

Contract title : Refurbishment and improved safety conditions of Children playgrounds

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Columns 1-2 should be completed by the Contracting Authority

Columns 3-4 should be completed by the tenderer

Column 5 is reserved for the evaluation committee

Annex III - the Contractor's technical offer

The tenderers are requested to complete the template on the next pages:

- Column 2 is completed by the Contracting Authority shows the required specifications (not to be modified by the tenderer),
- Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words “compliant” or “yes” are not sufficient)
- Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offered specifications.

1. GENERAL REQUIREMENTS

All elements of the playground must be safe and designed to be resistant to atmosphere influences. All playgrounds must be easily accessible to users. All elements of the playgrounds must be designed and installed according to safety standards EN 1176 and EN 1177 (SRPS EN 1176 and SRPS EN 1177). All parts of equipment must comply to the all safety standards demands.

Detailed design documents have been prepared for this project. They are fully in accordance with prevailing EU design and construction standards and fully in accordance with these Technical Specifications.

1.1 Scope of Works

The contract consists of the supply and installation of play equipment and urban furniture for the rehabilitation of 27 existing playgrounds.

1.2 Site Preparation

The Contractor shall confine his operations within the allocated Sites, or such other areas of land as may be agreed between the Contracting Authority and Contractor.

The Contractor shall be responsible for ensuring that the equipment, trees and furniture to remain on the site are made safe and are adequately protected during the installation.

The Contractor shall maintain the Site in a clean, tidy and safe condition during the period of installation and commissioning. The Contractor shall remove any disused materials and other debris arising in connection with the installation from the Site as it arises. The Sites shall not be provisionally accepted until such material has been removed.

The Contractor shall prevent vehicles from entering or leaving the Site depositing mud or other debris on the surface of the adjacent roads or footpaths. Any materials so deposited shall be removed at the earliest practical opportunity.

The Contractor must establish and maintain a security fence all around the Construction Site throughout the entire work period. The Site must be signed in order to keep unauthorized persons away from the Site.

The Contractor must submit for approval a Site layout plan showing Stock yard, cabin camp, crane track and parking area for employees' cars.

1.3 Warranties

During the defect liability period the Contractor shall promptly correct, repair, redesign or/and replace any defective equipment, materials or parts upon receipt of a written notice of defect from the Contracting Authority or the Beneficiary.

1.4 Faulty Work

Any work which fails to comply with these Specifications shall be rejected and the Contractor shall, at his own expense, make good any defects, as directed by and to the satisfaction of the Supervisor. The warranty period shall commence on the date of issuance of Provisional Acceptance Certificate.

1.5 Standards

General safety requirements for playground equipment – standards EN 1176 and EN 1177 (SRPS EN 1176 and SRPS EN 1177).

2. DETAILED DESIGN

2.1 Structural Integrity:

When assessed by calculation or physical test all structural parts shall resist the worst case loading whether they be permanent or variable loads acting on the equipment.

2.2 Handrails, Guardrails and Barriers:

Handrails:

Shall be at a height not less than 600mm and not more than 850mm above the standing surface.

Guardrails:

Only permitted for equipment 'not easily accessible' by younger children (less than 36 months) for standing surfaces of less than 2m above the playing surface. They shall be between 650mm and 850mm in height above the standing surface.

Barriers:

For equipment easily accessible to all ages (including those less than 36 months) barriers shall be provided when the standing surface is more than 600mm above the playing surface. For equipment not easily accessible by younger children barriers shall be provided for standing surfaces greater than 2m above the playing surface. Barriers shall be at least 700mm in height. They shall have no intermediate horizontal or near horizontal rails or bars that can be used as steps by children attempting to climb.





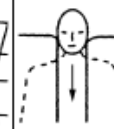






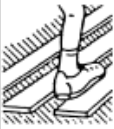
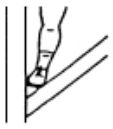
The cross section of any support designed to be gripped (holding of the hand round the entire circumference of the support) shall have a dimension between 16mm and 45mm. The cross section of any support designed to be grasped (holding of the hand round part of the circumference of the support) shall have a width not exceeding 60mm. For climbing ropes (fixed at both ends) the diameter shall be between 18mm and 45mm. For swinging ropes (fixed at one end) the diameter shall be between 25mm and 45mm.

2.3 Protection against Entrapment:

Head and Neck:



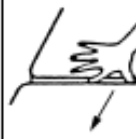

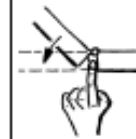
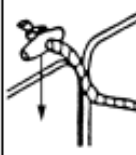




All accessible completely bound openings, with a lower edge more than 600mm above the ground or standing surface, which allow the passage of the small probe(s), shall also allow the passage of the large probe. As a rule of thumb this will fail gaps between 89mm and 230mm for equipment accessible to children of all ages

(including those less than 36 months). For equipment not easily accessible to younger children it will be gaps between 110mm (feet first) or 120mm (head first) and 230mm. Bound openings should have no parts that converge in a downward direction at an angle of less than 60 degrees. All partially bound and V shaped openings with an entrance 600mm or more above the ground shall be tested for neck entrapment using the specified template and test procedure.

		1	2	3	4	5	6
		Completely bound openings		Partially bound openings	V-shapes	Protrusions	Moving parts of equipment
		Rigid	Non-rigid				
A	Whole body						
B	Head/neck head first						
C	Head/neck feet first						
D	Arm and hand						
E	Leg and foot						

Clothing:

Slides, sliding poles and roofs shall be tested for toggle entrapment.

		1	2	3	4	5	6
		Completely bound openings		Partially bound openings	V-shapes	Protrusions	Moving parts of equipment
		Rigid	Non-rigid				
F	Finger						
G	Clothing						
H	Hair						

Whole Body:

Tunnels shall be greater than the diameters specified, depending on their length and inclination.

Fingers:

Openings within the 'Free Space' and holes which have a lower edge more than 1.2m above ground, which allow passage of the 8mm finger rod, must also allow the passage of the 25mm finger rod.

2.4 Zones:

Minimum Space:

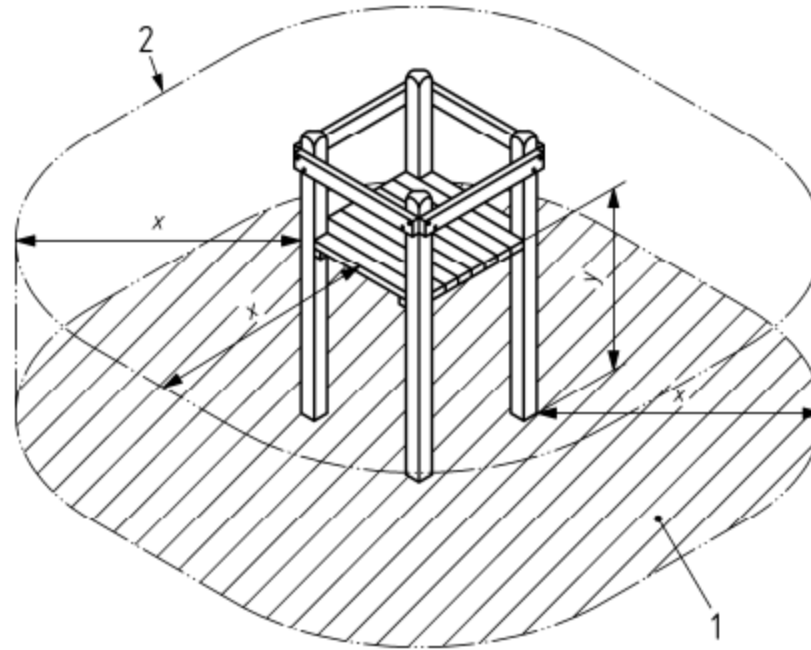
This is defined as the space required for the safe use of the equipment and will consist of the space occupied by the equipment, the Free Space (if any) and the Falling Space.

Free Space:

This is defined as the space in, on or around the equipment that can be occupied by a user undergoing a movement forced by the equipment (e.g. sliding, swinging, rocking). It is specified as a cylinder of diameter 1m for sitting and standing use and 500mm for hanging use. The heights of the cylinder are 1.8m for standing, 1.5m for sitting and 300mm plus the body extension below for hanging.

Falling Space:

This is defined as the space in, on or around the equipment that can be occupied by a user falling from an elevated part of the equipment. The extent of the Falling Space shall be 1.5m from a point directly below the elevated part of the equipment unless a greater Impact Area is required.



Impact Area:

Area required to have an Impact Absorbing Playground Surface, which has been fully tested to the requirements of SRPS EN 1177. This is required for all free heights of fall above 600mm and is generally specified by the graph below but with specific requirements for specific types of equipment.

Height of Fall:

The maximum Free Height of Fall permitted is 3m. Equipment Separation: The Falling and Free Spaces shall not contain any obstacles. In most cases there may be overlapping of Falling Spaces. There shall be no overlapping of adjacent Free Spaces or an adjacent Free Space and Falling Space. Main travelling routes at or through the playground shall not intersect the Free Space. (e.g. pedestrian pathway)

2.5 Inspection of playground before putting into operation

After finishing playground equipment installation on each of 27 locations Contractor is obligated to do safety inspection according to safety standard SRPS EN 1176 and to hand over signed statement that all demands from the safety standard are fulfilled on specific playground to the Consultant and Municipality representative.

2.6 Detailed Design documentation

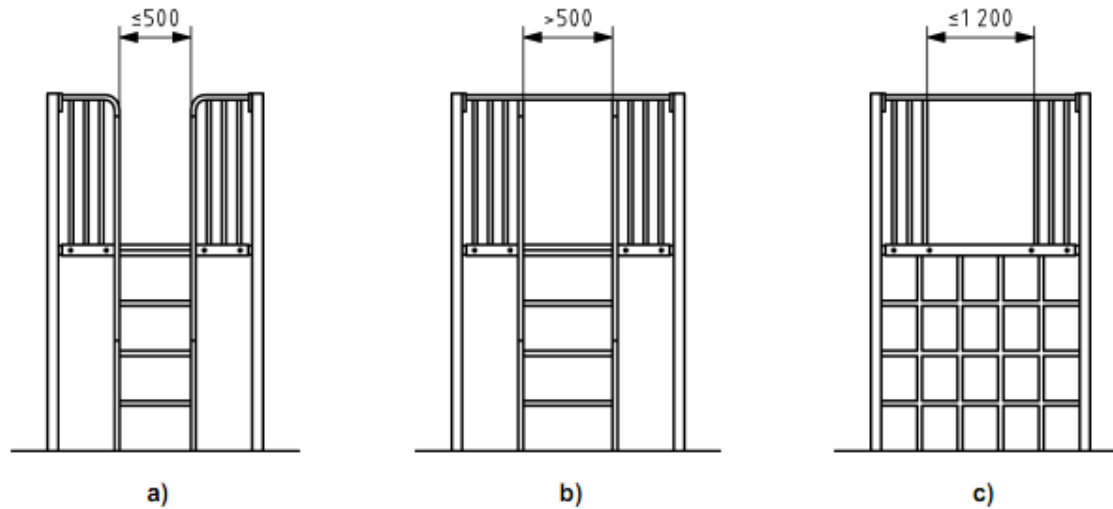
The Contractor will draw up full design documentations of individual types of equipment at Detailed Design stage on due dates, according to the timetable submitted by the Contractor and approved by the Contracting Authority.

The Detailed Design documentation will include all Detailed Design elaborates for the equipment, schedule of producing and installing equipment and schedule for the ground works and works on concrete slabs.

2.7 Materialisation of playground equipment

Elements of the playground must be made from combination of:

- Wood preparation - Natural laminated wood pine structures dimensions not less than 11.5 x 9.5 cm which are protected with alcidic varnish resistant to atmosphere influences. These elements must not be in direct contact to the children since this material is not resistant to friction. All elements must be with rounded edges, sanded smooth surfaces and without any sharp parts near hands or legs.
- Panel preparation - Panels must be made from water resistant birch plywood boards (18-21mm thickness). Elements must be protected from water penetration in to the panel. All sides of panel edges must be rounded and sanded. Panels must be painted with hi resistance acrylic or polyurethane varnishes in more than two layers. Colours must be well combined with environment on each location. Panels must be bolted on to the construction with water sealed elements with protective polyamide hemispheric caps over the bolts.
- All hand rails and other elements which are subjective for friction must be made from stainless steel tubes.



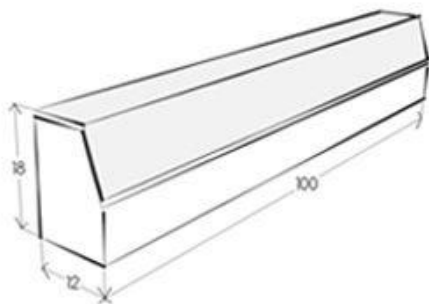
- Slides must be made from stainless steel plates mounted over steel structure. All slides must have side elements made from plywood boards, with height according to standard SRPS EN 1176. All slides on the highest angle must have a stainless steel tube barrier, not less than 40mm in diameter, so that users must sit before using it. Both ends of stainless steel tube barrier must be protected with plastic ring.
- Floor preparation - All floor elements must be made from anti-slip plywood boards, with sanded and rounded edges, protected with polyurethane coat.
- Floor elements that are providing users climbing to the slides must be produced of anti-slip water resistant plywood with stainless steel barriers. These elements must have mounted foot holes that are providing additional grip for users to climb. Foot whole elements must be from plastic inserted into plywood board (plastic cup).
- Horizontal tubes, that are providing users proving trough between elements, must be made from plastic tubes not less than 500mm in diameter and the thickness of the tube wall must be not less than 10mm.


TECHNICAL SPECIFICATION


1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1	<p>Removing old playgrounds and old concrete elements demolition:</p> <p>(Quantity: 4.861,87 m²)</p> <p>Removing old playground equipment to the location defined by municipality. After removing equipment all old concrete elements in or above ground must be demolished and taken to the local landfill. Also on some places trees which are in the playground zone must be displaced to a near location. Trees are going to be placed by the municipalities. Area which is going to be demolished, or area under one playground equipment element and zone for excavating trees is defined in m² for each location.</p>			
2	<p>Ground works:</p> <p>(Quantity: 1.836,50 m³)</p> <p>All surfaces under playground must be prepared for concrete slabs on which safety surface is to be laid. Ground must be levelled and excavated for 20 cm in depth. Topsoil and vegetable matter to be cleared from site and floor area and disposed to tip of site. In this phase playground must be marked and marking is included in the price.</p>			
3	<p>Gravel layer:</p> <p>(Quantity: 7.118,90 m²)</p> <p>On the excavated and levelled ground surface, 10 cm of gravel must be laid as an underlayer for concrete slab. Gravel must be levelled, compacted and oversize stones removed. Dimension of gravel must be 16 to 32 mm in diameter.</p>			

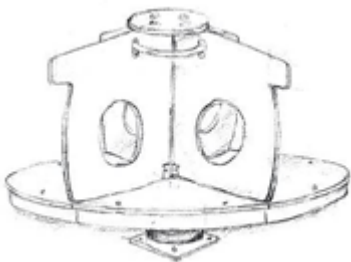
1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
4	<p>Reinforced concrete slab:</p> <p>(Quantity: 6.894,46 m²)</p> <p>Lay 100mm thick reinforced concrete slab with a smooth surface ready for safety rubber. On the edge of the concrete slab cement cranks must be placed with highest point 6cm above concrete slab so that after making protective surface from rubber, rubber and the cranks are in the same level. Concrete slab should be made with 0,2 to 0,5% cross fall on two sides so that there is no water retention. Concrete must be type MB 25. Entire slab area must be reinforced continually. Reinforcement must be made with steel mesh Q188 d=6mm. Concrete slab must be even so that there are no uneven parts after laying rubber plates.</p>			


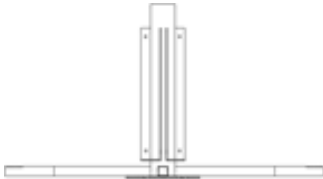


1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
5	<p>Safety surface rubber plates:</p> <p>(Quantity: 6.894,46 m²)</p> <p>Safety surface must be made of classic soft-impact surface offering a hygienic, safe solution. The soft-impact surface must be available in various colours. Recycled rubber surfaces have to be individually tested (HIC tests) to obtain critical fall height values. The manufacturer is obliged to inform what critical fall height specific products have and, if requested, present a corresponding certificate. Rubber plates made of recycled SBR-rubber granulate dimension 1-3 mm, with Polyurethane. Dimensions (participation of up to 10%). Dimension in mm: 500x500/60 ± 10% rubber drainage layer integrated in tile thickness min. 2cm. The weight of the rubber plate is min. 35kg/m². The set of recycled rubber in the tone of the choice of the purchaser, with applications made of polysoft materials and species of animals, letters, numbers. Rubber Plate Dimension 50 h 50 cm, = 60 mm, ± 10% weight min. 35kg Elastic canvas of rubber granulate and polyurethane, intended to appoint children's playgrounds. UV radiation resistant, steady on weather, not easily inflammatory, so that they meet the security standards-TUV certificate tested on the basis of 1176-1:2008 and 1177:2008 European standards. Attach the TUV certificate to the test based on 1176-1:2008 and 1177-1:2008 standards and for the Polysoft panel. Rubber mats must be glued to the concrete slab with polyurethane glue. Zone for gluing is 2m from edge element to the centre of the playground from all four sides.</p> <p>Rubber mats shall cover entire area over the concrete slab.</p>			


1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
6	<p>Edge concrete element-crank:</p> <p>(Quantity: 1.847,30 m)</p> <p>Edge element made of concrete must be positioned at the edge of concrete slab on all four sides. Edge element must be positioned 6cm above concrete slab so that rubber plates and the edge elements are in the same level. Below edge element is the gravel layer in continuity with concrete slab under layer. Dimensions of edge elements are 100cm in length, 18 cm in height and 12 cm in width.</p> 			

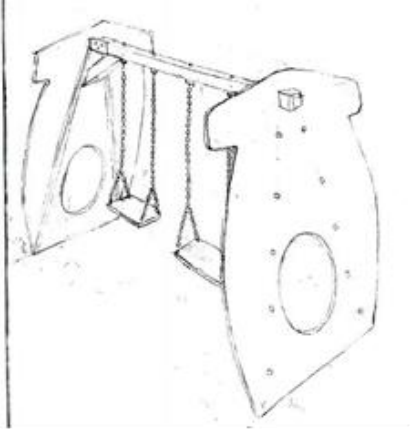
1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
7	<p>Steel fence:</p> <p>(Quantity: 762,45 m - number of gates: 14)</p> <p>Height of fence must be 110 cm measured from ground. All reachable edges must be rounded. Fence must be anchored in the concrete slab by the edge element. Fence must be painted with anti-corrosion varnish and with alcade varnish in colours same like playground equipment.</p> <p>The fences must be made of steel boxed profiles. The pillars should be of 50 x 50 x 2 mm profile boxes, which are connected together up and down by steel boxes of 30 x 20 x 2 mm, and these are vertical and parallel with steel boxes measuring 20 x 20 x 2 mm at a mutual distance in accordance with SRPS EN 1176 standards. The height of the fence must be 110cm. It is desirable that the dimensions of the panel of the fence be 1950mm, in order to achieve the appropriate geometry on the sides of the playground that is necessary to enclose.</p> <p>The gate with the opening / closing device must be 1200mm. The gate is made of the same material as the fence. Price of the gate must be included in the price of fence per meter.</p> <p>Corrosion protection is required and then basic and final painting with high quality colors for external conditions.</p>  <p>Picture shown is for illustration purpose only. Actual product may vary, as long is in the line with respective specification.</p>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
8	<p>Trash cans:</p> <p>(Quantity: 55 pcs)</p> <p>Trash cans should be made from steel structure. Design of trash cans must be contemporary. Trash cans must be safe without sharp edges, very resistant to atmosphere influences and designed to be with anti-vandal features. Trash cans must be anchored to the concrete slab.</p>  <p>Picture shown is for illustration purpose only. Actual product may vary, as long as it is in line with the respective specification.</p>			
9	<p>Benches:</p> <p>(Quantity: 105 pcs)</p> <p>Benches should be made from steel structure with natural hard wood seating elements. Design of benches must be contemporary. Benches must be safe without sharp edges, very resistant to atmosphere influences and designed to be with anti-vandal features. Benches must be anchored to the concrete slab.</p>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
10	<p>Panel carousel:</p> <p>(Quantity: 8 pcs)</p> <p>It must consist of main vertical axel made of steel tube not less than 100mm in diameter, horizontal steel square tube structure above the ground and under the floor that must be permanently welded with the main axel and steel mechanism with ball bearings that provides smooth and unlimited rotation of carousel in both ways. Floor of the panel carousel must be made in round structure and must be made of anti-slip water resistant birch plywood (see floor preparation). Panels that give final structure appearance of panel carousel must be made of water resistant birch plywood boards (see panel preparation) and positioned vertically, angled 120 degrees, if there is 3 panels, or 90 degrees if there is 4 panels. These panels should be hardly mounted with the main vertical axel tube. These panels also determined number of places on carousel. Minimum diameter of carousel is 130 cm and total height 85 cm</p>  <p>Picture shown is for illustration purpose only. Actual product may vary, as long is in the line with respective specification.</p>			

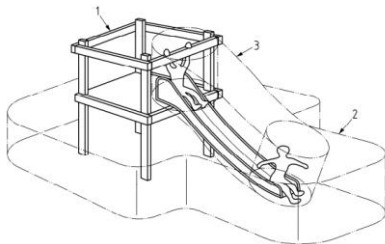
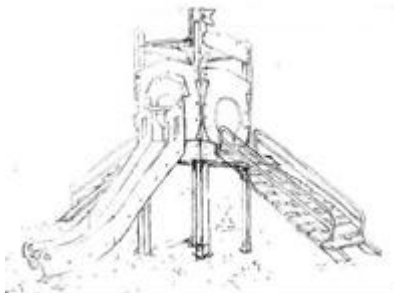
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	<p>Additional specific requirements and test methods for carousels</p> <p>AXIS: The axis of support of the carousel shall not be inclined at an angle of more than 5 degrees from the vertical.</p> <p>SPEED OF ROTATION: Carousels shall be designed so that the maximum speed at the periphery, under normal conditions of use, is not more than 5m/s.</p> <p>GROUND CLEARANCE: (For traditional type Carousels) If flush with the ground there shall be no vertical gaps between the ground and the edge of the carousel greater than 6mm. If not flush with the ground the underside of the platform shall be between 60mm and 110mm (maintained for at least 300mm towards the axis) or greater than 400mm, unless the underside is designed to specific requirements of the standard.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;">  <p>Carousel mechanism detail</p> </div> <div style="text-align: center;">  <p>Carousel construction detail</p> </div> </div>			

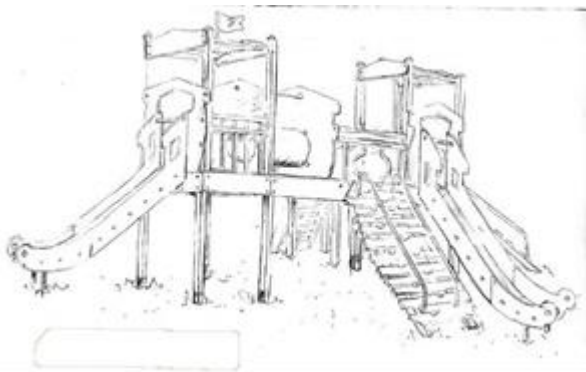
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11	<p>Swing:</p> <p>(Quantity: 29 pcs)</p> <p>All swings must have rubber seats with additional stainless steel or aluminium reinforcement under the rubber coat and galvanized steel chains. Galvanized steel chains must be no less than 6mm thick and ring chains must be at least 35mm long. Mechanism for swings must be made from plastic materials with ball bearing to provide smooth swinging. Swings sides must be on steel structure and plywood panels must be bolted on both sides for decoration. All bolts must be protected with plastic caps. Horizontal beam that connects two sides of swing must be from laminated wood pine material (in visual coloration with columns on the slide house and multi-slide house).</p>  <p>Rubber seat</p> <p>Picture shown is for illustration purpose only. Actual product may vary, as long is in the line with respective specification.</p>			

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<p>August 2018 c4f_technical specification</p>	<p>ROUND CLEARANCE: Traditional to and fro swings with one rotational axis shall have a seat ground clearance in the rest position of 350mm unless a tyre seat is used in which case it shall be 400mm.</p> <p>IMPACT TESTING OF SWING SEATS: When seats are tested in accordance with the standard there shall be no peak values of acceleration greater than 50g and the average surface compression shall not exceed 90N/m.</p> <p>MINIMUM SPACE BETWEEN THE SEATS OF SWINGS: Shall be calculated to the standard requirements with a greater space required the higher the swing beam.</p> <p>DYNAMIC LOAD TEST FOR SWINGING EQUIPMENT: When tested in accordance with the standard the components in the suspension system shall show no cracks, permanent deformation or damage and no connection shall be loosened after 100,000 cycles of test.</p> <p>FRAMEWORK: Swings with more than two seats shall be divided by construction parts into bays so that there are no more than two seats per bay. Cradle seats for young children shall not be mixed with flat seats designed for older children in the same swing bay.</p> <p>Minimum length must be 300cm, width 90cm and height 200cm.</p>  <p>Picture shown is for illustration purpose only. Actual product may vary, as long as it is in line with respective specification.</p>			<p>Page 20 of 33</p>

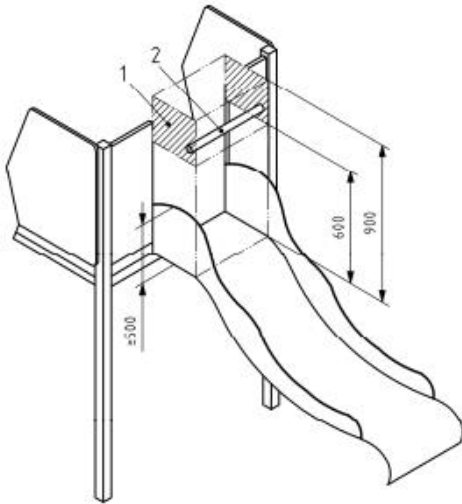
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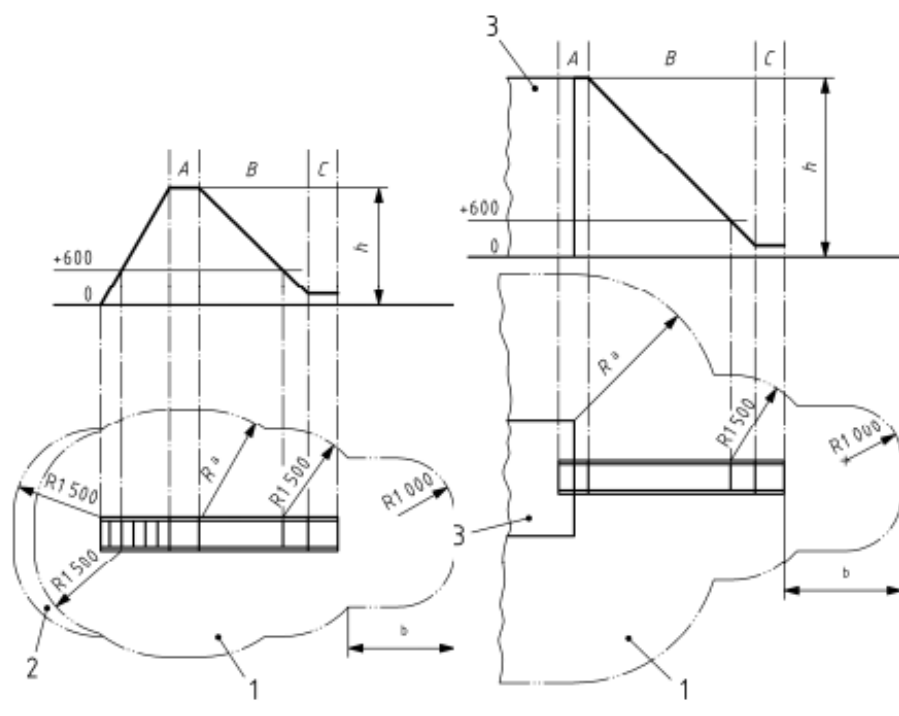
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12	<p>Wooden house with installation of tube for crawling through:</p> <p>(Quantity: 26 pcs)</p> <p>Main structure should be made from natural laminated wood pine beam dimensions not less than 11.5 x 9.5 cm (see wood preparation). Panels that give strength and final looks of hose should be made of water resistant birch plywood boards (see panel preparation). Wooden house floor must be made of anti-slip water resistant plywood (see floor preparation). It must have at least 1m² area. Tube for crawling through must be made from plastic tubes not less than 500mm in diameter and the thickness of the tube wall must be not less than 10mm. Wooden house must consist of entrance, semi closed house interior*1m², tube opening for crawling through and panel structure that shapes tube exit and give unique structure of the house. Outer panel should be connected to the tube with screws and with panels from main house structure with at least 3 stainless steel tubes no less than 40mm in diameter ended with plastic cap rings from inner sides of panels.</p>			
13	<p>Steel climbing band:</p> <p>(Quantity: 23 pcs)</p> <p>It must be contained of main structure built from two round steel tubes not less than 60mm diameter and anti-slip water proof panels (see floor preparation) that makes sides of steel climbing band with free climbing stones screwed in panels. Main structure steel tubes must be banded in 3000mm radius. These two main structure curved tubes should be placed parallel one to each other, angled so that the radius centre of each other can be permanently welded. Two smaller sides of steel climbing band must be permanently welded as well with steel tube pipes not less than 23mm diameter and with distance of not less than 80mm between so it can provide climbing like ladders. Minimum length 300cm and height 150 cm.</p>			

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14	<p>Slide house:</p> <p>(Quantity: 11 pcs)</p> <p>Slide house is playground equipment element which is consists of one slide, stairs, climber and other elements.</p> <p>Slide must be made from stainless steel plates mounted over steel structure. All slides must have side elements made from plywood boards, with height according to standard SRPS EN 1176. All slides on the highest angle must have a stainless steel tube barrier, not less than 40mm in diameter, so that users must sit before using it. Both ends of stainless steel tube barrier must be protected with plastic ring.</p> <p>Height of the floor should be 175 cm. Platform must be minimum 90/90cm. Total height minimum 350 cm.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>Picture shown is for illustration purpose only. Actual product may vary, as long is in the line with respective specification.</p>			

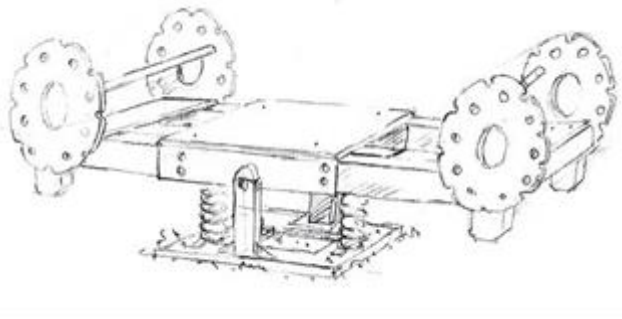
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15	<p>Multi slide house:</p> <p>(Quantity: 16 pcs)</p> <p>Multi slide house is playground equipment element which is consisted from two or more slides, stairs, climbers and other elements.</p> <p>Slides must be made from stainless steel plates mounted over steel structure. All slides must have side elements made from plywood boards, with height according to standard SRPS EN 1176. All slides on the highest angle must have a stainless steel tube barrier, not less than 40mm in diameter, so that users must sit before using it. Both ends of stainless steel tube barrier must be protected with plastic ring.</p> <p>Horizontal tubes, that are providing users proving trough between elements, must be made from plastic tubes not less than 500mm in diameter and the thickness of the tube wall must be not less than 10mm.</p> <p>Height of the floor should be combined:120 cm and 175 cm (for use of younger and older children). Total height minimum 350 cm.</p>  <p>Picture shown is for illustration purpose only. Actual product may vary, as long is in the line with respective specification.</p>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p><u>Additional specific safety requirements and test methods for slides:</u></p> <p>STARTING SECTION: Each slide shall have a horizontal starting section of at least 350mm to allow the user to get into the sliding position. For attachment slides the platform may be used as the starting section.</p> <p>ACCESS RAIL: All attachment slides with a free height of fall greater than 1m shall be provided with a rail across the opening. This is within specified height and range parameters.</p> <p>RUNOUT SECTION: Two types of runout section are permitted and both have a horizontal length, which increases with the length of the Sliding Section.</p> <p>SURFACE OF THE SLIDE: Should the slide surface be constructed from more than one piece of material it should be fabricated so as to eliminate gaps at the joints so that they inhibit the introduction of sharp objects such as razor blades and splinters. The preferred method of protecting against this problem is by manufacturing one-piece slide surfaces.</p>			

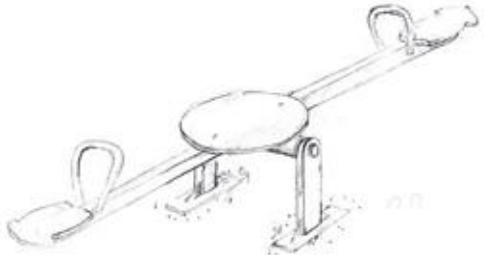
1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p style="text-align: right;">Dimensions in millimetres</p>  <p>The diagram is a perspective view of a playground slide. It features a vertical support post on the left, a horizontal platform at the top, and a curved slide chute. Callout '1' points to a horizontal bar on the platform, and callout '2' points to a vertical post. Dimension lines indicate a width of 500 mm for the platform, a height of 600 mm for the platform, and a total height of 900 mm for the slide structure.</p>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p style="text-align: right; color: red;">Dimensions in millimetres</p>  <p>a) Free-standing slide</p> <p>b) Attachment slide</p>			

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16	<p>Spring toy:</p> <p>(Quantity: 54 pcs)</p> <p>Spring toy must be made of waterproof birch plywood panels and steel spring with two steel plates for attaching body of spring toy to spring and spring to the pad. There are two types of spring toys. Open one (riding as horse) and closed one (sitting between two sides of panels)-for children under the age of 3. Body of open spring toy has to have two handle and two footrests as well as seat. Plywood panels should be sand, with round edges and painted (see panel preparation).</p> <p>Closed spring toy body consists of two panels with seat of anti-slip panel in between. Panels (see panel preparation) must be connected with permanent weld in range of seat as well as between each other with 40mm stainless steel tubes. These tubes need to be in zones that provide stability of spring toy as well as handle and footrest for users. Both ends of tubes must be protected with plastic rings.</p> <p>Steel spring must be built from top quality steel at least 20mm thickness and 19cm in diameter. It has to be centred so when the spring toy is off use, spring is in vertical position and spring toy is in position- in situ.</p>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
17	<p>See saw on springs for four users:</p> <p>(Quantity: 22 pcs)</p> <p>See saw on springs for four users consists of main steel structures, from at least 5mm thickness steel, in square shape not less than 100x40mm. Main vertical carriers has to be built from at least 5mm thick steel, in square shape dimensions not less than 80x40mm. Movable steel structure of see saw should be made from two horizontally and vertically connected square clamps built from steel not thicker than 3mm. Two natural laminated wood pine beams, dimensions not less than 11.5 x 9.5 cm, (see wood preparation) and should be positioned trough these claps. Main Inner central axel need to be from stainless steel tube at least 40mm diameter. Axel must line back on two vertical carriers, on special polyamide plastic rings to provide smooth movements of see saw. Connection between static and dynamic parts of see saw should be provided with screws at least 20mm in diameter. Two ores of the see saw that goes parallel trough steel clamps shod be made of two natural laminated wood pine beams, dimensions not less than 11.5 x 9.5 cm, (see wood preparation). Two steel spring with two steel plates for attaching body of see saw to spring and springs to the steel pad should be positioned in the middle between ores vertically to the pad, and in the middle of central imagined axes of see saw. Steel springs must be built from top quality steel at least 20mm thick and 19cm in diameter.</p>  <p>Picture shown is for illustration purpose only. Actual product may vary, as long is in the line with respective specification.</p>			

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	<p>It has to be centred so when the see saw is off use, spring is in vertical position and see saw is in position - in situ. Panels that should give final looks of see saw for four users should be made according (see panel preparation) shaped like a flower. As well as looks these panels should provide safety of users while sitting and using see saw. It provides lateral barrier for users and the panels should be connected in their upper zone with stainless steel tube not less than 40mm in diameter with end plastic cups to provide handle for users. From the upper side of the ores and between two panel barriers should be positioned seats made from ant slip water resistant plywood thickens no less than 20mm. That goes for both sides of see saw on springs for four users. The middle axels and all static and dynamic parts of see saw on springs for four users should be covered with ant slip water resistant plywood thickens no less than 20mm.</p>			

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18	<p>See saw:</p> <p>(Quantity: 48 pcs)</p> <p>Primary structure of the seesaw must be made from steel tubes, both round and/or square. Outer central axel need to be supported with to two square steel tubes at least 80x40mm. Outer central axel need to be at least 76mm in diameter. Inner central axel need to be from stainless steel tube at least 40mm diameter. Inner and outer central axel must line back on two vertical legs, with special polyamide plastic. Connection between inner central and outer central axel and vertical square steel tube legs must be provided with screws at least 20mm in diameter. Ore of the seesaw must be from steel round and/or square tubes 6x4cm or if round 6cm in diameter permanently welded with axel of seesaw. As an option, seesaw ore can be horizontally curved, both side symmetrical, so it can be more interesting for users. Crossing of outer axel and ore have to be protected with round platform made from anti slip plywood 60cm diameter so it can provide protection from movable parts of seesaw. Guardrail must be permanently welded for ore, it must be round, built from steel tubes, placed directly in front of the seats. Seats of the seesaw must be from water resistant birch plywood, rounded edges, sanded and painted (see panel preparation). To provide that seesaw works according to EN 1176 standards under the seats of seesaw, directly under the both ends of ore, it must be installed rubber bumpers screwed for pad. Minimum length must be 300 cm.</p>  <p>Picture shown is for illustration purpose only. Actual product may vary, as long is in the line with respective specification.</p>			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	<p>Additional specific requirements and test methods for rocking equipment</p> <p>RESTRAINT OF MOTION: The motion of all rocking equipment shall be progressively restrained towards the extremities of movement so that no sudden stop or sudden reversal of motion can occur. In addition to this certain types of rocking equipment (generally the higher types) also require a minimum ground clearance of 230mm.</p> <p>HAND SUPPORTS: Hand supports shall be provided for each seat/stand position that shall be firmly fixed and unable to rotate. The diameter of the supports shall be between 16mm and 45mm (for equipment accessible for use by younger children a maximum of 30mm is recommended).</p> <p>LIMITS OF MOTION: (For traditional type seesaws) When in motion the seat or stand position shall not exceed a free fall height of 1.5m and it shall not exceed an angle of 20 degrees. When at rest the maximum height of the seat or stand shall not exceed 1m.</p>			
19	<p>Rubber toy:</p> <p>(Quantity: 53 pcs)</p> <p>Rubber toy must be made of SBR and EPDM rubber granulates. Form of the toy should be in explicit form of an animal or similar. Shape must be spherical and without edges. All outside surface must be covered with recycled rubber. Bottom part of the toy must be flat.</p>			

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20	<p>Information board:</p> <p>(Quantity: 27 pcs)</p> <p>Information board must be made from steel tubes 50 mm in diameter, in pair, with height from the protective surface 200cm and on distance between them 100cm. Tubes must have polyamide semisferic element for sealing the tubes. Between steel tubes steel plate dimensions 150/100 cm must be placed. Bottom edge of the plate must be at 50 cm above ground. Board and the tubes must be in anthracite varnish. Board must be decorated with same panel like playground equipment. Board sticker design will be delivered to the Contractor.</p>			

Specifications Required		Specifications Offered	Notes, remarks, ref to documentation	Evaluation Committee's notes YES/NO
Standard Warranty	Valid one 1 year after issuing Provisional Acceptance Certificate.			
Dimensioned or catalogue drawings	A detailed description and dimensioned drawings or catalogue drawings of all equipment to be supplied.			

Attachment: ANNEX to Technical Specification (containing Drawings of all 27 playgrounds)