

## **SPIRAL STAIRS**

Upwards with momentum



## Flexible design. Sustainable use.

True to this motto, Minka has been producing stairs in the heart of Austria since 1952. While the initial focus was primarily on the production of attic staircases, system staircase production has continued to grow in recent decades. This has enabled us to build up an extensive product range: From highly insulated and fire-retardant loft ladders to space-saving and spiral staircases to galvanised external staircases. Over the past 70 years, we have established ourselves on the national and international staircase market and are now one of the largest staircase manufacturers in the world.

Thanks to our state-of-the-art production facilities and our in-house powder coating department, we can flexibly customise our products to meet any residential requirements and guarantee an excellent price-performance ratio. The modular system of Minka system staircases allows customers to choose between different types of wood, metal colours, installation options and sizes. Thanks to the high quality standards, excellent insulation technology and the use of durable and low-wear materials, Minka staircases are not only extremely sustainable in production, but also in use.





## **Upwards with momentum**

#### Flexible spiral staircases from Minka

The special thing about Minka spiral staircases is the combination of quality and extreme flexibility. Although they are classified as 'non-essential stairs' under building regulations, they still serve as a fixed connection between two floors. Minka spiral staircases consist of a flexible construction kit that can be easily adapted to the respective spatial conditions.

For example, the incline and therefore the overall height of the staircase can be easily varied. The patented system for adjusting the height of our spiral staircases allows the tubular elements of the centre column to be easily adjusted to the desired height. Individual slices of the tube can be easily broken off along pre-cut lines using laser technology to shorten the spindle. Thanks to this innovative system, our spiral staircases are completely plastic-free, which significantly increases stability and quality.



There is also great flexibility in the choice of diameters and materials. We offer almost all models in two to four different sizes. This means we have the ideal solution for both tight spaces and large areas. The wood for our spiral staircases comes from sustainable European cultivation and is coated with a high-quality varnish. Depending on which style you prefer, you can choose between beech, walnut, oak and white. As we powdercoat the metal parts of our stairs ourselves, there are no limits to the colour scheme. Our standard colours include deep black, matt grey and plain white. Whether indoors or outdoors, spiral staircases from Minka are always the architectural centre of attention thanks to the wide range of material combinations.

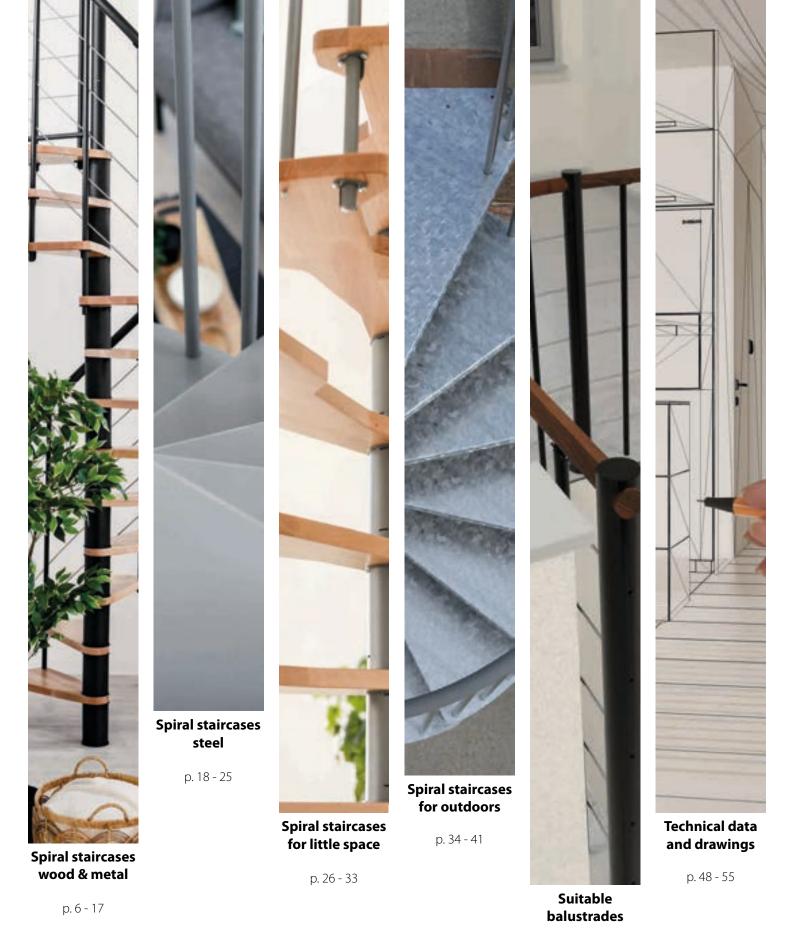
Let us convince you of the quality and flexibility of Minka spiral staircases - because a Minka is bought for life!



#### Scan me!

On all product pages you will find a QR code. If you scan this with your smartphone, you will be taken directly to the corresponding product page in the Minka online shop.

There you will not only find all the complete and current data on the product, but you can also personalise the staircase and view it in different colour variants, for example.



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## **Table of contents**

# Spiral stairs made of wood & metal

#### Wood + steel = perfect match ♥

Furniture made of wood and steel has become an integral part of modern households. The combination of the natural material with metal results in an unusual and modern design that complements any furnishing style.

The wood for our spiral staircases has not travelled halfway around the world, but comes exclusively from Europe. Our beech and oak wood has been awarded the FSC certificate. This testifies to the high quality and sustainability of the material.

We produce all the steel parts for our staircases ourselves. Our state-of-the-art laser and bending machines shape the steel parts with great precision. With the help of our in-house powder coating facilities, the parts are surface-finished and coloured to the desired RAL shade.

The combination of these high-quality materials results in spiral staircases of unbeatable quality and exceptional appearance.







Wood is a product of nature. Just as every tree is unique, the grain and colour of our solid wood stair treads also vary.





## **Fusion**

## Steps made of solid wood with steel cover

The Fusion is a spiral staircase with very special steps: they are half solid wood and half powder-coated steel. The steps can be installed either with the metal side or the wooden side facing upwards - depending on which surface you prefer for your home. The railing with stainless steel bottom chords and the handrail made of high-quality PVC provide a comfortable grip and the necessary safety when climbing the stairs.

#### **ACCESSORIES**

- Height extension
- Balustrade

#### **DIRECTION OF ROTATION**







clockwise

#### WOOD



**Beech** lacquered



**Walnut** beech stained dark, lacquered



**Oak** lacquered



**White**beech stained
light, lacquered

#### **METAL**



**Black** RAL 9004 FS



**Grey** RAL 9023 FS



White RAL 9016 FS



TECHNICAL DATA	drawings on p. 53	
Diameter	120, 140, 160 cm	
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	2951 mm 3178 mm 3405 mm	
Rise per step	182 - 227 mm	
Number of steps	12 + 1 platform	

## **Switch**

## Half metal, half wood - steps flexibly reversible

The spiral staircase Switch impresses with its unusual look with steps made of wood and steel. These can be installed with the wooden side facing upwards or with the metal side facing upwards - giving you flexible design options, just the way you want them. The railing consists of powder-coated steel rods and a high-quality PVC handrail. This fits comfortably in the hand when climbing the stairs.

#### **ACCESSORIES**

- Height extension
- Balustrade

#### **DIRECTION OF ROTATION**







clockwise

#### WOOD



**Beech** lacquered



**Walnut** beech stained dark, lacquered



**Oak** lacquered



**White**beech stained
light, lacquered

#### **METAL**



**Black** RAL 9004 FS



**Grey** RAL 9023 FS



White RAL 9016 FS





Diameter	120, 140, 160 cm
Maximum storey height	
<ul> <li>Standard</li> </ul>	2951 mm
<ul> <li>With 1 height extension</li> </ul>	3178 mm
<ul> <li>With 2 height extensions</li> </ul>	3405 mm
Rise per step	182 - 227 mm
Number of steps	12 + 1 platform

## **Venezia**

## Elegant spiral staircase with solid wood handrail

High-quality wood combined with dynamic metal elements - that's the unmistakable look of the spiral staircase Venezia. The curved stainless steel bottom rails wind elegantly upwards, making the Venezia a visual highlight in your home. The many wood variants in particular ensure that the Venezia spiral staircase can be adapted to any individual room situation.

#### **ACCESSORIES**

- Height extension
- Balustrade straight or round
- Special platform

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### WOOD



**Beech** lacquered



**Walnut** beech stained dark, lacquered



**Oak** lacquered



**White**beech stained
light, lacquered

#### **METAL**



**Black** RAL 9004 FS



**Grey** RAL 9023 FS



White RAL 9016 FS





Diameter	120, 140, 160 cm
Maximum storey height • Standard • With 1 height extension	3055 mm 3290 mm
With 2 height extensions	3525 mm
Rise per step	190 - 235 mm
Number of steps	12 + 1 platform

## **Venezia Smart**

## Modern spiral staircase with handrail made of PVC

The spiral staircase Venezia
Smart brings the light Italian
flair directly into your home. The
combination of flat wooden
treads and curved bottom rails
gives the staircase a dynamic
and modern look. Thanks to the
large selection of wood types
and metal colours, the Venezia
Smart perfectly complements a
wide range of furnishing styles.
The PVC handrail makes the
Venezia Smart the ideal choice
for anyone who values a pleasant
feel and a slightly lower price.

#### **ACCESSORIES**

- · Height extension
- Balustrade
- Special platform

#### **DIRECTION OF ROTATION**



anti-clockwise



clockwise

#### WOOD



**Beech** lacquered



**Walnut** beech stained dark, lacquered



**Oak** lacquered



**White**beech stained
light, lacquered

#### **METAL**



**Black** RAL 9004 FS



**Grey** RAL 9023 FS



White RAL 9016 FS











#### **TECHNICAL DATA**

Diameter	100*, 120, 140, 160 cm
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	3055 mm 3290 mm 3525 mm
Rise per step	190 - 235 mm
Number of steps	12 + 1 platform

## **Spiral Wood**

## Sturdy staircase with handrail made of lacquered solid wood

A steel frame combined with 35 mm thick steps and a handrail made of real solid wood - the spiral staircase Spiral Wood is second to none in terms of stability. With its secure balustrade, the Spiral Wood is the ideal choice for families. In addition to its high stability, the Spiral Wood also scores highly in terms of design. There are countless personalisation options here.

#### **ACCESSORIES**

- · Height extension
- Balustrade straight or round
- Special platform

#### **DIRECTION OF ROTATION**





anti-clockwise



clockwise

#### WOOD



**Beech** lacquered



**Walnut** beech stained dark, lacquered



**Oak** lacquered



**White**beech stained
light, lacquered

#### **METAL**



**Black** RAL 9004 FS



**Grey** RAL 9023 FS



White RAL 9016 FS



# TECHNICAL DATA drawings on p. 50 Diameter 120, 140, 160 cm Maximum storey height • Standard 3055 mm • With 1 height extension 3290 mm • With 2 height extensions 3525 mm Rise per step 190 - 235 mm

12 + 1 platform

Number of steps

## **Spiral Effect**

#### Spiral staircase with powdercoated aluminium handrail

The Spiral Effect skilfully combines wood and metal to create a beautifully designed spiral staircase that attracts everyone's attention. Thanks to the wide range of personalisation options, you can adapt the Spiral Effect perfectly to your interior design. However, it not only scores points with a wide range of colours, but also with a particularly sturdy banister with a handrail made of powder-coated aluminium. This makes the Spiral Effect a great choice for families.

#### **ACCESSORIES**

- · Height extension
- Balustrade straight or round
- Special platform

#### **DIRECTION OF ROTATION**



anti-clockwise



clockwise

#### WOOD



**Beech** lacquered



**Walnut** beech stained dark, lacquered



**Oak** lacquered



**White**beech stained
light, lacquered

#### **METAL**



**Black** RAL 9004 FS



**Grey** RAL 9023 FS



White RAL 9016 FS



#### **TECHNICAL DATA**

Diameter	120, 140, 160 cm
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	3055 mm 3290 mm 3525 mm
Rise per step	190 - 235 mm
Number of steps	12 + 1 platform

## Spiral Smart

#### Safe to use thanks to stable structure with bar railing

The Spiral Smart is a particularly versatile spiral staircase. With its straightforward and rather simple shape, it is a true all-rounder and blends pleasantly into any room design. The Spiral Smart is particularly suitable for families with children and pets - thanks to the sturdy wooden steps and closely spaced balusters, it allows the whole family to ascend and descend safely.

#### **ACCESSORIES**

- Height extension
- Balustrade
- Special platform

#### **DIRECTION OF ROTATION**







clockwise









#### WOOD



**Beech** lacquered



Walnut beech stained dark, lacquered



Oak lacquered



White beech stained light, lacquered

#### **METAL**



**Black** RAL 9004 FS



Grey RAL 9023 FS



White **RAL 9016 FS** 



Number of steps

## **Berlin**

#### Beech wood steps combined with modern steel elements

The spiral staircase Berlin from Minka impresses with its simple yet elegant design. The combination of straight wooden treads and straight balusters creates a harmonious overall look that visually enhances any room. But the spiral staircase Berlin is not only visually appealing - thanks to the sturdy centre column and railing, safe stair climbing is always guaranteed.

#### **ACCESSORIES**

- · Height extension
- Balustrade
- Special platform

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### WOOD



Beech lacquered

#### **METAL**



RAL 9004 FS





RAL 9023 FS







TECHNICAL DATA	drawings on p. 51
Diameter	120, 140 cm
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	2820 mm 3055 mm 3290 mm
Rise per step	190 - 235 mm
Number of steps	11 + 1 platform

## **Paris**

## Elegant spiral staircase with step railing

The spiral staircase Paris is a real eye-catcher in any living space with its high-quality solid beech wood treads and elegant powder-coated steel railing. At the same time, it is the ideal choice for anyone who is looking for good value for money. The spiral staircase Paris is one of the more affordable models from Minka. The reason for this is a smaller selection of colours and sizes.

#### **ACCESSORIES**

- · Height extension
- Balustrade
- Special platform

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### WOOD



**Beech** lacquered

#### **METAL**













## **TECHNICAL DATA** drawings on p. 51 Diameter 140 cm

Diameter	140 cm
Maximum storey height • Standard	2820 mm
<ul><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	3055 mm 3290 mm
Rise per step	190 - 235 mm
Number of steps	11 + 1 platform

## --> Facts about Minka

#### Patented height adjustment system

The patented height tubes of our spiral staircases have pre-punched breaking points at which individual rings can be broken off using a screwdriver. This allows the height to be flexibly adjusted without compromising stability.



#### Wood from sustainable sources

The wood for our system staircases comes from Bosnia, Poland and Slovakia. The beech and oak wood has been awarded the FSC certificate. This means that it comes from ecologically and socially managed forests.



#### Flexible composition of products

At our site in Kindberg, we pack our system staircases along a conveyor belt. The individual parts in the right colour are placed in the box piece by piece. This allows us to put together different product variants as quickly as possible.



# Spiral staircases made of steel

#### Hard and soft at the same time

The curved shape of spiral staircases perfectly breaks up the hard steel look. The result is an unmistakably modern and elegant design that makes the staircase a highlight in any living space.

We produce our metal staircases in the heart of Austria using state-of-the-art production facilities. The steel is moulded into exactly the right shape in compliance with the highest quality and safety standards.

With the help of our powder coating facilities, we can ensure optimum surface treatment and provide flexible colouring.

The standard colours for our spiral staircases are deep black, modern grey and brilliant white. However, we are also happy to realise special colour wishes on request.





## Milano

## Timeless elegance thanks to particularly flat metal steps

Add timeless elegance to your home with the spiral staircase Milano from Minka. The flat metal treads together with the bottom chord railing create a minimalist and modern look. With the colour options of black, white and grey, the spiral staircase Milano is a visual highlight that blends perfectly into any room design. The metal of the staircase is powder-coated to a high quality and the treads are slightly rough - so there is no risk of slipping.

#### **ACCESSORIES**

- Height extension
- Balustrade

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### **METAL**



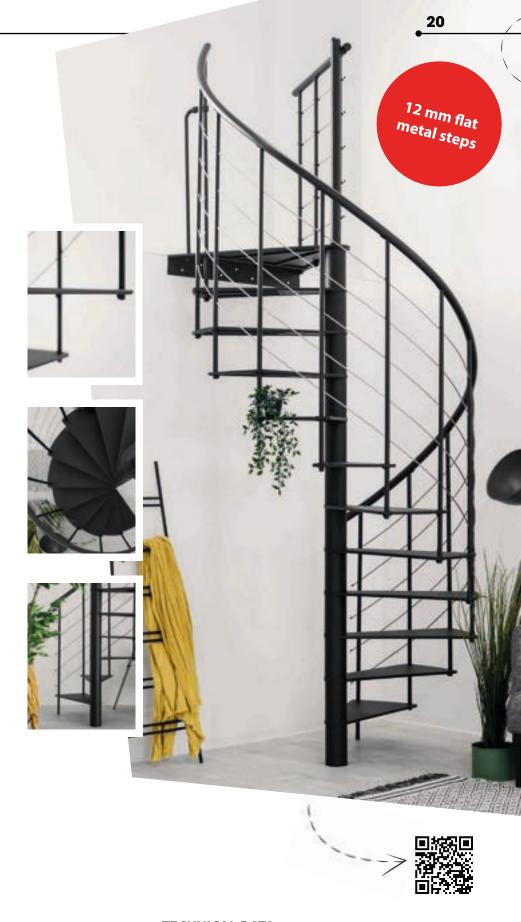
**Black** RAL 9004 FS



**Grey** RAL 9023 FS



**White** RAL 9016 FS



TECHNICAL DATA	drawings on p. 53
Diameter	120, 140, 160 cm
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	3003 mm 3234 mm 3465 mm
Rise per step	210 - 231 mm
Number of steps	12 + 1 platform

## **Portofino**

#### **Perfect combination of** stability and elegance

The metal spiral staircase Portofino skilfully combines elegance and stability. Although its steps are flat, they are made of powdercoated steel and are therefore extremely resistant. As the tread surfaces are slightly roughened, there is no risk of slipping when climbing the stairs. The 1 metre high railing and the handrail made of highquality PVC also ensure that all residents can get up and down safely.

#### **ACCESSORIES**

- Height extension
- Balustrade

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### **METAL**



Black RAL 9004 FS



Grey RAL 9023 FS



White **RAL 9016 FS** 



TECHNICAL DATA	drawings on p. 53
Diameter	120, 140, 160 cm
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	3003 mm 3234 mm 3465 mm
Rise per step	210 - 231 mm
Number of steps	12 + 1 platform

## **Spino Smart**

## Flat metal steps meet curved bottom rails

Striking but elegant - the steel spiral staircase Spino Smart skilfully combines solid steel treads with an elegant bottom railing. The Spino Smart blends in perfectly with industrial-style living spaces in particular, but it also complements various other interior design styles. As the Spino Smart is made of powder-coated steel, it impresses with an extremely long durability. The PVC handrail is comfortable to hold and provides support when climbing stairs.

#### **ACCESSORIES**

- · Height extension
- Balustrade

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### **METAL**



**Black** RAL 9004 FS



**Grey** RAL 9023 FS



**White** RAL 9016 FS



TECHNICAL DATA	drawings on p. 53
Diameter	120, 140, 160 cm
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	3055 mm 3290 mm 3525 mm
Rise per step	190 - 235 mm
Number of steps	12 + 1 platform

## Metal spiral staircase in a linear design

The metal spiral staircase Rondo Smart impresses with its modern design, which is perfect for living spaces with an industrial design. You benefit not only from the look, but also from the high stability of the Rondo Smart. The solid steel steps, together with the comfortable PVC handrail, ensure a secure hold on your way up. The staircase is coated with a high-quality powder coating to protect it from wear and tear and to match the black, grey or white colour scheme.

#### **ACCESSORIES**

- · Height extension
- Balustrade

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### **METAL**



**Black** RAL 9004 FS



**Grey** RAL 9023 FS



**White** RAL 9016 FS



	9 .
Diameter	120, 140, 160 cm
Maximum storey height	2055
• Standard	3055 mm
<ul> <li>With 1 height extension</li> </ul>	3290 mm
• With 2 height extensions	3525 mm
Rise per step	190 - 235 mm

drawings on p. 53

12 + 1 platform

**TECHNICAL DATA** 

Number of steps

## **Rondo Color**

## Striking designer spiral staircase in anthracite

The metal spiral staircase Rondo Colour is a modern accessory for your living space. With its studded steel treads and dark colour, it fits perfectly into living spaces furnished in an industrial style. But the Rondo Color is also perfect as an eye-catcher for simpler furnishing styles. The steel parts and the aluminium handrail of the Rondo Color are coated with an anthracitecoloured powder coating. This elegant colour provides an exciting contrast to white walls, but also blends in wonderfully with darker living styles.



- Height extension
- Balustrade straight or round
- Special platform









#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### METAL



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drawings	$^{\circ}$	n	5つ
drawings	OH	U.	JZ

Diameter	120, 140, 160 cm
Maximum storey height     Standard     With 1 height extension     With 2 height extensions	3003 mm 3234 mm 3465 mm
Rise per step	207 - 231 mm
Number of steps	12 + 1 platform

## -> Facts about Minka

#### **Everything under one roof**

Everything happens under one roof, from metal preparation to the precise production of parts and powder coating. The entire production of our staircase parts takes place at our main site in St. Lorenzen im Mürztal.



### Precision through laser technology

In recent years, we have invested heavily in the expansion of our production facilities. We use state-of-the-art laser technology to shape the metal parts for our staircases. Automated processing ensures maximum precision.



#### Colour and protection with powder coating

For colour design and protection against wear and other environmental influences, the metal parts of our staircases are powder-coated in our in-house facilities. Coatings in special colours are available on request, but are subject to a small surcharge.



# Spiral staircases for little space

#### **Small but mighty!**

When space is limited, it can be difficult to get to the next floor. Space-saving spiral staircases from Minka are the perfect solution for this. Thanks to the steep spiral of the steps, the way up is possible even in the smallest of spaces.

Despite the slightly narrower tread area, our spacesaving spiral staircases impress with their high stability. The steps are made of high-quality solid wood that is certified with the FSC label.

It is particularly important to have something to hold on to when climbing stairs in confined spaces. The banisters of the Minka spiral staircases are made of powder-coated steel. The powder coating not only protects the metal parts from scratches, but also gives them the perfect colour finish.

Our spiral staircases for confined spaces are particularly suitable for loft conversions. Thanks to their narrow dimensions, they can also be used in ceiling openings for attic staircases.





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## **Helios**

#### Diameter can be customised by cutting off the steps

Do you have limited space to get to the next floor and the standard dimensions of many staircases simply don't fit? That's no longer a problem! With the spiral staircase Helios, you can cut the steps to the desired length yourself. Powder-coated metal strips are used to fasten the split steps together and skilfully conceal the cut. The spiral staircase Helios is suitable for ceiling openings of 101-155 x 57-84 cm thanks to the option of cutting the steps to size.

#### **ACCESSORIES**

- · Height extension
- Balustrade

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### WOOD



Beech lacquered

#### **METAL**



RAL 9004 FS





**RAL 9023 FS** 



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RAL	901	6	FS

TECHNICAL DATA	drawings on p. 51
Ceiling opening size	101-155 x 57-84 cm
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	3055 mm 3290 mm 3525 mm
Rise per step	190 - 235 mm
Number of steps	13

## Luna

#### Innovative spiral staircase with variable diameter

The spiral staircase Luna is a particularly flexible and spacesaving model from Minka. It has an innovative system that allows you to cut the steps to the desired length yourself. Thanks to the metal runners, the split steps remain stable and the cut is no longer visible. The staircase therefore skilfully combines flexibility, load-bearing capacity and design. Thanks to the flexibly customisable steps, the staircase Luna fits into ceiling openings with a minimum of 101 x 57 to a maximum of 155 x 84 cm.

#### **ACCESSORIES**

- Height extension
- Balustrade

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### WOOD



Beech lacquered

#### **METAL**













	9 .
Ceiling opening size	101-155 x 57-84 cm
Maximum storey height	
<ul> <li>Standard</li> </ul>	3055 mm
<ul> <li>With 1 height extension</li> </ul>	3290 mm
With 2 height extensions	3525 mm
Rise per step	190 - 235 mm
Number of steps	13



## Metallica

#### Modern spiral staircase with step railing for small rooms

The spiral staircase Metallica is a particularly space-saving model from Minka. With basic dimensions of 130 x 78 cm, it is perfect for loft conversions or renovations. The Metallica is not only practical, but also looks great with its stylish banister. The steps of the Metallica spiral staircase are made of solid beech wood. There are three colour options to choose from for the metal parts: Black, grey and white. This allows you to match your staircase to your interior and create a harmonious look.

#### **ACCESSORIES**

• Balustrade

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### WOOD



Beech lacquered

#### **METAL**



RAL 9004 FS





RAL 9023 FS







#### drawings on p. 51 130 x 78 cm Ceiling opening size 3055 mm Maximum storey height 190 - 235 mm Rise per step 150 - 210 mm Tread depth Number of steps 12

## **Metallica Smart**

## Safely upwards even with little space

The spiral staircase Metallica Smart is a very space-saving model. It can be installed in ceiling openings measuring 130 x 78 cm and is therefore perfect for loft conversions. The Metallica Smart has steps made of solid beech wood. The spindle and the vertical balusters are made of steel and are powder-coated in black, grey or white. The PVC handrail has the same colour to match the metal parts.

#### **ACCESSORIES**

• Balustrade

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### WOOD



**Beech** lacquered

#### **METAL**







**Grey**RAL 9023 FS



White RAL 9016 FS



TECHNICAL DATA	drawings on p. 51
Ceiling opening size	130 x 78 cm
Maximum storey height	3055 mm
Rise per step	190 - 235 mm
Tread depth	150 - 210 mm
Number of steps	12

## Suono

#### **Extremely space-saving spiral** staircase with step railing

If you are looking for a spiral staircase that saves as much space as possible, the Suono is the right choice. It can be installed in very small ceiling openings with minimum dimensions of 120 x 68 cm or 133 x 78 cm. This makes it the perfect solution for loft conversions or renovations. The Suono is not only practical, but also looks good. The wooden treads made of solid beech and the chic banister give the staircase an extraordinary look that enhances any living space. The metal parts are powdercoated in black, grey or white.

#### **ACCESSORIES**

• Balustrade

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### WOOD



Beech lacquered

#### **METAL**









Grey White RAL 9023 FS **RAL 9016 FS** 



#### **TECHNICAL DATA**

Ceiling opening size	120 x 68, 133 x 78 cm
Maximum storey height	3055 mm
Rise per step	190 - 235 mm
Tread depth	106 - 154 mm
Number of steps	12

## **Suono Smart**

Space-saving spiral staircase with handrail made of high-quality PVC

The Suono Smart is one of Minka's smallest spiral staircases. The great advantage of this staircase is that it can also be installed in ceiling openings for loft ladders. The hatch only needs to be at least 120 x 68 or 133 x 78 cm in size. This makes the Suono Smart perfect for anyone looking for a particularly space-saving solution to get to the next floor. The staircase with its sturdy PVC handrail is the ideal choice for loft conversions in particular.

#### **ACCESSORIES**

• Balustrade

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### WOOD



**Beech** lacquered

#### **METAL**







**Grey** RAL 9023 FS



V	Vhite
RAL	9016 FS

TECHNICAL DATA	drawings on p. 52

Ceiling opening size	120 x 68, 133 x 78 cm
Maximum storey height	3055 mm
Rise per step	190 - 235 mm
Tread depth	106 - 154 mm
Number of steps	12

# Spiral staircases for outdoors

#### Straight into the garden

It is particularly important for outdoor staircases that the material can cope with any environmental influences. Our spiral staircases for outdoors are made of galvanised steel and can withstand any weather.

But it's not just the durability of the material that plays a major role in outdoor staircases - the look also has to be right. After all, a spiral staircase in the garden is a real eye-catcher that can enhance the overall appearance of the property.

For this reason, Minka also offers a range of colours for outdoor spiral staircases. For example, you can embellish your property with a black, anthracite or white staircase.

Whether it's spring, summer, autumn or winter - with an outdoor staircase from Minka, you can get from the house to the garden and back safely and elegantly at any time of year!





Galvanised

and powdercoated

## **Spino Zink Color**

**Double corrosion protection through** galvanising and powder coating

The outdoor staircase Spino Zink Color is a real eye-catcher in any garden. With its robust galvanised steel construction and powder coating in various colours, it skilfully combines functionality and design. The steel parts of the spiral staircase Spino Zink Color are not only galvanised, but also powdercoated. There are three different colours to choose from: Black, anthracite and white. The PVC handrail matches the same colour and the bottom rails are made of stainless steel.

#### **ACCESSORIES**

- · Height extension
- Balustrade
- Special platform

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### **STEPS**



Galvanised and ribbed

#### **COLOUR**







Anthracite **RAL 7016 FS** 



White **RAL 9016 FS** 









#### **TECHNICAL DATA**

Diameter	120, 140, 160, 180 cm
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	3055 mm 3290 mm 3525 mm
Rise per step	190 - 235 mm
Number of steps	12 + 1 platform

# Spino Zink Smart

Elegant spiral staircase for outdoors with stainless steel bottom rails

If you are looking for a dynamic spiral staircase for outdoor use, the Spino Zink Smart is the perfect choice. You can reach terraces, raised entrances or higher floors quickly, comfortably and safely via the nubbed steps. The galvanised railing is given a modern touch by the stainless steel bottom chords and the handrail made of high-quality PVC. All materials are designed for outdoor use and can easily withstand any wind and weather.

#### **ACCESSORIES**

- · Height extension
- Balustrade
- Special platform

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### **STEPS**



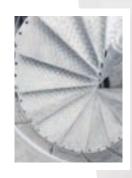
**Galvanised** and ribbed

#### **COLOUR**



**Handrail** grey









#### **TECHNICAL DATA**

drawings on	p.	53
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Diameter	120, 140, 160, 180 cm
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	3055 mm 3290 mm 3525 mm
Rise per step	190 - 235 mm
Number of steps	12 + 1 platform



## · Height extension

**ACCESSORIES** 

and weatherproof.

- Balustrade
- Special platform

#### **DIRECTION OF ROTATION**

Nowadays, an external staircase must not only be functional, but also a visual highlight. For this reason, Minka has developed the spiral staircase Rondo Zink Color. The steel parts of the staircase are first galvanised and then powder-coated in colour. There are three colours to choose from for the powder coating of the Rondo Zink Color: striking black, modern anthracite and plain white. The handrail is made of highquality PVC in the same colour. All materials are corrosion-resistant





anti-clockwise

clockwise

#### **STEPS**



Galvanised and ribbed

#### **COLOUR**



RAL 9004 FS





RAL 7016 FS



**RAL 9016 FS** 

### **TECHNICAL DATA**

drawings on p. 53

Diameter	120, 140, 160, 180 cm
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	3055 mm 3290 mm 3525 mm
Rise per step	190 - 235 mm
Number of steps	12 + 1 platform

Sturdy spiral staircase with galvanised metal and PVC handrail

Rondo Zink Smart

With the galvanised spiral staircase Rondo Zink Smart, you can easily reach terraces, balconies or raised entrance doors in outdoor areas. This model is also ideal as an escape staircase. The Rondo Zink Smart is not only practical, but also a visual eye-catcher. It can be used not only in your garden, but also indoors to create a unique and modern industrial look. The steps, spindle and railing of the Rondo Zink Smart are made of galvanised steel, while the handrail is made of grey plastic.

#### **ACCESSORIES**

- · Height extension
- Balustrade
- Special platform

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### **STEPS**



**Galvanised** and ribbed

#### **COLOUR**



**Handrail** grey



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drawings or	1 D. 53

	· .
Diameter	120, 140, 160, 180 cm
Maximum storey height	
<ul> <li>Standard</li> </ul>	3055 mm
<ul> <li>With 1 height extension</li> </ul>	3290 mm
<ul> <li>With 2 height extensions</li> </ul>	3525 mm
Rise per step	190 - 235 mm
Number of steps	12 + 1 platform



# **Rondo Zink Plus**

## Sturdy external spiral staircase with aluminium handrail

The external spiral staircase Rondo Zink Plus consists almost exclusively of galvanised metal parts. This makes it perfect for outdoor use. With its studded steps, railing and aluminium handrail, it is not only very safe to walk on, but is also a visual eye-catcher in your garden. With three different diameters, the Rondo Zink Plus is suitable for various spatial conditions. The height of the spindle elements can be flexibly adjusted.









#### **ACCESSORIES**

- Height extension
- Balustrade straight or round
- Special platform

#### **DIRECTION OF ROTATION**





anti-clockwise

clockwise

#### **METAL**



**Galvanised** and ribbed



TECHNICAL DATA	drawings on p. 52					
Diameter	120, 140, 160 cm					
<ul><li>Maximum storey height</li><li>Standard</li><li>With 1 height extension</li><li>With 2 height extensions</li></ul>	3003 mm 3234 mm 3465 mm					
Rise per step	207 - 231 mm					
Number of steps	12 + 1 platform					

## -> Facts about Minka

#### Powered by the sun

There is hardly a spot on the roofs of our company buildings that is not covered with solar panels. Thanks to our large-scale photovoltaic systems, we can generate enough of our own electricity to power our entire production.



## Sustainability in powder coating

By modernising the pre-treatment systems in powder coating, we have been able to dispense with the use of chrome and achieve significant water savings. In addition, we are now even faster and more flexible when it comes to colour design.



#### Highest quality through galvanisation

To protect against corrosion and other environmental influences, the metal parts of our external staircases are coated with a layer of zinc. Depending on the type and condition of the components, we use either hot-dip galvanising or electrogalvanising.



# Suitable balustrades

#### Better safe than sorry

The balustrades from Minka are the ideal way to secure your ceiling hatch or gallery. The railings are one metre high and protect young and old from falling down.

Our balustrades are available in various designs to match the Minka stairs. With stainless steel bottom rails, the result is a modern look. The version with vertical balusters is particularly safe, even for small children.

As with the spiral staircases, the metal parts of the balustrades can also be powder-coated in black, grey or white. The handrail is either in the same colour or made of solid wood. Here you can choose between the wood colours beech, walnut, oak and stained white.

Thanks to the flexible choice of colours, you can customise your banister just like the Minka spiral staircases.





## **Wood horizontal**

- Balustrade with bottom chords and wooden handrail
- Fits the following spiral staircase: Venezia
- Fits the following space-saving staircases: Quatro, Quatro Turn, Style, Style Turn
- Powder-coated steel balusters, stainless steel bottom rails and solid wood handrail
- Straight or round (diameter 120, 140 or 160 cm)
- Length and height: 100 cm

#### WOOD







Walnut beech stained dark, lacquered



Oak lacquered



White beech stained light, lacquered

#### **METAL**







**RAL 9023 FS** 











## **PVC** horizontal

- Balustrade with stainless steel bottom chords and PVC handrail
- Fits the following spiral staircases: Fusion, Venezia Smart, Milano, Spino Smart, Helios
- Fits the following space-saving staircases: Comfort Top, Comfort Top Turn, Nizza
- Can be installed with a straight or round run
- Length and height: 100 cm

#### **COLOURS**







Black **RAL 9004 FS** 

RAL 9023 FS

White RAL 9016 FS

## **Wood vertical**

- Balustrade with vertical steel bars and wooden handrail
- Fits the following spiral staircase: Spiral Wood
- Fits the following space-saving staircases: Joker, Joker Turn, Joker Turn 180°
- · Powder-coated steel balusters, solid wood handrail
- Straight or round (diameter 120, 140 or 160 cm)
- Length and height: 100 cm

#### WOOD



**Beech** lacquered



**Walnut** beech stained dark, lacquered



**Oak** lacquered



**White**beech stained
light, lacquered

#### **METAL**







**Grey** RAL 9023 FS



White

RAL 9016 FS





- Balustrade with vertical steel bars and PVC handrail
- Fits the following spiral staircases: Switch, Spiral Smart, Berlin, Paris, Portofino, Rondo Smart, Luna, Metallica, Metallica Smart, Suono, Suono Smart
- Fits the following space-saving staircases: Monte Carlo, Monaco, Vienna, Twister
- Construction with straight and round run possible
- Length and height: 100 cm

#### **COLOURS**







45

Black RAL 9004 FS RA White RAL 9016 FS

## **Balustrade for Spino Zink Color**

- Balustrade for outdoor staircase Spino Zink Color
- Galvanised and powder-coated steel balusters, stainless steel bottom rails, PVC handrail
- Suitable for outdoor use thanks to weather-resistant and rustproof materials
- Can be set up with a straight or round course
- Length and height: 100 cm

#### **METAL**



Galvanised

#### **COLOURS**









**Black** 

**Anthracite** RAI 9004 FS RAI 7016 FS

White **RAL 9016 FS** 







## **Balustrade for Spino Zink Smart**

- Balustrade matching the external staircase Spino Zink Smart
- Vertical balusters made of galvanised steel, horizontal chords made of stainless steel, handrail made of grey PVC
- Suitable for outdoors due to galvanised materials
- Construction with straight and round run possible
- · Length and height: 100 cm

**METAL** 











## **Balustrade for Rondo Zink Color**

- Balustrade for external staircase Rondo Zink Color
- Metal parts galvanised and powder-coated
- Galvanisation provides protection against corrosion and other environmental influences
- Flexible PVC handrail enables construction with a straight or round course
- Length and height: 100 cm

#### **METAL**



**Galvanised** 

#### **COLOURS**



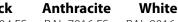




**Black** RAL 9004 FS

**RAL 7016 FS** 

**RAL 9016 FS** 









## **Balustrade for Rondo Zink Smart**

- Balustrade matching the external staircase Rondo Zink Smart
- With galvanised steel bars and PVC handrail
- Suitable for outdoor use thanks to galvanised materials
- Can be installed with a straight or slightly rounded course
- Length and height: 100 cm

**METAL** 









Grey



# Technical data in comparison

	FUSION	switch	VENEZIA	VENEZIA SMART	SPIRAL WOOD	SPIRAL EFFECT	SPIRAL SMART	BERLIN	PARIS	MILANO	PORTOFINO	
Diameter in cm	120, 140, 160	120, 140, 160	120, 140, 160	100, 120, 140, 160	120, 140, 160	120, 140, 160	100, 120, 140, 160	120, 140	140	120, 140, 160	120, 140, 160	_
Minimal ceiling opening in cm	130x130, 150x150, 170x170	130x130, 150x150, 170x170	130x130, 150x150, 170x170	110x110, 130x130, 150x150, 170x170	130x130, 150x150, 170x170	130x130, 150x150, 170x170	110×110, 130×130, 150×150, 170×170	130×130, 150×150	150x150	130x130, 150x150, 170x170	130x130, 150x150, 170x170	
Max. storey height in mm	2951	2951	3055	3055	3055	3055	3055	2820	2820	3003	3003	
Max. storey height with one height extension in mm	3178	3178	3290	3290	3290	3290	3290	3055	3055	3234	3234	_
Max.storey height with two height extensions in mm	3405	3405	3525	3525	3525	3525	3525	3290	3290	3465	3465	
Number of steps	12 + 1 platform	12 + 1 platform	12 + 1 platform	12 + 1 platform	12 + 1 platform	12 + 1 platform	12 + 1 platform	11 + 1 platform	11 + 1 platform	12 + 1 platform	12 + 1 platform	
Max. number of height extensions	2	2	2	2	2	2	2	2	2	2	2	
Max. number of rises (wiithout height extensions)	13	13	13	13	13	13	13	12	12	13	13	
Rise per step in mm	182-227	182-227	190-235	190-235	190-235	190-235	190-235	190-235	190-235	210-231	210-231	
Tread depth in mm	210-244	210-244	210-244	180-244	210-244	210-244	180-244	172-180	172	210-244	210-244	
Free passage width in mm	486-686	486-686	486-686	386-686	486-686	486-686	386-686	500-600	600	486-686	486-686	
Railing height in mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Rotation per step in °	22-29	22-29	22.2-30.2	22.2-30.2	22.2-30.2	22.2-30.2	22.2-30.2	22-26	21	22-29	22-29	
Rotation of the platform in °	53	53	50	50	50	50	50	50	50	53	53	
Step thickness in mm	26,5	26,5	35	35	35	35	35	35	35	12	12	
Diameter of the spindle tube in mm	108	108	108	108	108	108	108	108	108	108	108	
Diameter of the balusters in mm	22	22	22	22	22	22	22	22	22	22	22	
Diameter of the handrail in mm	40	40	40	40	40	50	40	40	22	40	40	



SPINO SMART	RONDO SMART	RONDO COLOR	HELIOS	LUNA	METALLICA	METALLICA SMART	SUONO	SUONO SMART	SPINO ZINK COLOR	SPINO ZINK SMART	RONDO ZINK COLOR	RONDO ZINK SMART	RONDO ZINK PLUS
120, 140, 160	120, 140, 160	120, 140, 160	-	-	130	130	120, 140	120, 140	120, 140, 160, 180	120, 140, 160, 180	120, 140, 160, 180	120, 140, 160, 180	120, 140, 160
130×130, 150×150, 170×170	130x130, 150x150, 170x170	130x130, 150x150, 170x170	101x57	101x57	130x78	130x78	120x68, 133x78	120x68, 133x78	130x130, 150x150, 170x170, 190x190	130x130, 150x150, 170x170, 190x190	130x130, 150x150, 170x170, 190x190	130x130, 150x150, 170x170, 190x190	130x130, 150x150, 170x170
3055	3055	3003	3055	3055	3055	3055	3055	3055	3055	3055	3055	3055	3003
3290	3290	3234	3290	3290	-	-	-	-	3290	3290	3290	3290	3234
3525	3525	3465	3525	3525	-	-	-	-	3525	3525	3525	3525	3465
12 + 1 platform	12 + 1 platform	12 + 1 platform	13	13	12	12	12	12	12 + 1 platform	12 + 1 platform	12 + 1 platform	12 + 1 platform	12 + 1 platform
2	2	2	2	2	-	-	-	-	2	2	2	2	2
13	13	13	13	13	13	13	13	13	13	13	13	13	13
190-235	190-235	207-231	190-235	190-235	190-235	190-235	190-235	190-235	190-235	190-235	190-235	190-235	207-231
210-244	210-244	196-233	150-230	150-230	150-210	150-210	96-154	96-154	196-233	196-233	196-233	196-233	196-233
486-686	486-686	486-686	410-680	410-680	540	540	508-609	508-609	486-786	486-786	486-786	486-786	486-686
1000	1000	1000	1000	1000	1000	1000	900	1000	1000	1000	1000	1000	1000
21.9-29.6	21.9-29.6	21.9-29.6	20	20	18	18	12-14	12-14	19.4-29.6	19.4-29.6	19.4-29.6	19.4-29.6	21.9-29.6
54	54	60	-	-	-	-	-	-	54	54	54	54	60
4	4	1,5	35	35	35	35	35	35	4	4	4	4	1,5
108	108	127	108	108	108	108	108	108	108	108	108	108	127
22	22	22	22	22	22	22	22	22	22	22	22	22	22
40	40	50	40	40	22	40	22	40	40	40	40	40	50

# **Technical drawings**

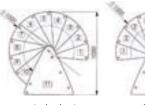
Here you will find the technical drawings of all spiral staircases. These show you a bird's eye view of the basic sizes and the possible mounting variations of the individual models.

Please note that not every model or colour variant is available in all diameters.

#### **VENEZIA, VENEZIA SMART, SPIRAL WOOD, SPIRAL EFFECT AND SPIRAL SMART**



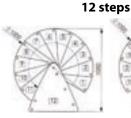




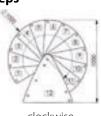
11 steps

anti-clockwise

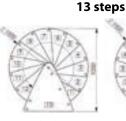
clockwise



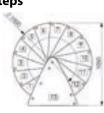
anti-clockwise



clockwise



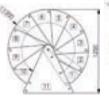
anti-clockwise



clockwise

Diameter: 120 cm

11 steps

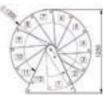


anti-clockwise



clockwise

12 steps



anti-clockwise

clockwise

13 steps



anti-clockwise



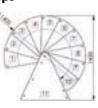
clockwise

Diameter: 140 cm

11 steps

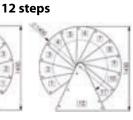


anti-clockwise



clockwise

anti-clockwise



clockwise

13 steps



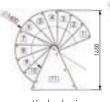
anti-clockwise



clockwise

Diameter: 160 cm

11 steps



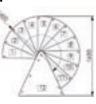
anti-clockwise

clockwise

12 steps

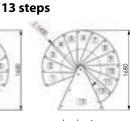


anti-clockwise



clockwise

anti-clockwise

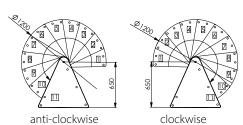


clockwise

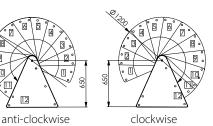
#### **BERLIN AND PARIS**

#### Diameter: 120 cm

#### 11 steps



#### 12 steps

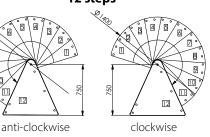


#### Diameter: 140 cm

11 steps

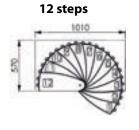
The steps of the step of the ste

#### 12 steps

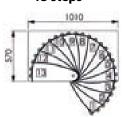


#### **HELIOS AND LUNA**

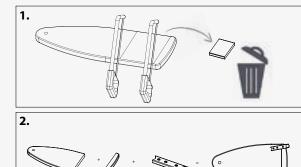
#### **Minimum diameter**



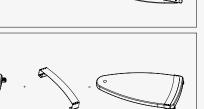
#### 13 steps



#### How to adjust the diameter:

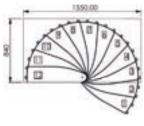




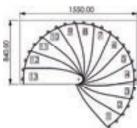


## Maximum diameter



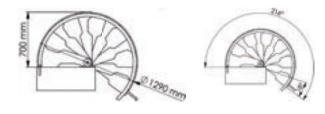


13 steps



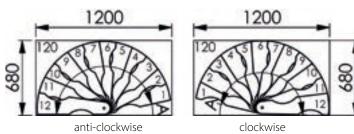
#### **METALLICA AND METALLICA SMART**

Minimum ceiling opening: 130 x 78 cm

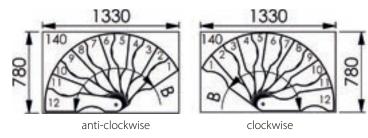


#### **SUONO AND SUONO SMART**

#### Diameter: 120 cm



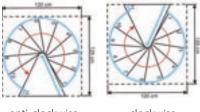
Diameter: 140 cm



#### **RONDO COLOR AND RONDO ZINK PLUS**

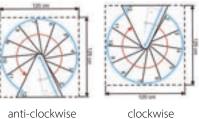
#### Diameter: 120 cm

11 steps

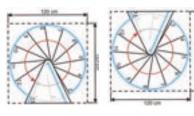


clockwise anti-clockwise

12 steps



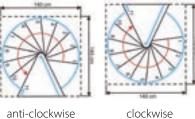
13 steps



anti-clockwise clockwise

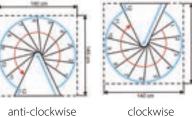
Diameter: 140 cm

11 steps



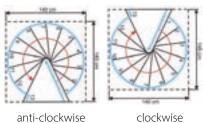
anti-clockwise

12 steps



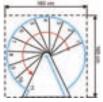
anti-clockwise

13 steps



Diameter: 160 cm

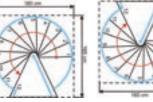
11 steps



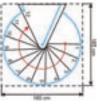
anti-clockwise

clockwise

12 steps

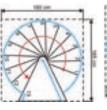


anti-clockwise



clockwise

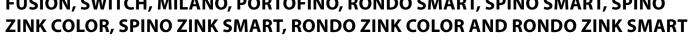
13 steps

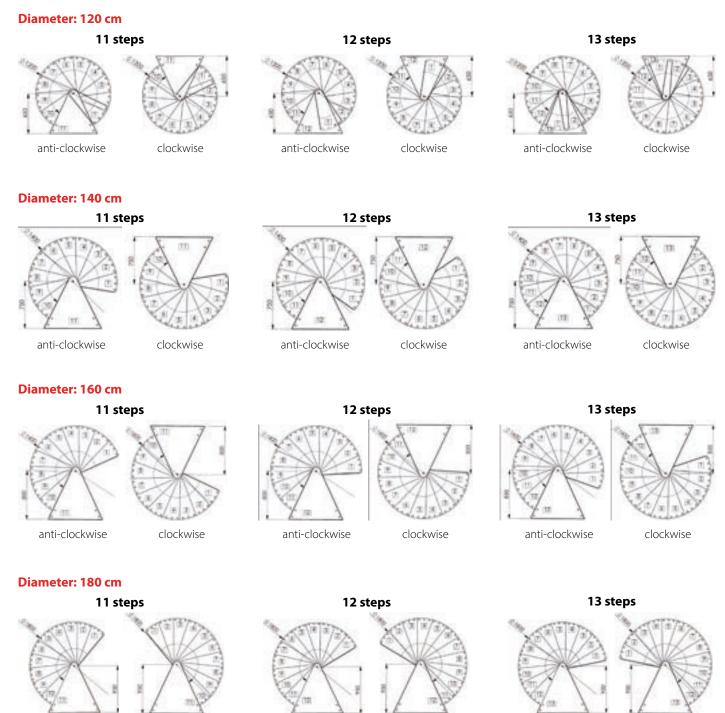


anti-clockwise

clockwise

# FUSION, SWITCH, MILANO, PORTOFINO, RONDO SMART, SPINO SMART, SPINO





When planning your spiral staircase, consider where the entry and exit points should be located. There should be sufficient space in front of the bottom step so that you can step onto the stairs comfortably.

clockwise

anti-clockwise

clockwise

anti-clockwise

The top of the landing should be flush with the floor of the next level. Make sure that the platform does not end against a wall and that there is also enough space at the top so that you can easily exit the stairs on the upper floor.

Windows, doors and radiators should also be taken into consideration when planning.

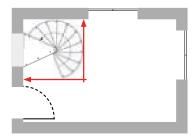
clockwise

anti-clockwise

# Measuring and planning

Before you choose a staircase model, you should measure your room situation precisely. We recommend recording the values in a true-to-scale drawing - this will make it easier for you to visualise the spiral staircase in the room.

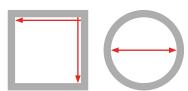
Here you will find an overview of the most important dimensions that you should know before buying or installing a staircase.



#### **Basic size**

The space available for your staircase is decisive in determining which models are suitable. The best way to do this is to measure the length and width of the space available for the staircase on the floor of the room.

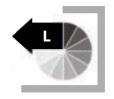
It can help to take a floor plan of the room. When measuring the basic size, be sure to take windows, doors and radiators into account so that they are not in the way or covered by the stairs.



#### Dimensions of the ceiling opening

With spiral staircases, the diameter must be selected to match the ceiling opening. It is therefore essential that you measure the length and width of your ceiling opening before purchasing your staircase.

Please note that the ceiling opening must be 10 cm larger than the basic dimensions of the staircase. For a spiral staircase with a diameter of 140 cm, a ceiling opening with a length and width or diameter of 150 cm is therefore required. When climbing up to a gallery, you only need to measure whether the width is sufficient for installing the landing.



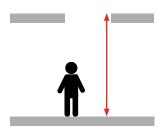


#### **Direction of rotation**

With a left-turning spiral staircase, you climb the steps anti-clockwise. With this variant, the centre column is on your left hand as you go up and the railing is on your right hand

A clockwise spiral staircase, on the other hand, is climbed from bottom to top in a clockwise direction. When you climb the stairs, the centre column is on your right and you can hold on to the railing with your left hand.

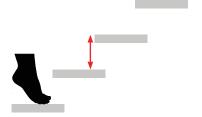
All Minka spiral staircases can be installed both left and right- turning.



#### Storey height

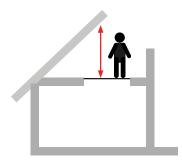
The storey height is measured from the top edge of the floor to the top edge of the ceiling or gallery. Make sure that you measure exactly at right angles to the floor. It can be helpful to place the tape measure or folding rule along a wall.

If the floor height of the Minka spiral staircase is too low for your room, you can extend the staircase with the help of separately available height extensions.



#### Rise

The rise of a staircase indicates how steeply a staircase goes upwards. Specifically, it describes the height from one tread to the next. A staircase with a low rise is easier to climb, but it also takes up more space. The opposite is true for a high rise. You can set the gradient of the Minka system stairs yourself within certain limits. This also allows you to adjust the storey height of the staircase.



#### Standing height

If there is a sloping roof on the upper floor, the height from the landing to the ceiling should be at least 1.90 metres. This will ensure that nobody bumps their head when climbing the stairs.

# Stair dictionary

#### **Balustrade**

Balustrades can be used to provide all-round protection for galleries or ceiling hatches. Minka balustrades are available in various designs to match the stairs.

#### **Bottom chords**

Bottom chords are horizontal bars in the banister. In Minka system staircases, the bottom chords are made of stainless steel.

#### **Entry and exit**

The term entry refers to the beginning of the staircase or the bottom step. Exit, on the other hand, refers to the end of a staircase or the last step.

#### Free passage width

The free or clear passage width is the usable area on the steps. It is slightly smaller than the step width, as the banister and spindle tube take up some space at the sides.

#### Galvanised

Our external staircases are made of galvanised metal parts. This means that the materials are coated with a layer of zinc to make them corrosion-resistant, durable and weatherproof.

#### Handrail

A handrail is the upper part of a railing that you can hold on to when climbing stairs. With Minka spiral staircases, the handrail is usually made of solid wood or PVC.

#### **Height extension**

Height extensions are available as an optional extra for most of our system staircases. You need a height extension if you need to achieve a room height that exceeds the standard dimensions. If you order a height extension, you will receive an additional step as well as the additional material for the extended banister.

#### **Platform**

Most Minka spiral staircases are supplied with a triangular platform. This is installed at the same level as the floor of the upper storey. This allows you to get off comfortably on the upper floor.

#### **Powder coating**

Powder coating is a process for the surface treatment of metals. After pre-treatment of the material, a paint powder is applied to the workpiece and then cured. In this way, products made of aluminium or steel, for example, can be coated in different colours and textures and protected against corrosion.

#### **Rotation per step**

The rotation per step refers to the angle at which the steps wind around the centre column of a spiral staircase. If the rotation per step is high, this means that the steps are comfortable to walk on. If the angle of rotation is smaller, however, less space is required for the stairs.

#### Secondary staircase / non-essential staircase

All Minka staircases fall into the category of 'secondary staircase' or 'non-essential staircase' under building regulations. Such stairs are often used to reach a loft or to provide a second access to a floor or gallery.

#### Spindle tube

The spindle tube - also known as the height tube - is the centre section of spiral staircases. The wooden or metal steps are attached to it. Minka spindle tubes are manufactured using laser technology and have prefabricated cutting lines. Individual rings can simply be broken off the tube along these edges using a screwdriver or similar. This means that the height of the spindle tubes and therefore also the rise per step can be flexibly adapted to the room.

#### Spiral staircase

A spiral staircase is a space-saving special form of winding staircase. With this type of staircase, the steps are attached to a centre column - the so-called spindle. This means that spiral staircases only have a banister on the outer edge of the steps. Minka offers a wide variety of spiral staircases with wooden and metal treads and different types of banisters.

#### Staining

Staining involves applying a chemical solution (stain) to the surface of the wood. This changes the colour of the wood, but the natural grain is retained. The walnut treads of the Minka stairs, for example, are not made from real walnut wood, but from beech wood that has been stained to create a walnut look.

#### Step thickness

The step thickness indicates how thick the material of the steps is - it is measured from the bottom edge of the step to the top edge of the step.

#### System staircase

Minka's space-saving staircases and spiral staircases belong to the category of system staircases. System staircases consist of a modular system - so there are different wood variants, metal colours and sizes to choose from. The modular system enables private individuals to assemble their staircase themselves.

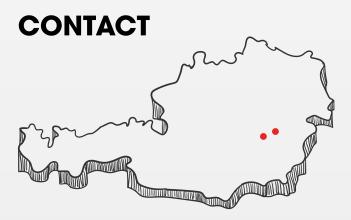
#### **Tread depth**

The tread depth indicates the distance from the front edge of one step to the front edge of the next step. In other words, this refers to the tread area on the step that the foot has to the front. The greater the tread depth, the more comfortable it is to walk on the stairs.

#### Winding staircase

A winding staircase has an almost circular shape and winds upwards around an open centre point. This open centre point is also known as the staircase eye, hollow spindle or light spindle. In contrast, a spiral staircase has a post in the centre to which the steps are attached.





#### Headquarters

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#### **Second location**

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#### **HOTLINE FOR TECHNICAL QUESTIONS**

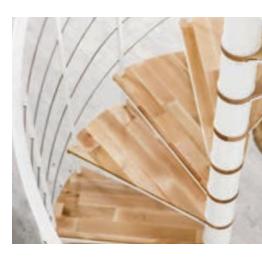
Monday to Saturday, 08:00-20:00 (CET)

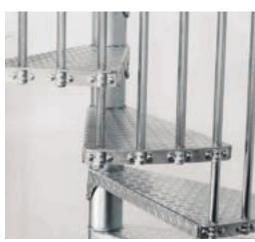
Austria: +43 3864 / 2238-16

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Space-saving stairs
Spiral stairs
Attic stairs
External stairs
Stair safety gates







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