

# PT-31



**Age range**  
3+



**Number of Users**  
6



**Free Fall Height**  
1,5m



**Height**  
4,22cm



**Assemble Area**  
32m<sup>2</sup>



**Sitting Area**  
5,19cm\*6,15cm

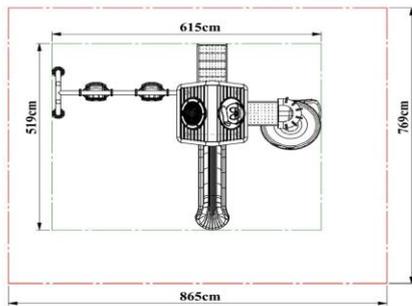
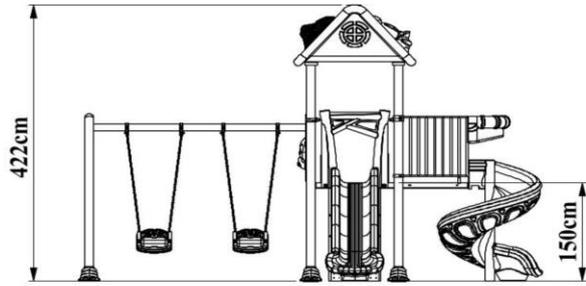


**Safety Area**  
7,69cm\*8,65cm

# PRODUCT TREE

|  |           |              |
|--|-----------|--------------|
| <b>HOUSE ROOF</b>                                  | <b>1</b>  | <b>Piece</b> |
| <b>H:150 STRAIGHT SLIDE</b>                        | <b>1</b>  | <b>Piece</b> |
| <b>H:150 SPIRAL SLIDE</b>                          | <b>1</b>  | <b>Piece</b> |
| <b>WOODEN FIGURED SLIDE ENTRY</b>                  | <b>1</b>  | <b>Piece</b> |
| <b>SPIRAL SLIDE ENTRY</b>                          | <b>1</b>  | <b>Piece</b> |
| <b>DUCK FIGURED PANEL</b>                          | <b>1</b>  | <b>Piece</b> |
| <b>116 x 116 SQUARE PLATFORM</b>                   | <b>1</b>  | <b>Piece</b> |
| <b>60 x 90 SPIRAL SLIDE PLATFORM</b>               | <b>1</b>  | <b>Piece</b> |
| <b>H:150 STAIRS FROM GROUND TO TOWER</b>           | <b>1</b>  | <b>Piece</b> |
| <b>ANCHORAGE COVER</b>                             | <b>6</b>  | <b>Set</b>   |
| <b>SCREW HIDING</b>                                | <b>12</b> | <b>Piece</b> |
| <b>PLASTIC CLAMP WITH STRAIGHT CONNECTION PART</b> | <b>10</b> | <b>Piece</b> |
| <b>H:150 STAIR RAILS FROM GROUND TO TOWER</b>      | <b>1</b>  | <b>Set</b>   |
| <b>335 CM TOWER PIPE</b>                           | <b>4</b>  | <b>Piece</b> |
| <b>180 CM SPIRAL INNER PIPE</b>                    | <b>1</b>  | <b>Piece</b> |
| <b>Ø27 PANEL INNER PIPE</b>                        | <b>2</b>  | <b>Piece</b> |
| <b>ATTACHED CURVED CLASSICAL SWING</b>             | <b>1</b>  | <b>Set</b>   |
| <b>SPIRAL SLIDE FRAM METAL RAILING</b>             | <b>1</b>  | <b>Set</b>   |

# TECHNICAL DRAWING



## **Load-bearing Construction**

- Tower, slide, roof, ladder, railing, etc. The main columns that will carry the playgroup elements are manufactured from industrial pipes with a diameter of 114 mm and a wall thickness of min. 2 mm.
- The open top parts of the 114 mm diameter industrial pipes are closed and riveted with self-colored plastic pipe plugs shaped with injection molds in the form of a hemisphere with a wall thickness of 4-6 mm, detailed to prevent corrosion caused by water and moisture.

## **Polyethylene Products**

- The raw material of polyethylene materials to be used in playgrounds is low density linear polyethylene.
- Original raw materials that do not contain any chemicals that may harm children's health and that have EN 1176-1.3 certificate are used.
- In order to prevent electrification, an anti-static agent is added to the polyethylene.
- There is no zinc in the paints used in the polyethylene raw material and the light sensitivity is between 6-8 scales.
- In polyethylene materials, the thickness is at least 5 mm in areas where there is friction and pressure.

## **Electrostatic Paint**

- After all metal parts are manufactured, they are immersed in an iron phosphate bath with 1% concentration at 50 degrees for 15 minutes after rinsing in the dust and degreasing bath with 5% concentration at 70 degrees for 10 minutes.
- Afterward, it is rinsed with clean water again and drying processes are carried out.
- Before the static paint process, sanding is applied in a way to prevent rusting, which may be caused by dust and particles that can settle on the metal parts as a result of air circulation during the drying phase during the resting period.
- After this stage, the material is covered with polyester-based powder paint with a thickness of 60-80 microns, which prevents heating (color fading) in the sun, and then it is heated in an oven at a temperature of at least 200-220 degrees for 10 minutes, and the painting process is completed.

## Pipes

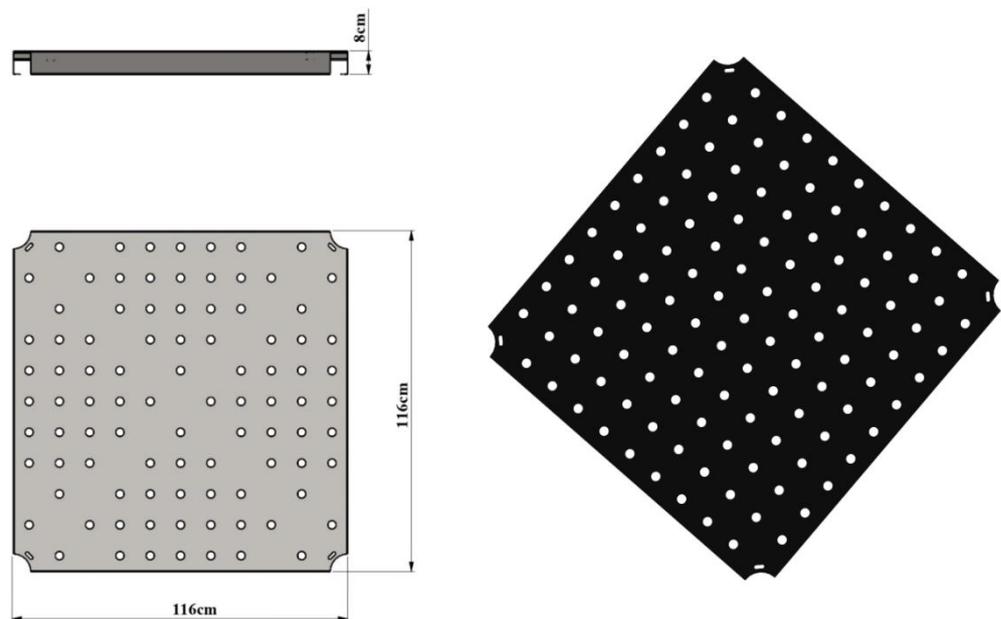
- Tower pipes; It is manufactured from SDM pipe with a height of 335 cm a diameter of 114 mm, and a wall thickness of min. 2 mm.
- The tower pipes are produced in one piece and perfectly, from horizontal and vertical pipes in length cut according to the determined heights, with a minimum of 2250 mm.
- Pipes with seam marks on the surface are not used in production.
- Adding the length of the pipes, welding, etc. is not extended by the procedure.
- In order to prevent water, moisture, and foreign matter from entering the upper parts of these pipes, colored plastic pipe plugs produced by the injection method are fixed and closed to the pipes with a riveting system.
- The connection points of the pipes with the concrete floor are joined by the sheet metal flange welding method with the size of 20\*20\*6 mm.
- Connection of the Tower Pipes with the platform the half-moon-shaped ears welded according to the platform size, produced from 6 mm wall thickness, are welded to the pipes and these ears are connected to the platform with the screwing system by means of galvanized bolts and nuts.
- A polyester-based electrostatic powder paint coating process is performed and it is baked in a 200°C oven for 20 minutes.
- Tower pipes are closed with anchor caps produced by injection after assembly.
- 100 cm high, Ø27 elektrostatic paint panel inner pipe is used.



|                   |                |           |
|-------------------|----------------|-----------|
| <b>Dimensions</b> | Diameter       | Ø 114 mm  |
|                   | Wall Thickness | Min. 2 mm |

## 116x116 Square Platform

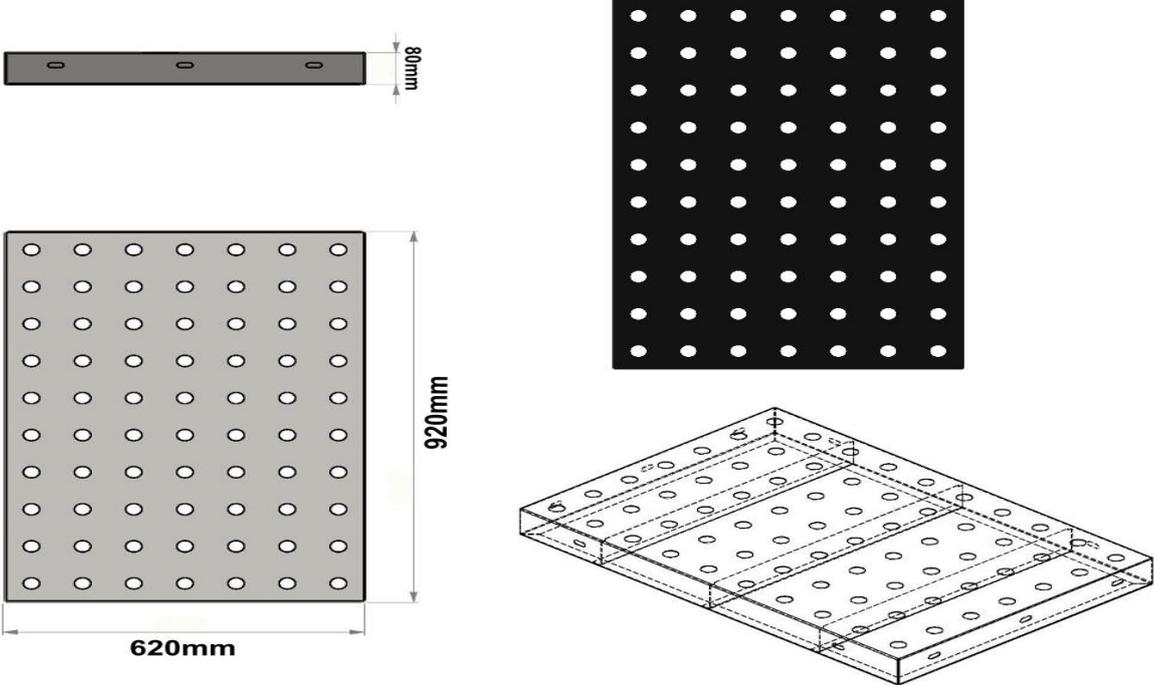
- The platform is manufactured from perforated sheet metal with a minimum size of 116 cm x 116 cm x 8 cm and a minimum wall thickness of 1.5 mm-2 mm.
- Flat designed surface; It is designed to prevent slipping and not allow water retention.
- In the middle of the platform, support sheets are welded to the lower part in order to prevent the sheet from flexing.
- The corners of the platform are manufactured in the form of a quarter circle, enclosing the 114 mm pipe.
- Before the coating process, the sheets are washed with special chemicals, cleared of oil and dirt that will prevent the coating on them, and then coated with the priming method.
- After the priming process, the upper surface of the platform is hot-dip method with an anti-static material mixture with a hardness of  $-60 \pm 5$  share A, a density of  $1 \text{ gr/cm}^3$ , minimum  $\text{kgf/cm}^2$  breaking strength, 650-700% breaking elongation, and  $100 \text{ m}^3$  (max) abrasion. PVC (Plastisol) coating is made.
- PVC thickness is produced at a minimum of 2 mm at each point.



|                   |                           |             |
|-------------------|---------------------------|-------------|
| <b>Dimensions</b> | Platform Dimensions       | 116*116 cm  |
|                   | Sheet Thickness           | 2 mm - 8 cm |
| <b>Features</b>   | Plastisol Coated Platform |             |

# 60x90 Spiral Extension Platform

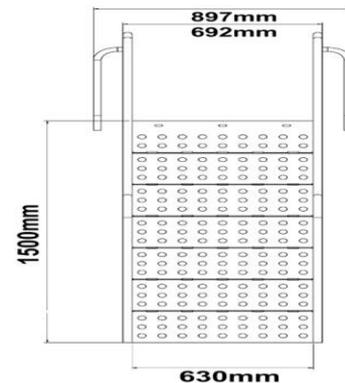
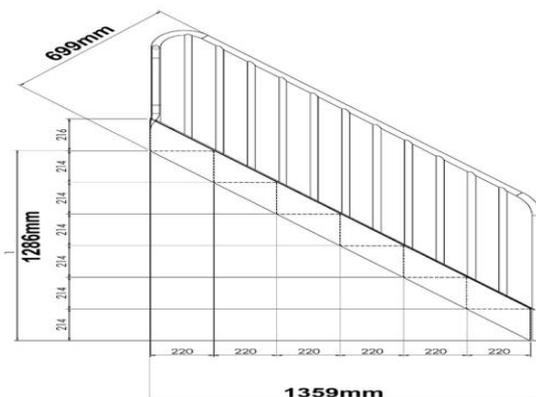
- The platform is manufactured from perforated sheet metal with a minimum dimension of 60 cm x 90 cm x 8 cm and a minimum wall thickness of 1.5 mm-2 mm.
- Flat designed surface; It is designed to prevent slipping and not allow water retention.
- In the middle of the platform, support sheets are welded to the lower part in order to prevent the sheet from flexing.
- The corners of the platform are manufactured in the form of a quarter circle, enclosing the 114 mm pipe.
- Before the coating process, the sheets are washed with special chemicals, cleared of oil and dirt that will prevent the coating on them, and then coated with the priming method.
- After the priming process, the upper surface of the platform is hot-dip method with an anti-static material mixture with a hardness of  $-60 \pm 5$  share A, a density of  $1 \text{ gr/cm}^3$ , minimum  $\text{kgf/cm}^2$  breaking strength, 650-700% breaking elongation, and  $100 \text{ m}^3$  (max) abrasion. PVC (Plastisol) coating is made.
- PVC thickness is produced at a minimum of 2 mm at each point.
- The platform is attached to the square platform by screwing and its assembly is provided.



|                   |                           |             |
|-------------------|---------------------------|-------------|
| <b>Dimensions</b> | Platform Dimensions       | 60*90 cm    |
|                   | Sheet Thickness           | 2 mm - 8 mm |
| <b>Features</b>   | Plastisol Coated Platform |             |

## H: 150 Cm Ground to Tower Ladder

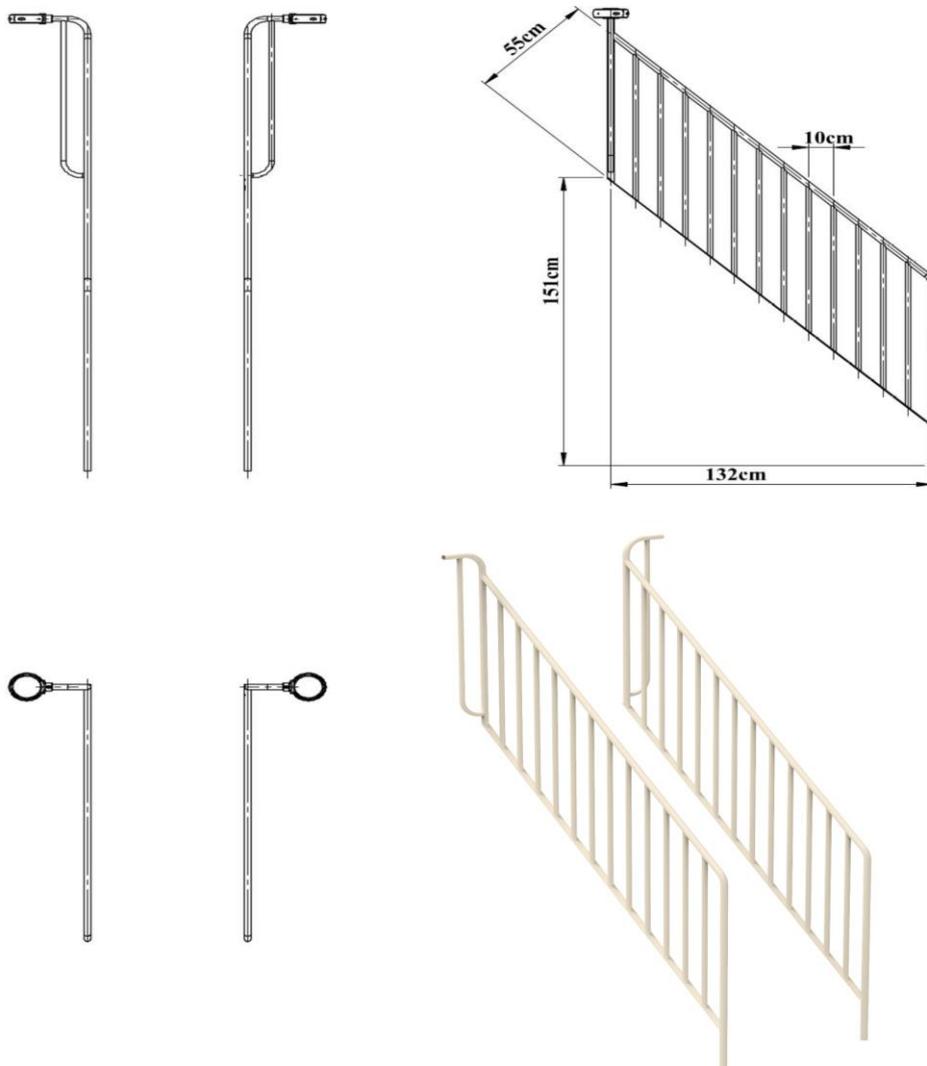
- Ladders are manufactured in one piece with a minimum of 7 steps, with a height difference of 150 cm from the ground to the platform.
- The step height of the stairs is produced with a minimum of 130 mm and a maximum of 200 mm.
- The steps are manufactured from dkp sheet with a minimum wall thickness of 1.5 mm - 2 mm.
- There will be no sharp or sharp edges, corners, or points on the stairs, and no shapes that may cause injury will be used in any way whatsoever.
- Stair treads are mixed  $-60\pm 5$  share A hardness,  $1 \text{ gr/cm}^3$  density, minimum  $\text{kgf/cm}^2$  breaking strength, 650-700% breaking elongation and  $100 \text{ m}^3$  (max) wear feature, anti-static material mixed with PVC (Plastisol) method by hot dipping method.) will be covered. PVC thickness is at least 2 mm at each point.



|                   |                                       |             |
|-------------------|---------------------------------------|-------------|
| <b>Dimensions</b> | Platform Height                       | 150 cm      |
|                   | Sheet Thickness                       | 2 mm-1,5 mm |
| <b>Features</b>   | Plastic Coated Stairs + Metal Railing |             |

## H: 150 Cm Ground to Tower Stair Railing

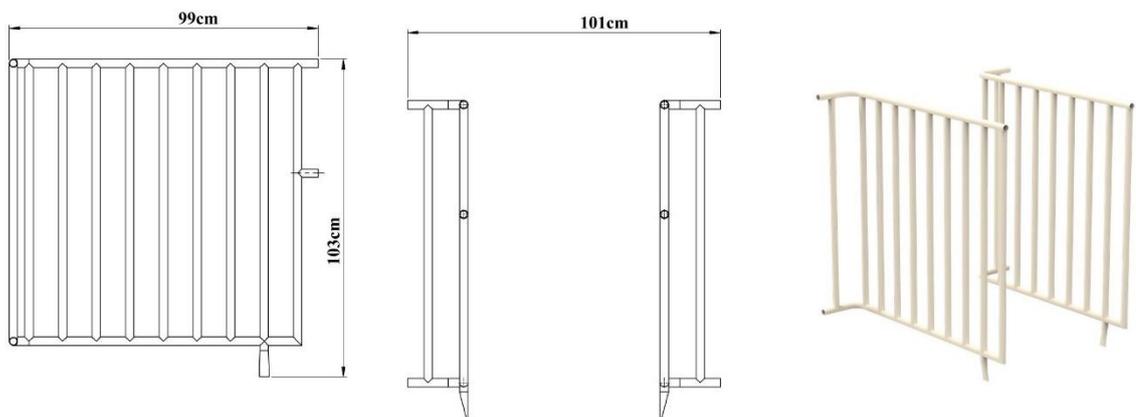
- The edges of the stair railing are made of a maximum of  $\text{Ø } 27 \text{ mm}$  pipes, and the railings are made of a minimum of  $\text{Ø } 21 \text{ mm}$  pipes.
- The distance between the handrails on the stair railing from the platform to the platform is a minimum of 89 mm.
- Stair railings are painted with polyester-based electrostatic powder paint.



|                   |                                   |                           |
|-------------------|-----------------------------------|---------------------------|
| <b>Dimensions</b> | Outer Frame Tube                  | $\text{Ø } 27 \text{ mm}$ |
|                   | Frame Inner Tube                  | $\text{Ø } 21 \text{ mm}$ |
|                   | Minimum Distance Between Railings | 89 mm                     |

## Spiral Slide Metal Railing

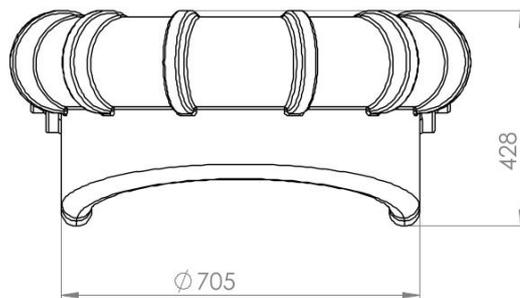
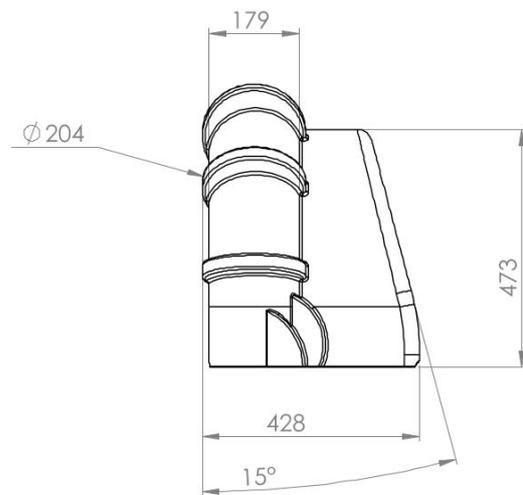
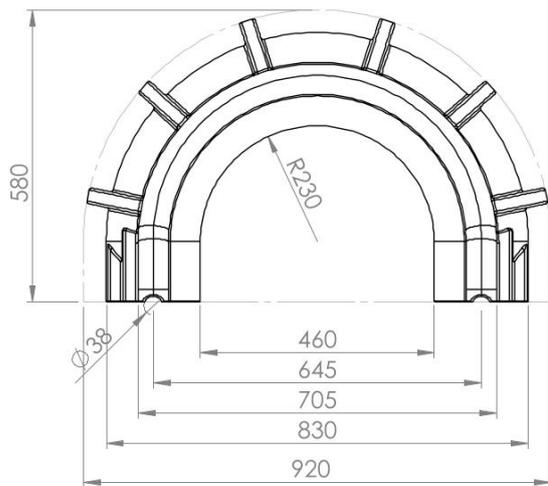
- The edges of the stair railing are produced from a maximum of  $\text{Ø } 27 \text{ mm}$  pipe, and the railings are produced from a minimum of 21 mm pipes.
- Stair railings are painted with polyester-based electrostatic powder paint.
- The slide entrance railing is produced as a single piece of metal.
- The slide entry guardrail is connected to the carrier pole with the help of polyamide clamps with  $\text{Ø}27 \text{ mm}$  pipes from the top.
- It is mounted on the platform with the help of galvanized bolts and nuts from the bottom.



|                   |                                   |                           |
|-------------------|-----------------------------------|---------------------------|
| <b>Dimensions</b> | Outer Frame Tube                  | $\text{Ø } 27 \text{ mm}$ |
|                   | Frame Inner Tube                  | $\text{Ø } 21 \text{ mm}$ |
|                   | Minimum Distance Between Railings | 88 mm                     |

## Spiral Slide Entrance

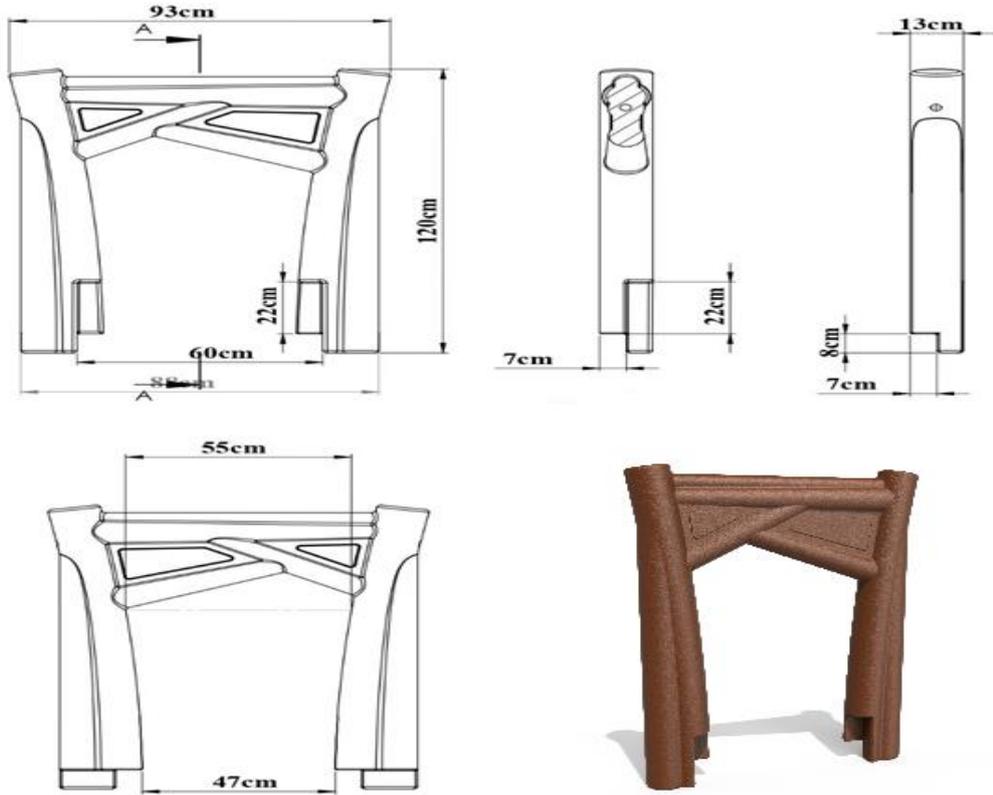
- It is manufactured from self-colored polyethylene plastic material as a one-piece and double-walled by rotation molding method with low density (LLDPE Linear Low-Density Polyethylene) designed to prevent falling into the slide entrances.
- In order for the product surface to be smooth; It is produced by sandblasting the surface of the mold made of aluminum or its equivalent material and undergoing a Teflon coating process for surface brightness.



|                   |              |       |
|-------------------|--------------|-------|
| <b>Dimensions</b> | Length       | 58 cm |
|                   | Width        | 92 cm |
|                   | Input Width  | 46 cm |
| <b>Features</b>   | Min. Weight  | 8 kg  |
|                   | Raw material | LLDPE |

# Wooden Figured Straight Slide Entry

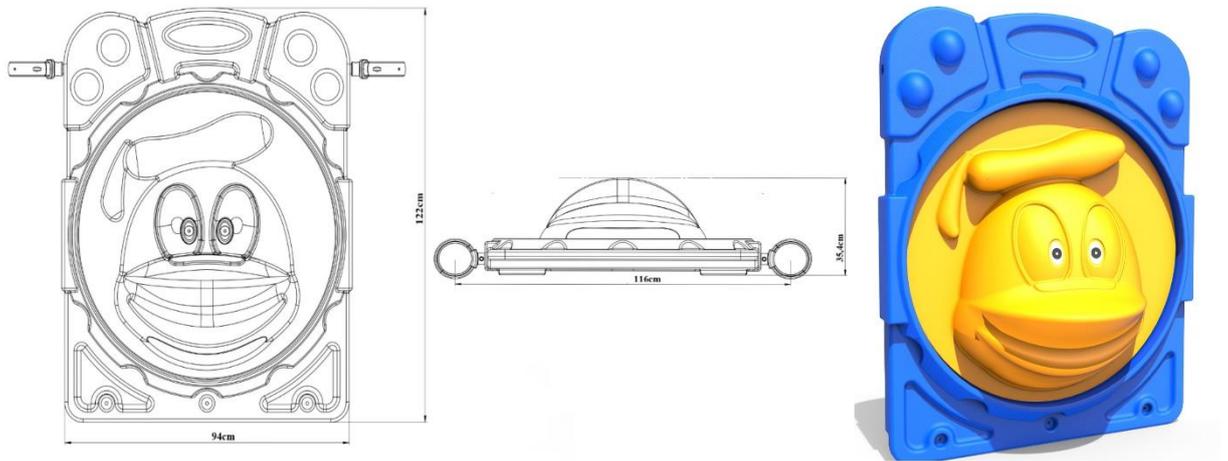
- It is manufactured from self-colored polyethylene plastic material as a one-piece and double-walled by rotation molding method with low density (LLDPE Linear Low-Density Polyethylene) designed to prevent falling into the slide entrances.
- Plastic clamps and vertical mouth connection apparatuses are attached to the Ø 27 mm. inner pipe ends attached to the slides, and the Ø 114 mm tower is fixed to the pipes and screwed from the parts of the panels that sit on the platform.
- In order for the product surface to be smooth; It is produced by sandblasting the surface of the mold made of aluminum or its equivalent material and undergoing a Teflon coating process for surface brightness.



|                   |              |        |
|-------------------|--------------|--------|
| <b>Dimensions</b> | Length       | 120 cm |
|                   | Width        | 93cm   |
|                   | Input Width  | 55 cm  |
| <b>Features</b>   | Min. Weight  | 8,5 kg |
|                   | Raw material | LLDPE  |

## Duck Figured Panel

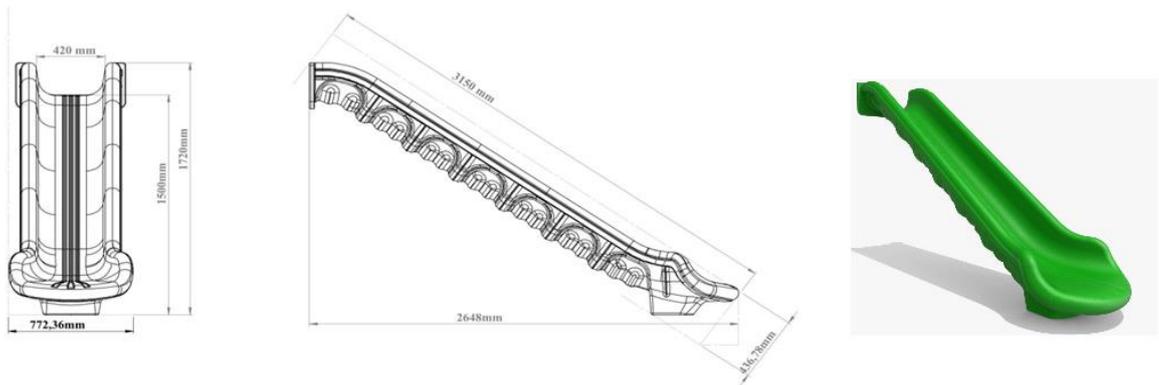
- Duck figured panels are manufactured from self-colored polyethylene LLDPE (Linear Low-Density Polyethylene) material as double-walled by rotation molding method.
- The Duck figured panels are fixed to the main construction with the help of a polyamide-based clamp system with pipes of 95x122 cm dimensions Ø, 27 mm diameter from the top.
- The dyestuffs used in coloring are suitable for child health.



|                   |                 |         |
|-------------------|-----------------|---------|
| <b>Dimensions</b> | Height          | 122 cm  |
|                   | Width           | 95 cm   |
|                   | Panel thickness | 35,4 cm |
| <b>Features</b>   | Min Weight      | 12,5 kg |
|                   | Raw material    | LLDPE   |

## H: 150 Straight Slide

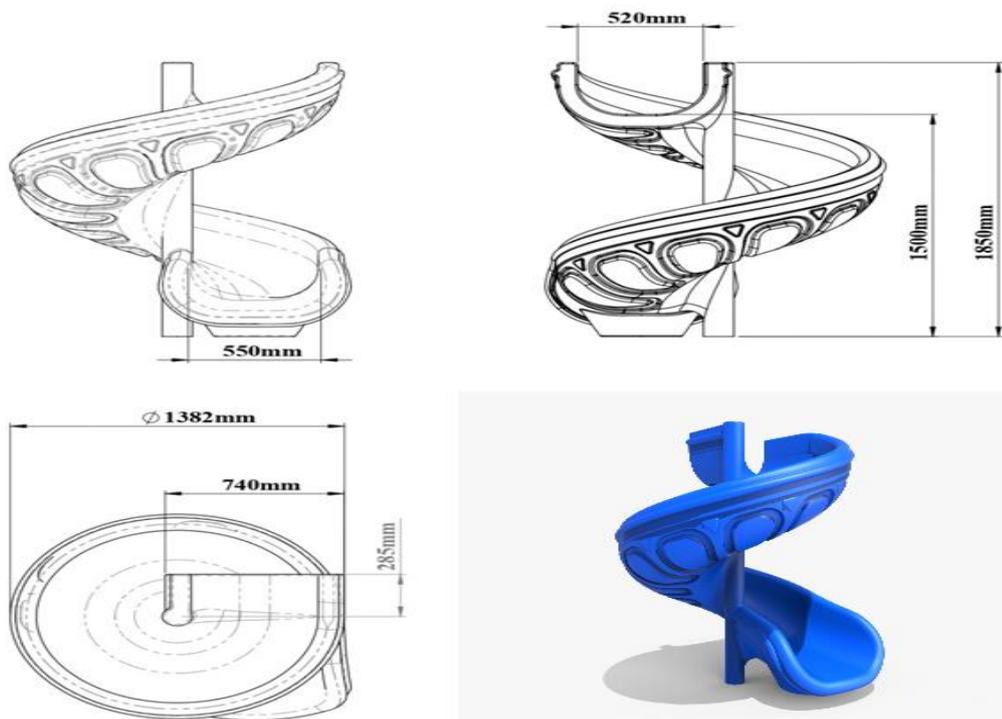
- LLDPE (Linear Low-Density Polyethylene) made of self-colored polyethylene plastic material, which is designed to slide from a 150 cm high platform, has a minimum length of 3 meters, is produced in a single piece and double-walled form with a minimum weight of 33 kg.
- It is manufactured in such a way that the inner height dimension of the side protective corners of the slide is 17 cm, the width of the sliding surface is 40 cm, and the slope is 25-30 degrees.
- The slide is fixed to the ground with a metal apparatus from the anchorage point at the bottom of the slide's exit point.
- In order for the product surface to be smooth; Sandblasting is applied to the surface of the mold made of aluminum or its equivalent material, and it is produced by passing the Teflon coating process for surface brightness.
- A flat slide entrance panel is used to ensure safety at the slide entrance.
- LLDPE (Linear Low-Density Polyethylene) from self-colored polyethylene plastic material is produced in one piece by rotation molding method.
- Plastic clamps and vertical mouth connection apparatuses are attached to the  $\varnothing 27$  mm inner pipe ends attached to the inside of the polyethylene flat slide entrance panels and fixed to the  $\varnothing 114$  mm tower pipes.



|                   |                   |        |
|-------------------|-------------------|--------|
| <b>Dimensions</b> | Platform Height   | 150 cm |
|                   | Side Wall Length  | 17 cm  |
|                   | Slide Inner Width | 40 cm  |
|                   | Slide Length      | 315 cm |
| <b>Features</b>   | Raw material      | LLDPE  |
|                   | Min. Slide Weight | 33 kg  |

## H:150 Spiral Slide

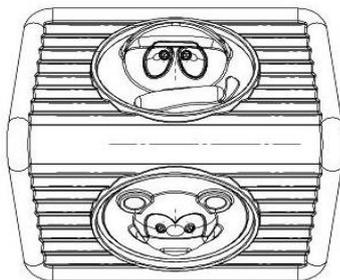
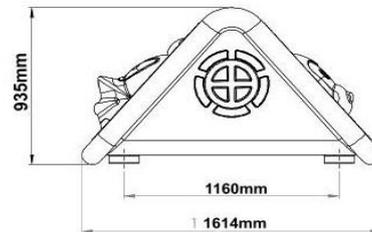
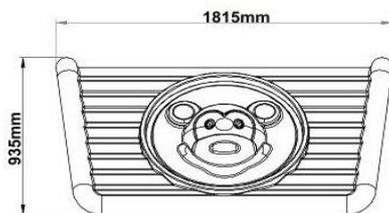
- It is produced from a single piece of polyethylene plastic material with a low-density LLDPE (Linear Low-Density Polyethylene) rotation molding method, which is spirally molded from a 150±10 cm high platform to a minimum Ø89 mm profile pipe in its center, in a self-colored form.
- It is manufactured in such a way that the inside height measure of the side protective corners of the slide is 17 cm, the width of the sliding surface is 40 cm, and the slope is 25-30 degrees.
- In order to ensure safety, metal spiral guardrails are used on both sides of the slide entrance, and a polyethylene entrance barrier with a minimum weight of 8 kg is used on the upper part.
- A 15\*15\*5 mm diameter flange is welded to the middle part of the slide, and it is fixed to the floor with an SDM pipe with a diameter of 89 mm, a length of 180 cm.



|                   |                   |        |
|-------------------|-------------------|--------|
| <b>Dimensions</b> | Platform Height   | 150 cm |
|                   | Side Wall Length  | 17 cm  |
|                   | Slide Inner Width | 40 cm  |
|                   | Slide Length      | 185cm  |
| <b>Features</b>   | Raw material      | LLDPE  |
|                   | min. Slide Weight | 38 kg  |

## House Roof

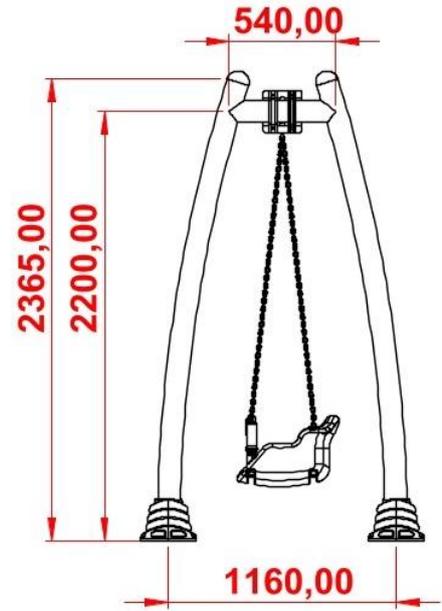
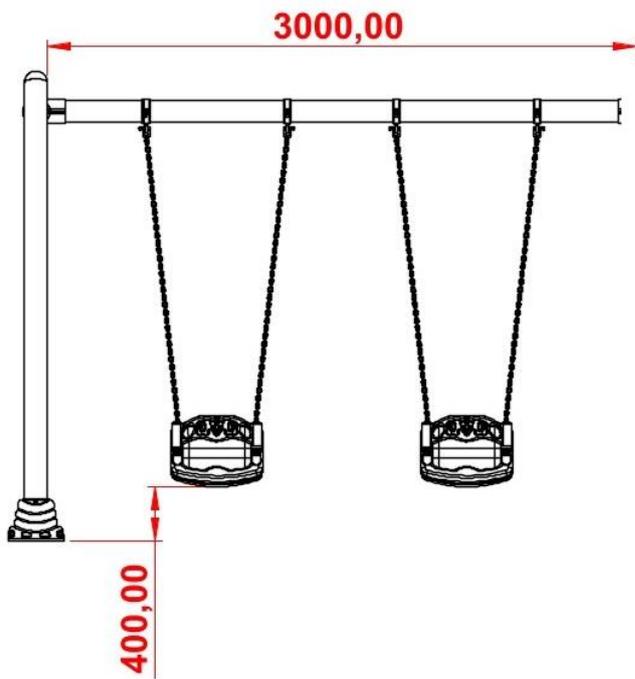
- The house roof is manufactured from polyethylene plastic material, LLDPE (Linear Low-Density Polyethylene) with a minimum height of 89 cm, by rotation molding method, in two parts as body and upper apparatus, in self-color.
- In accordance with TS EN 1176-1, when measuring on the platform, the height between the platform and the roof is at least 1800 mm.
- The house roof is manufactured to be directly connected to the main construction.
- No connecting element is used in between.
- The roof of the house is completed by mounting 2 large figures on the side surfaces with screws.



|                   |                        |        |
|-------------------|------------------------|--------|
| <b>Dimensions</b> | Length                 | 161 cm |
|                   | Width                  | 181 cm |
|                   | Min. House Roof Height | 89 cm  |
| <b>Features</b>   | Min. House Roof Weight | 37 kg  |
|                   | Raw material           | LLDPE  |

## Attached Curved Classical Swing

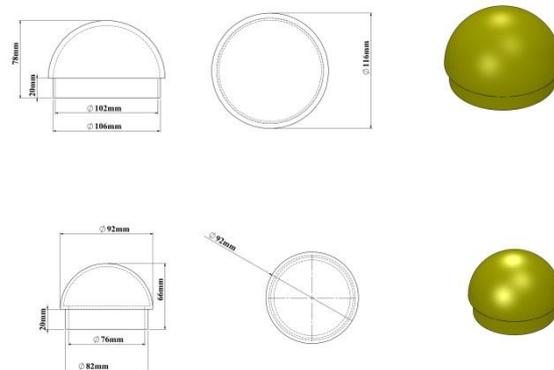
- The cutting points of the horizontal and vertical pipes from the SDM pipe with a diameter of 114 mm are connected to each other with doetail metal clamps with a minimum wall thickness of 3 to form a right angle.
- The open parts of the Ø 114 mm diameter SDM pipes are detailed to prevent rusting caused by water and moisture, shaped with hemispherical injection molds, sealed with self-colored plastic plugs and riveted.
- Double swing frame; 1 swing side strut, 2,2 m length Ø 114 mm, 1 pcs 3 m length horizontal pipe and 2 pieces of protected polyethylene seat products are used.
- This Flat seat is designed in a form that will wrap the user's body and is made of LLDPE (Linear Low Density Polyethylene) self-colored polyethylene plastic material weighing at least 2.5 kg.
- The swing seat railing is manufactured by LLDPE (Linear Low Density Polyethylene) blow molding manufacturing method from self-colored polyethylene plastic material weighing at least 0.5 kg.
- The swing chains are at least 6 mm thickness and coated with galvanized 25 micron hot-dip.
- The chain channels through which the chain must pass are manufactured ready to use on the product.
- The chains are connected by chain locks to the bearing wedges, which are welded together on the swing carrier.
- In order to prevent the chain locks from being easily removed, the bolt is manufactured with an allen head and galvanized coated for corrosion resistance.
- The length of the main chain is 175 cm long, and a 6 mm caliber dipped chain is used.
- The chain channels are opened spontaneously on the product.
- Double Swing chains are manufactured in such a way as to prevent finger jamming of small children and babies.
- In front of the product, there is no movable polyethylene protection assembly in the vertical plane.
- The distance between the bottom of the polyethylene swing seat and the Decking is a maximum of 40 cm.



|                   |                                 |        |
|-------------------|---------------------------------|--------|
| <b>Dimensions</b> | Side Pipe Length                | 230 cm |
|                   | Horizontal Pipe Length          | 300 cm |
|                   | Swing Seat Width                | 44 cm  |
|                   | Swing Seat Length               | 32 cm  |
|                   | Swing Seat Height               | 33 cm  |
|                   | Minimum Swing Seat Weight       | 2,5 kg |
|                   | Minimum Weight of Swing Railing | 0,5 kg |
|                   | Chain Length                    | 175 cm |
|                   | Chain Thickness                 | 6 mm   |

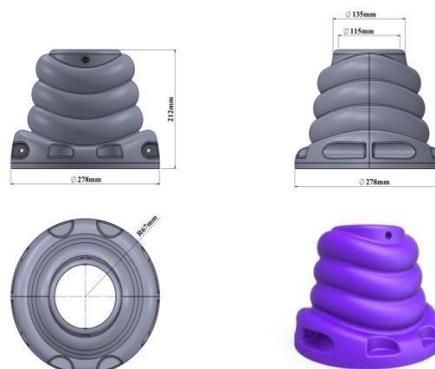
## Ø 114 Hat Plug

- The cap plug is used to close open-ended pipes in children's playgroups, seesaws, swings, and other products.
- The cap plug is manufactured from polyethylene material for indoor and outdoor use.
- The product is resistant to UV lights.
- Its design is oval in a way that does not harm the user.
- It grasps the pipe with its 114 mm double-walled inlet and is easy to install.



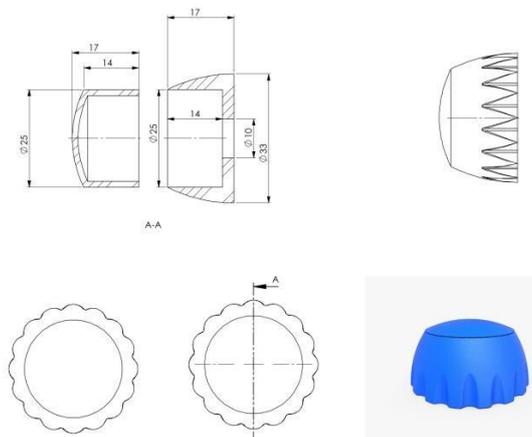
## Ø 114 Anchor Cover

- Anchor caps measuring 114 mm are used to cover open-ended pipes in children's playgrounds, seesaws, swings, and other products.
- Anchor caps are produced from polythene plastic material for indoor and outdoor use.
- It is resistant to UV lights and is designed not to harm the user.
- It is manufactured as double-walled and assembled with a screwing system.



## Screw Concealment

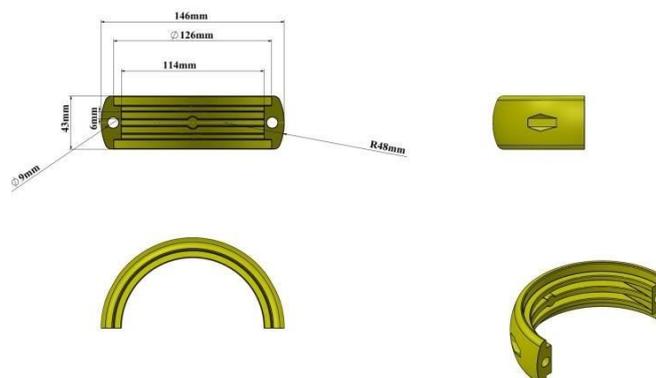
- Screw hides are used in all playgroups to prevent possible accidents and injuries.
- Screw hides; It provides an aesthetic appearance to playgroups and parking elements by allowing mounting elements such as screws and nuts to be hidden.
- Screw closures are produced from A polythene plastic material by injection method, suitable for indoor and outdoor use.
- It is resistant to UV lights and is designed not to harm the user.



# Connectors

## Ø 114 Plastic Clamps

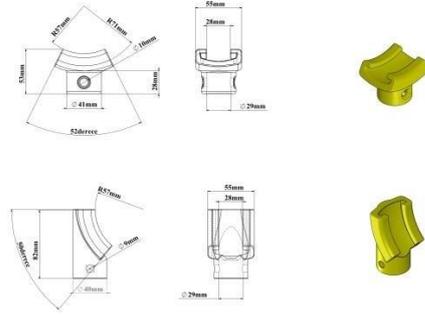
- Plastic clamps, board on the playgroup, slide entrance, railings, etc. It enables the elements to be mounted on the carrier system with a diameter of 114 mm.
- Clamps are manufactured from fibrous polyamide raw material by injection method.
- The clamp is designed in accordance with the inner diameter 114 mm pipe.
- It does not rotate on the pipe surface when tightened.
- After the clamp is connected, there are no protrusions or sharp corners that may cause injury in any part of the clamp.
- It can be produced in the desired color.



## Ø114 Perpendicular Mouth

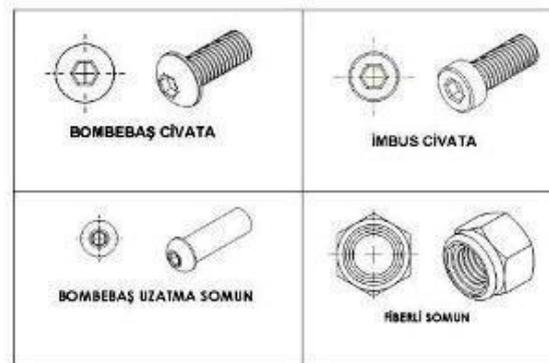
- Upright mouth, curved mouth, and platform wedge apparatus are used in the assembly of various playgrounds and sports equipment.
- It is produced from polyethylene material suitable for 114 mm pipe, suitable for indoor and outdoor use.
- The product is resistant to UV lights.
- Its design is in a structure that will not harm the user.

- It can be produced in desired colors.



## Bolts, Nuts and Washers

- The fasteners (bolts, washers, and nuts) used in-game systems are produced as GeometB321 Plus or galvanized coating to protect them against corrosion.
- There are no nut and bolt protrusions anywhere in the playset.
- Except for the camber head nut within the playgroup, all nuts are produced with fiber.



## Aluminum Doetail Clamp

- Doetail clamp made of 3 mm DKP sheet is used in the swing and climbing connections.
- The inner diameter of the clamp, which consists of 2 parts, is designed in accordance with the carrier pipe with a diameter of  $\text{Ø}114$  mm and is connected to the carrier H on one side and to the horizontal carrier pipe on the other.
- When it is connected to the pipe and its bolts are tightened, there is no gap and loose.
- After the clamp connection is made, there are no protrusions or sharp corners that may cause injury anywhere.
- Bolt connections are designed to not loosen on their own.
- The parts are painted with polyester-based electrostatic powder oven paint by baking.

