

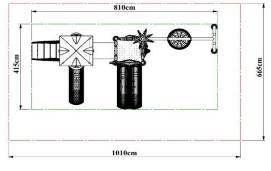


PRODUCT TREE

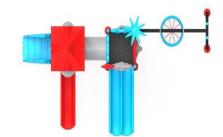
IDEAL ROOF	1	Piece
H:100 WAVY SLIDE	1	Piece
H:100 DOUBLE SLIDE	1	Piece
HAT FIGURED SLIDE ENTRY	1	Piece
BUGS BUNNY SLIDE ENTRY	1	Piece
CAT & LION FIGURED PANEL	3	Piece
PALM TREE	1	Piece
BUGS BUNNY FIGURE	1	Piece
H:100 TUBE PASSING	1	Piece
H:100 CATERPILLAR STAIRS	1	Piece
ATTACHED CURVED BIRD NEST SWING	1	Set
116 x 116 SQUARE PLATFORM	2	Piece
285 CM TOWER PIPE	4	Piece
250 CM TOWER PIPE	2	Piece
225 CM TOWER PIPE	2	Piece
PLASTIC CLAMP WITH STRAIGHT CONNECTION PART	20	Piece
Ø27 PANEL INNER PIPE	8	Piece
SCREW HIDING	36	Piece
ANCHORAGE COVER	10	Set

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 linearpolyethylene.
- Original raw materials that do not contain any chemicals that may harm children's healthand 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 becaused 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.

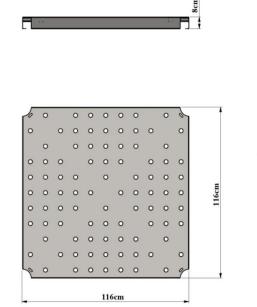
Pipes

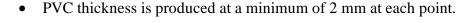
- Tower pipes; It is manufactured from SDM pipe with a height of 225 cm, 250 cm,285 cm a diameter of 114 mm, and a wall thickness of min. 2 mm.
- The tower pipes are produced in one piece and perfectly, from horizontal and vertical pipes in length cut according to the determined heights, with a minimum 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.

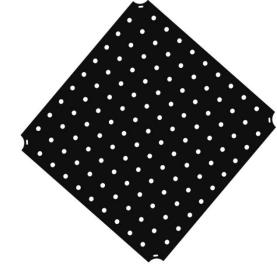
	Diameter	Ø 114 mm
Dimensions	Wall Thickness	Min. 2 mm

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 ±5 share A, a density of 1 gr/cm³, minimum kgf/cm² breaking strength, 650-700% breaking elongation, and 100 m³ (max) abrasion. PVC (Plastisol) coating is made.



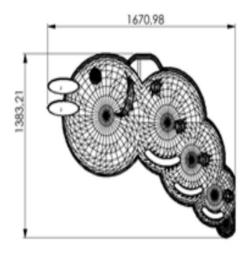


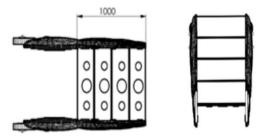


Dimensions	Platform Dimensions	116*116 cm
Dimensions	Sheet Thickness	2 mm - 8 cm
Features	Plastisol Coated Platform	

H:100 Plastic Stair

- The stair is manufactured from self-colored polyethylene plastic material, LLDPE (Linear Low Density Polyetylene) rotation molding method, with a minimum of 4 steps, in a way that can reach 100 cm level difference from the ground to the platform.
- There are patterns designed for children on the stair railing.
- Stair railing is manufactured from self-colored polyethylene plastic material LLDPE (Linear Low Density Polyetylene) by rotation molding method.
- In order for the product surface to be smooth; Sandblasting is applied to the surface of the mold made of aluminum or equivalent material and it is produced by passing the Teflon coating process for surface brightness.



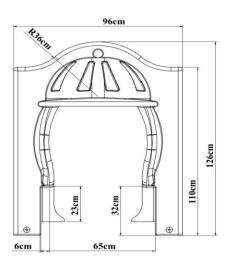


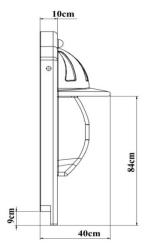


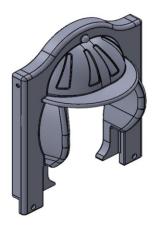
Dimensions	Platform Height	100 cm
	Railing Height	167 cm
	Railing Width	138 cm
Features	min. Weight	50 kg
	Raw materials	LLDPE

Flat Slide Entrance With Hat

- 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.





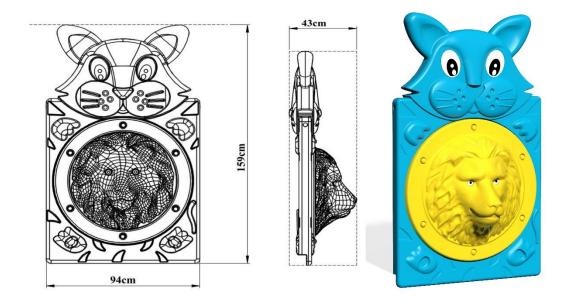




Dimensions	Height	126 cm
	Width	96 cm
	Panel thickness	40 cm
Features	Min Weight	8 kg
	Raw material	LLDPE

Cat-Lion Figured Panel

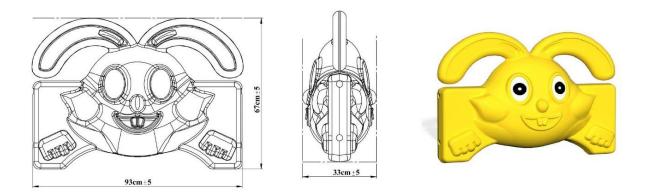
- Cat-Lion figured panels are manufactured from self-colored polyethylene LLDPE (Linear Low-Density Polyethylene) material as double-walled by rotation molding method.
- The Cat-Lion figured panels are fixed to the main construction with the help of a polyamide-based clamp system with 96x122 cm dimensions, Ø 27 mm diameter from the top.
- The dyestuffs used in coloring are suitable for child health.



Dimensions	Height	159 cm
	Width	94 cm
	Panel thickness	43 cm
Features	Min Weight	17 kg
	Raw material	LLDPE

Bugs Bunny Slide Entry

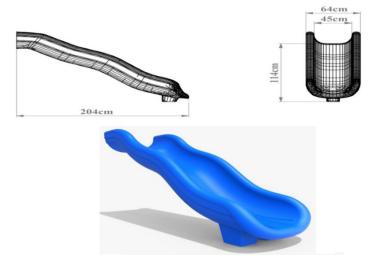
- Bugs Bunny Slide Entry are manufactured from self-colored polyethylene LLDPE (Linear Low-Density Polyethylene) material as double-walled by rotation molding method.
- Bugs Bunny Slide Entry are fixed to the main construction with the help of a polyamidebased clamp system with galvanized pipes of 67*93 cm dimensions, Ø 27 mm diameter from the top, and 2 mm wall thickness.
- The dyestuffs used in coloring are suitable for child health.



Dimensions	Height	67 cm
	Width	93 cm
	Panel thickness	33 cm
Features	Min Weight	4,5 kg
	Raw material	LLDPE

H:100 Wavy Slide

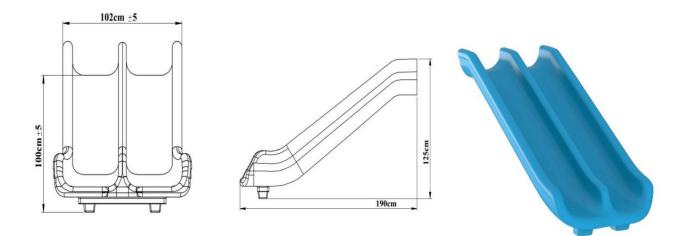
- On the wavy slides connected to the 100 mm high platform; It is manufactured as a single-piece and double-walled LLDPE (Linear Low Density Polyetylene) rotation molding method from self-colored polyethylene plastic material, so that the inclination angle of the slide section with the horizontal does not exceed 60 degrees at any point and 40 degrees on average when the measurement is made according to the longitudinal axis of the slide.
- 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 Ø 27 mm inner pipe ends attached to the inside of the polyethylene flat slide entrance panels and fixed to the Ø 114 mm tower pipes.



Dimensions	Platform Height	100 cm
	Side Wall Length	17 cm
	Slide Inner Width	40 cm
	Slide Length	210 cm
Features	Raw material	LLDPE
	Min. Slide Weight	24 kg

H:100 Double Slide

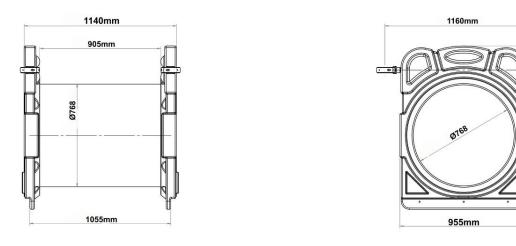
- LLDPE (Linear Low-Density Polyethylene) made of self-colored polyethylene plastic material, which is designed to slide from a 100 cm high platform is produced in a single piece and double-walled form with a minimum weight of 40 kg.
- It is manufactured in such a way that the inner height dimension of the side protective corners of the slide is 25 cm, the width of the sliding surface is 42 cm, and the slope is 25-30 degrees.
- A flat slide entrance panel is used to ensure safety at the slide entrance.
- 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.
- The slide is fixed to the ground with a metal apparatus from the anchorage point at the bottom of the slide's exit point.



Dimensions	Platform Height	100 cm
	Side Wall Length	25cm
	Slide Inner Width	42 cm
	Slide Length	190 cm
Features	Raw material	LLDPE
	Min. Slide Weight	40 kg

100 Cm Tube Passage

- H:100 tube passage with a minimum length of 1 m, designed to allow passage between two platforms; It is manufactured from 3 parts, 2 pcs tube inlets and 1 pcs 110 degree tube, and from self-colored polyethylene plastic material, LLDPE (Linear Low Density Polyethylene) rotation molding method.
- Plastic clamps and vertical mouth connection apparatuses are attached to the ends of Ø 27 inner pipes attached to the tube passages, and 114 towers are fixed to the pipes and screwed from the parts of the panels that sit on the platform.
- The product produced as disassembled; It is made a whole by assembling the given tube parts to each other according to the given angles.
- 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.



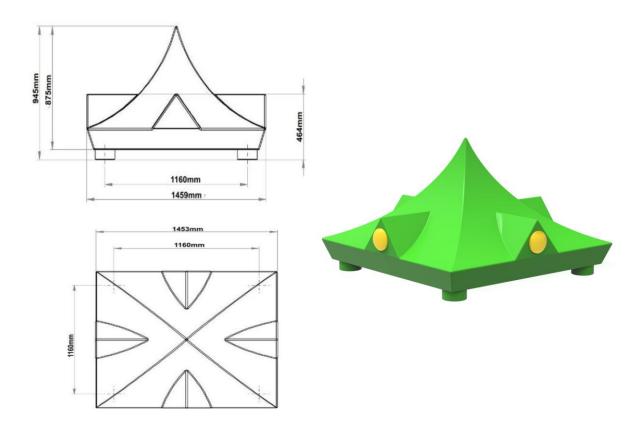
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Dimensions	Tube Passage Length	124 cm
	Panel Entry Diameter	75 cm
E (Min. Weight	42 kg
Features	Raw material	LLDPE

Ideal Roof

- The ideal roof is manufactured from polyethylene plastic material, LLDPE (Linear Low-Density Polyethylene) with a minimum height of 88,5 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 ideal roof is manufactured to be directly connected to the main construction.
- No connecting element is used in between.
- The apparatus in its four corners are mounted with screws.



	Depth	148 cm
Dimensions	Width	148 cm
	Min. Ideal Roof Height	88,5 cm
Features	Min. Ideal Roof Weight	23 kg
	Raw material	LLDPE

Palm Figure

- The palm figure is used to add visuality to playgroups.
- It is produced from polyethylene material suitable for indoor and outdoor use in accordance with 114 mm pipe.
- It is resistant to UV lights and is designed not to harm the user.
- The palm figure weighs 8 kg.



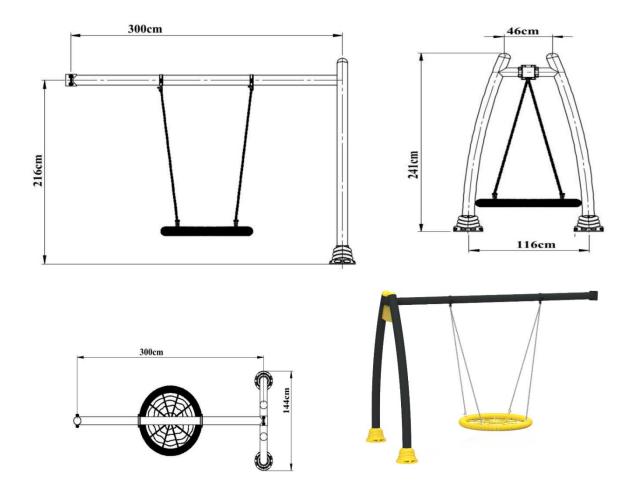
Bugs Bunny Figured

- The bugs bunny figure is used to add visuality to playgroups.
- It is produced from polyethylene material suitable for indoor and outdoor use in accordance with 114 mm pipe.
- It is resistant to UV lights and is designed not to harm the user.
- The squirrel figure weighs 2 kg.



Attached Curved Bird Nest Swing

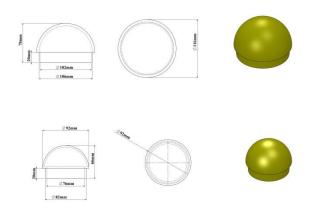
- From the SDM pipe with a diameter of 114 mm, the cut points of the horizontal and vertical pipes are connected with doetail metal clamps with a wall thickness of at least 3 mm so that they form a right angle to each other.
- The open parts of the 114 mm diameter SDM pipes are detailed to prevent rusting caused by water and moisture, shaped with hemispherical injection molds, closed with self-colored plastic plugs and riveted.
- In order to close the open-ended pipes; anchor covers made of double-walled self-colored polyethylene plastic material LLDPE (Linear Low Density Polyethylene) are used.
- Curved bird nest swing; It consists of 2 pcs swing side pillars minimum 2.5 m long Ø 114 mm curved pipes, 1 pcs 3 m long Ø 114 mm middle pipe and 1 pcs bird nest swing seat.
- The circle around the bird nest swing seating surface will be manufactured from Ø 42 SDM pipe in accordance with the appearance in the technical drawing. Hatching knitting will be done inside this circle.
- It will be connected to the carrier horizontal pipe with rope and connection devices.
- The seating surface knitted from rope or plastic materials should have a tight knitting system so that it is protected against hand and foot compression of small children and babies.
- The connection of the ropes is made in such a way that they are also mounted with the help of bolts and terminal blocks.
- The swing chains are at least 6 mm thickness and coated with galvanized 25 micron hotdip.
- The chains are connected in a double row on the polyethylene protected seat.
- 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 immersion chain is used.
- Double Swing chains are manufactured in such a way as to prevent finger jamming of small children and babies.



Dimensions	Side Pipe Length	241 cm
	Horizontal Pipe Length	300 cm
	Swing Seat Diameter	Ø 90
	Minimum Swing Seat Weight	14 kg
	Chain Length	175 cm
	Chain Thickness	6 mm

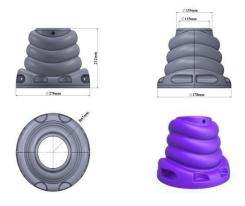
Ø 114 Hat Plug

- 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.



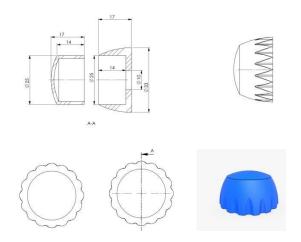
Ø 114 Anchor Cover

- Anchor caps measuring 114 mm are used to cover open-ended pipes in children'splaygrounds, 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

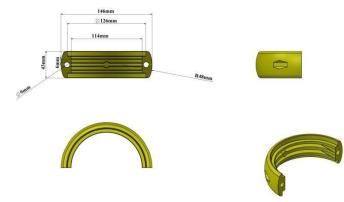
- Screw hides are used in all playgroups to prevent possible accidents and injuries.
- Screw hides; It provides an aesthetic appearance to playgroups and parking elements by allowing mounting elements such as screws and nuts to be hidden.
- Screw closures are produced from Apolythene plastic material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



Connectors

Ø 114 Plastic Clamps

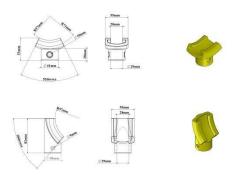
- Plastic clamps, board on the playgroup, slide entrance, railings, etc. It enables the elementsto be mounted on the carrier system with a diameter of 114 mm.
- Clamps are manufactured from fibrous polyamide raw material by injection method.
- The clamp is designed in accordance with the inner diameter 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 injuryin any part of the clamp.
- It can be produced in the desired color.



Ø114 Perpendicular Mouth

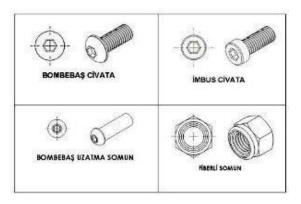
- Upright mouth, curved mouth, and platform wedge apparatus are used in the assembly ofvarious playgrounds and sports equipment.
- It is produced from polyethylene material suitable for 114 mm pipe, suitable for indoor andoutdoor use.
- The product is resistant to UV lights.
- Its design is in a structure 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 Ø114 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.

