

Acoustic and Play



Richter Spielgeräte GmbH



About the Catalogue

For many years we have made it our business to offer equipment which shows people how significant is the deliberate use of ones senses.

Our small catalogue offers concentrated information around the theme acoustic effects and hearing. Children love creating tones by self-determined movement. For elder people, hearing is a special kind of "gate", a door, the opening to the world.

Frasdorf, July 2013

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... and „everywhere“

graubner Play Stations for Developing the Senses

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Planning Information

Creating environmental structures for people makes high demands on planners. On one hand, equipment with acoustic effects may be very attractive for this purpose, but on the other hand even more care is needed to include it in planning as might be the case for non-acoustic equipment. The main reason for this is that the acoustic effects of the equipment can differ considerably; extending from noise to tuned harmonies, from loud to very soft, from high to low.

Children have great fun creating acoustic effects by physical activities. In doing this they do not care whether the noise is harmonious/pleasant or how annoying these effects may be for others. Being used to normal, sturdy play equipment on playgrounds, it is not important to them that this sound equipment is often more sensitive than that which they are used to.

Not every kind of equipment is suited for installation in all places. Regardless of the question of need, factors such as fragility to wilful destruction or disturbance by noise can have an influence on where it can be used. In order to preclude unnecessary disappointment, we have made a rough assessment of all our equipment with acoustic effects with regard to noise levels and sensitivity.

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

strong
medium
soft

Loud, high, clear or shrill tones are considered to be more annoying than deep, low, soft and gentle tones.

For the classification of the sensitivity of the equipment, we chose the following terms:

delicate (like a music instrument)
slightly delicate (depending on the neighbourhood)
damage resistant (similar to playground stability)

Adults regard some actions as vandalism which are, for children, part of normal play, without the intention of destroying anything.

By the combination of acoustic equipment wonderful, unique sound spaces, sound clouds can be created - spaces of well-being.

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

In the Playground ...

Our sound and acoustic elements ensure surprise and joy. In a simple way, sometimes with more physical effort, players experience the relation between cause and effect and get rewarded with a sound or a joyful sequence of tones for their action. Some of the equipment is well suited for leisure parks and other for large play areas, being unique and original.

Licensers/Ideas

F. Dorband/K.H. Thiele, M. Kachel, G. Beltzig,
A. van Leggelo, B. Poth-Lengefeld, W. Graubner



Function and Play value

The Wind Pipes are simple sound equipment which enables the person „playing them“ to experience physically the relation of cause and effect. The three at 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

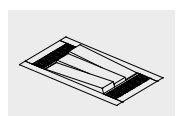
Suitable

- for all age groups
- public playgrounds
- children's institutions
- institutions for people with special needs
- pedestrian areas
- parks
- leisure areas

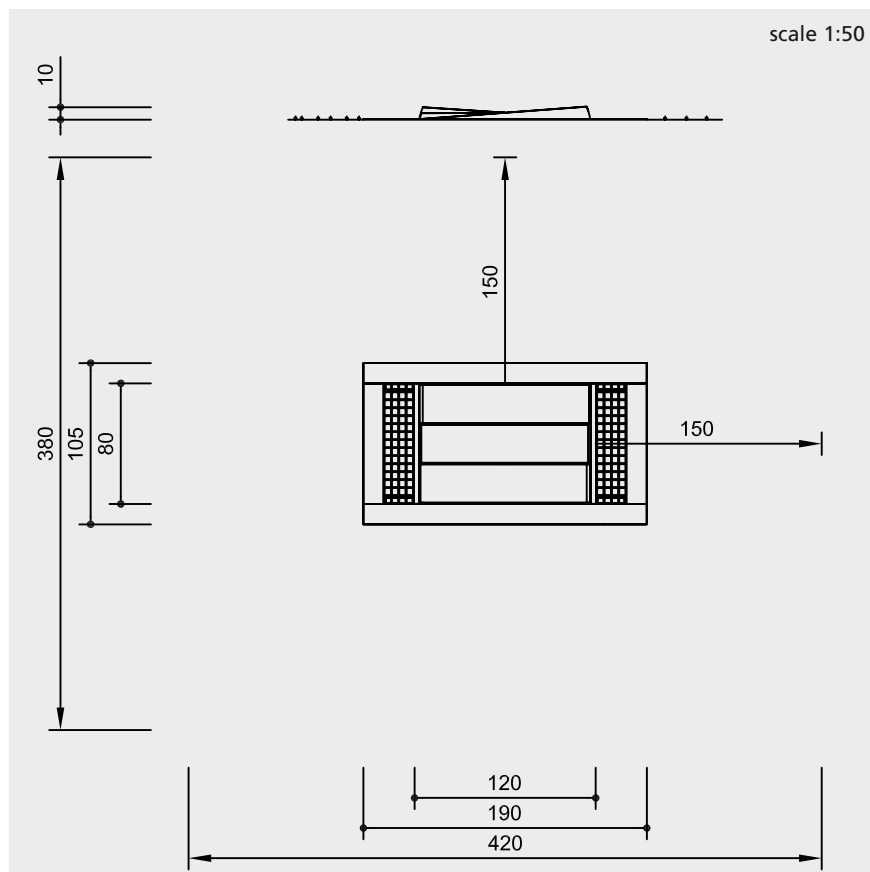


Wind Pipes

Acoustic effect	medium / pipes
Vandalism	not vulnerable



9.02400



Safety check according to EN 1176

Technical information

core-free timber

sawn-timbers of unimpregnated mountain larch, selected according to eight quality criteria; core-free, by that formation of cracks can be reduced
see-saw beams 10/26 cm
frame of squared timbers 14/14 cm



brass bush

for all to and fro movements we use bush bearings which allow for self-lubrication while in use



maintenance-free slide bearings

piston pumps with pipes mounted under the see-saw beam

ventilation from hot-dip galvanised grille

Dimensions

(small deviations possible)

length	1.90 m
width	1.05 m
weight approx.	180 kg

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

Components

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

Installation information

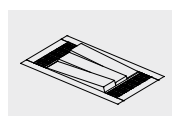
Surfacing requirements corresponding to a fall height of < 0,60 m (please refer to price list for more detailed information)

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 installation instructions.
Subject to technical changes!



9.02400

Function and 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.



Fundamental characteristics

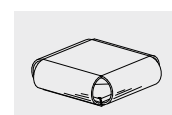
- incentive for playing: „funny“ cushions on the ground, curiosity
- movement: jumping, hopping, running

Suitable

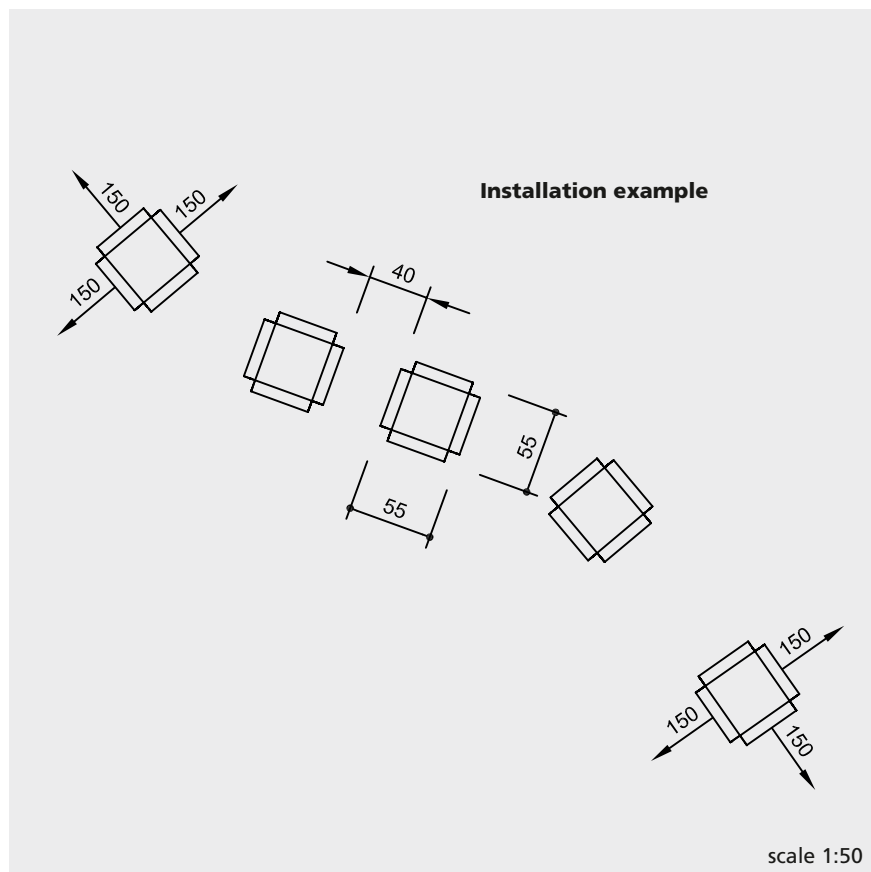
- for children from 4 years
- only in supervised play areas of:
 - children's institutions
 - nurseries
 - schools
 - institutions for people with special needs

Sound Cushions

Acoustic effect	medium / pipes
Vandalism	slightly delicate



9.02410



Safety check according to EN 1176

Components

1 hopper with 2 ground anchors

Installation information

Surfacing requirements
corresponding to a fall height of < 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 installation instructions.
Subject to technical changes!

Technical information

Hopping surface of textile-reinforced
rubber belt, 8 mm thick

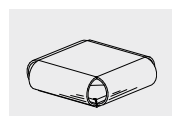
air spring with pipe, for installation in
groups pentatonically tuned

ground plate and anchor tubes hot-dip
galvanised

Dimensions

(small deviations possible)

height	0.15 m
length	0.55 m
width	0.55 m
weight approx.	25 kg



9.02410



Function and Play value

A rubber belt runs over three movable transverse timbers and is fixed in the ground at either end. The movements and loads created by running and jumping on the bridge are distributed from one section to another and influence each other. The combination of movements promote co-operative play and always has a surprise in store when running and jumping. Additional interest is provided by bells mounted under the transverse beams, which acoustically accompany movement.

Fundamental characteristics

- walking over a movable surface, combined with experience of sound
- incentive for playing: unusual surface
- movement: jumping, hopping, running

Suitable

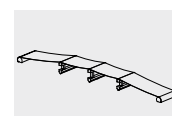
- for all age groups
- for playgrounds
- school playgrounds
- nurseries
- institutions for people with special needs
- parks



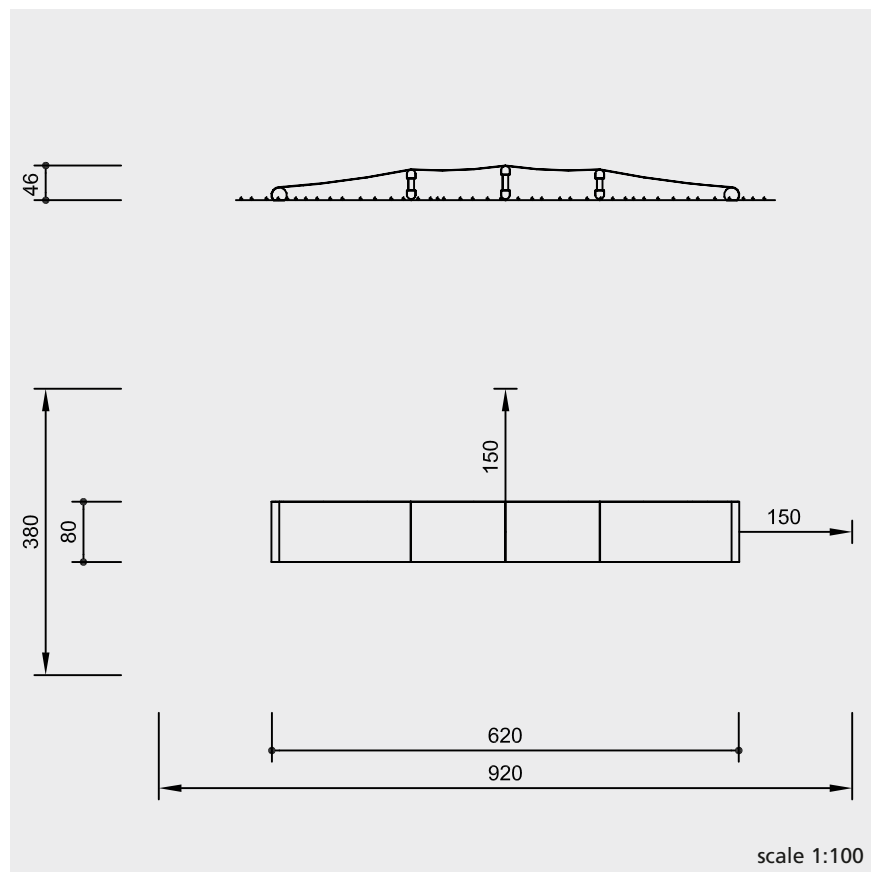
Musical Path



Acoustic effect	soft / bells
Vandalism	not vulnerable



9.02420



Safety check according to EN 1176

Components

1 steel-reinforced rubber belt with anchors
3 movable supports with 6 bells

Equipment also available with textile-reinforced rubber belt (see **Order no. 9.02440** in the price list)

Installation information

Surfacing requirements corresponding to a fall height of < 0,60 m (please refer to price list for more detailed information)

Foundations
3 items 40 x 120 x 30 cm
excavation 50 cm
2 items 60 x 120 x 60 cm
excavation 80 cm

Attention!
Exact measurements may vary, for all installation dimensions refer to current installation instructions.
Subject to technical changes!

Technical information

Wooden parts of mountain larch and oak heartwood

de-barked timbers
round timbers de-barked



core-free timber
sawn-timbers core-free, by that formation of cracks can be reduced



steel reinforced rubber belt
two way steel armoured rubber belt, almost indestructible, total thickness approx. 11 mm



ground anchor
steel feet hot-dip galvanised

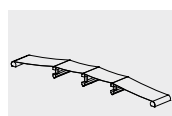


bells made of brass

Dimensions
(small deviations possible)

height	0.46 m
length	6.20 m
width	0.80 m
weight approx.	300 kg

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



9.02420



Function and 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

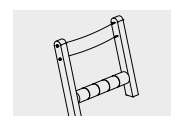
Suitable

- for children from 6 years
- for public playgrounds
school playgrounds
children's homes
day centres
leisure areas
institutions for people with special needs

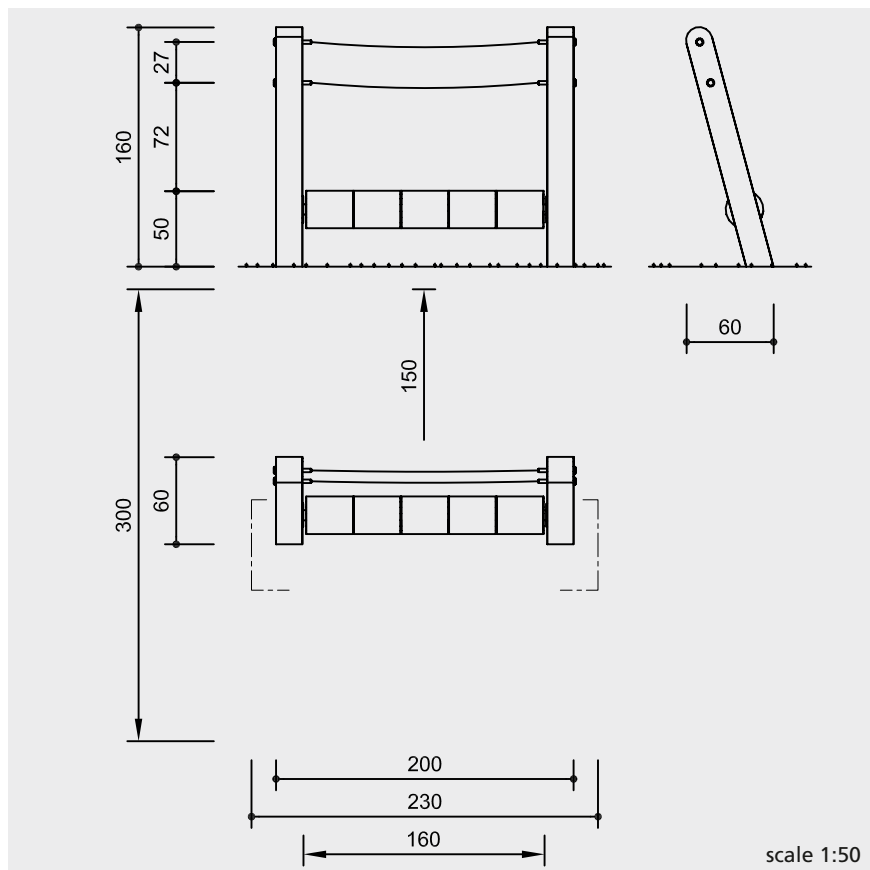


Sound Roller

Acoustic effect	soft clanging
Vandalism	not vulnerable



9.02430



Safety check according to EN 1176

Components

2 support posts with 2 ropes
1 axle with 5 rollers on bearings

Installation information

Surfacing requirements
corresponding to a fall height < 0,60 m
(please refer to price list for more
detailed information)

Foundations
2 items 60 x 60 x 60 cm
excavation 80 cm

Attention!

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

Subject to technical changes!

**Equipment also available with steel
feet.**

Technical information

core-free timber

support posts of unimpregnated mountain larch 18/18 cm, selected according to eight quality criteria, core-free, by that formation of cracks can be reduced



Corocord® rope

special ropes of „Hercules“ type

holding ropes of Corocord® rope of the special „Hercules“ type, abrasion protected through heating of the six steel strands and melting the polyamide sleeve onto them



aluminium swages

double-conical aluminium swages with rounded-off ends



rope connection fixed

close fitting connection without dangerous openings



concealed head bolts

large surface for pressure distribution, prevents water from getting inside, protects the bolt head, easy procurement of spare parts by company trademark indelibly inscribed on the equipment



brass bush

hot-dip galvanised rollers with integrated brass sound elements housed on brass bushes; for all to and fro movements we use bush bearings which allow for self-lubrication while in use

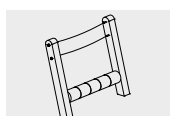


Dimensions

(small deviations possible)

height	1.60 m
length	2.00 m
depth	0.60 m
weight approx.	250 kg

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



9.02430

Function and 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.

Fundamental characteristics

- unique and original
- agreeable design
- incentive for playing: interesting installation, curiosity
- movement: pumping

Suitable

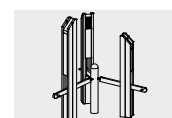
- for people from 5 years
- for public playgrounds
- children's institutions
- parks
- leisure areas



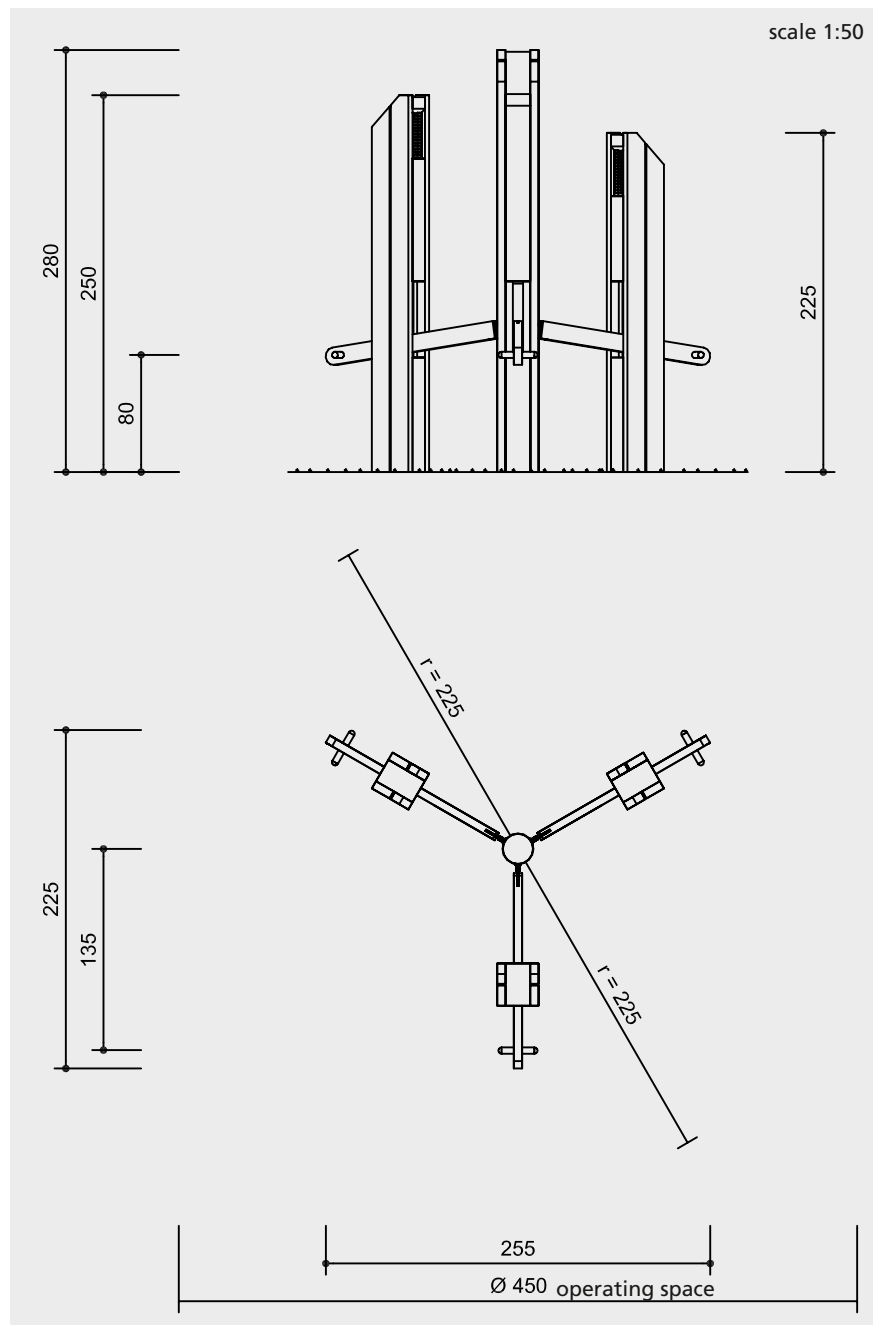
Wind Pumps



Acoustic effect	medium / pipes
Vandalism	not vulnerable



9.02500



Safety check according to EN 1176

Components

- 3 individual pumps with integrated sound elements
- 1 centre column with 3 levers

Installation information

Surfacing requirements
no requirements

Foundations
3 items 60 x 60 x 50 cm
excavation 70 cm
1 item 60 x 60 x 60 cm
excavation 80 cm

Attention!

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

Subject to technical changes!

Technical information

Equipment of mountain larch, selected according to eight quality criteria or oak heartwood

de-barked

de-barked post, Ø 15 - 18 cm



core-free timber

sawn-timbers core-free, by that formation of cracks can be reduced



1 piston pump with 2 pipes each per column

fittings hot-dip galvanised

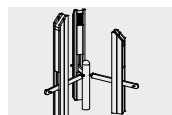
Dimensions

(small deviations possible)

equipment height 2.80 m

weight approx. 300 kg

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



9.02500

Function and Play value

The Bell Tower is an attractive eye-catcher for play areas and leisure areas. Because of its size and design, it is suitable for marking special areas and giving them an unmistakable character. The Bell Tower is enjoyed by nearly everyone. When the hanging ropes are pulled, the sound elements are set in motion and produce a whole range of tones. The Bell Tower promotes communication and co-operation and can be used as therapy equipment for people with different impairments.

Fundamental characteristics

- carpenter construction
- incentive for playing: gate, suspended ropes
- movement: pulling, hanging

Suitable

- for children from 3 years
- for public playgrounds
- tourist centres
- leisure areas
- parks
- forests



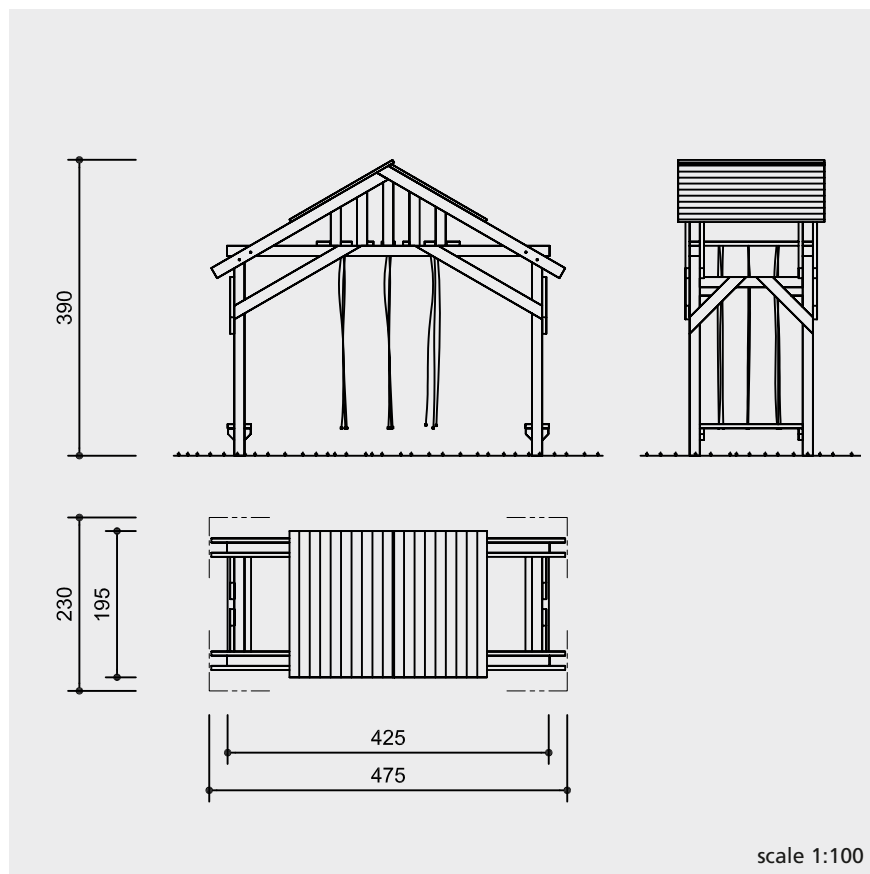
Bell Tower



Acoustic effect	strong
Vandalism	not vulnerable



9.02510



Safety check according to EN 1176

Components

- 2 support frames
- 1 roof construction of square timbers with 9 integrated noise generators and 9 pull ropes

Installation information

Surfacing requirements
no requirements

Foundations
4 items 80 x 80 x 80 cm
excavation 100 cm

Attention!
Exact measurements may vary, for all installation dimensions refer to current installation instructions.
Subject to technical changes!
Equipment also available with steel feet.

Technical information

Equipment of mountain larch, selected according to eight quality criteria

core-free timber

sawn-timbers core-free, by that formation of cracks can be reduced, support posts 14/14 cm



tongue and groove

roof of 40 mm tongue and groove boarding



Corocord® rope

special ropes of „Hercules“ type
pulling ropes of six-strand Corocord® rope of the special „Hercules“ type, abrasion protected through heating of the six steel strands and melting the polyamide sleeve onto them



aluminium swages

double-conical aluminium swages with rounded-off ends



concealed head bolts

large surface for pressure distribution, prevents water from getting inside, protects the bolt head, easy procurement of spare parts by company trademark indelibly inscribed on the equipment



adjustable bolts

no projecting threads after re-tightening due to two-piece bolt connection



noise generation through pipes, bells, metal, bike bell, gong

Dimensions

(small deviations possible)

height 3.90 m
width 4.25 m
depth 1.95 m

weight approx. 1000 kg

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



9.02510

Function and Play value

The play possibilities of this element are not apparent until the user steps onto the stainless steel platform and discovers the rocking, jumping and pivotally rotating movements it allows. These movements are fun and increased play value is achieved when users interact with each other. The sound it creates when moving then becomes the target and control of the activity when it is realised what movement creates what sound - the roaring of the sea is discovered. Below the surface there are many little balls which move when the standing plate position 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 sense of balance and hearing are both challenged and stimulated, heightening the awareness of the senses through play activity.

Fundamental characteristics

- unique and original
- combination of balancing and creation of sound
- incentive for playing: agreeable design, curiosity
- movement: balancing, experiencing one's whole body

Suitable

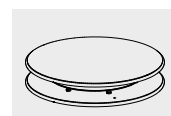
- for children from 6 years
- nurseries
- children's homes
- institutions for people with special needs



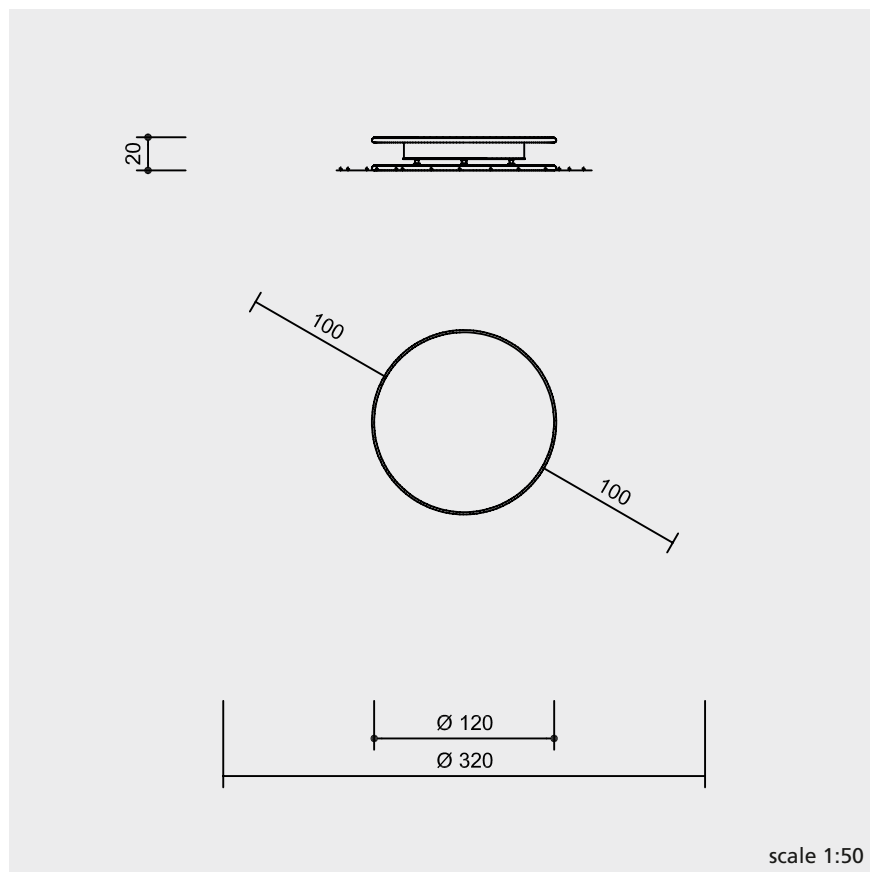
Sea Roarer
Free standing Sea Roarer



Acoustic effect	very soft to loud depending on type of use
Vandalism	not vulnerable



9.02650/9.02652



Safety check according to EN 1176

Technical information

Equipment completely made of stainless steel with sound elements

Order no. 9.02652
Free standing Sea Roarer

Rubber buffers of hard rubber, friction-proof

Dimensions
(small deviations possible)

diameter	1.20 m
height	0.20 m
weight approx.	120 kg

Components

Order no. 9.02650
Sea Roarer
1 complete equipment
3 anchor tubes

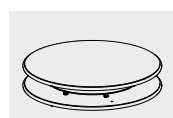
Order no. 9.02652
Free standing Sea Roarer
1 complete equipment
6 rubber buffers

Installation information

Surfacing requirements
corresponding to a fall height of < 0,60 m
(please refer to price list for more detailed information)

Foundations
Order no. 9.02650
3 items 40 x 40 x 35 cm
excavation 40 cm

Attention!
Exact measurements may vary, for all installation dimensions refer to current installation instructions.
Subject to technical changes!



9.02650/9.02652



Order no. 9.02710 Phones in Concrete

Function and 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
- incentive for playing: mouthpieces
- movement: bending, stretching

Suitable

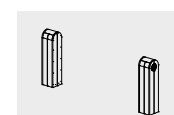
- for people from 4 years
- for public playgrounds
- children's institutions
- schools
- pedestrian areas
- institutions for people with special needs



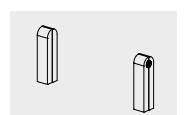
Phones in Wood
Phones in Concrete



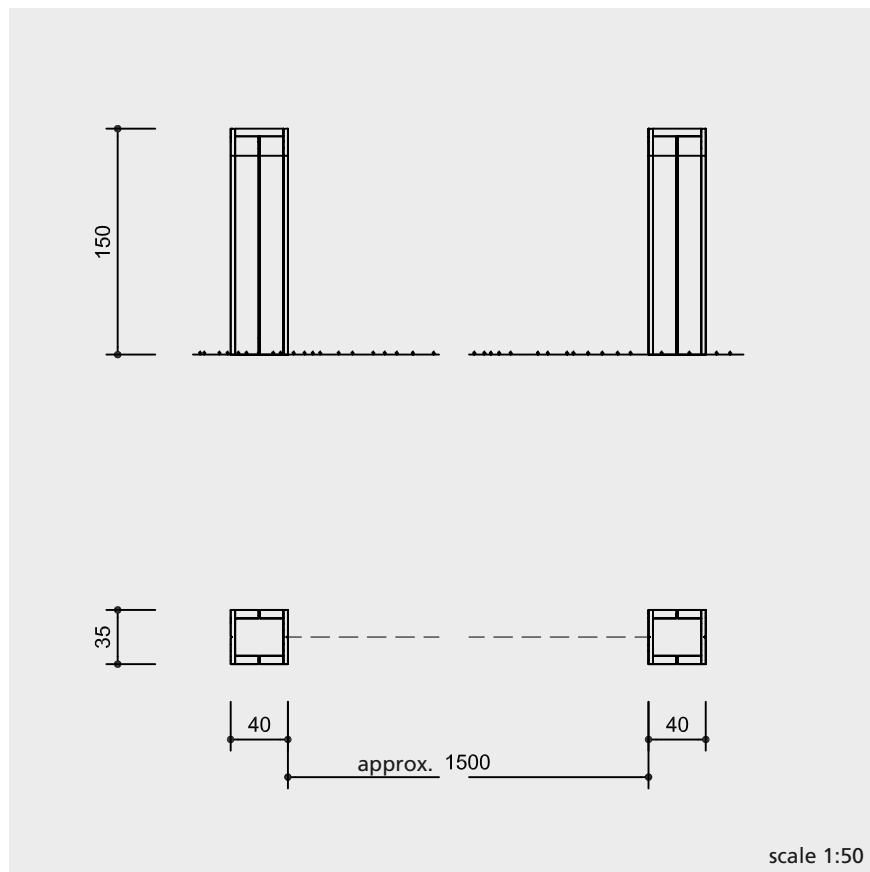
Acoustic effect	soft
Vandalism	not vulnerable



9.02700



9.02710



Safety check according to EN 1176

Components

2 phones
20 m plastic pipe and accessories
2 foundation frames

Phones in Wood for nurseries see
Order no. 9.02720 in the price list.

Installation information

Surfacing requirements
no requirements

Foundations

wooden columns

2 items 60 x 60 x 35 cm
excavation 40 cm

concrete columns

no foundation work necessary
excavation 60 x 55 x 40 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 installation instructions.

Subject to technical changes!

Technical information

Order no. 9.02700 Phones in Wood

core-free timber

sawn-timbers of unimpregnated mountain larch, selected according to eight quality criteria, core-free, by that formation of cracks can be reduced



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

foundation frames hot-dip galvanised

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

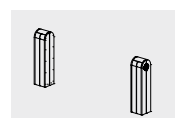
(small deviations possible)

height	1.50 m
width	0.35 m
depth	0.40 m
weight approx.	

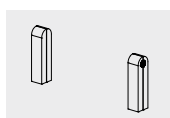
Order no. 9.02700	150 kg
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Order no. 9.02710	720 kg
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For more detailed explanation of the quality characteristics see price list.



9.02700



9.02710

Function and 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

Suitable

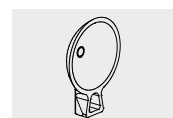
- for people from 6 years
- public playgrounds
- for leisure areas and pedestrian zones
- school playgrounds



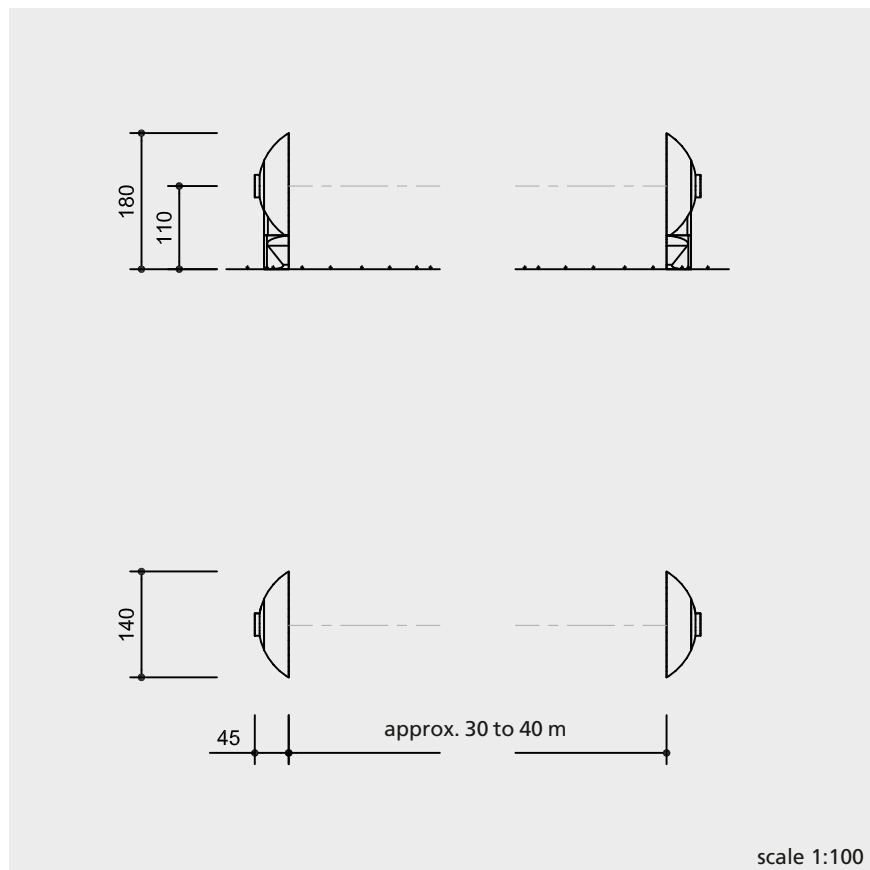
Parabolic Reflectors



Acoustic effect	soft
Vandalism	not vulnerable



9.05000



Safety check according to EN 1176

Technical information

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

foundation anchors galvanised

Dimensions

(small deviations possible)

height	1.80 m
diameter	1.40 m
weight	
per reflector approx.	300 kg

Components

- 2 concrete Parabolic Reflectors with stand feet
- 2 pylon frames
- 2 foundation irons

Installation information

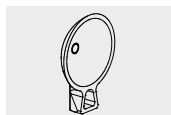
Surfacing requirements
no requirements

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

Attention!

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

Subject to technical changes!



9.05000

Function and 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 (even a car can be driven over)
- incentive for playing: surprising element on the ground, curiosity
- movement: jumping, hopping, dancing

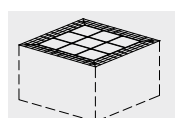
Suitable

- for people from 4 years
- for leisure areas and pedestrian zones
- public places
- children's institutions
- institutions for people with special needs
- school playgrounds
- tourist centres

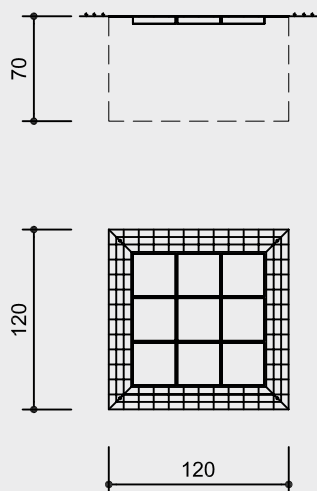


Dance Chimes

Acoustic effect	medium / tubular bells
Vandalism	not vulnerable



9.06000



scale 1:50

Safety check according to 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

additionally with locking device see **Order no. 9.06100** in the price list

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 is 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 installation instructions.

Subject to technical changes!

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.

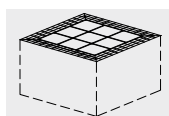
In order for play, dance and music to form an inseparable, mutually reinforcing entity, the following and further mechanical refinements are necessary, to guarantee problem-free operation:

- 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)

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



9.06000

Function and Play value

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 sound 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: keys, sound elements
- movement: striking, pressing

Suitable

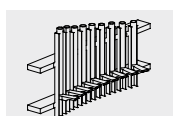
- for people from 4 years
- children's institutions
- parks and leisure areas
- tourist centres
- entrance halls and stairwells of representative buildings



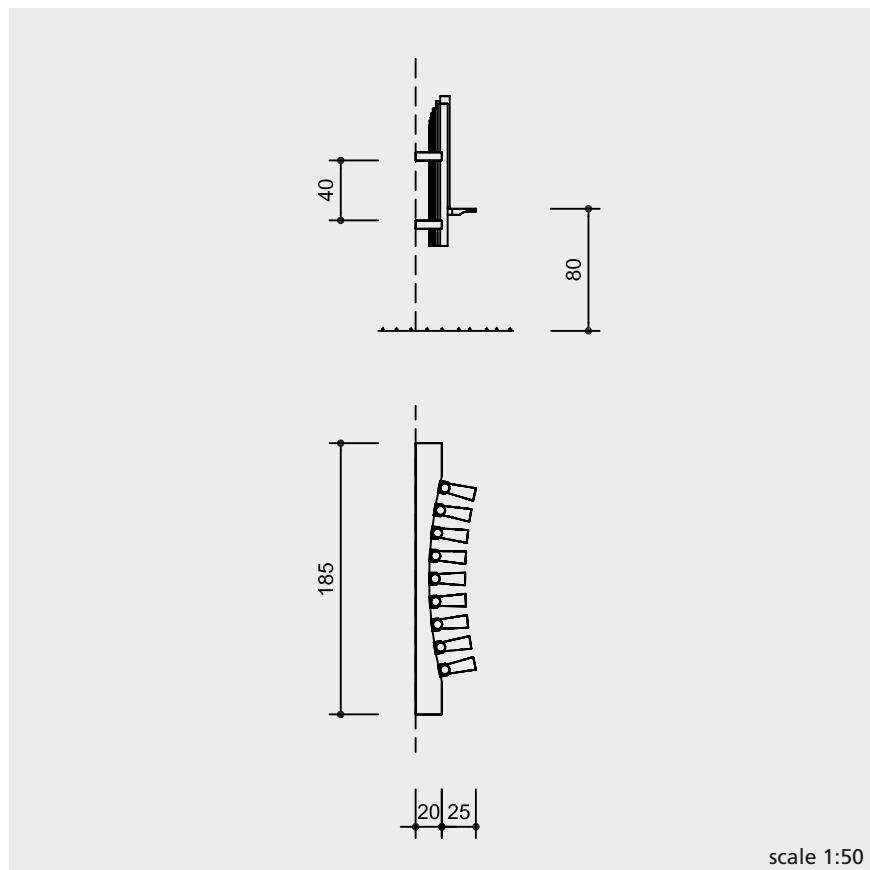
Sound Wall



Acoustic effect	medium
Vandalism	not vulnerable



9.06710



Safety check according to EN 1176

Components

1 Sound Wall with 9 tones
to be mounted

The Sound Wall is also available with
support posts to be set in concrete
foundations.

Order no. 9.06720

Installation information

Surfacing requirements
no requirements

Attention!

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

Subject to technical changes!

Technical information

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

tuned pentatonically in groups

the percussion mechanism is dampened
in each direction by robust rubber
buffers

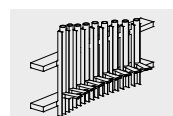
percussion keys of hardwood

fastening part to the wall of mountain
larch, selected according to eight
quality criteria

Dimensions

(small deviations possible)

width	1.85 m
length of sound elements	0.75 - 1.00 m
weight approx.	180 kg



9.06710



Function and 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

Suitable

- for people from 4 years
- children's institutions
- parks and leisure areas
- tourist centres

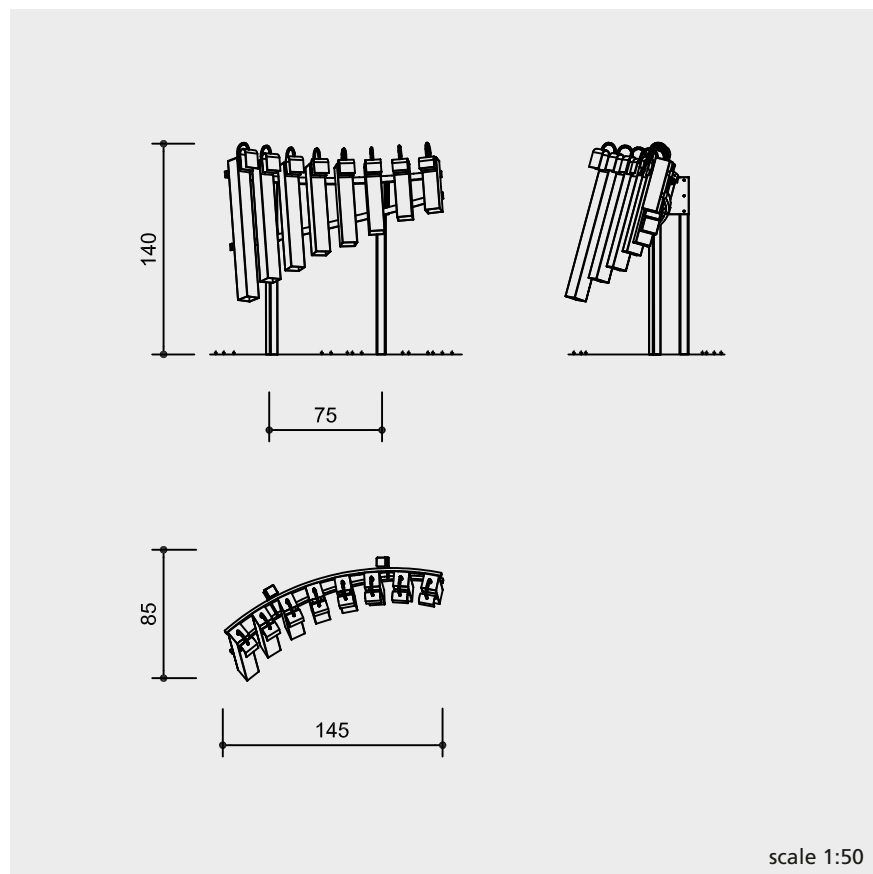


Ferraphone

Acoustic effect	soft
Vandalism	not vulnerable



9.07000



Technical information

equipment made of stainless steel

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 approx. 85 kg

Safety

This equipment is not playground equipment within the scope of EN 1176 and therefore is also not subject to the requirements of this standard. However, it is complied with where appropriate.

Components

1 ferraphone with 2 beaters

Installation information

Surfacing requirements
no requirements

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

Attention!

Exact measurements may vary, for all installation dimensions refer to current installation instructions.
Subject to technical changes!



9.07000



Function and 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
- amiable design
- visual and aural experience
- incentive for playing: turning disc, spheres, curiosity
- experience: sounds, cause and effect

Suitable

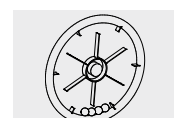
- for people from 4 years
- for public playgrounds
- pedestrian zones
- institutions for people with special needs
- homes for the aged entrance areas of public buildings
- alongside paths in parks
- in waiting areas of stations, bus stations etc.



The pictures show Order no. 9.08500
with support post

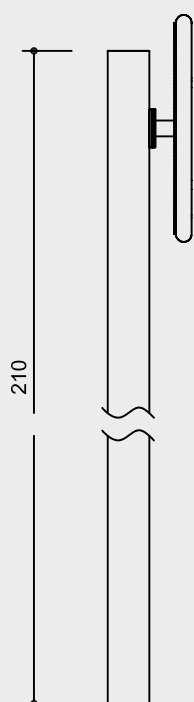
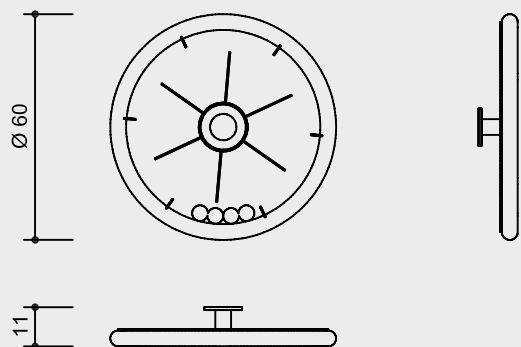
Kling Klang Disc for wall attachment
Kling Klang Disc with support post

Acoustic effect	soft
Vandalism	not vulnerable



9.08000/9.08500

Order no. 9.08000 Kling Klang Disc
for wall attachment



Order no. 9.08500
Kling Klang Disc
with support post

Maßstab 1:20

Technical information

Sound disc of stainless steel, with ball bearings

transparent cover disc of Makrolon

spheres of hard plastic

support post of **Order no. 9.08500**
of stainless steel

Dimensions

(small deviations possible)

Order no. 9.08000

diameter	0.60 m
depth	0.11 m
weight approx.	30 kg

Order no. 9.08500

diameter	0.60 m
depth	0.25 m
height of support post	2.10 m
weight approx.	100 kg

Safety check according to EN 1176

Components

Order no. 9.08000 Kling Klang Disc
for wall attachment

1 Kling Klang Disc

Order no. 9.08500 Kling Klang Disc
with support post

1 Kling Klang Disc
1 support post

Installation information

Surfacing requirements
no requirements

Foundations

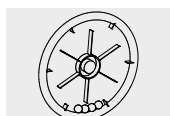
Order no. 9.08500 Kling Klang Disc
with support post

1 item 50 x 50 x 60 cm
excavation 80 cm

Attention!

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

Subject to technical changes!



9.08000/9.08500

Function and Play value

The installation „Street Musicians“ is of a high artistic effect and gives a special accent to public places and play areas. The triangular figures are made of stainless steel, have a coloured small head and can be turned around their middle axis. As „hands-on“ sculpture this movement produces a gong-like, deep sound. When several „Musicians“ are installed next to each other, new spaces can be created again and again and interesting views are produced. The rotating bodies make different sounds so that an unusual harmony is created when several are „played“ together.

Fundamental characteristics

- unique and original
- exclusive design
- due to the triangular shape, players of every age can „embrace“ the musicians
- incentive for playing: shape, coloured head, curiosity
- movement: holding on, setting in motion

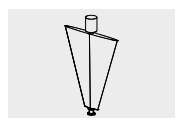
Suitable

- for people from 4 years
- public places
- leisure areas
- pedestrian zones
- tourist centres

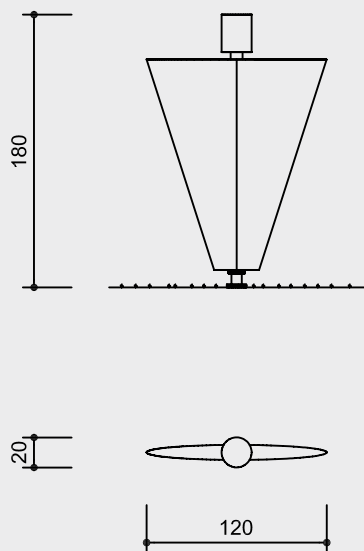


Street Musicians

Acoustic effect	medium
Vandalism	not vulnerable



9.10010



scale 1:50

Safety check according to EN 1176

Components

1 Street Musician with coloured head
1 tube to be set into concrete

Installation information

Surfacing requirements
no requirements

Foundations
1 item 60 x 60 x 60 cm
excavation 80 cm

Attention!

Exact measurements may vary, for all installation dimensions refer to current installation instructions.
Subject to technical changes!

Technical information

Body of stainless steel, with rotating bearings

sound elements of groups are tuned and painted in different colours

brass bush

for all to and fro movements we use bush bearings which allow for self-lubrication while in use



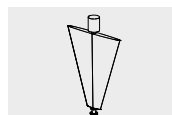
foundation tube hot-dip galvanised

Dimensions

(small deviations possible)

height	1.80 m
width	1.20 m
depth	0.20 m
weight approx.	100 kg

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



9.10010



Function and Play value

To see oneself in a mirror, to discover changes, to experience a mirror world. To exert oneself while turning the rotunda and to be rewarded with the sound of the bell. The Mirror Rotunda represents a concentrated address of the senses and is interesting for grown-ups as well as for children. In pedestrian zones, it is a welcome change to the commercial activities. It gives a particular accent to large places or squares, particularly when several rotundas are grouped together. In front of public buildings, especially of modern architecture, it emphasises through play the significance of the location due to its impressive appearance.

The Mirror Rotunda is available with or without sound effect.

Fundamental characteristics

- unique and original
- surprising reflections, address of the senses
- incentive for playing: reflection, coloured head
- movement: setting the rotunda in motion, turning oneself

Suitable

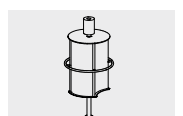
- for people from 4 years
- for pedestrian zones
- public places
- entrance halls of public buildings
- alongside paths



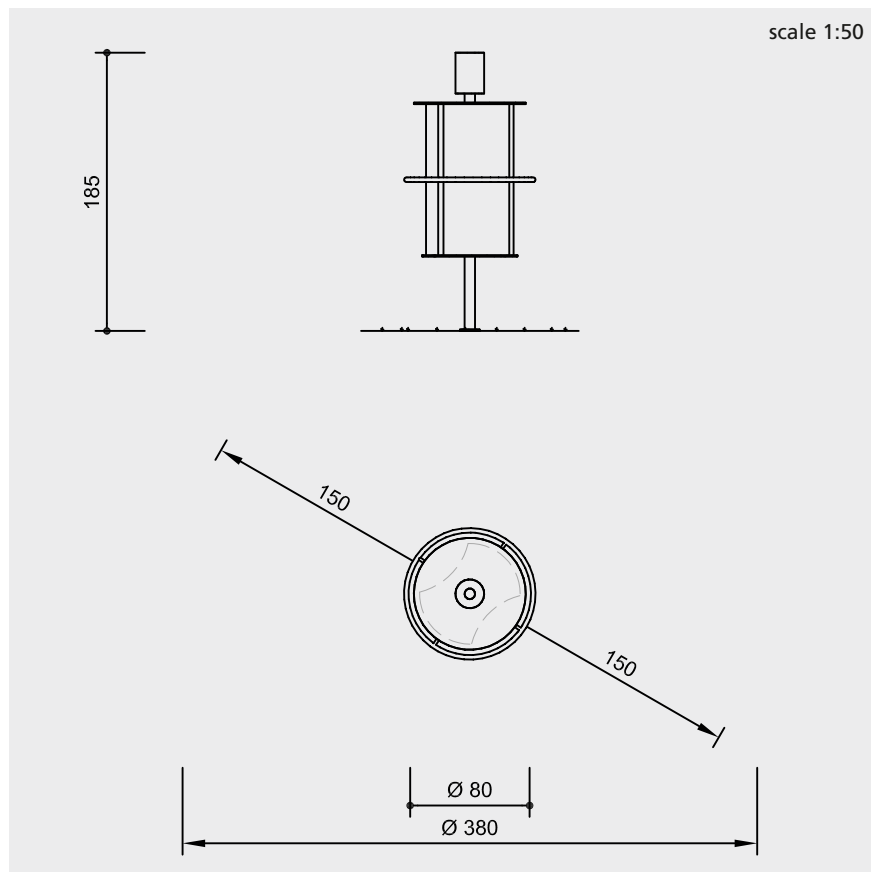
Mirror Rotunda



Acoustic effect	medium
Vandalism	not vulnerable



9.10020



Safety check according to EN 1176

Components

- 1 Mirror Rotunda
- 1 tube to be set into concrete

Installation information

Surfacing requirements
corresponding to a fall height of < 0,60 m
(please refer to price list for more
detailed information)

Foundations
1 item 60 x 60 x 60 cm
excavation 80 cm

Attention!

**Exact measurements may vary, for
all installation dimensions refer to
current installation instructions.**
Subject to technical changes!

Technical information

Equipment of stainless steel, with
built-in concave and convex mirrors of
stainless metal sheeting

brass bush

for all to and fro movements we use
bush bearings which allow for self-
lubrication while in use



sound elements of groups are tuned
and painted in different colours

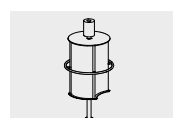
foundation tube hot-dip galvanised

Dimensions

(small deviations possible)

height	1.85 m
diameter	0.80 m
weight approx.	200 kg

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



9.10020

... and „everywhere“

It is fun making sound from stones, wood and metal bodies. Improving the quality of life of elderly people often involves moving them from inactivity, from waiting without orientation towards self determined activity. Equipment with acoustic effect provides a vehicle for this process. People with special needs can also benefit from a similar process, some of the sound elements can even be used for therapy.

Acoustic effects of this kind make people smile very quickly with a certain amazement, which is often the first step for a successful re-activation.

For this reason many of the following play elements should also be installed in the vicinity of adults rather than in a typical playground.

Apropos "Safety"

The following equipment with acoustic effects (order no. 10.41100 ...) is not regarded as play equipment.

Therefore, safety certification according to EN 1176 is not possible. Of course, this equipment is also on the safety state of the art for its type.

Function and 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.

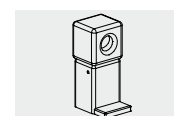
Suitable

- for leisure areas, parks, zoological and botanical gardens, institutions for people with special needs, music, language or drama schools, youth centres, seminar centres, presentation rooms, theatres, broadcasting corporations, training and conference rooms, convention institutions

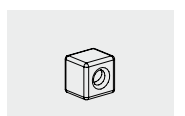


Small Singing Stone *graubner* Play Stations for Developing the Senses

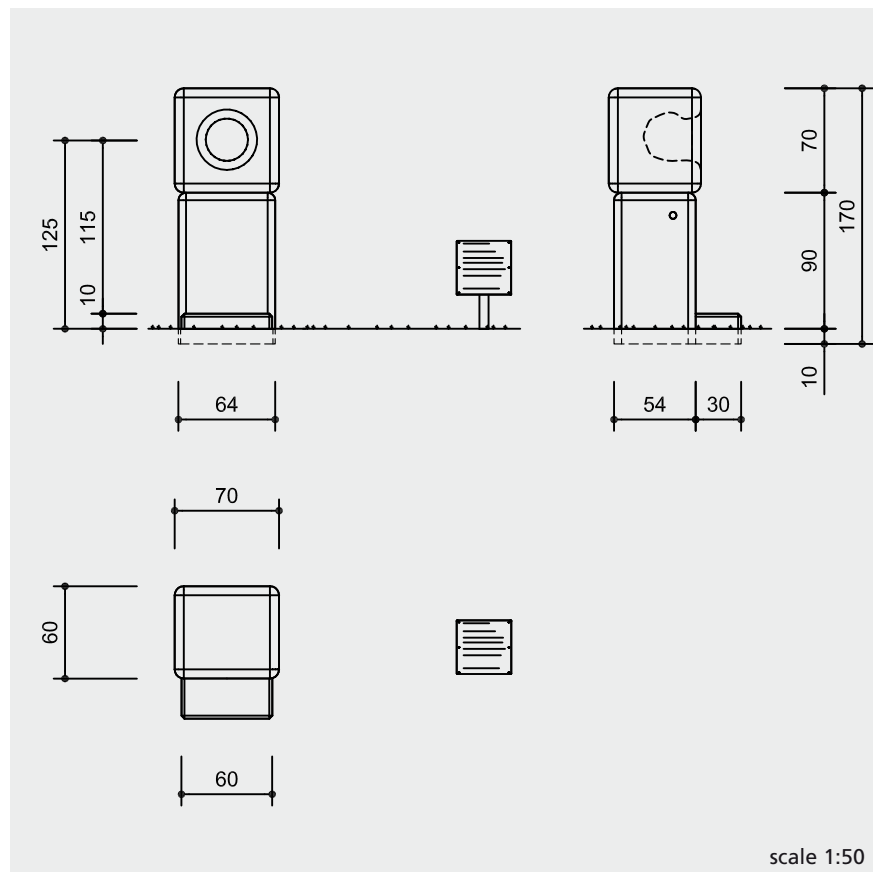
Acoustic effect	soft
Vandalism	not vulnerable
Supervision	not necessary
Explanation Board	included
Installation	indoors and outdoors
Safety check (EN 1176)	not necessary
Installation in concrete	possible



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

support for Explanation Board made of stainless steel

Dimensions

(small deviations possible)

total height	1.70 m
singing stone	0.70 x 0.60 m
	height 0.70 m
step height	0.20 m

weight approx.

Order No.	
10.41100	1440 kg
10.41300	570 kg

Components

Order No. 10.41100

- 1 Small Singing Stone with 2 anchor irons
- 1 pedestal
- 1 step
- 1 Explanation Board with support

Order No. 10.41300

- as before but without pedestal and step

Installation information

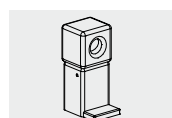
Recommended space
4.00 x 3.00 m

Foundations
1 item 100 x 80 x 60 cm
excavation 70 cm
recess 5 x 5 x 20 cm
Explanation Board
1 item 40 x 40 x 40 cm
excavation 60 cm

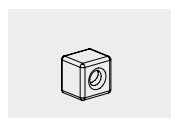
Attention!

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

Subject to technical changes!



10.41100



10.41300

Function and 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.

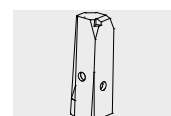
Suitable

- for leisure areas, parks, zoological and botanical gardens, institutions for people with special needs, therapy gardens

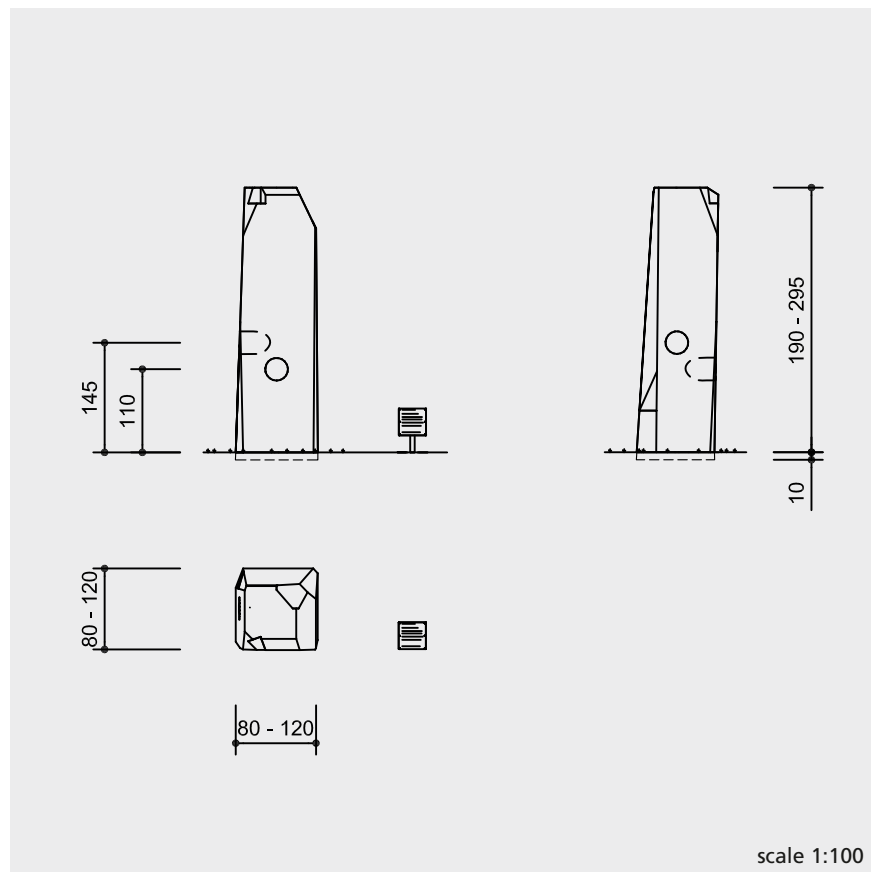


Large Singing Stone graubner Play Stations for Developing the Senses

Acoustic effect	soft
Vandalism	not vulnerable
Supervision	not necessary
Explanation board	included
Installation	outdoors
Safety check (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.

Support for Explanation Board made of stainless steel.

Dimensions

(small deviations possible)

base approx. 0.80/0.80 m -
1.20/1.20 m

total height approx.

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 m/1.45 m

weight depends on size
approx. 2 - 5 t

Components

- 1 Large Singing Stone
with 2 singing hollows
and 1 anchor iron
- 1 Explanation Board with support

Installation information

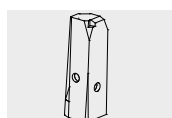
Recommended space
4.00 x 3.00 m

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 85 cm
Explanation Board
1 item 40 x 40 x 40
excavation 60 cm

Attention!

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

Subject to technical changes!



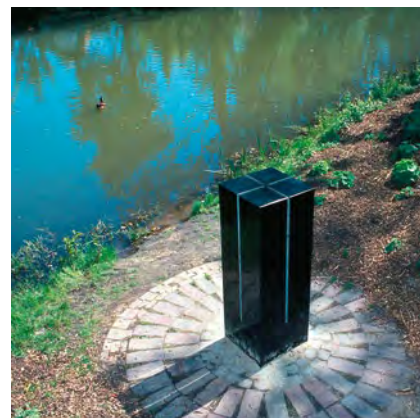
10.42020/10.42030/10.42040

Function and 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 carefully but 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 living relationship to be made with the otherwise dead, cold material.

Suitable

- for public places, parks, pedestrian areas, botanical gardens, town halls, concert halls, material research institutions, educational institutes, department stores, youth centres, suitable institutions for people with special needs, seminar centres, music schools, training and recreational areas of companies

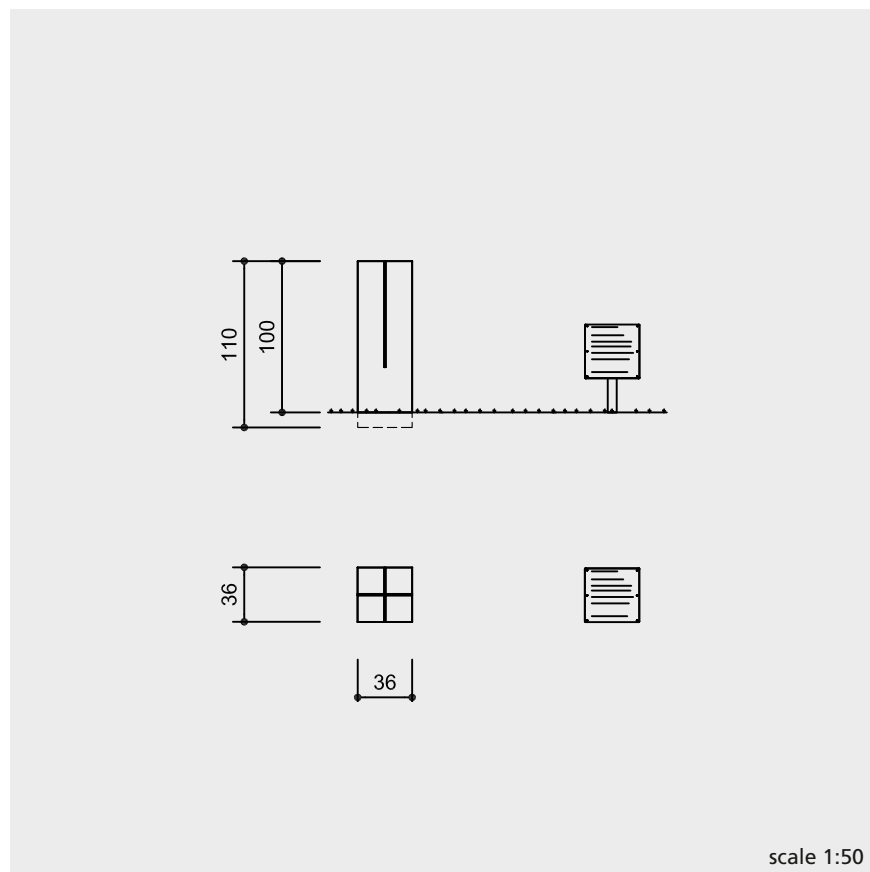


Tuning Stone
graubner Play Stations for
Developing the Senses

Acoustic effect	soft
Vandalism	not vulnerable
Supervision	recommended
Explanation board	included
Installation	indoors and outdoors
Safety check (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.

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 approx.	400 kg

Components

- 1 Tuning Stone with 1 anchor iron
- 1 Explanation Board with support

Installation information

Recommended space
circle diameter 3.00 m

Foundations
1 item 80 x 80 x 60 cm
excavation 70 cm
recess 5 x 5 x 20 cm
Explanation Board
1 item 40 x 40 x 40 cm
excavation 60 cm

Attention!

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

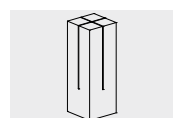
Subject to technical changes.

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



Function and Play value

With this stone you can create wonderful sounds 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.

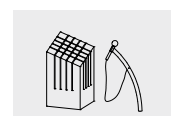
Suitable

- for public places, parks, pedestrian areas, botanical gardens, town halls, concert halls, material research institutions, educational institutes, department stores, youth centres, institutions for people with special needs, seminar centres, music schools, training and recreational areas of companies

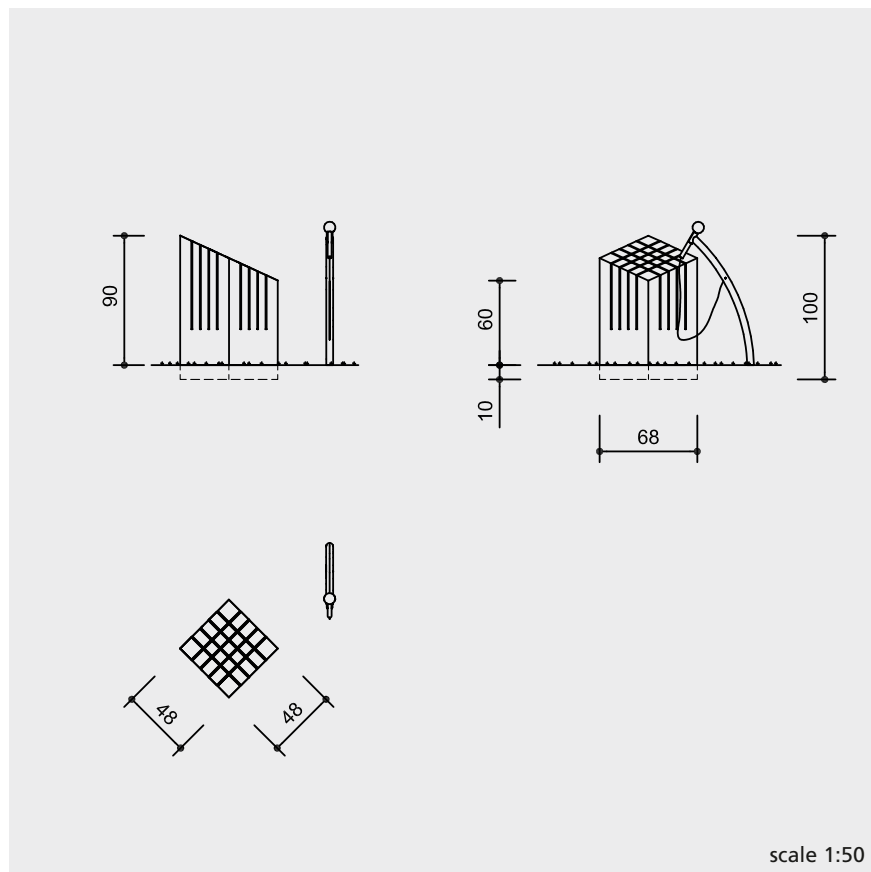


Stone Harp *graubner* Play Stations for Developing the Senses

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



10.45000



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 approx.	400 kg

Components

- 1 Stone Harp with 1 anchor iron
- 1 beater with stand post and attachment

Installation information

Recommended space
3.00 x 3.00 m

Foundations

Stone Harp

1 item 80 x 80 x 50 cm
excavation 60 cm
recess 5 x 5 x 20 cm

Stand post for beater

1 item 40 x 40 x 40 cm
excavation 60 cm

Attention!

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

Subject to technical changes!



10.45000

Function and 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 hammer 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.



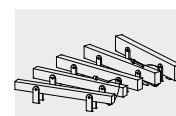
This ensures high-quality sound and break-resistance.

Suitable

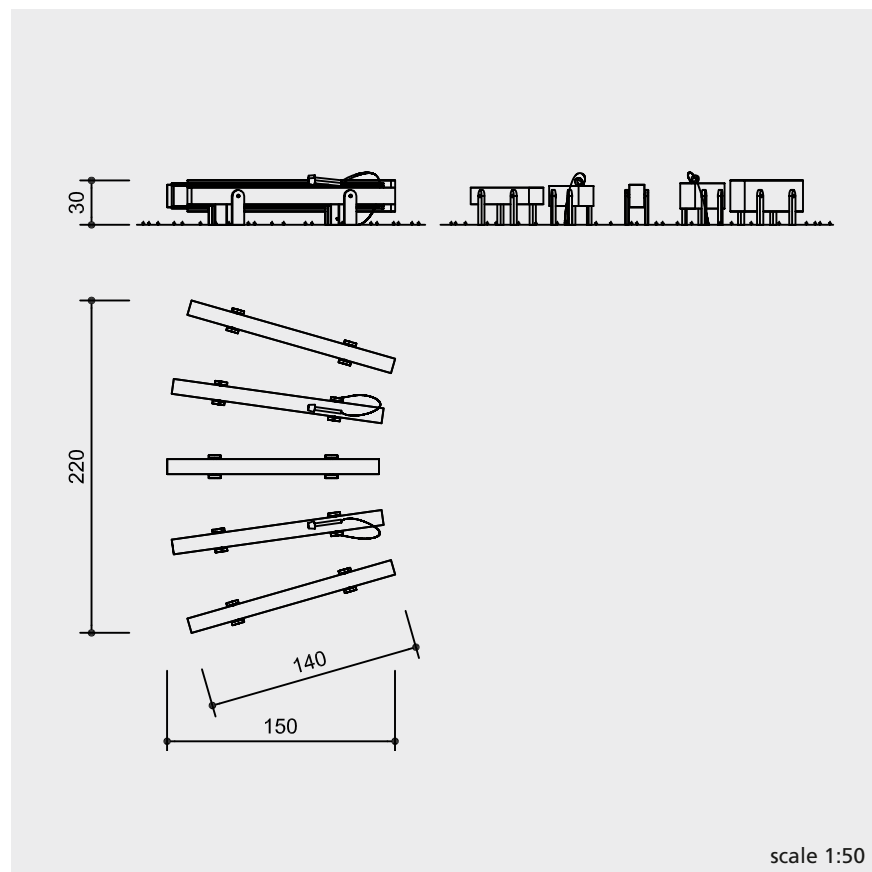
- for parks, outdoor areas of company buildings, schools, kindergartens, zoological and botanical gardens
- for the indoors and outdoors of music schools, research institutions, institutions for people with special needs, children's museums, children's parks

Acoustic effect	medium
Vandalism	not vulnerable
Supervision	not necessary
Explanation board	recommended
Installation	indoors and outdoors
Safety check (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 of black synthetic material,
suspension made of stainless steel cable

Dimensions

(small deviations possible)

height	0.30 m
width	2.20 m
length	1.40 m

weight approx.	490 kg
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scale 1:50

Components

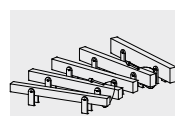
5 stones with supporting constructions
and 2 beaters

Installation information

Recommended space
4.00 x 3.00 m

Foundations
1 item 50 x 250 x 30 cm
excavation 40 cm
1 item 40 x 200 x 30 cm
excavation 40 cm

Attention!
Exact measurements may vary, for
all installation dimensions refer to
current installation instructions.
Subject to technical changes!



10.46000

Function and 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 own experiences.

Suitable

- for indoors and outdoors
- for parks, patios, zoological and botanical gardens, schools, kindergartens, music schools, research institutions, institutions for people with special needs, children's museums, children's parks

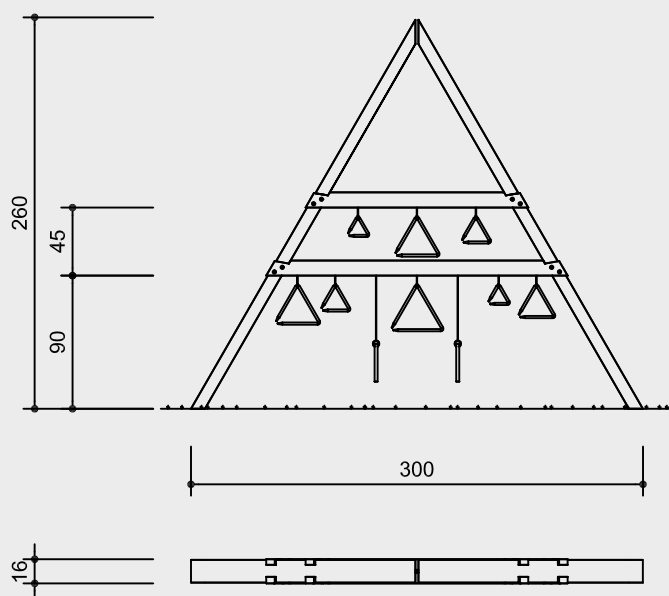


Triangles *graubner* Play Stations for Developing the Senses

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



10.52000



Technical information

frame made of weather-resistant oak

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 approx. 100 kg

Components

1 support frame with 8 triangles with
5 different tones and 2 beaters

Installation information

Recommended space
5.00 x 2.50 m

Foundations
2 items 60 x 40 x 40 cm
excavation 60 cm

Attention!
Exact measurements may vary, for
all installation dimensions refer to
current installation instructions.
Subject to technical changes!



10.52000



Function and 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 form typical to this material. The gong, along with the triangle and bells, is a typical design for metal. It consists of a hand-finished metal plate which can be tuned by changing the tension, making particularly pure vibrations audible. The vibrations emitted by the gong are perceived as relaxing and invigorating on the skin and pass right through all the different areas of the body. That is why the gong is also used for therapy.

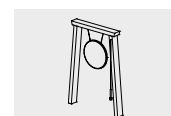
Suitable

- for parks, therapy gardens, institutions for people with special needs, kindergartens, nurseries, school youth hostels, seminar houses, training and recreational areas of companies

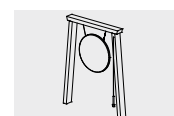


Gong graubner Play Stations for Developing the Senses

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

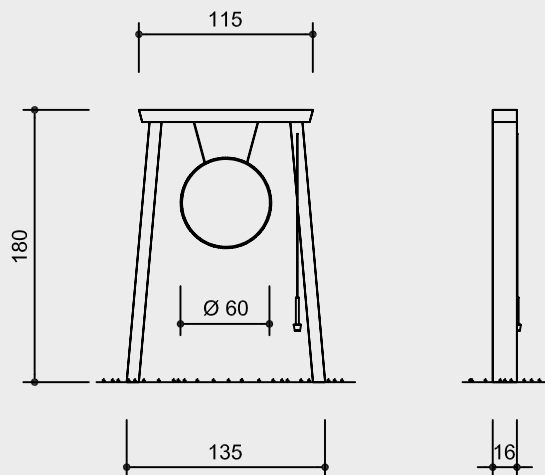


10.52160

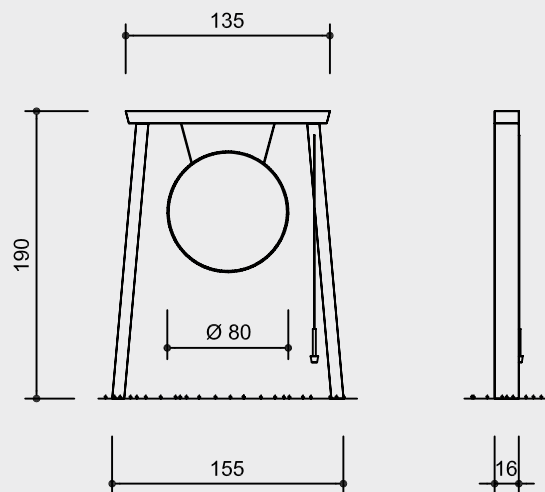


10.52180

Order No. 10.52160 Gong
diameter 0.60 m



Order No. 10.52180 Gong
diameter 0.80 m



scale 1:50

Technical information

frame made of weather-resistant oak

suspension made of plastic coated stainless steel cable

high quality manually operated gong of non-rusting bronze alloy with individual tone character

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 approx. 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 approx. 100 kg

Components

1 support frame with 1 gong
and 1 beater

Installation information

Recommended space
3.00 x 2.00 m

Foundations
2 items 50 x 50 x 40 cm
excavation 60 cm

Attention!

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

Subject to technical changes!



10.52160



10.52180

Function and 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 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 hammer or by hand, produces sounds which generate melodic patterns and rhythms. Several people can play simultaneously and create music by listening to each other.

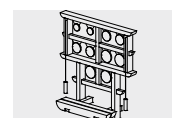
Suitable

- for parks, school yards, patios, kindergartens, music schools, sanatoriums



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 (EN 1176)	not necessary
Installation in concrete	possible



10.52200

Technical information

frame made of weather-resistant oak

high-quality metal discs in non-rusting bronze alloy, suspension made of stainless steel cable

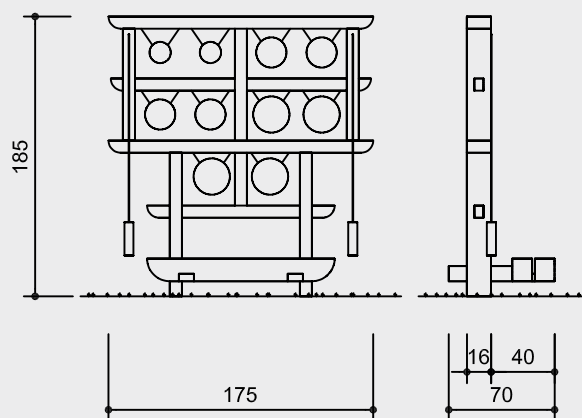
beater made of white synthetic material, suspension made of stainless steel cable

Dimensions

(small deviations possible)

height 1.85 m
width 1.75 m
depth 0.70 m

weight approx. 140 kg



scale 1:50

Components

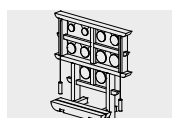
1 support frame with 10 metal discs
and 2 beaters

Installation information

Recommended space
3.00 x 2.00 m

Foundations
1 item 150 x 60 x 55 cm
excavation 75 cm

Attention!
Exact measurements may vary, for
all installation dimensions refer to
current installation instructions.
Subject to technical changes!



10.52200

Function and Play value

The curved steel plate enables the forces pulling on the three steel strings to be seen and felt. Because the strings are not clamped into a ridged frame like piano strings, their note changes constantly. They produce quiet, relatively deep sounds when someone plucks or strikes them.

Suitable

- for city centres, parks, promenades



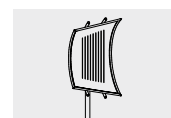
Note

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

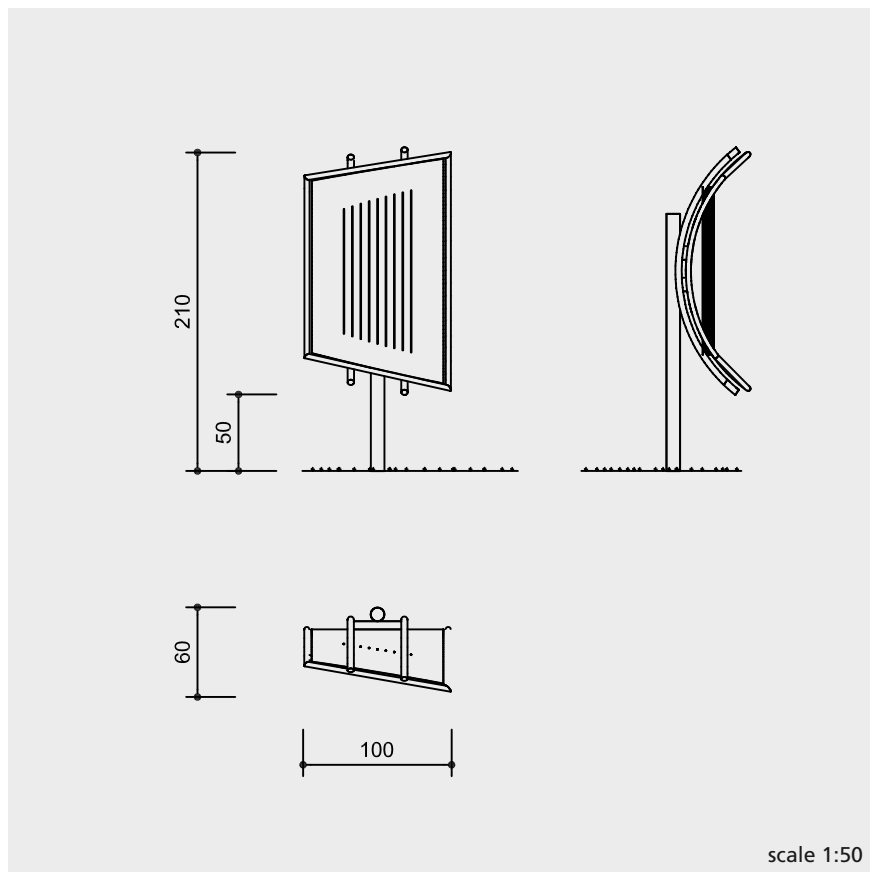


Sound Chord graubner Play Stations for Developing the Senses

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



10.52300



Technical information

equipment made of stainless steel

strings made of stainless steel,
wrapped in copper wire

Dimensions

(small deviations possible)

height	2.10 m
width	1.00 m
depth	0.60 m
weight approx.	80 kg

Components

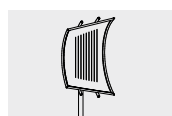
1 complete piece of equipment
with 9 strings
for fixation with screws, fastening
material included

Installation information

Recommended space
2.50 x 2.00 m

foundations
1 item 60 x 60 x 50 cm
excavation 70 cm

Attention!
Exact measurements may vary, for
all installation dimensions refer to
current installation instructions.
Subject to technical changes!



10.52300

Function and 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 clear and lasting sound.

Suitable

- for public areas,
parks, play centres,
museums, music gardens

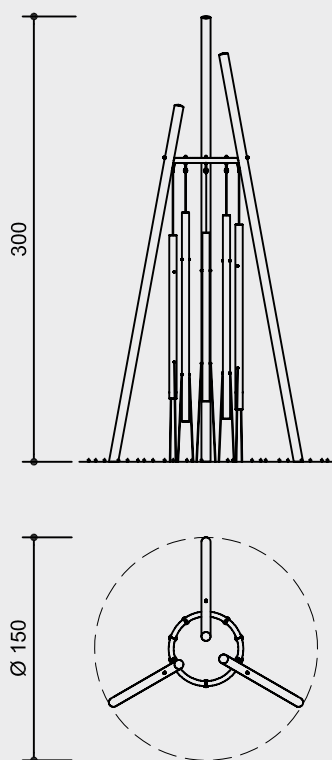


Tubular Chimes *graubner* Play Stations for Developing the Senses

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



10.52400



Technical information

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

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 approx. 90 kg

Components

3 supporting tubes on foot plates
1 ring with 5 sound tubes and
tensioning cables on base plate,
each to be screwed in,
fastening material included
2 beaters

Installation information

Recommended space
circle diameter 3.00 m

Foundations
1 item triangular,
length of the edge 175 cm,
20 cm high, excavation 30 cm

Attention!

**Exact measurements may vary, for
all installation dimensions refer to
current installation instructions.**
Subject to technical changes!



10.52400

Function

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.

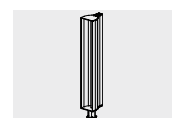
Suitable

- for particularly windy locations, lookout points, nature parks

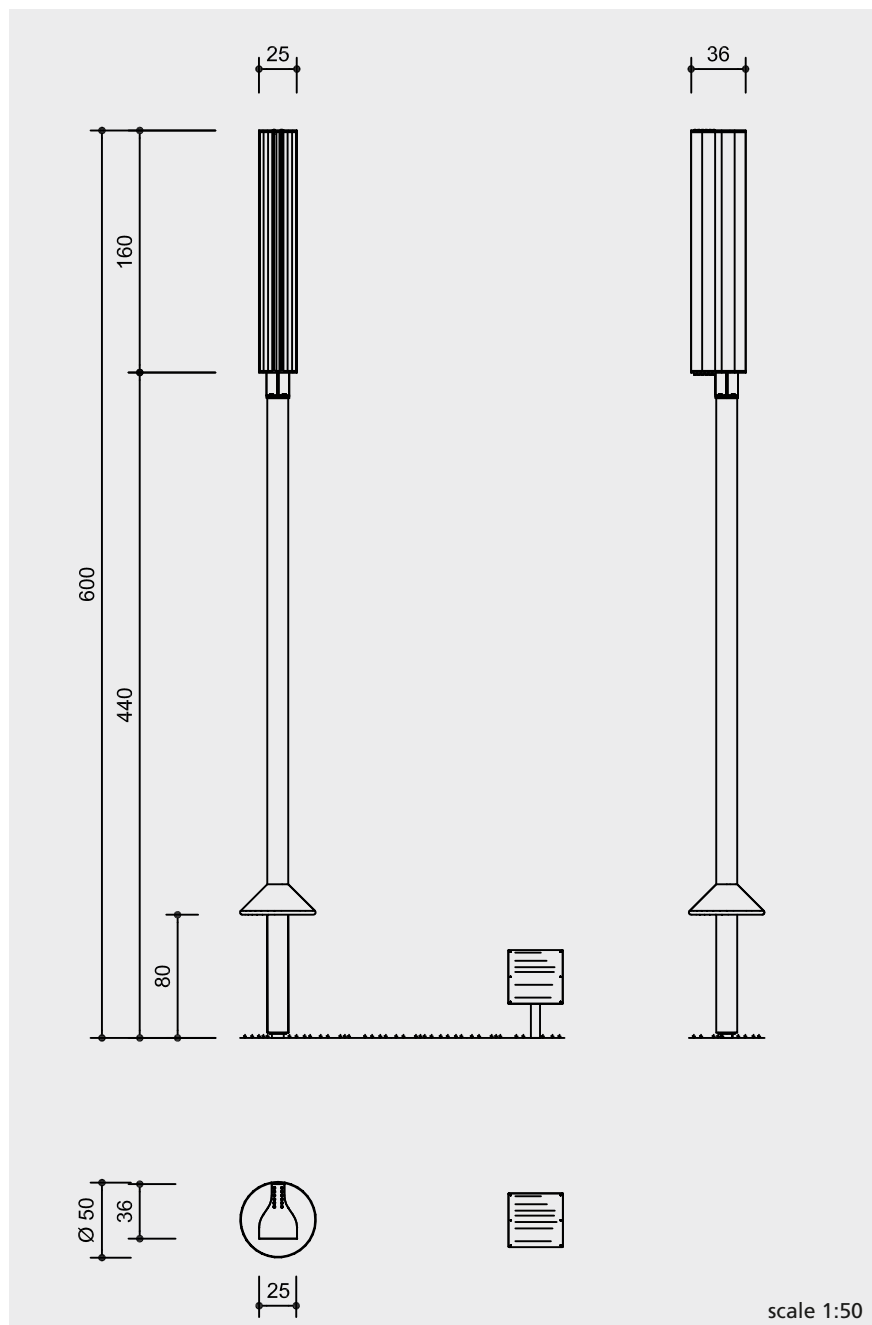


Wind Harp
graubner Play Stations for
Developing the Senses

Acoustic effect	with strong winds not suitable for residential areas
Vandalism	not vulnerable
Supervision	not necessary
Explanation board	included
Installation	outdoors
Safety check (EN 1176)	not necessary
Installation in concrete	possible



10.52500



Technical information

rotating, stainless steel mast, with lubricating nipple and 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

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 approx.	200 kg

Components

- 1 complete piece of equipment with steel mast and foundation anchor
- 1 Explanation Board with support

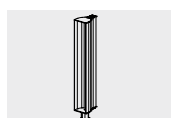
Installation information

Recommended space
circle diameter 3.00 m

Foundations
1 item 130 x 130 x 70 cm, reinforced
blinding layer 5 cm
excavation 115 cm
Explanation Board
1 item 40 x 40 x 40 cm
excavation 60 cm

Attention!

Exact measurements may vary, for all installation dimensions refer to current installation instructions.
Subject to technical changes!



10.52500



Function and 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 hammer 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.

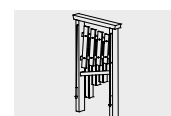
Suitable

- for indoors and outdoors
- for parks, health resort gardens, national parks, zoological and botanical gardens, schools, kindergartens, sanatoriums, institutions for people with special needs



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

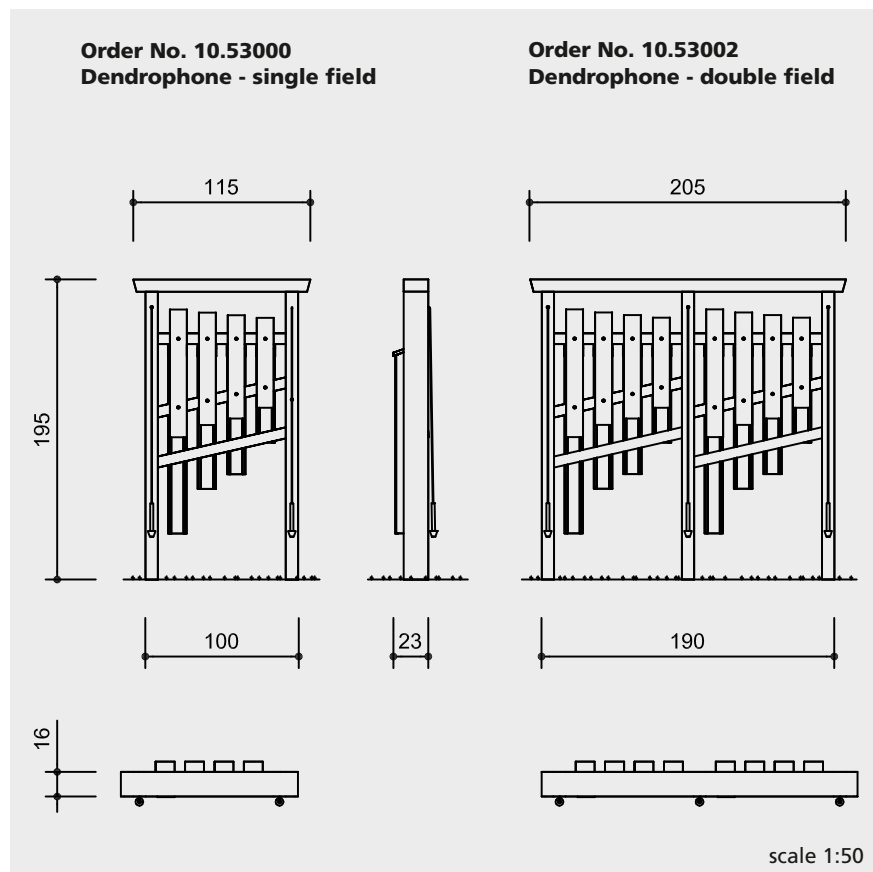
Acoustic effect	soft
Vandalism	not vulnerable
Supervision	not necessary
Explanation board	not necessary
Installation	indoors and outdoors
Safety check (EN 1176)	not necessary
Installation in concrete	possible



10.53000



10.53002



Technical information

frame made of weather-resistant oak

carefully chosen 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)

height 1.95 m
single field width 1.15/1.00 m
double field width 2.05/1.90 m
depth 0.23 m

weight approx. 75/140 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

Installation information

Recommended space

Single field 2.50 x 2.10 m

Double field 2.50 x 3.00 m

Foundations

Single field

2 items 40 x 40 x 40 cm

excavation 60 cm

Double field

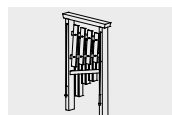
3 items 40 x 40 x 40 cm

excavation 60 cm

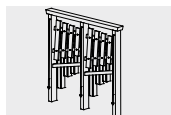
Attention!

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

Subject to technical changes!



10.53000



10.53002

Function and 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.

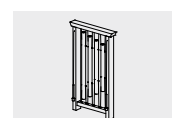
Suitable

- for parks, health resort gardens, national parks, zoological and botanical gardens, schools, kindergartens, sanatoriums, institutions for people with special needs

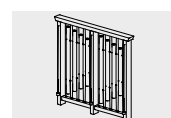


Tubular Dendrophone - single field
Tubular Dendrophone - double field
graubner Play Stations for
 Developing the Senses

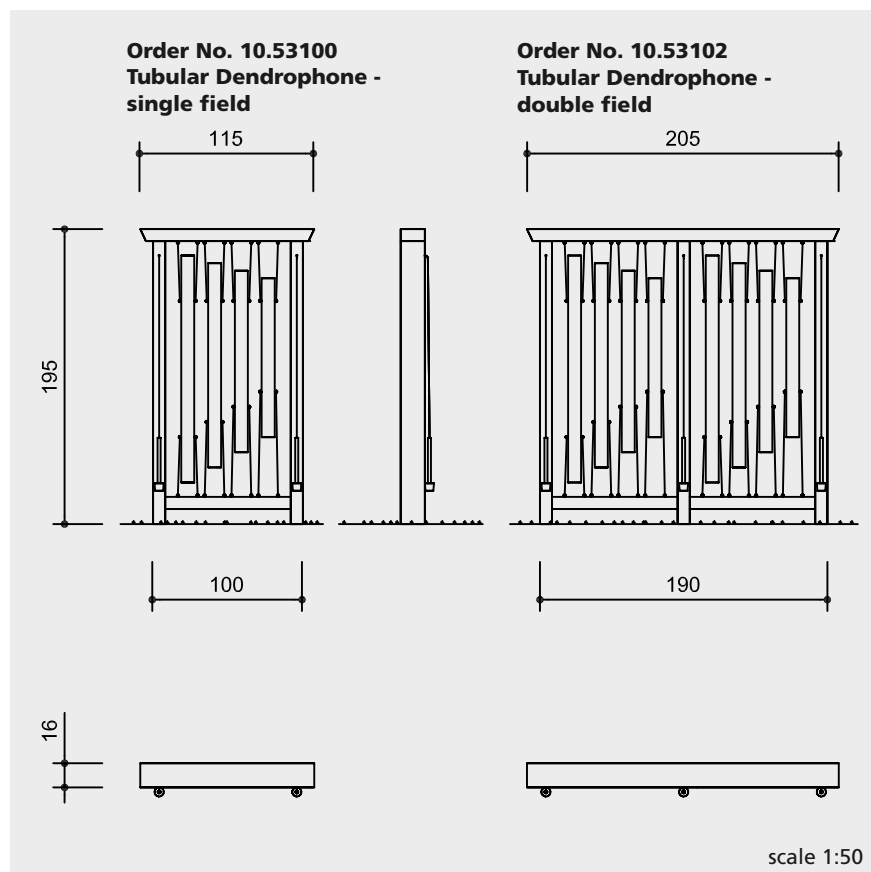
Acoustic effect	soft
Vandalism	slightly vulnerable
Supervision	not necessary
Explanation board	not necessary
Installation	indoors and outdoors
Safety check (EN 1176)	not necessary
Installation in concrete	possible



10.53100



10.53102



Technical information

frame made of weather-resistant oak

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)

height	1.95 m
single field width	1.15/1.00 m
double field width	2.05/1.90 m
depth	0.16 m

weight	
single field	approx. 85 kg
double field	approx. 160 kg

Components

Order No. 10.53100
Tubular Dendrophone- single field
 1 single field with 4 sound tubes
 and 2 beaters

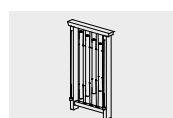
Order No. 10.53102
Tubular Dendrophone - double field
 1 double field with 8 sound tubes
 and 3 beaters

Installation information

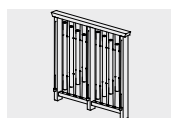
Recommended space
Single field 2.50 x 2.10 m
Double field 3.00 x 2.50 m

Foundations
Single field
 2 items 40 x 40 x 40 cm
 excavation 60 cm
Double field
 3 items 40 x 40 x 40 cm
 excavation 60 cm

Attention!
Exact measurements may vary, for
all installation dimensions refer to
current installation instructions.
 Subject to technical changes!



10.53100



10.53102

Function and 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.

Suitable

- for parks, health resort gardens, national parks, zoological and botanical gardens, schools, kindergartens, sanatoriums, institutions for people with special needs

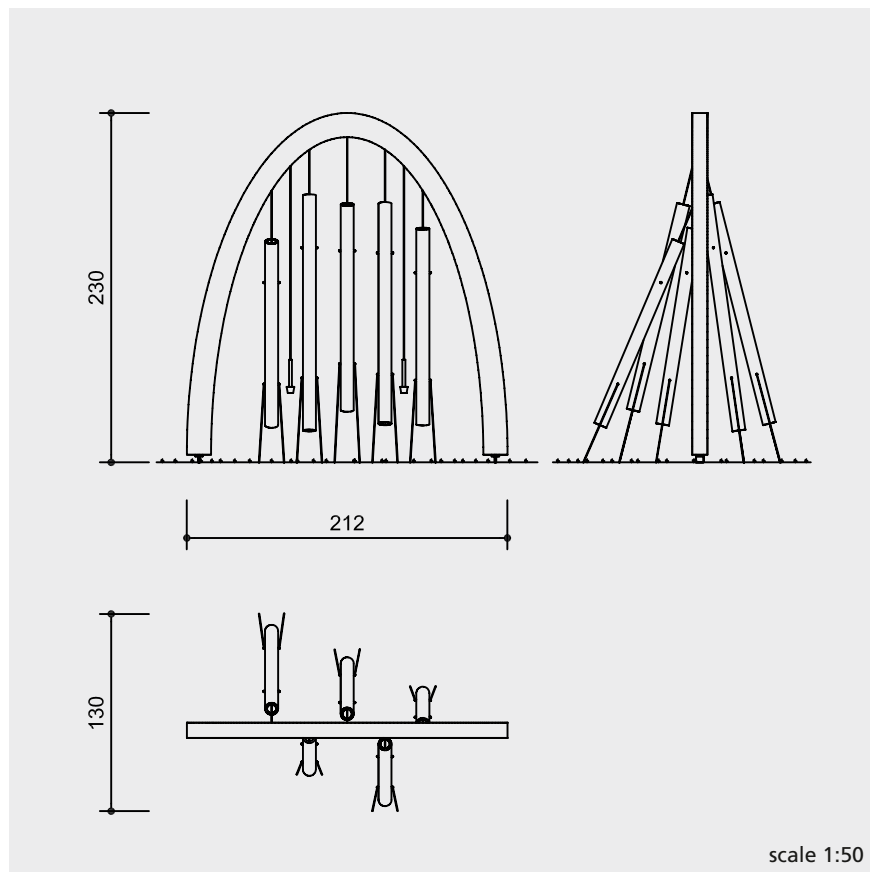


Sound Arch
graubner Play Stations for
Developing the Senses

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



10.53200



Technical information

wooden frame, constructed from oiled larch, glued into the shape of an arch

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	2.30 m
width	2.12 m
depth	1.30 m

weight approx.	110 kg
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Components

1 wooden frame with steel feet
5 sound tubes with tensioning cables and base plates for fixation with screws, fastening material included
2 beaters

Installation information

Recommended space
4.50 x 3.00 m

Foundations
2 items 50 x 50 x 50 cm
excavation 65 cm
1 item 175 x 30 x 30 cm
excavation 45 cm
1 item 100 x 30 x 30 cm
excavation 45 cm

Attention!

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

Subject to technical changes!



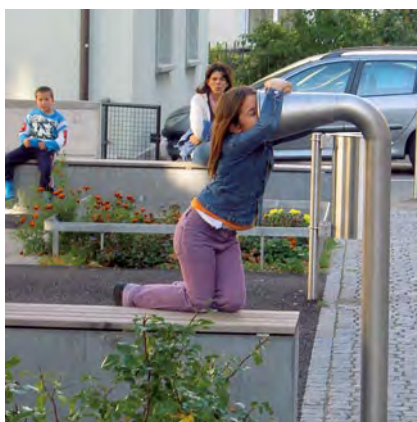
10.53200

Function and 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.

Suitable

- for parks, therapy gardens, schoolyards, playgrounds

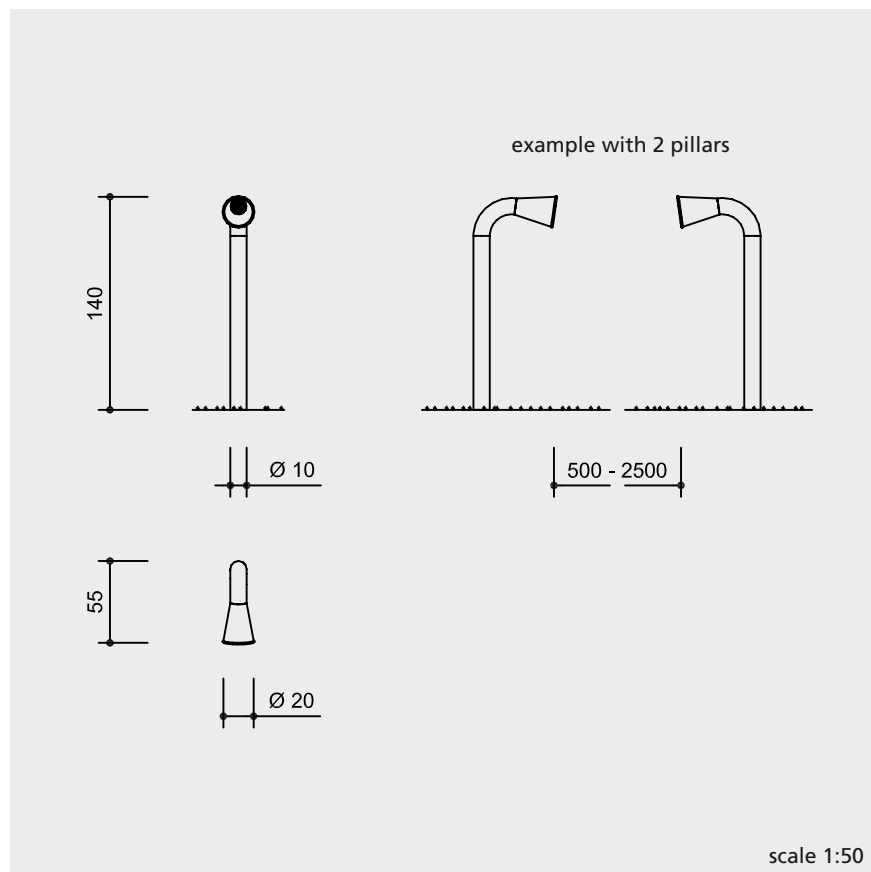


Conference *graubner* Play Stations for Developing the Senses

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



10.55000



Technical information

pillar made of stainless steel

cone shaped opening with perforated sheet cover

Dimensions

(small deviations possible)

height	1.40 m
tube diameter	0.10 m
speech and listening tube depth	0.20 m
depth	0.55 m

weight approx. 21 kg per stele

Components

depending on the number ordered
2 - 4 pillars with coupling

minimum number is 2 pillars

On-site work

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

Installation information

Recommended space
circle diameter 2.00 m per pillar

Foundations
1 item 60 x 60 x 70 cm per pillar
excavation 90 cm

Attention!

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

Subject to technical changes!



10.55000

Function and 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.

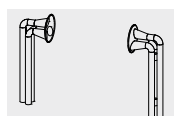
Suitable

- for parks, children's hospitals, therapy gardens, schoolyards
- for entrances to public buildings

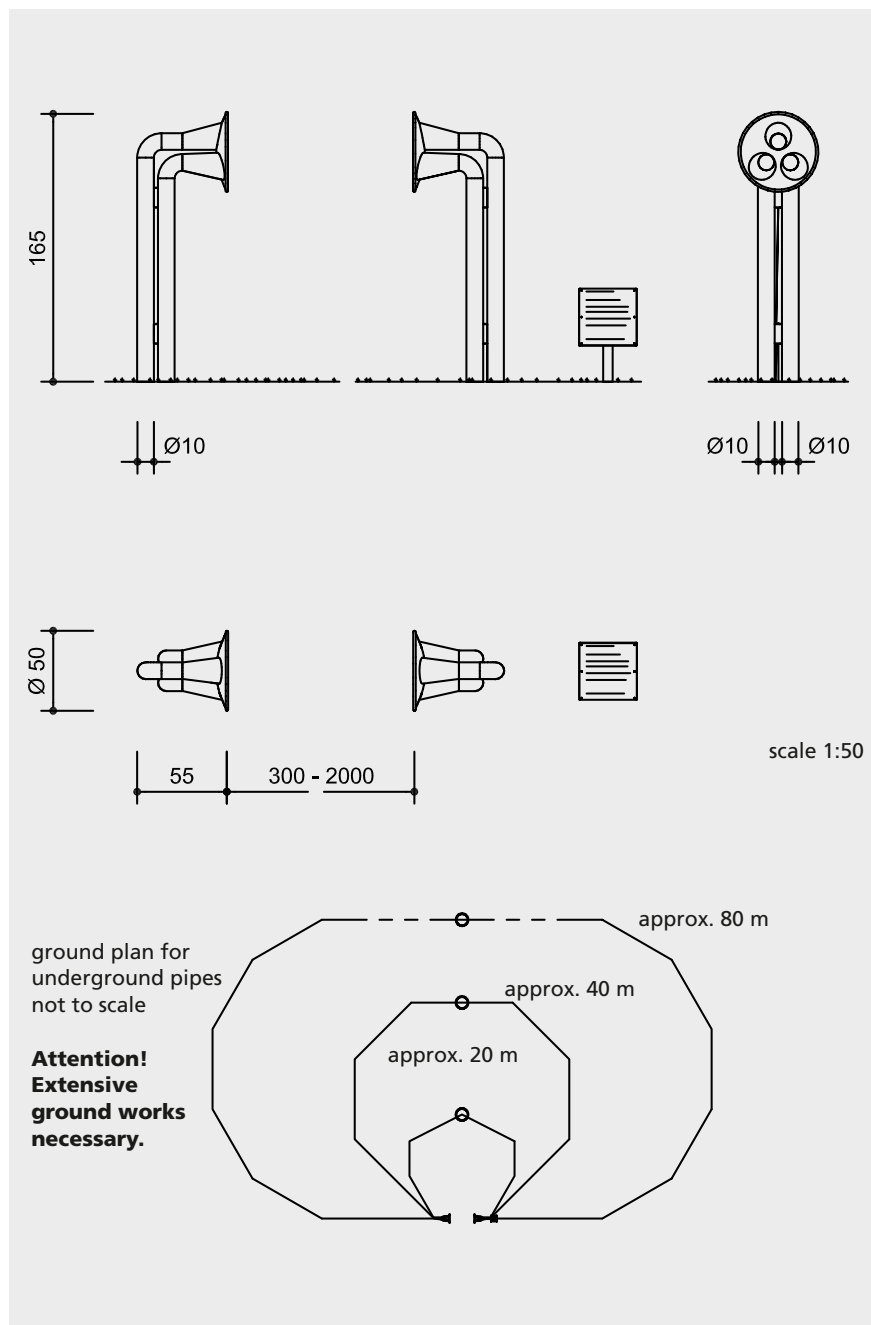


Echo Game graubner Play Stations for Developing the Senses

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



10.55100



Technical information

echo pillars made of stainless steel

cone shaped openings with incorporated sound reflector and perforated sheet cover

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 approx.	80 kg

Components

2 echo pillars with flange and couplings
1 Explanation Board with support

On-site work

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

Installation information

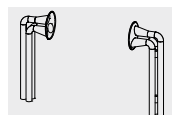
Recommended space
circle diameter 2.00 m per pillar

Foundations
2 items 80 x 80 x 70 cm
excavation 100 cm
Explanation Board
1 item 40 x 40 x 40 cm
excavation 60 cm

Attention!

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

Subject to technical changes!



10.55100

Function and 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.

Suitable

- for footpaths near watercourses, parks, health resort gardens
- for entrances and reception areas



Listening to Water graubner Play Stations for Developing the Senses

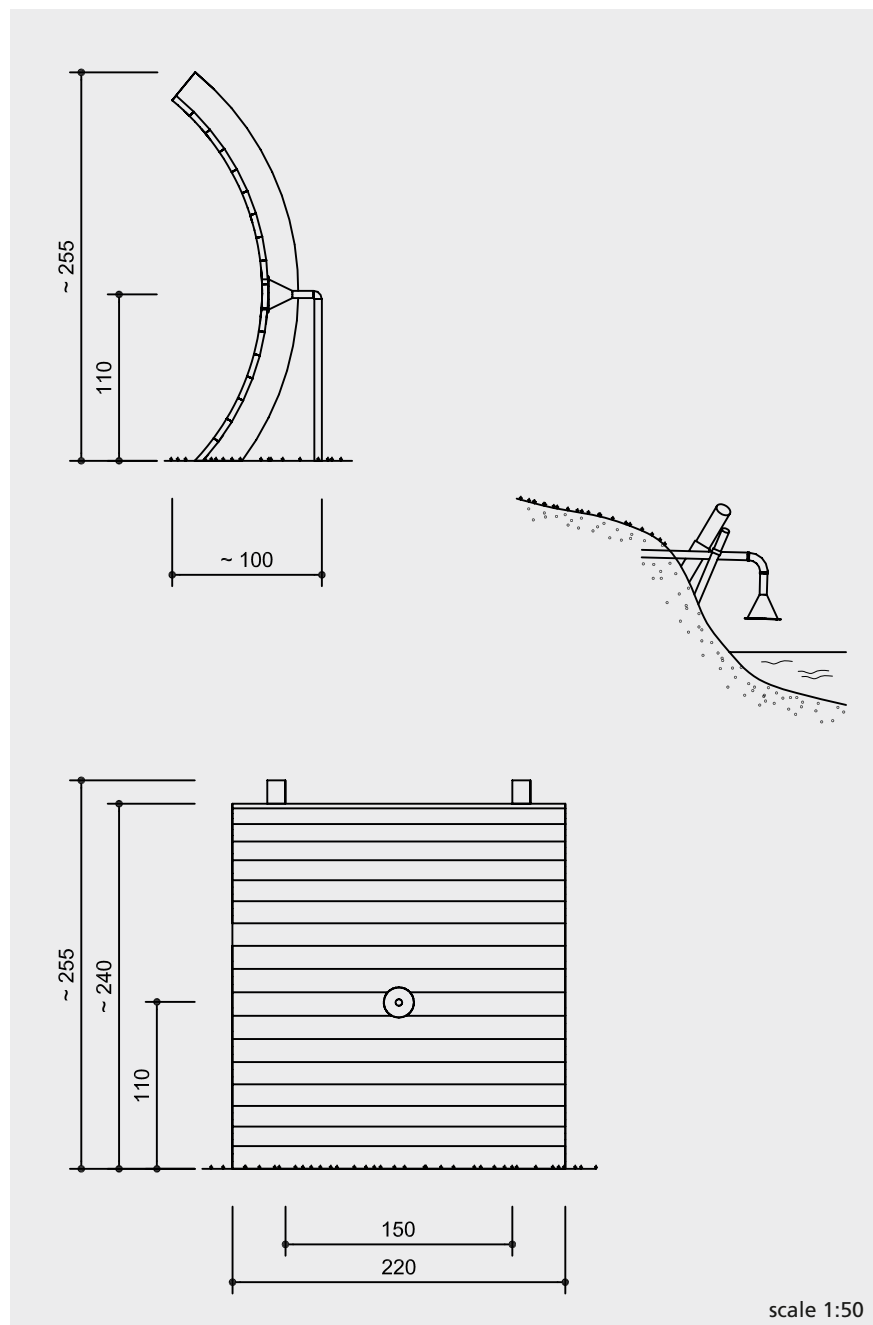
Acoustic effect	very soft
Vandalism	not vulnerable
Supervision	not necessary
Explanation board	recommended
Installation	outdoors
Safety check (EN 1176)	not necessary
Installation in concrete	not possible



10.57100



10.57200



Technical information

all pipe and cone elements made of stainless steel

hot-dip galvanised frame

planking made of mountain larch, selected according to eight quality criteria

Dimensions

(small deviations possible)

height	2.55 m
listening height	1.10 m
width	2.20 m
depth	1.00 m

weight approx. 220 kg

Components

Order No. 10.57100

Listening to Water

1 reflecting wall with listening cone
1 sound receiving cone

Order No. 10.57200

Listening to Water as Pillar

1 listening pillar
1 sound receiving cone

On-site work

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

Installation information

Recommended space
depending on the installation situation

Foundations

Order No. 10.57100

2 items 50 x 50 x 70 cm
excavation 90 cm

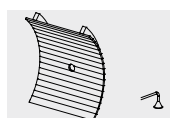
Order No. 10.57200

1 item 60 x 60 x 70 cm
excavation 90 cm

Attention!

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

Subject to technical changes!



10.57100



10.57200

Function and 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. With changes of more than +/- 10 % please request a price that will differ from the list price.

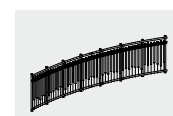
Suitable

- for public places
- to support sensory perception for senior citizens and people with special needs
- early musical education

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

Melodic Fence „Hänschen Klein“ „Frère Jacques“

graubner Play Stations for
Developing the Senses



10.58000

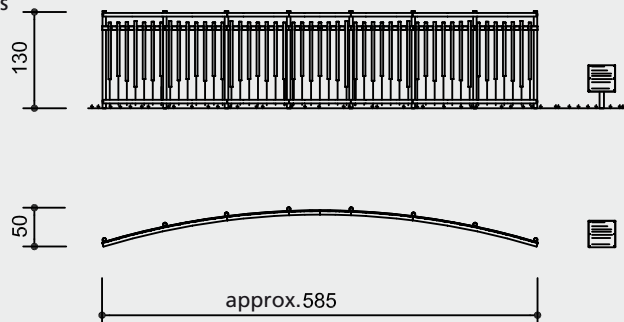


10.58100

"Hänschen Klein"

Order no. 10.58000

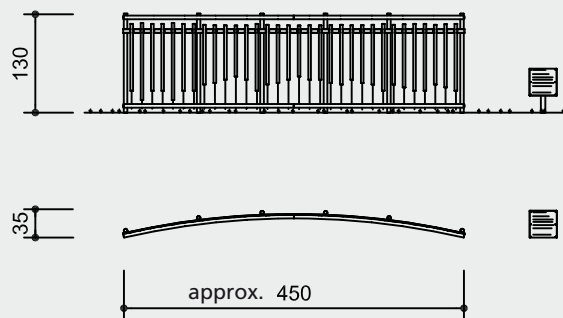
with 49 notes



"Frère Jacques"

Order no. 10.58100

with 32 notes



scale 1:100

Technical information

melodic fence made of stainless steel
with metal sound tubes

support for Explanation Board made of
stainless steel

Dimensions

(small deviations possible)

Order no. 10.58000 „Hänschen Klein“

height 1.30 m

length approx. 5.85 m

weight approx. 100 kg

Order no. 10.58000 „Frère Jacques“

height 1.30 m

length approx. 4.50 m

weight approx. 85 kg

Components

- 1 complete piece of equipment
with base plates for fixation with
screws, fastening material included
- 1 Explanation Board with support

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 60 cm

Order no. 10.58100

2 items 220 x 40 x 50 cm
excavation 60 cm

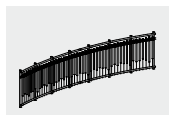
Explanation Board

1 item 40 x 40 x 40 cm
excavation 60 cm

Attention!

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

Subject to technical changes!



10.58000



10.58100



①



②



③



④



⑤



⑥



⑦

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 Growing Older
- ③ graubner Play Stations for Developing the Senses
- ④ Water and Play
- ⑤ Child and Play
- ⑥ Movement by Climbing
- ⑦ For the Very Young

Please ask for our information materials.
We look forward to hearing from you.
Phone +49-80 52/1 79 80

