





# LEDON'

Tall towers, escape-proof dungeons, proud knights and beautiful princesses. In the knights' castle, there is always much at stake – treasures must be found and defended in both good times and bad.

Crests gleam alongside ruby red roofs, while torches cast long shadows along the suspension bridge. Being in a castle such as this takes courage, strength and, not least, cunning! One must always keep a watchful eye – is someone climbing up the thick castle walls? Did a thief swing his way across the moat and creep in through an open basement window, or did a rival elope with the beautiful princess?

Everyone wants the key to the treasure chest, but the treasure quest is paved with a plethora of challenges: You must balance, climb and find your way through dark corridors. The smallest of missteps and you risk a trip to the dungeons, where the handcuffs will surely keep you in place.

LEDON Castle is a world that takes imagination and creativity to new heights. Underneath the balcony, the scene is set for a bit of everything: Whether you're looking for the key to the treasure chest, an adventure in the distance or the way to the princess' heart, there is plenty to attend to. There is always a battle to fight, a land to conquer – and a beating princess heart to win. Get on the white horse!

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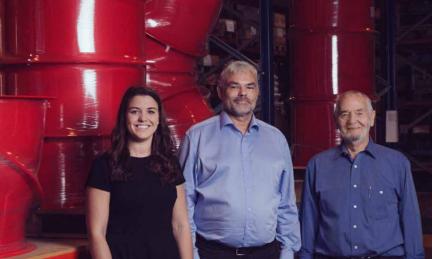
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of arms





All our playground equipment is produced in Denmark and sold in 25 different countries





## **LEDON**

A family-owned company for three generations

When Leo Donbæk founded LEDON in 1969, it was based on a desire to make a difference: He wanted to create quality playgrounds with maximum durability and safety.

Today Leo's son, Tom Donbæk, is managing director of LEDON. For the past 33 years, he has, together with his father, developed and carried out the production transition that has led LEDON to where it is today, where all playground equipments are produced by technical programs, software and CNC-machines. The craftsmanship and quality remains crucial, and for that reason, details are carefully carved by hand, just as the products are also assembled by hand. Since 2012, Tom's daughter, Simone

Donbæk, has been employed in the family business. In fact, she has been with us her whole life, first as a kid playing around, then as a young worker in the warehouse and now as our marketing manager.

### Sharing the same passion and ambition

We are three generations and we are driven by the same passion and ambition: We want to create the best play experiences for children, and we want to do it the right way. This requires both dedicated workers, great know-how and optimised quality production. Therefore, all of LEDONs production takes place in Denmark, and here we create quality controlled environments where we can help children around the world experience the joy of play.

## Vision & Mission



Vision

Our vision is to support and inspire the children in their physical, communicative and cognitive development.

## Values

## **Play value**

We create play experiences that are inherently playful. Experiences that awaken the children's imagination and make them want to develop themselves. It is the value of the play that drives us. We let the children test it first, and this testing determines the composition of our playground environment.



### **Know-how**

At LEDON, we have created play experiences for children for nearly 50 years. We know what is needed because we understand the children and know a lot about their development. We know how to design a playground to provide the highest possible play value, durability and safety.

# Advice & Guidance

There are so many things to be considered when planning on purchasing new playground equipment. Which equipment match your needs, how much space and what safety surface is required etc. We help you find the solution perfectly matching your wishes, your funds and your space.



Mission

Our mission is that our playground equipment will help to create opportunities for play that develop the children physically, as well as their language and social skills in a safe environment.



## Quality & Safety

Quality and safety comes before fun play. We use the best materials, assemble the parts by hand and maintain strict quality controls. Our products are validated by the European standard EN1176 and are verified by TÜV Hamburg.



## **Sustainability**

Our focus is on the children. Besides providing them with the best play experiences, we actively work towards handing over a better world to them. We do this by thinking in sustainable terms. Our PE boards for instance, mainly consist of recycled plastic.



Our playground environments have play at their core, right down to the tiniest details. We work together with children in the development stage, so we are confident in creating play experiences that are well suited for children - both when it comes to play, learning and development.

## Product development

And then we played, that ...

At Ledon, we are children at heart ourselves, and children are our best playmates. They help to ensure that the final products are fun to play around in.

Our playground environments are based on academic theories. We know a lot about children's development - both the physical, cognitive, creative, emotional and social development. We know how to promote child development through play. But we won't reach our goal without the children. Their imagination is our engine.

We usually say: We do not create playgrounds, we create play experiences. And we do this by working

together with children. Our focus is on learning through play. We ensure there is a high play value by listening to the children and by continually renewing ourselves. We catch the balls they throw and make the wildest things happen - without compromising on safety or quality.

To create play experiences, in our world, means providing frameworks that invite children to play. Frameworks that open and challenge the children's imagination. We have the children in mind all the way from idea to final product. They are our proof that these systems work the way they are intended.





By involving children in the design process, we have created activities that inspire and open up several types of play.

## **Co-Creation**

One must hear the truth from children

It is crucial to know your target market in every product development process. Who will use the product, how will they use it and what exactly are their needs?

At Ledon, we develop playground environments, and therefore our target market is children of all ages. They are the ones who know best how to play. They are the experts, and it is wise to listen to the experts when you want to create the world's best play experiences.

We meet the children at their level and have them advise us right from the start: "If you had a castle - what would it look like, and what would you do there?" we ask. The boys answer one thing, the girls something





## 

else. While the children explain, we jot it down eagerly.

At home in the drawing room we translate the children's input into narrative characteristics and physical play elements: The lock on the treasure chest must mean there is a thief about. Therefore, we must have a key, a prison and an escape route. A princess requires a prince - she must have a balcony, and he must have a horse. We continue like this until we have created an image of how the game will be played out in a true LEDON knight's castle. When the prototype is ready, we go back to the children and the discussion continues until we have created an environment for and with children.

By incorporating play value in each and every element, we ensure that the children are constantly challenged and their imagination is stimulated

> Søren Skøtt lead of Desig LEDON



## At eye level with the children

### To invite yourself in to the lives of the children

A successful toy product always has its original source in children's motivation, curiosity, wonder and passion. A child-focused approach to designing toy products can help to ensure that the design is actually for those who create and experience playing at the end point, namely the children. Therefore, it is important that the child-focused perspective is implemented before the actual product development starts. Here, it is not only about inviting the children into the design process, but as an adult to invite oneself into the lives of the children.

To experience children in their natural environment provides a fundamental insight into what is important to them, what they are occupied with, and what a normal day for them looks like – seen through the eyes of the children.

– Karen Feder

### Children are experts at being children

The children are the experts – the experts at being children, and through them, it is possible to gain a picture of how it is to be a child and what it is that motivates children to play and explore the world. By being part of their life, being humble and curious towards why they do what they do, and how they interact with the world around them, you gain a direct insight into the world that you are designing for. This way, the design of the play products is not based on one's own assumptions and presuppositions about children and children's everyday lives, but on real children and the world that they are a part of.

### Let the children be part of the development

Good play experiences are based on the child's curious, investigative and creative approach to its surroundings. This approach is important in the design process when working in a child-focused manner. Children are creative by nature, and they do not have the same restrictions in their thinking as adults often have. By letting the children be part of



By observing the children play, one often finds entirely new dimensions of play that are created in the children's interaction with the product

the development process, you get input, inspiration and ideas which you would not have been able to come up with yourself. This can result in answers to questions you did not know you had to ask, which can be some of the most valuable and innovative knowledge in the development process.

### To qualify the product along the way

Another very common method to involve the children is to let them test the products in the final design process. This can give an important clue as to whether your play product works as intended. If one waits until the very end before involving the children, there is the risk that a prototype, after long hours of work and many resources spent on it, turns out to not live up to the expectations. This risk can be reduced by involving children along the way through the whole process, where one qualifies along the way, and the design can then be changed and modified continuously.

### Focus on the children creates value for everyone

A child-focused approach not only helps to ensure that you end up with the best possible product but also that you achieve the best possible play experience. A play product only creates play if it is played with – and this is why it is so important to make sure it is relevant and interesting for the children. It must provoke their natural curiosity and their need for inves-



Through co-creation, children's natural curiosity, and creativity are strengthened.

tigation and creativity so that they are strengthened and supported in their development. To be focused on the children creates both value for the developer, the buyers, the users, and for the world our children grow up in and become a part of in the future.

– Karen Feder, 10 November 2017



Karen Feder PhD student in childfocused design of play. Design School Kolding

Karen Feder has a background as an observational nursery teacher and interaction designer, and has for the past many years worked with children, play and design.

Karen has built the strategic focus on play and design in Kolding Design School through deep investigations of games companies, development projects in public organisations and strong team work with experts, opinion leaders and users.

Karen now works on the research project 'Child-focused design of play' that investigates how a more child-focused approach to the design process influences the development of play experiences for children.





## Stepping stones & Coat of arms

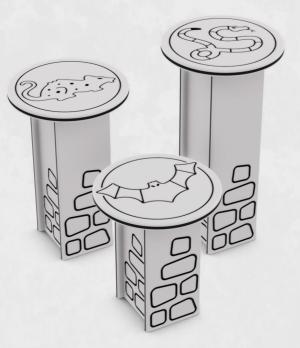
When the elements come together

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When things are put together, many new possibilities arise. Children know all about this. Therefore, we have placed the Castle series' stepping stones and coat of arms close to each other. This opens up the children's imagination and can be used within the educational work to stimulate motor skills and language development.

What does the sword point to? Is the soil, for example, only poisonous when the sword lands on red? Is it the rat that gets us up on the stepping stone in a hurry? It is the children's imagination that drives the game forward. The four illustrations of the coat of arms: the rat, the snake, the bat and the parrot are recurring throughout the entire series. The shield can hereby also become a starting point for a further expedition on the playground.

The stepping stones come in four different heights, and if they are joined end to end, the older children will be challenged in their motor skills to get all the gold coins.





The sword from the coat of arms is controlled from the inside by the rudder



The connection between the icons on the coat of arms and the stepping stones opens up the possibility for countless games

Quality & Safety The surface of the stepping stones is coated with our skid-proof and hard-wearing rubber surface.





## Playground environments

It is not only about connecting a slide, a staircase, four pillars and a floor. It is about doing it in a way that is playful. When we layout our playground environments it is well thought through. Things must make sense.

For example, what you see through the windows should make sense according to the game. The windows should be placed in a way so that the eye catches what is important. And from the balcony, there needs to be a view of the prison so that the king knows if the prisoners escape.

We create environments where nothing is accidental. playground environments that promotes play and child development through play. The different activities are placed in a way so that they are age-relevant: For example, we give the younger ones plenty to do at ground level, whilst a challenging route ensures that only the older children have access to the towers on the top floor.

## Symbol explanation



Age group The product is recommended for the following age groups (guide).



Maximum fall height Indicates maximum fall height to the underlay.



Floor height Indicates the height between the floor and underlay.



### Size Indicates the product size in length, width and

leight.



**Space requirements** Indicates how big the product is incl. safety area.

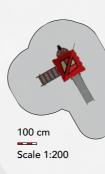


**Bonus-info** Extra information about the product e.g. hidden functions.

## Galahad

LC115 Galahad













# George LEDON \***\*\*** From 3 years (H) 140 cm (H) 187 cm (LxWxH) 339 x 313 x 498 cm (LxW) 648 x 623 cm





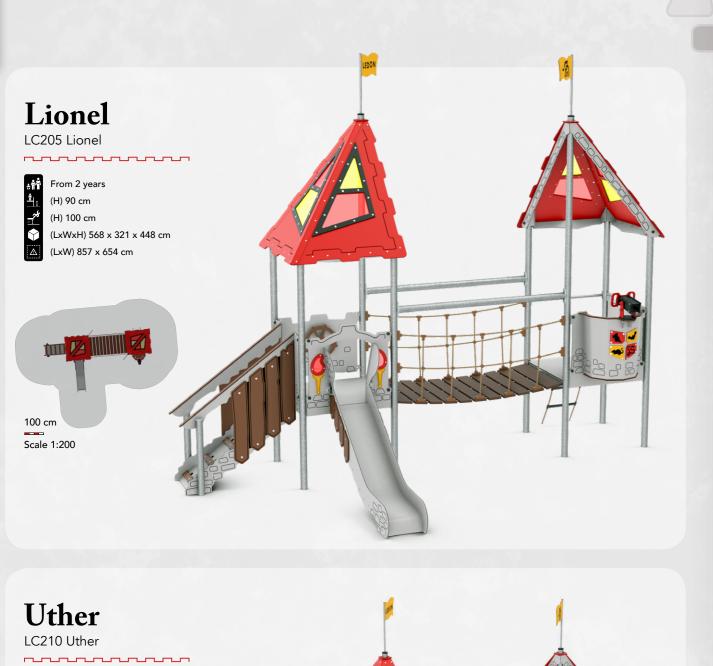
## Balin

LC135 Balin

From 2 years
(H) 140 cm
(H) 150 cm
(LxWxH) 356 x 299 x 498 cm
(LxW) 579 x 666 cm







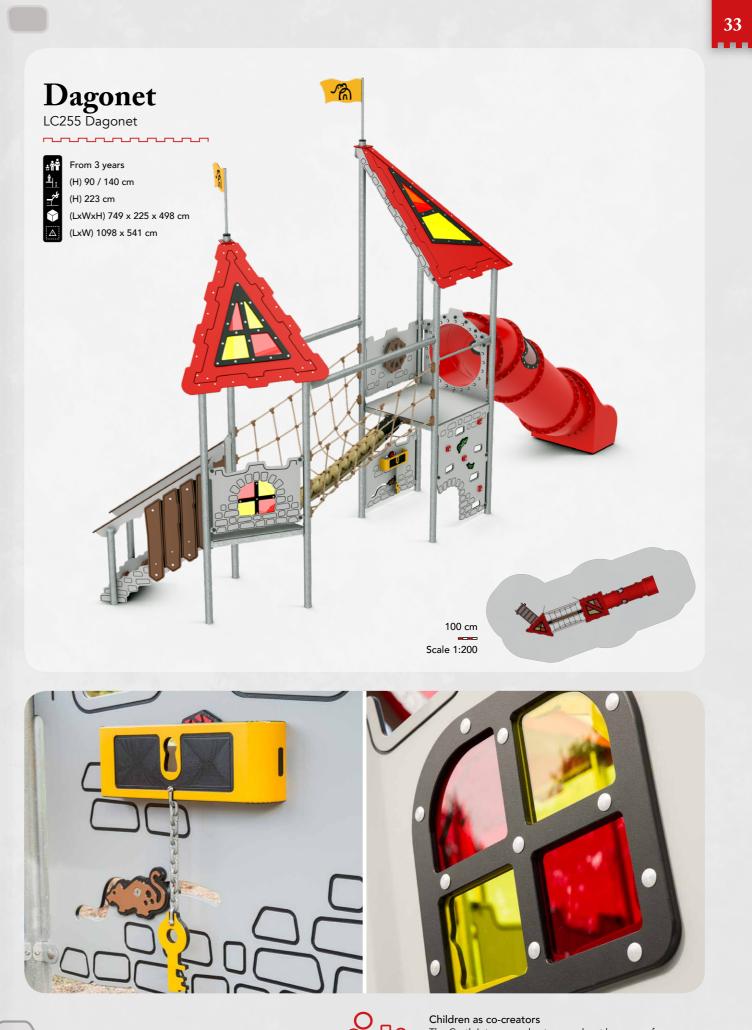








## Dagonet LC255 Dagonet ~ଲି \***\*\*** From 3 years (H) 90 / 140 cm (H) 223 cm (LxWxH) 749 x 225 x 498 cm (LxW) 1098 x 541 cm

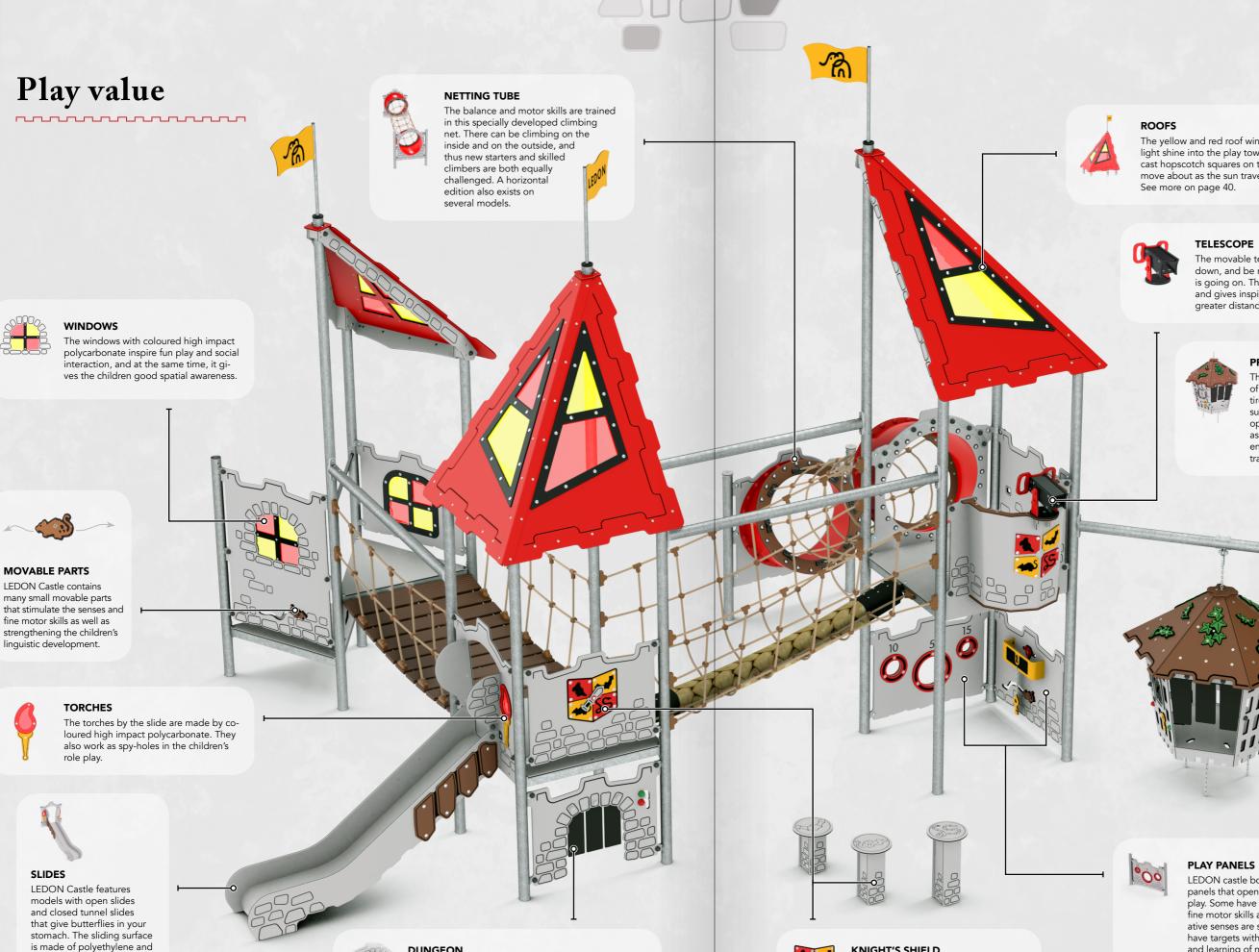




The Castle's treasure chest came about because of a co-creation where the children wanted a place to store diamonds, gold coins and other valuables.

therefore does not get hot

in the summer sun.



### DUNGEON





## The knight's shield with its movable

sword inspires one to play with it or make games around it, and it can be combined with stepping stones for even more play opportunities. See more on page 16.

The yellow and red roof windows make the light shine into the play tower. The windows cast hopscotch squares on the floor, and they move about as the sun travels across the sky.

The movable telescope can be tilted up and down, and be rotated so that it catches what is going on. This stimulates the motor skills and gives inspiration to role play - also over greater distances.

### PRISON

The heavy rubber slats give the illusion of an escape proof prison. If one gets tired of being in prison, small details such as the key and the food-chute opens up for other games – for example as a grocer. All the while, the suspension ensures constant movement and balance training.

LEDON castle boasts several types of play panels that open up for imagination and role play. Some have small movable parts where fine motor skills and the cognitive and creative senses are strengthened, whilst others have targets with numbers that inspire play and learning of numbers and sizes.









## Maximum play value

Innovative use of the whole play area

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A roof normally does not have any play value in itself. You cannot reach it, so therefore it makes no sense to incorporate any play elements there. But then what can you do? You give the roof a visual effect so that it has a role in the game!

It is in the nature of the games to be constantly evolving. This creates dynamic interactions and lets creativity flow. With the yellow and red windows, we let the light filter down through the roof. The windows cast hopscotch squares on the floor, and they move about as the sun travels across the sky. The shadows change as the children's faces turn alternately yellow and red. Everything can happen as light, reflections and colours help stimulate the imagination. We know that children are fascinated by colours. That colours help set a certain mood. We know that yellow equals sun, gold and happiness. And that red equals power, love and danger. Just the colours alone can help inspire a variety of games.







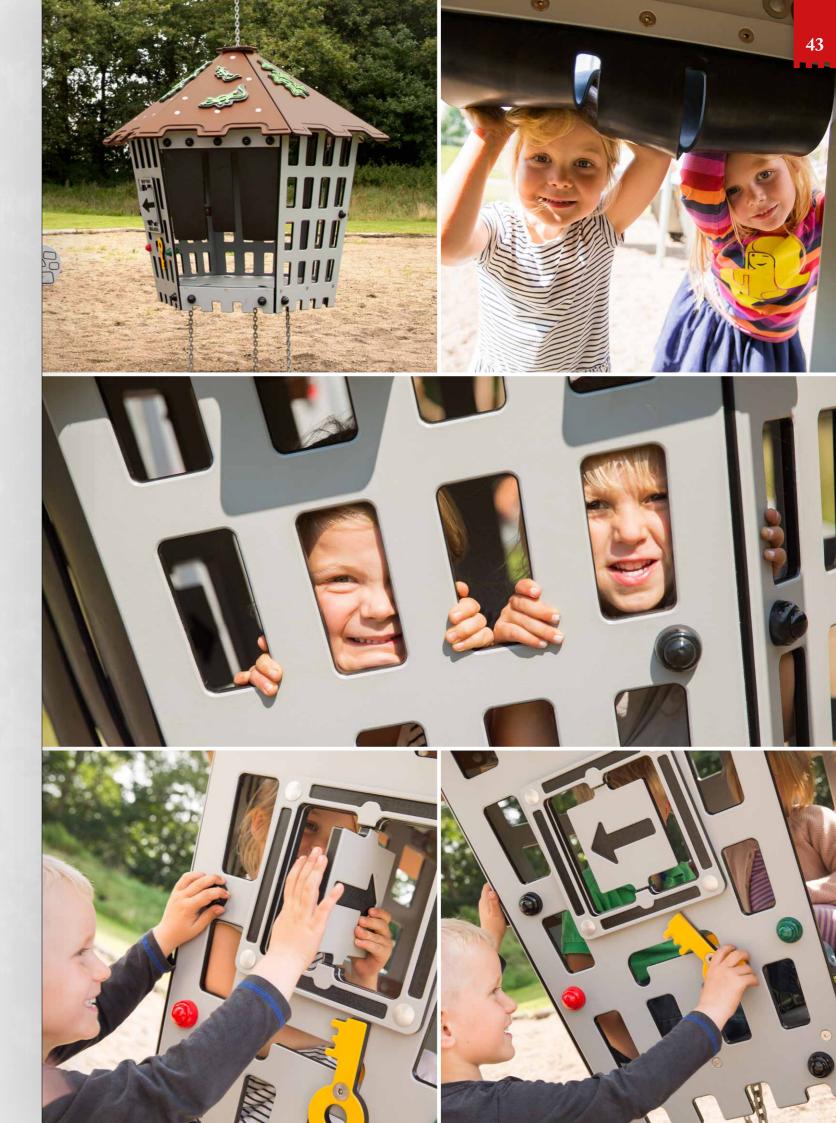




**Play value** The shadows, with their reflections of light, open up for a whole new set of games and therefore create a whole new dimension in playground systems. The lighting invites children to invent new games and creates a dynamic play experience that constantly changes throughout the day

Quality & Safety The transparent polycarbonate boards are impact and scratch resistant, as well as UVstabilised so that the colour does not fade.





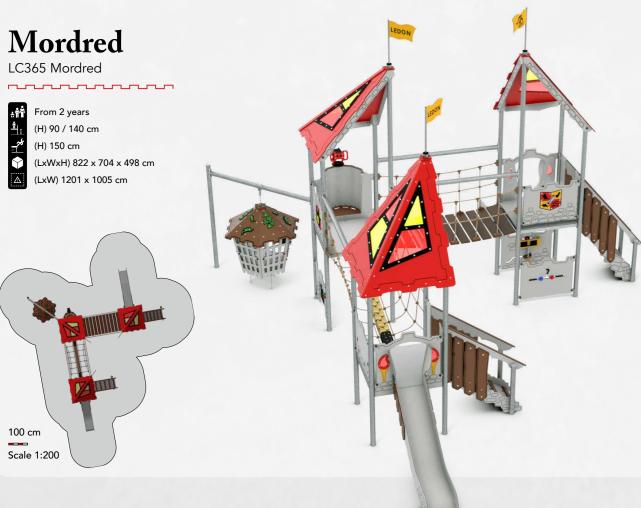


From 2 years (H) 40 / 90 / 140 cm (H) 187 cm









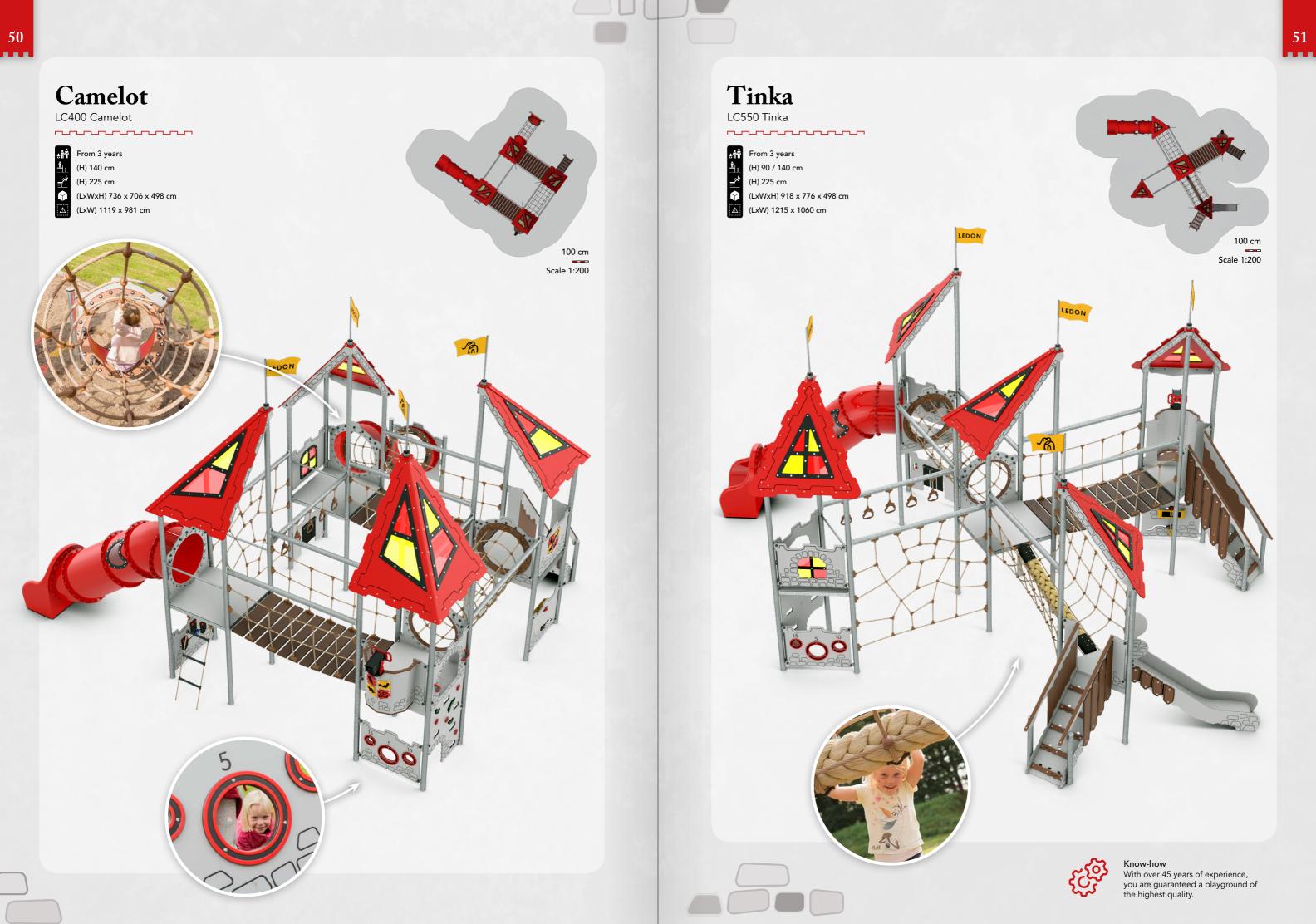




UV-stabilised and zero-maintenance materials 

















Play value To ensure the highest play value, our play equipment is developed in collaboration with children.

From 3 years (H) 90 / 140 cm (H) 225 cm





## Accessories

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## Symbol explanation



## Age group The product is recommended for the following age groups (guide).



### Maximum fall height Indicates maximum fall height to the underlay.



### Size Indicates the product size in length, width and height.



Space requirements Indicates how big the product is incl. safety area.



Bonus-info Extra information about the product e.g. hidden functions.

## 

## Moonlight

LC042 Moonlight 

÷Ť From 2 years (H) 49 cm (LxWxH) 89 x43 x 81 cm Δ (LxW) 289 x 243 cm (NB Skid proof seat



## Zaphir LC046 Zaphir



## (LxWxH) 89 x43 x 81 cm (LxW) 289 x 243 cm



## Prince

LC044 Prince



From 2 years (H) 49 cm (LxWxH) 89 x43 x 81 cm (LxW) 289 x 243 cm Skid proof seat

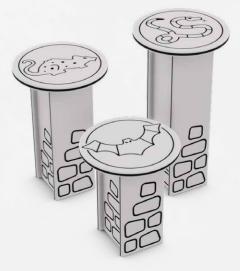


## **Stepping stones**

(Contact us for item numbers) 



(H) 30/40/50 cm (LxWxH) 28 x 28 x 30/40/50 cm (LxW) 328 x 328 cm Skid proof surface







## Materials

When safety meets functionality

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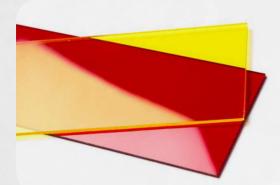


## Polyethylene (PE)

All polyethylene boards are especially developed for Ledon, aiming at getting the best possible quality. The material is maintenance-free and extremely hard-wearing - even scratches and fissures do not reduce its durability.

The boards are non-toxic and comply with EN71 (safety requirements for toys) as well as with the requirements of the United States Food & Drug Administration (FDA) as outlined in the CFR (Code of Federal Regulations) Title 21, Section 177.1520.

Our polyethylene boards are available in 11 different colours with a black core. The boards are UV-stabilized regarding both shape and colour. We give 5 years guarantee on considerable fading.



### Crystal clear polycarbonate

The coloured windows in the LEDON Castle are made of crystal clear polycarbonate. Polycarbonate is extremely impact-proof at temperatures between -40°C and +120°C, which means that in practice, the window is shatter-proof. The material is UV-protected so that wind and weather do not influence the look of the playground, just as the board does not fade despite many hours of sunlight.



No waste All waste material from our Polyethylene boards are recycled.



## Skid-proof polyethylene

Our skid-proof polyethylene board is coated with a 3 mm rubber layer. Being a gimmick from the car industry, it also provides our playground items with extremely durable surfaces.



deform.



### Fittings

All fittings have got round edges and are hot-dip galvanized.



## Nylon parts

All handles are made of nylon (PA6), have round edges and are shaped to offer good grip. This reduces eye and dental injuries. Fingers won't freeze to them. All parts are UV-stabilized regarding shape and colour. They are impact-proof from -40 °C to +110 °C. All parts are maintenance-free.

## Metal pipes

All metal pipes and posts are hot-dip galvanized to avoid rust. Metal pipes make a very stable construction and do not



## Nut covers

All nuts and bolt ends are capped with nut covers, protecting children from sharp edges and the playground items from unwanted demounting.





Most of our playground items are assembled with either bolts, screws or specially designed aluminium bushes. All screws and bolts are made of stainless or galvanized steel.



LEDONS new rubber membrane ensures not just many hours of fun play. The rubber membrane is fitted with several layers of microfibre, which makes the material incredibly hard-wearing and at the same time protects against vandalism.

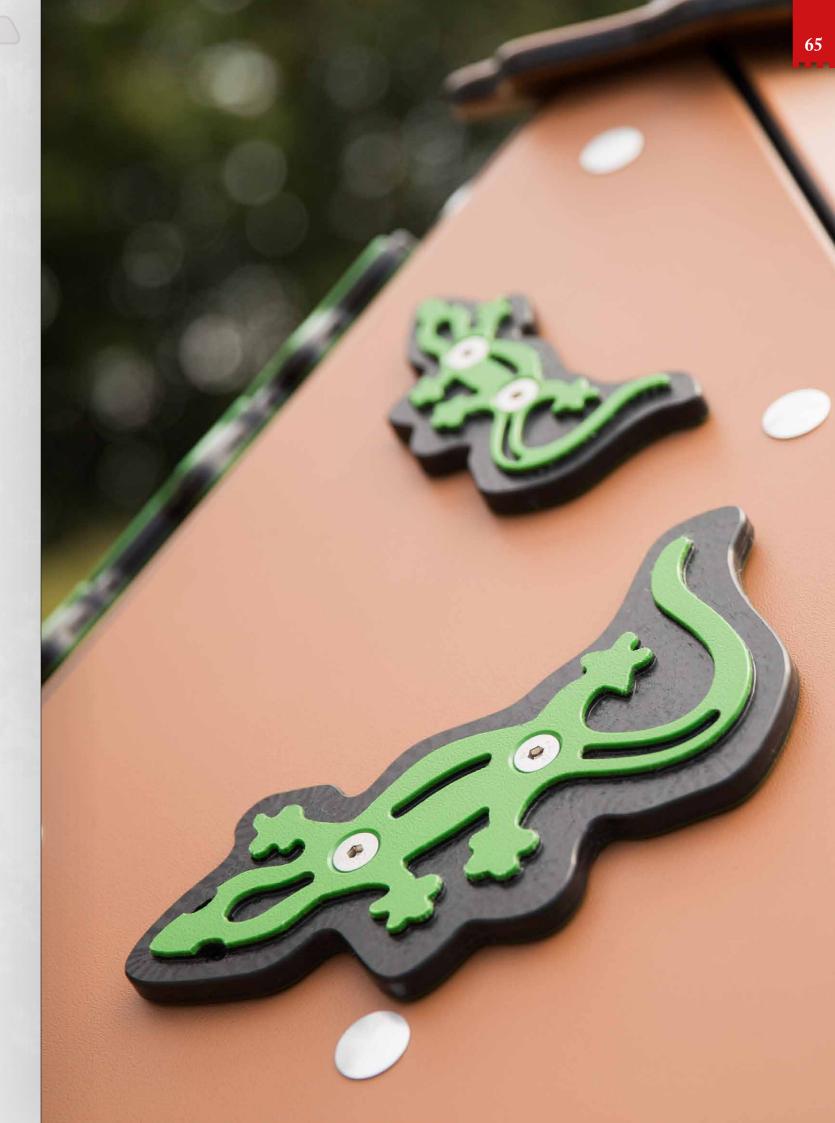


## Ropes and net

All ropes and nets are made of six strands with eight steel wires each, that is a total of 48 steel wires protecting against vandalism.

The rope can take a peak load up to 4,500 kg and does not brittle nor get slack. All climbing nets are put together with joints of impact-proof nylon (PA6).







## Warranties

Your assurance of quality and durability

Ledon's warranties cover material faults in the stated length of time for the respective material. The warranty is only valid if the product was installed correctly and has been maintained in accordance with Ledon's assembly and maintenance instructions.

The warranty does not cover damage caused by ordinary wear and tear, negligence, faulty maintenance, vandalism and abuse. Furthermore the warranty does not cover if original Ledon parts are used with unoriginal parts.

Changes in the material that only alter the product's appearance - such as changes in colour (Plastic and wooden parts) and shrinkage cracks in wood - are not covered by the warranty. However, we give 5 years warranty on considerable fading of HDPE board parts.

Products that are occasionally exposed to chlorine, sand or salt spray, are not covered by Ledon's warranty against corrosion.

## [1] WARRANTY-

## 20 years warranty

Boards of HDPE Steel posts and top beams Floor beams and steel frames Other galvanized bearing parts Components of stainless steel

## 10 years warranty

Other galvanized fittings Components of spray cast PE and PA6 Cedar wood and Robinia Larch wood not touching the ground

### 5 years warranty

Painted metal parts Springs Ropes See-through domes and windows made of polycarbonate

### 2 years warranty

Movable plastic and metal parts

All certifications are made by TÜV or corresponding authorities. The TÜV-badge is only for products that live up to very strict safety, reliability and quality regulations.

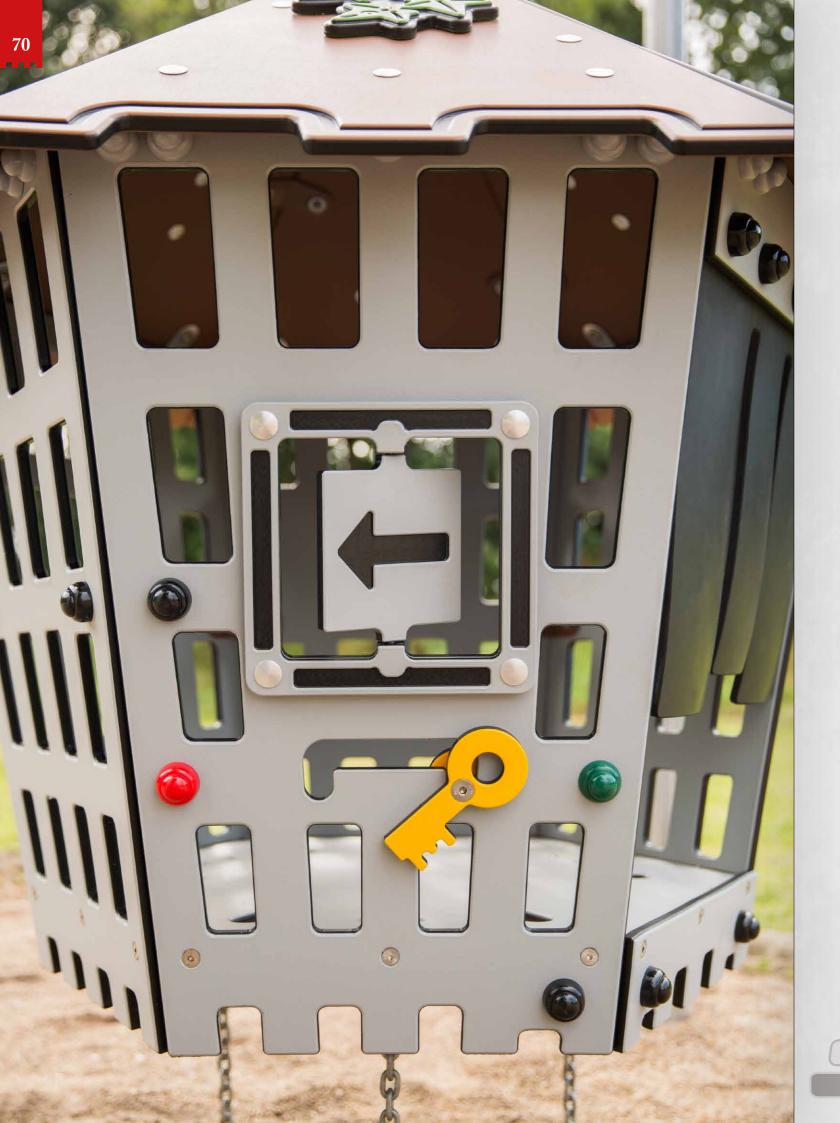


## Products approved of **IAW EN1176**

Safety has got top priority at Ledon, which is why all our play items of course are checked and approved of IAW EN1176.







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