
Weight	110 kg

## Components

- 1 Wooden bow with steel feet for dowelling
- 5 Sound tubes with tensioning cables and base plates for dowelling each, incl. 18 heavy duty anchors
- 2 Beaters

### Trademark

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40-0682207 South Korea

Explanation board on request

## Installation information

Recommended space  
4.50 x 3.00 m

Foundations  
 2 items 50 x 50 x 50 cm  
 Excavation depth 70 cm  
 1 item 175 x 30 x 30 cm  
 Excavation depth 45 cm  
 1 item 100 x 30 x 30 cm  
 Excavation depth 50 cm

### Attention:

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

Technical changes reserved.



**10.53200**

### Play value

These stylised tree shapes with their different sound leaves, sound branches and drums are particularly suited to parks and atmospheric gardens. Exciting music can be experienced when played together. The sounds range from the melancholic sound of the Steeldrum to the cheerful one of the Sound Leaf. These robust objects can be played by hand or with the attached hammers.

### Sound Leaf

The individual sound plates have a tone like the clang of a cymbal. The stylised leaves are attached to the tree in a way that they can move freely. They produce a very cheerful and lively sound.

### Sound Tree

The sound bars are like powerful chimes and represent branches. They are also used to make xylophones.

### Steeldrum

The melodic, sometimes also melancholic sound of the Steeldrum fascinates people. It symbolises the wooden drums that are made from hollowed tree trunks in many different cultures. The Steeldrum was first made from old oil barrels after the Second World War by people from the Caribbean. Skilful hammering creates individual areas in the base each having their own different tone.

### Recommended for

- School children
- Young people
- Adults
- Older people
- Public play areas without supervision, such as playgrounds, parks or similar



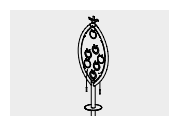
Order No. 10.54100 Sound Tree



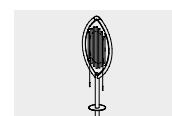
Order No. 10.54100 Sound Tree

**Sound Leaf**  
**Sound Tree**  
**Steeldrum**  
**graubner** Play Stations  
for Developing the Senses

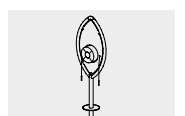
Acoustic effect	medium
Vandalism	not vulnerable
Supervision	not necessary
Explanation Board	not necessary
Installation	outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	not possible



10.54000



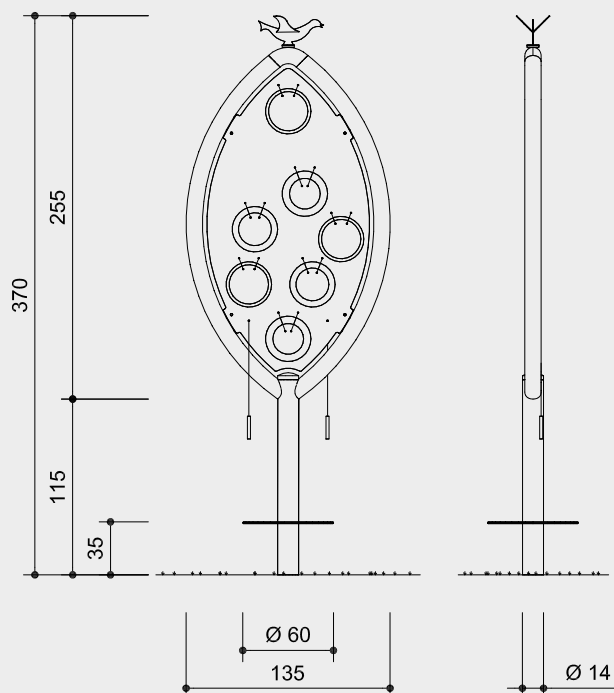
10.54100



10.54200

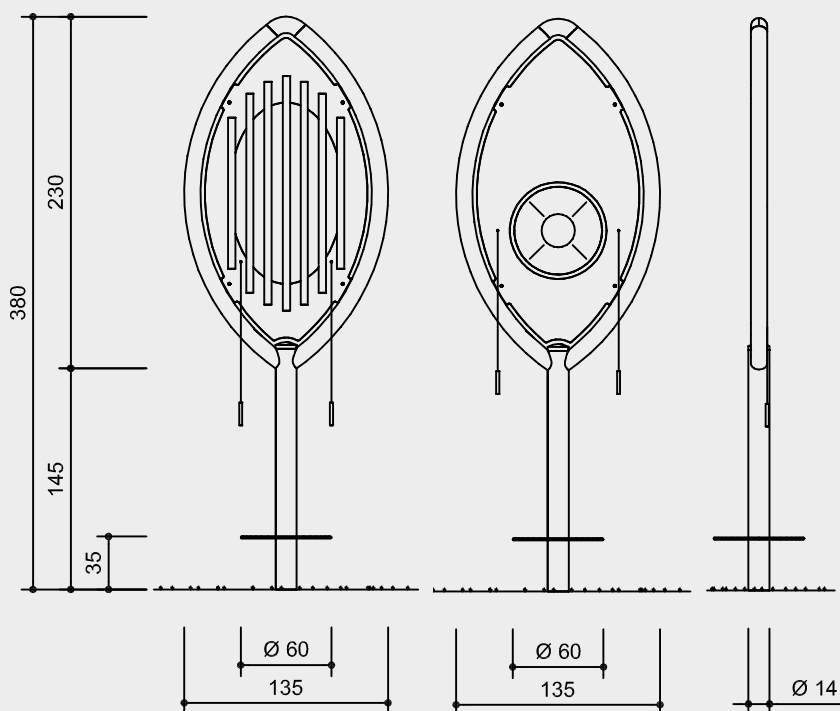
**Order No. 10.54000**  
**Sound Leaf**

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



**Order No. 10.54100**  
**Sound Tree**

**Order No. 10.54200**  
**Steeldrum**



Scale 1:50

**Technical information**

Equipment made of stainless steel;  
in stylized tree 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. 10.54000**

**Sound Leaf**

Sound plates made of brass  
Beater made of PE

**Order No. 10.54100**

**Sound Tree**

Tubes made of brass  
Beater made of PE

**Order No. 10.54200**

**Steeldrum**

Meditation pan made of stainless steel  
Powder-coated  
Beater made of rubber

**Dimensions**

(small deviations possible)

**Order No. 10.54000**

**Sound Leaf**

Height	3.70 m
Headroom	0.35 m
Width	1.35 m
Weight	180 kg

**Order No. 10.54100**

**Sound Tree**

**Order No. 10.54200**

**Steeldrum**

Height	3.80 m
Headroom	0.35 m
Width	1.35 m
Weight	180 kg

**Components**

- 1 Complete piece of equipment  
with Foundation frame

**Trademark**

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Explanation board on request

**Installation information**

Recommended space  
Circle diameter 3.00 m

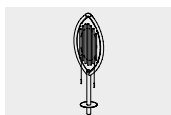
Foundation  
1 item 130 x 130 x 70 cm  
reinforced  
Blinding layer  
130 x 130 x 5 cm  
Total excavation depth 115 cm

**Attention:**

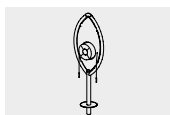
**Exact measurements may vary;  
for all installation dimensions refer  
to current assembly instructions.**  
Technical changes reserved.



10.54000



10.54100



10.54200





Order No. 10.57200 Listening to Water as Pillar

### Play value

We recommend installing a play station at the start of educational water trails, fields of experience, and also in entrances to playgrounds, where they serve the purpose of preparing the arriving participant for the following sensory and perceptive experiences. The play station „Listening to Water“ is suitable for this purpose. With this installation visitors are introduced to the natural sounds coming from a watercourse: dripping, murmuring, gurgling.

### Recommended for

- School children
- Young people
- Adults
- Older people
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

- Independent play



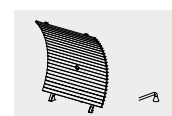
Order No. 10.57100 Listening to Water



Order No. 10.57100 Listening to Water

### Listening to Water Listening to Water as Pillar graubner Play Stations for Developing the Senses

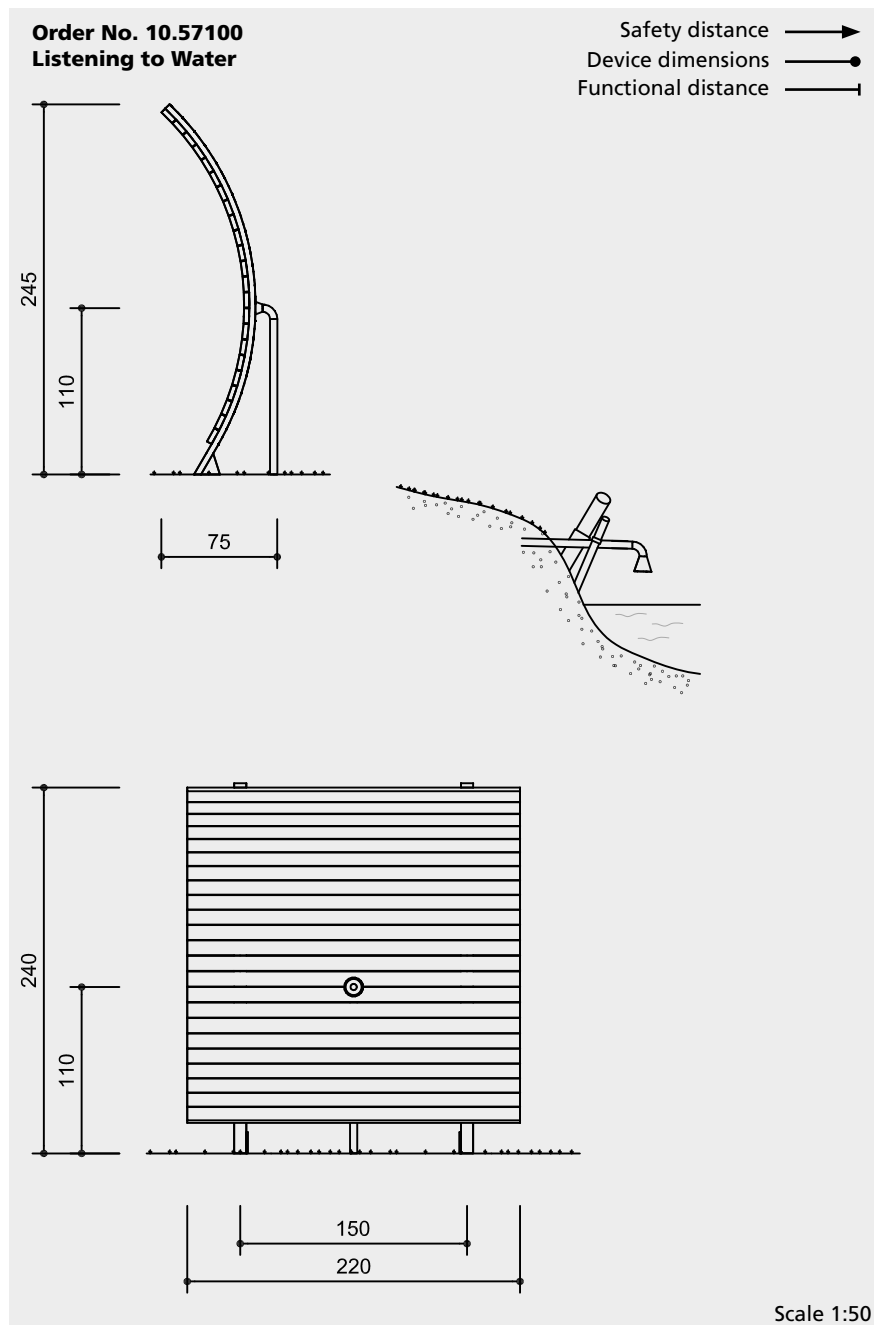
Acoustic effect	soft
Vandalism	not vulnerable
Supervision	not necessary
Explanation Board	recommended
Installation	outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	not possible



10.57100



10.57200



## Technical information

Planking 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.

All pipe and cone elements as well as pillar made of stainless steel

Hot-dip galvanised frame

### Dimensions

(small deviations possible)

#### Order No. 10.57100 / 10.57200

Height	2.45 m
Listening height	1.10 m
Width	2.20 m
Depth	0.75 m
Weight	260 / 80 kg

## Installation information

Recommended space  
Depending on the installation situation

Foundations

#### Order No. 10.57100

##### Listening to Water

1 item 200 x 100 x 30 cm

Excavation depth 50 cm

#### Order No. 10.57200

##### Listening to Water as Pillar

1 item 60 x 60 x 70 cm

Excavation depth 90 cm

### Attention:

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

Technical changes reserved.

## Components

#### Order No. 10.57100

- 1 Reflecting wall with listening cone
- 1 Sound receiving cone for dowelling incl. fastening material and 8 heavy duty anchors

#### Order No. 10.57200

- 1 Listening pillar
- 1 Sound receiving cone for dowelling incl. fastening material and 4 heavy duty anchors

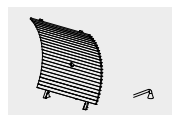
### Trademark

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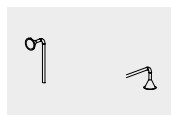
### On-site work

Supply and installation of the required pipe work according to our specifications

Explanation board on request



10.57100



10.57200





### Play value

Every culture has its melodies which stay alive by frequent repetition. The melodic fence gives you this opportunity to play these melodies as a chorus or as a canon or even backwards if you want to. The fence has been tuned with little familiar melodies such as „Frère Jacques“. Other melodies within an octave tone range are possible. The melodic fence consists of handrail, frame and sound tubes. Running a hammer or a stick over the metal rods of the melodic fence creates the tune of a song. In non-public areas the suspension can be done with cables instead of a screw. The length of the fence can be varied depending on the melody or the required space.

### Recommended for

- Kindergarten children
- School children
- Young people
- Adults
- Older people
- Public play areas without supervision, such as playgrounds, parks or similar

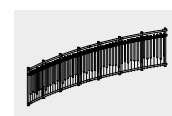
### Barrier-free

- Independent play



**Melodic Fence „Hänschen Klein“**  
**Melodic Fence „Frère Jacques“**  
*graubner* Play Stations  
 for Developing the Senses

Acoustic effect	soft
Vandalism	not vulnerable
Supervision	not necessary
Explanation Board	included
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	possible

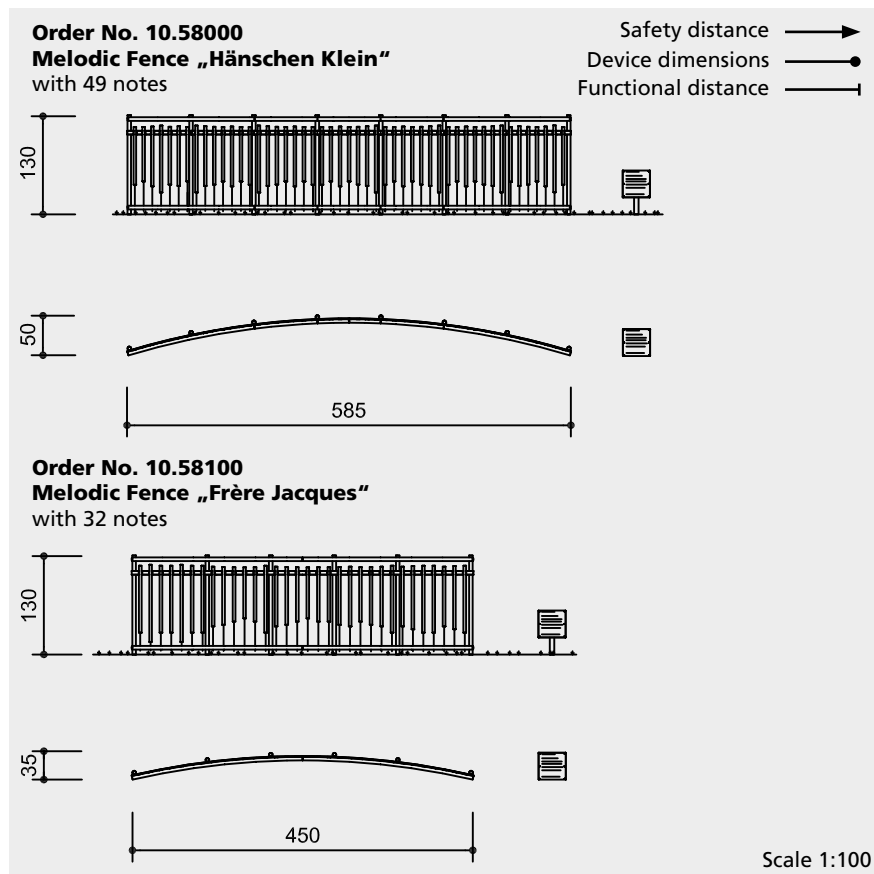


**10.58000**



**10.58100**





## Technical information

Equipment made of stainless steel

### 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.**

Board and support for Explanation Board made of stainless steel

### Dimensions

(small deviations possible)

#### Order No. 10.58000

##### Melodic Fence „Hänschen Klein“

Height	1.30 m
Length	5.85 m
Weight	170 kg

#### Order No. 10.58100

##### Melodic Fence „Frère Jacques“

Height	1.30 m
Length	4.50 m
Weight	118 kg

## Components

- 1 Complete piece of equipment with base plates for dowelling, incl. fastening material and 16 heavy duty anchors
- 1 Explanation Board with support, incl. 4 heavy duty anchors

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## Installation information

Recommended space  
 4.80 or 6.00 x 2.00 m

### Foundations

#### Order No. 10.58000

2 items 280 x 40 x 50 cm  
 Excavation depth 60 cm

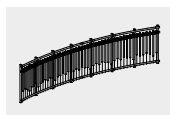
#### Order No. 10.58100

2 items 220 x 40 x 50 cm  
 Excavation depth 60 cm  
 Explanation Board  
 1 item 40 x 40 x 40 cm  
 Excavation depth 60 cm

### Attention:

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

Technical changes reserved.



10.58000



10.58100

**Play value**

Sound behaves in similar ways to water which is why it can be directed through tubes as was done in old ship's telephones. Between two and four speaking/ listening stations can be installed and these are connected by underground pipes and a special sound distributor. It is possible to communicate over unusually long distances without the use of any electronic amplifiers. However, visual contact makes sense.

**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

**Barrier-free**

- Independent play



Photo © Daniel Perales



Photo © Anton Donikov



Photo © Daniel Perales



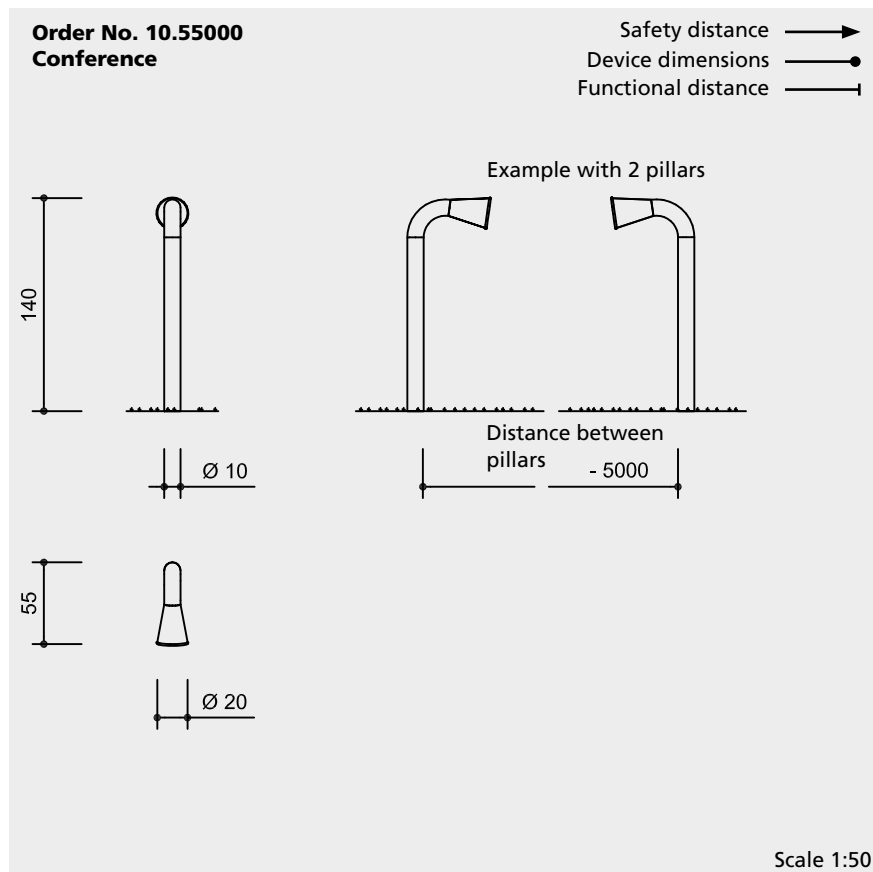
Photo © Daniel Perales

Acoustic effect	soft
Vandalism	not vulnerable
Supervision	not necessary
Explanation Board	not necessary
Installation	indoors and outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	not possible

**Conference**  
**graubner** Play Stations  
for Developing the Senses



10.55000



## Technical information

Equipment made of stainless steel

### 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.**

Cone shaped opening with perforated sheet cover

### Dimensions

(small deviations possible)

Height	1.40 m
Tube diameter	0.10 m
Speech and Listening tube	0.20 m
Depth	0.55 m
Weight	21 kg per pillar

## Components

Depending on the number ordered  
2 - 4 pillars with coupling for dowelling  
6 Heavy duty anchors per pillar

Minimum number is 2 pillars

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### On-site work

Supply and installation of the required underground pipes as well as the ducting for connecting materials according to our specifications

Explanation board on request

## Installation information

Recommended space  
2.00 x 3.00 m per pillar

Foundations  
1 item 60 x 60 x 70 cm per pillar  
Excavation depth 90 cm

### Attention:

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



**10.55000**





### Play value

Speak into the acoustic cone and listen to the multiple echo. The further the sound travels the more it changes, dark sounds will disappear. The reverberation becomes rhythmical. The echo allows you to experience the limiting effect of space: differing times between echoes give different impressions of space. It is also possible to communicate with each other by speaking into the acoustic cones. Different sound nuances are created depending on where you call into the cone.

### Recommended for

- School children
- Young people
- Adults
- Older people
- Public play areas without supervision, such as playgrounds, parks or similar

### Barrier-free

- Independent play

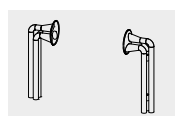


Order No. 10.55100 Echo Game with Order No. 10.22500 Rotating Disc, Photo © Daniel Perales

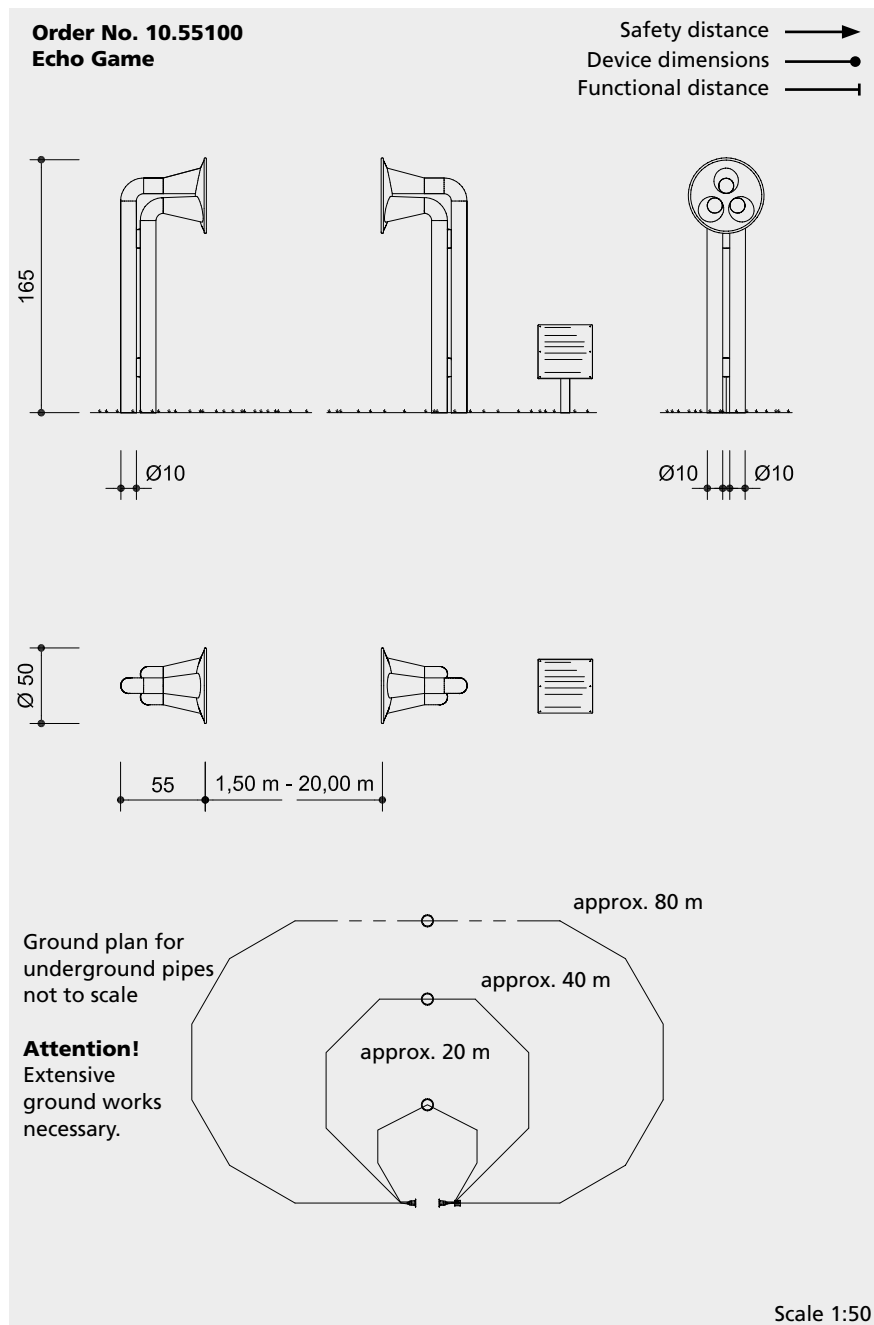


**Echo Game**  
**graubner** Play Stations  
for Developing the Senses

Acoustic effect	soft
Vandalism	not vulnerable
Supervision	not necessary
Explanation Board	included
Installation	outdoors
Safety check (DIN EN 1176)	not necessary
Installation in concrete	not possible



**10.55100**



## Technical information

Equipment made of stainless steel

### 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.**

Cone shaped openings with incorporated sound reflector and perforated sheet cover

Board and support for Explanation Board made of stainless steel

### Dimensions

(small deviations possible)

Height	1.65 m
Tube diameter	0.10 m
Speech and listening tube	0.50 m
Depth	0.55 m
Weight	110 kg

## Components

- 2 Echo pillars incl. 14 heavy duty anchors with flange for dowelling and couplings
- 1 Explanation Board with support for dowelling, incl. 4 heavy duty anchors

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### On-site work

supply and installation of the required underground pipes according to our specifications

## Installation information

Recommended space  
Circle diameter 2.00 m per pillar

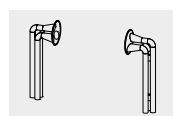
### Foundations

2 items 80 x 80 x 70 cm  
Excavation depth 90 cm  
Explanation Board  
1 item 40 x 40 x 40 cm  
Excavation depth 60 cm

### Attention:

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

Technical changes reserved.



**10.55100**

**Do you want to know  
more about us?**

- ① The main catalogue comprises our complete range of standard equipment.

A selection of our products is described in the following theme catalogues:

- ② For the very Young
- ③ Movement by Climbing
- ④ The Child at Play
- ⑤ Water and Play
- ⑥ Growing Older
- ⑦ Graubner Play Stations for Developing the Senses





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