

Play value

The observer gently spins the disc and then takes a step back. Looking at the disc the eye actively and automatically creates complementary and polar counter images. The sense of sight thus fulfils a basic principle of nature: maintaining the unity in a variety of perceptions, and thus through this unity maintaining the diversity. As a result of the turning motion of the Rotating Discs, observers see a dynamic penetration of the light and dark rotating parts. This creates surprising, colourful light phenomena.

Recommended for

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



Photo © Daniel Perales

Order No. 10.22505 Spiral 2 with post made of stainless steel, Photo © Liz Ligon

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

Rotating Discs *graubner* Play Stations for Developing the Senses



10.22100 - 10.22850



Order No. 10.22450 Rotating Coloured Disc for wall attachment

Colour Disc

The disc is divided into blue and yellow sectors. Turning creates not only a mixture of colours, but also the colour green and after that the complementary colour red. The observer experiences the effect of colour as a physical, non-material appearance.

Order No. 10.22350 Pulsation for wall attachment











Spiral

When the observer turns the disc clockwise, the spiral appears to expand further and further. Turning the disc the opposite way forms a continually deepening funnel. The eye attempts to compensate the one-sidedness of the rotation by involuntarily jumping from one spiral line to the next. This counteraction has the effect of appearing to slow down the rotation and make the funnel grow larger. The complementary colours appear on the borders of the black pattern. If the gaze is diverted from the disc then it appears as if the entire surroundings expand or contract in contrast to the image last seen on the disc - as if in slow motion - resulting in great astonishment. The eye "compensates". By seeing the complementary colours, a fundamental principle of light becomes visible: colour as the dynamic penetration of dark and light in the form of black and white spiral lines.

Funnel

Turning the disc slowly creates the impression of a rotating cone and funnel, around which there are regular black and white stripes. The impression remains unchanged even if the observer looks at it from different angles. The reason is that the eye seeks a virtual centre in the asymmetrical pattern. However, it can only achieve this by creating a third dimension, namely perspective, thus making the cone or funnel appear three-dimensional.

Pulsation

Here the eye perceives a pulsating physical motion similar to breathing in and out. The square and circle play around each other, pulling together and drawing outwards.

Order No. 10.22505 Spiral 2 with post made of stainless steel. Photo © Paul Upward



Order No. 10.22550 Spiral 2 as wall attachment



Order No. 10.22450 Colour Disc as wall attachment



Special Versions

Design W. Graubner based on H. Kükelhaus

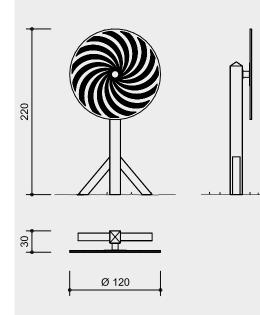
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Rotating Discs graubner Play Stations for Developing the Senses



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Order No. 10.22100 - 10.22850 **Rotating Discs**



Item

Safety distance	→
Device dimensions	
unctional distance	

Technical information

Frame made of oak

Core-free

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

Roller bearings

High-quality roller bearings made of chrome steel or stainless steel for rotating elements, easy to maintain and exchange, sealed

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

Maintenance-free ball bearing (for enduring motion)

Flange and fastening screws made of stainless steel

Supports made of special plastic

Large-format patterned disc with sufficient motion mass

Precise black and white or coloured print with weather-resistant, special protective paint

Anti-glare surface

Dimensions

(small deviations possible)

Height	2.20 m
Depth	0.30 m
Disc diameter	1.20 m
Weight	80 kg

Components

1 Disc with pattern and bearing,

Trademark

40-0682207 South Korea

Explanation board on request

Installation information

Recommended space 6.00 x 2.50 m

Foundations Stand Frame made of wood 1 item 40 x 40 x 40 cm Excavation depth 60 cm 2 items 30 x 50 x 30 cm Excavation depth 50 cm Stand post made of stainless steel 1 item 60 x 60 x 60 cm Excavation depth 80 cm

10.22250	Funnel for wall attachment	
10.22300 10.22305 10.22350	Pulsation with stand frame made of wood Pulsation with stand post made of stainless steel Pulsation for wall attachment	
10.22400 10.22405 10.22450	Colour disc with stand frame made of wood Colour disc with stand post made of stainless steel Colour disc for wall attachment	
10.22500 10.22505 10.22550	Funnel 2 with stand frame made of wood Funnel 2 with stand post made of stainless steel Funnel 2 for wall attachment	
10.22600 10.22605 10.22650	Pulsation 2 with stand frame made of wood Pulsation 2 with stand post made of stainless steel Pulsation 2 for wall attachment	_
10.22700 10.22705 10.22750	Pulsation 3 with stand frame made of wood Pulsation 3 with stand post made of stainless steel Pulsation 3 for wall attachment	
10.22800 10.22805 10.22850	Spiral 2 with stand frame made of wood Spiral 2 with stand post made of stainless steel Spiral 2 for wall attachment	

Spiral with stand frame made of wood

Funnel with stand frame made of wood

Spiral for wall attachment

Spiral with stand post made of stainless steel

Funnel with stand post made of stainless steel



Exact measurements may vary; for all installation dimensions refer to current assembly instructions. Technical changes reserved. Equipment also available with stainless steel stand post or for wall attachment (see table).



Order No.

10.22100

10.22105

10.22150

10.22200 10.22205

Scale 1:50

Motive

Height	2.20 m
Depth	0.30 m
Disc diameter	1.20 m
Weight	80 kg

1 Stand Frame

fastening material included

30 2005 500 000 Germany