

Technical specification of:

# Soli Bumper Cars and tracks



this image is an example

Cars models:

- Junior
- Mid-Size
- Adult
- Maxxi

Building and Floor:

- Floor Pick-up System (FPU)
- Over Head System (OHS)

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## Size & Models

Bumper cars are available in four different size and more different models:

### 1. Junior

- Proxima junior
- Animals
- Moto go (motorbike)
- Sphera
- Xixa junior
- Mini Classic
- Sport 1

### 2. Mid-Size

- Hypnos
- Sport 1
- VM5
- Charlie
- Sphera
- NK-Midsize

### 3. Adult

- Proxima Adv
- Xixa 2000
- French taxi
- Grand prix
- Charlie
- NK.01
- Proxima
- 1936
- Buggy
- The tiger
- Sport 1

### 4. Maxxi

- Maxxi

There are two different **kind of floor**:

- 1. Miniscooter:** for junior and mid-size cars
- 2. Autoscooter:** for adult cars and maxi cars

And two power **supply system**:

- 1. Floor Pick-up System (FPU)**
- 2. Over Head System (OHS)**

Note: junior and mid-size cars can work together  
adult and maxxi cars can work together

## Drifting system :

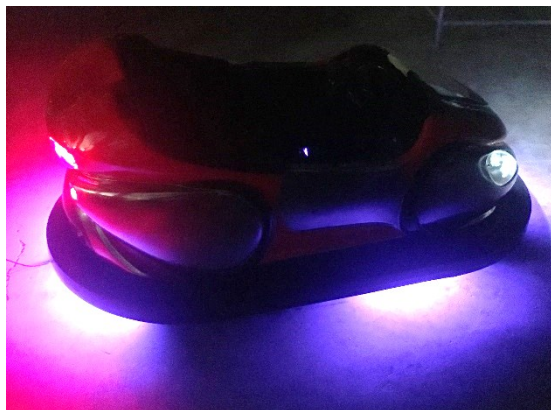
Optional

Regular Bumper car



This system can be easily installed on the adult bumper cars (all models)  
For the mid-size bumper car it must be required at time of order

## Blue Lights under the car :



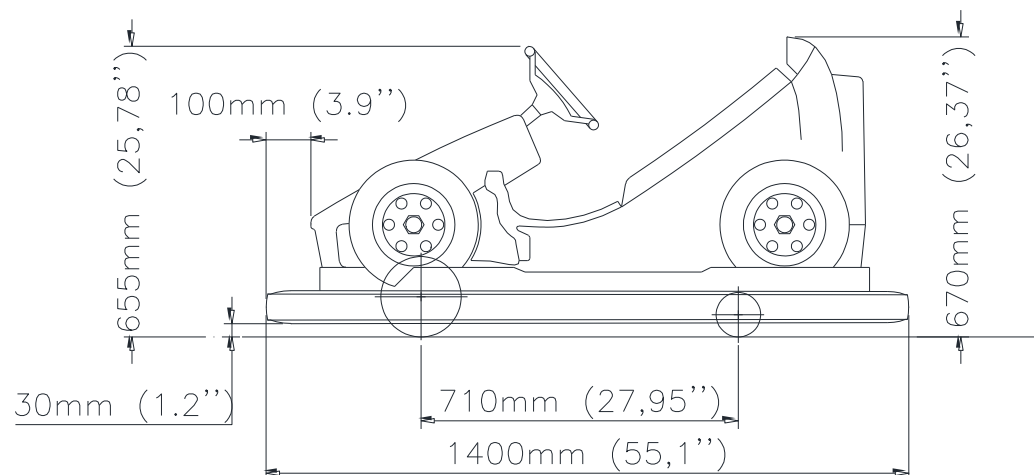
This system can be easily installed on the adult bumper cars (all models)

## Lights on the bumper cars floor :

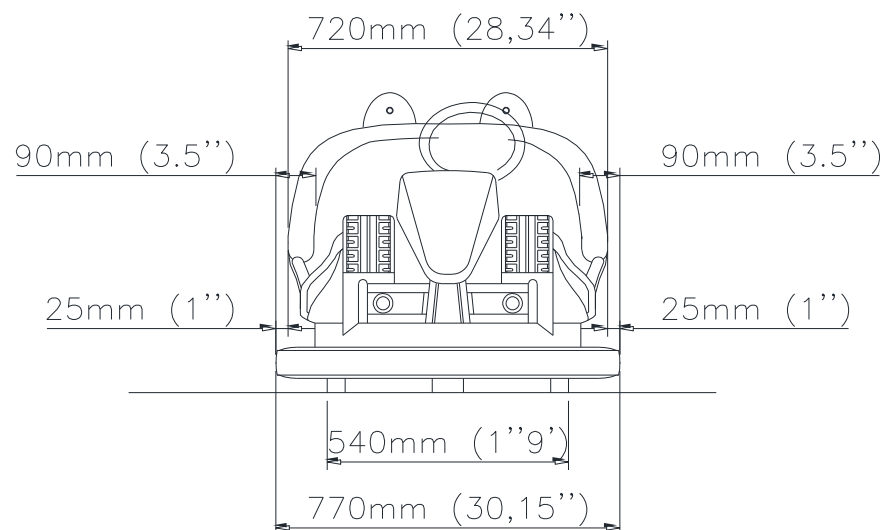


It is possible choose RGB lights or white lights

## Overall dimensions



SIDE VIEW



FRONT VIEW

this design is an example

## Junior Car

### TECHNICAL DATA

Weight	120 kg / 1,18 kN
Capacity	2 children
Size requirements	Minimum 5 sq m / 53.8 sq ft
	Recommended 7.5 sq m / 80.7 sq ft
Shipping Volume	29 cars in 1x20' box

### ELECTRICAL SPECIFICATION

Motor power	0.5 kW
Work's tension	40 - 60 V dc

### POWER SUPPLIED SYSTEM

floor pick-up (FPU)
over head (OHS)

### SPECIAL FEATURES

steel chassis painted with epoxidy powders
reinforced fiberglass body
standard bumper tyre
Safety belts
teeth protector

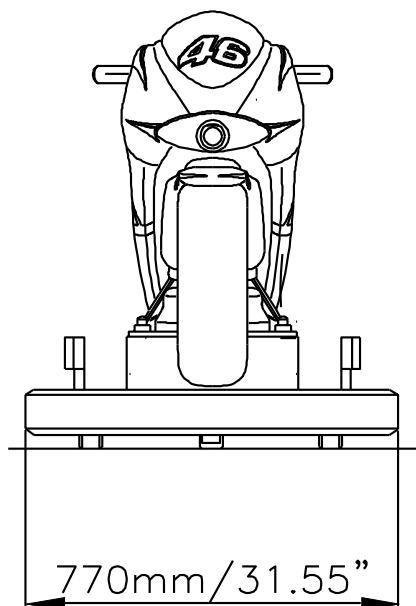
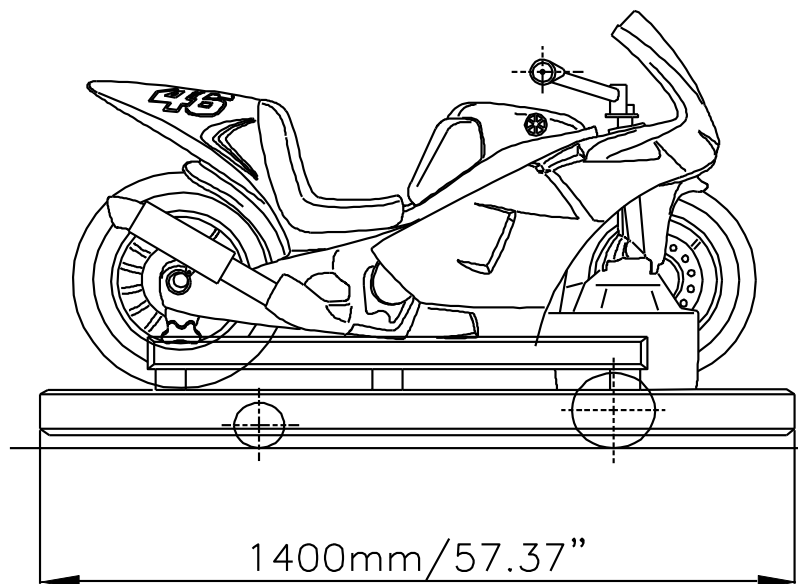
### MAIN OPTIONS

colours at request
head protection pad ( OHS only )
token mechanism
Rotating brush ( OHS only )

### PASSENGERS RESTRICTIONS:

Age: minimum 4 year old not accompanied by an adult
Height: minimum 105 cm not accompanied by an adult
Height: maximum 140 cm

## Mini Moto



this design is an example

### TECHNICAL DATA

Weight	102 kg / 1 kN
Capacity	1 child
Size requirements	Minimum 5 sq m / 53.8 sq ft Recommended 7.5 sq m / 80.7 sq ft
Shipping Volume	20 cars in 1x20'box
Noise	< 80 db

### ELECTRICAL SPECIFICATION

Motor power	0.5 kW
Work's tension	40 – 60 V dc

### POWER SUPPLIED SYSTEM

floor pick-up (FPU)  
over head (OHS)

### SPECIAL FEATURES

steel chassis painted with epoxidy powders  
reinforced fiberglass body  
standard bumper tyre  
Safety belts

### MAIN OPTIONS

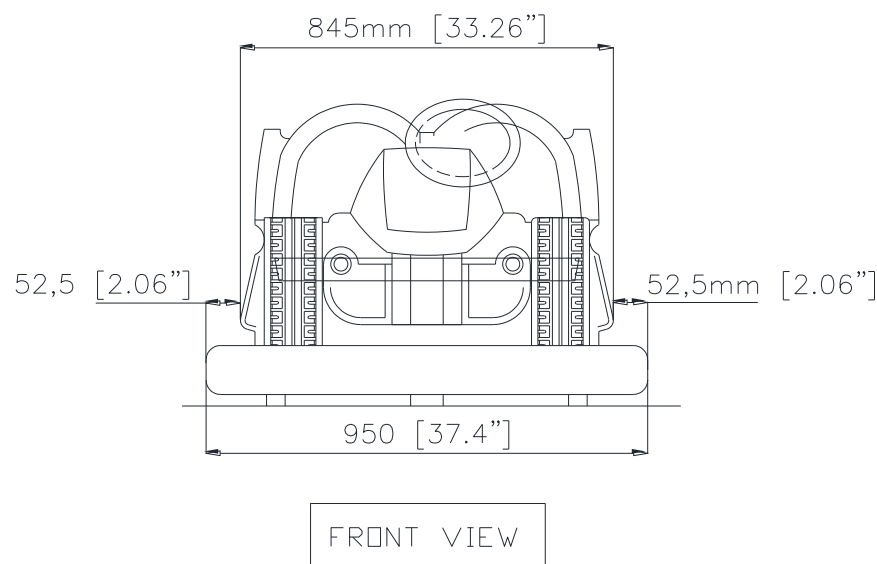
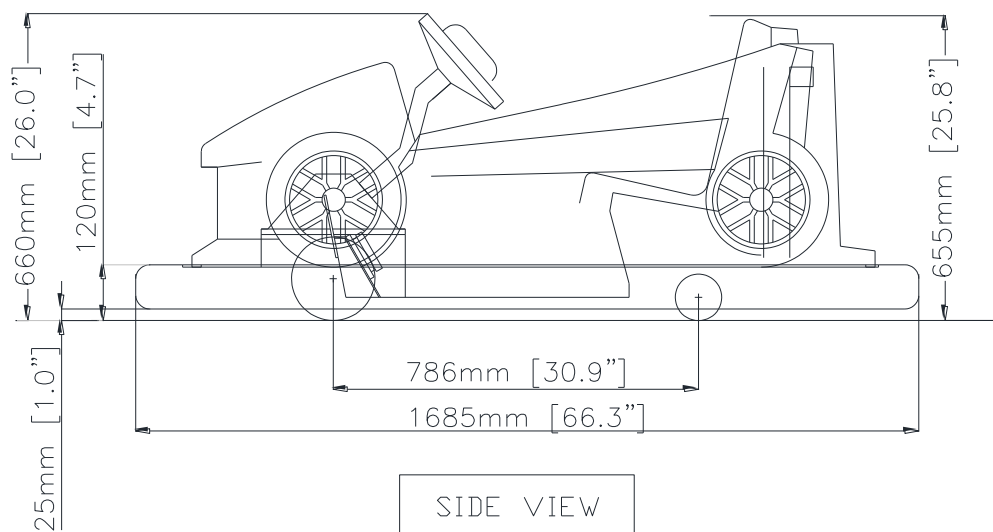
colours at request  
head protection pad (OHS only)  
token mechanism

### PASSENGERS RESTRICTIONS:

Age: minimum 5 year old  
Height: minimum 110 cm - maximum 140 cm



## Overall dimensions



this design is an example

## Mid-Size Car

### TECHNICAL DATA

Weight	138 kg / 1.35 kN
Capacity	1 adult and 1 children / or 2 children
Size requirements	Minimum 7.5 sq m / 80.7 sq ft
	Recommended 9.5 sq m / 102.25 sq ft
Shipping volume	12 cars in 1x20'box
Noise	< 80 db

### ELECTRICAL SPECIFICATION

Motor power	0.5 kW
Work's tension	40 - 60 V

### POWER SUPPLIED SYSTEM

floor pick-up (FPU)
over head (OHS)

### SPECIAL FEATURES

steel chassis galvanized and painted with epoxididy powders
reinforced fiberglass body
mid-size tyre
Safety belts
Rubber carpet
teeth protector

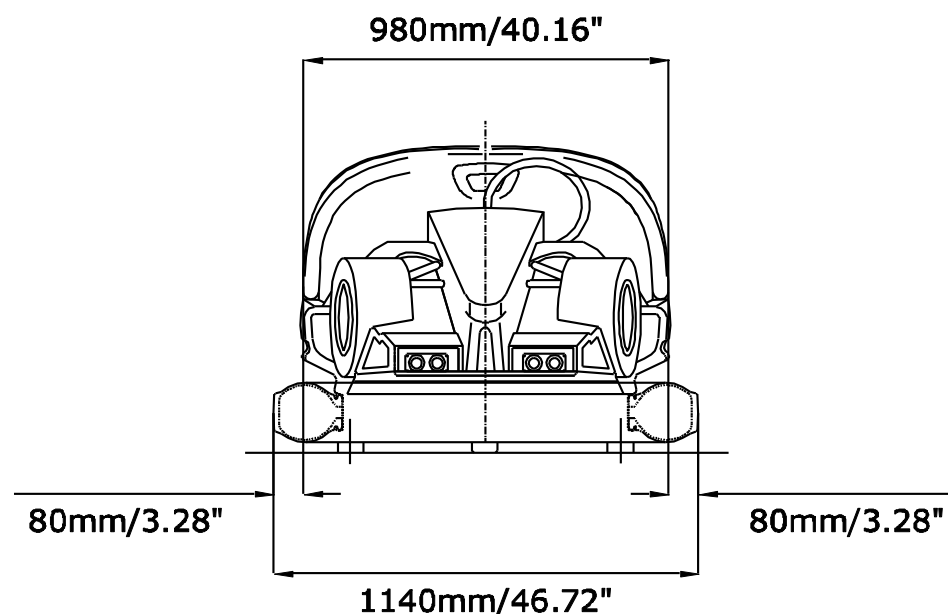
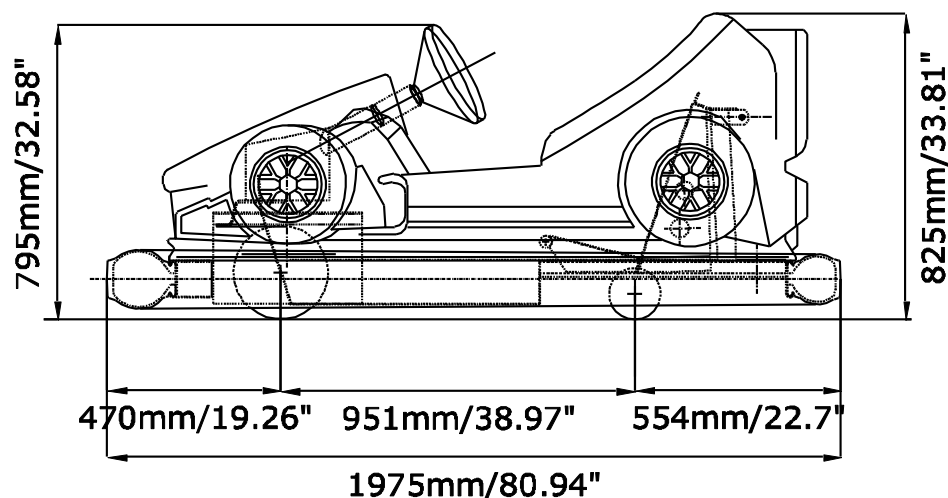
### MAIN OPTIONS

colours at request
revolving brush ( OHS only )
head p\rotection pad ( OHS only )
token mechanism
interactive laser gun system
Drifting frame

### PASSENGERS RESTRICTIONS:

Age: minimum 6 years	Height: minimum 120 cm
Not Accompanied by an adult	
Maximum height 170 cm suggested	
Children high over 90 Cm (2 years old) as a passengers and accompanied by an adult only if speed selector is set at first allowable speed ( $\leq 40V$ First gear in the control unit).	
Minimum passenger age 5 year and 110 cm without any speed limits accompanied by an adult.	

## Overall dimensions



this design is an example

## Adult Car

### TECHNICAL DATA

Weight	265 kg / 2.59 kN
Capacity	2 adults
Size requirements	Minimum 9 sqm/ 96.84 sq ft Recommended 12.5 sq m / 134.5 sq ft
Shipping volume	8 cars in 1x20'box
Noise	< 80 db

### ELECTRICAL SPECIFICATION

Motor power	max 1 kW
Work's tension FPU	40 - 60 V dc
Work's tension OHS	70 - 120 V

### POWER SUPPLIED SYSTEM

floor pick-up (FPU)	colours at request
over head (OHS)	revolving brush (OHS only) head protection pad (OHS only)

### SPECIAL FEATURES

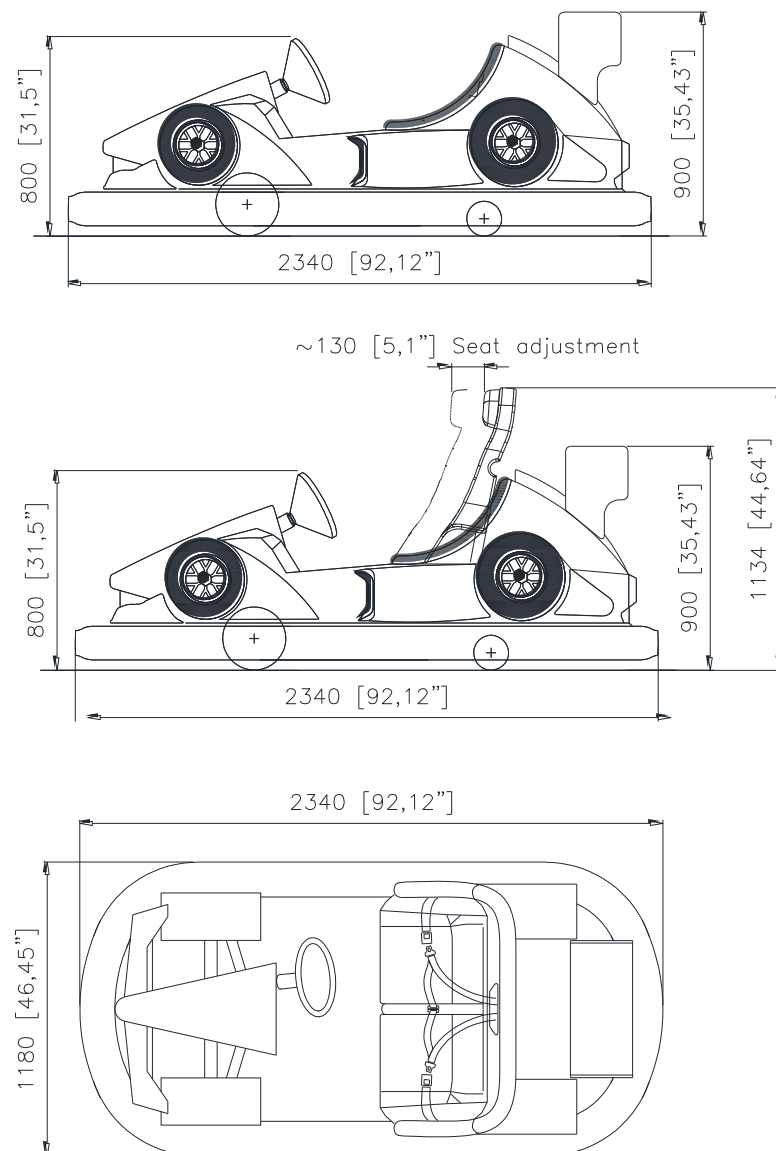
steel chassis galvanized and painted with epoxidy powders	token mechanism
reinforced fiberglass body	interactive laser gun system
Special tyre	Drifting axle
Safety belts	Blue lights under the cars
teeth protector	Drifting frame
rubber carpet	

### PASSENGERS RESTRICTIONS:

Age: minimum 8 year old	Height: minimum 130 cm
Not Accompanied by an adult	
Minimum 4 years and 105 cm if accompanied only if the track is works at 1 (first) speed (<44V). Only as passengers.	
Minimum 6 years and 120 cm if accompanied only if the track is works at 3 (third) speed (≤51V).	

## Maxxi Car

### Overall dimensions



this design is an example

### TECHNICAL DATA

weight	300 kg / 2.94 kN
capacity	2 adults
size requirements	Minimum 9 sq m / 96.84 sq ft
	Recommended 12.5 sq m / 134.5 sq ft
Shipping volume	8 cars in 1x20'box
Noise	< 80 db

### ELECTRICAL SPECIFICATION

motor power	max 1 kW
work's tension FPU	40 - 60 V dc
work's tension OHS	70 - 120 V

### POWER SUPPLIED SYSTEM

floor pick-up (FPU)	
over head (OHS)	

### SPECIAL FEATURES

steel chassis galvanized and painted with epoxidy powders
reinforced fiberglass body
Adjustable seats
Special tyre
Safety belts
teeth protector

### MAIN OPTIONS

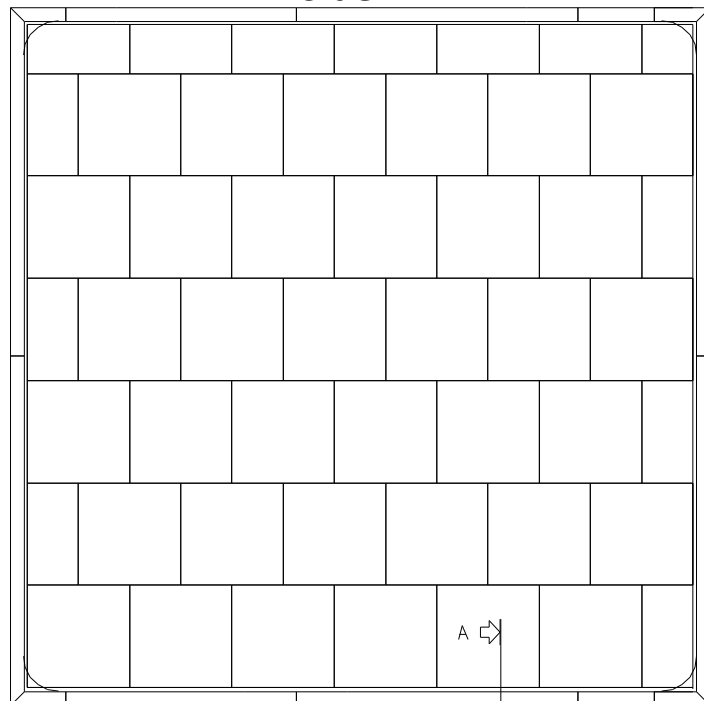
colours at request
revolving brush
rubber carpet
head safer
token mechanism
interactive laser gun system
Drifting system
Blue lights under the cars

### PASSENGERS RESTRICTIONS:

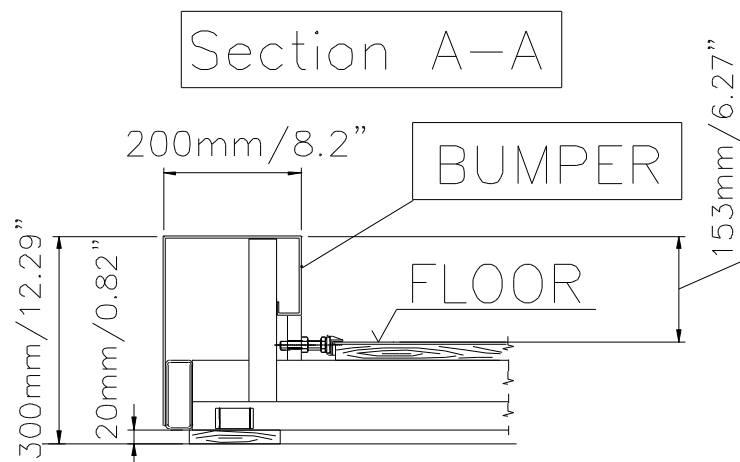
Age: minimum 10 year old
Height: minimum 140 cm



Typical Floor drawing  
**Side B**



**Side A**



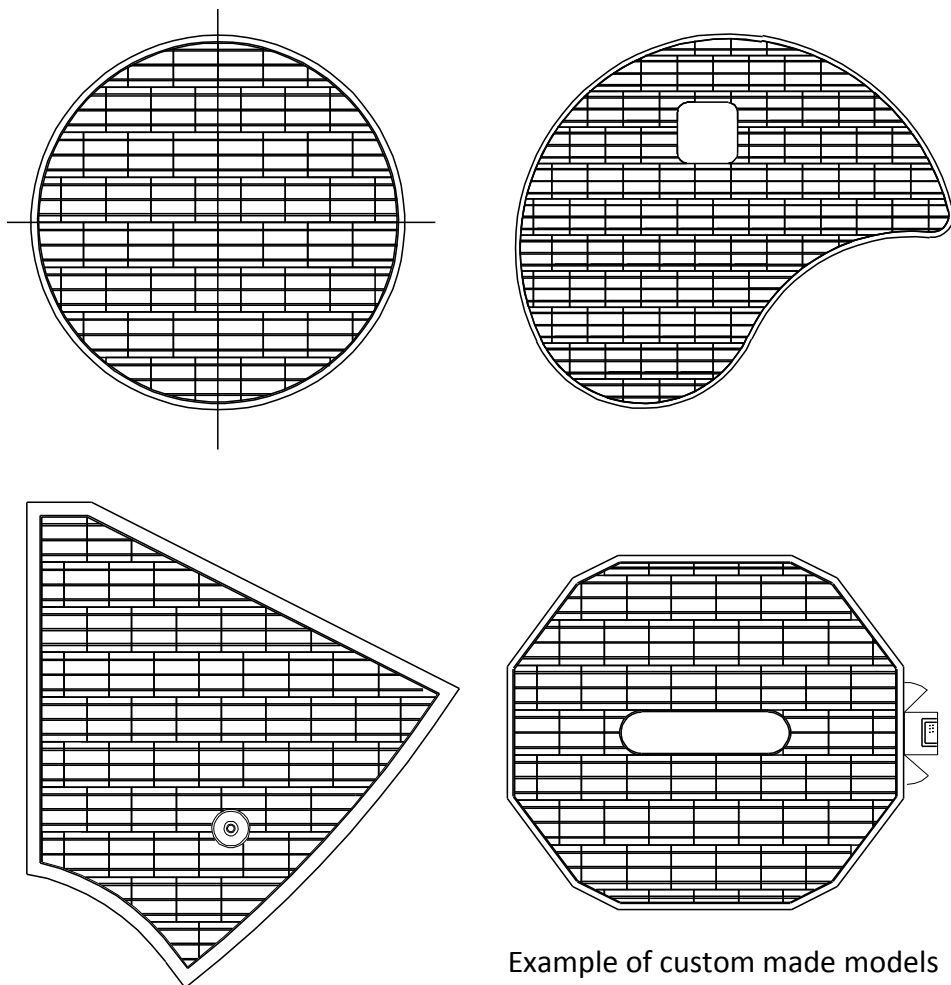
## Scooter FPU (Floor Pick-up System)

### MAIN FEATURES

Low-voltage power supply protection system	Max 60V DC
Standard plate floor	
- 1.5 x 1.5 m / 4.92 x 4.92 ft	
- 1.5 x 0.75 m / 4.92 x 2.46 ft	
Plate floor thickness	
- 18mm (mini-scooter)	
- 24mm (auto-scooter)	
Plate floor are made from laser-cut steel plate and mounted on multiply wood panels (S235JR).	

### OPTIONS

Token unit
Stainless-steel floor of three types (AISI430 - AISI304 – AISI316)
Cold or Hot galvanized base
Platform with illuminated edge
Light integrated in the bumper rail
Special interactive devices
"Countdown" automatic system for controlling and managing without operator
Power Transformer (Rectifier)
Cabin for operator
Motorized rotary brush with vacuum cleaner (for maintenance)
Custom dimension with not-standard plates



**SPECIAL MODELS (example)**

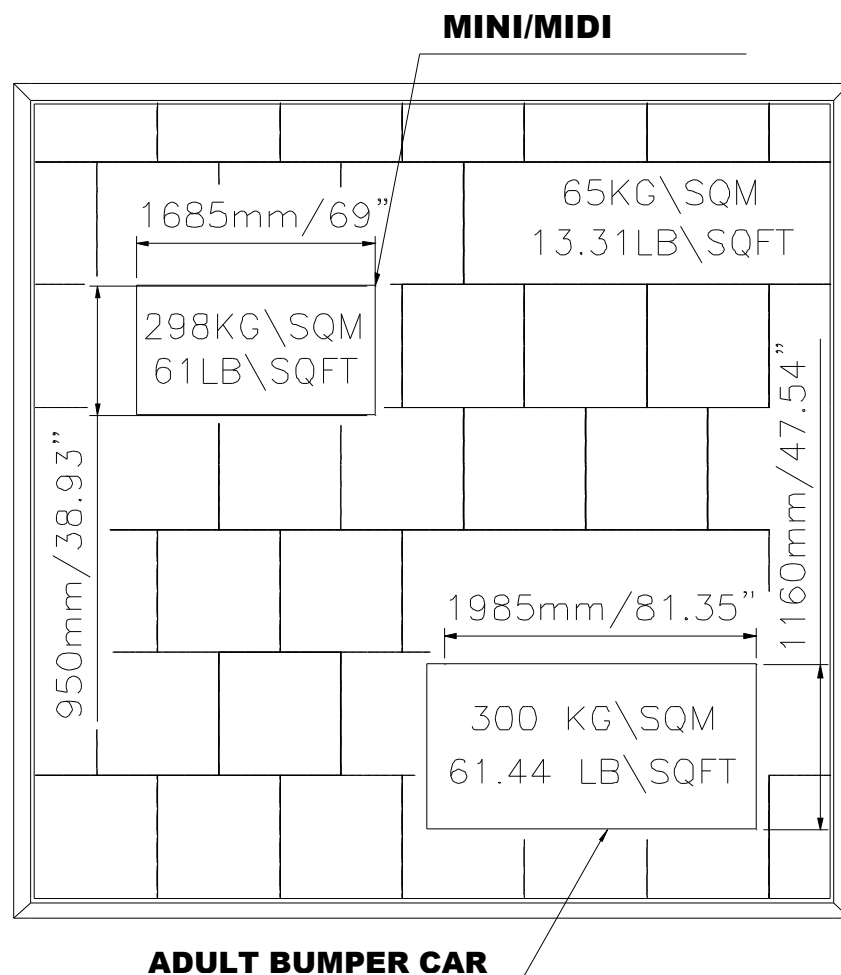
Shape	Outside dimension		Driving area		Car's capacity			
	(A x B) mt	(A x B) ft	Sq mt	Sq ft	Junior	Medium	Adult	Maxxi
Round	Diam 10,6	Diam 34,8	82	882	11	9	8	5
Oval	17 x 7,4	55,8x24,3	116	1248	16	12	12	7
Oval	10,5x13,8	34,4x45,3	135	1453	18	14	14	8
Octagonal	13,2x11,7	43,3x38,4	144	1549	20	15	14	9
Oval	12,5 x 16	41 x 52,5	146	1571	20	15	15	9
Oval	21 x 10	68,9x32,8	198	2130	27	21	20	12
Drop	18,3x15,6	60 x 51,2	260	2798	36	27	26	16

**FPU dimensions and capacities**

**STANDARD MODELS**

Outside dimension		Driving area		Car's capacity			
(A x B) mt	(A x B) ft	Sq mt	Sq ft	Junior	Medium	Adult	Maxxi
4,7 x 7,9	15,4 x 25,9	31	336	4	3		
6,5 x 6,5	21,3 x 21,3	36	393	5	4		
6,2 x 9,4	20,3 x 30,8	52	560	7	5		
6,5 x 9,4	21,3 x 30,8	55	586	7	6		
7,2 x 9,7	23,6 x 31,8	61	656	8	6		
5,4 x 13,1	17,7 x 43	64	684	9	7	6	4
6,5 x 11,6	21,3 x 38	68	732	9	7	7	4
7,2 x 10,9	23,6 x 35,8	71	762	10	7	7	4
7,7 x 10,9	25,3 x 35,8	76	818	10	8	8	5
7,2 x 12,4	23,6 x 40,7	81	872	11	9	8	5
7,9 x 11,7	25,9 x 38,4	85	910	12	9	8	5
7,9 x 12,4	25,9 x 40,7	90	970	12	9	9	6
10,2 x 10,2	33,5 x 33,5	95	1022	13	10	10	6
11,1 x 9,7	36,4 x 31,8	100	1076	14	11	10	6
7,6 x 15,8	24,9 x 51,8	104	1123	14	11	10	7
10,9 x 10,9	35,8 x 35,8	110	1184	15	12	11	7
9,4 x 13,1	30,8 x 43	115	1234	16	12	11	7
10,1 x 12,4	33,1 x 40,7	117	1255	16	12	12	7
9,4 x 13,9	30,8 x 45,6	121	1302	17	13	12	8
10,9 x 12,4	35,8 x 40,7	126	1354	17	13	13	8
9,4 x 14,6	30,8 x 47,9	128	1377	18	13	13	8
15,4 x 9,4	50,5 x 30,8	135	1453	18	14	14	8
10,4 x 14,6	34,1 x 47,9	143	1539	20	15	14	9
16,1 x 10,1	52,8 x 33,1	153	1646	21	16	15	10
10,9x15,4	35,8 x 50,5	158	1695	22	17	16	10
10,1x18,3	33,1 x 60	175	1878			17	11
12,4x15,4	40,7 x 50,5	179	1929			18	11
12x20,2	39,4 x 66,3	218	2342			22	14
13x21,9	42,6 x 71,8	271	2911			27	17
18,2x18,2	59,7 x 59,7	295	3174			30	18

## Weights & Loads



### JUNIOR BUMPER CAR

Car weight	120 Kg	264,55 lb
Passenger weight (2 children)	80 Kg	176,37 lb
Car weight (full load)	200 Kg	440,92 lb

#### Distributed loads:

- Junior bumper cars area	1,078 sqm	11,60 sqft
- Car distributed load	185,5 Kg/sqm	37,99 lb/sqft
- Car distributed load (included dynamic effect)	241,2 Kg/sqm	49,40 lb/sqft
- Miniscooter load	57,0 Kg/sqm	11,67 lb/sqft
- Maximum distributed load (including dynamic effect)	298,2 Kg/sqm	61,07 lb/sqft

### MID-SIZE BUMPER CAR

Car weight	138Kg	304,24 lb
Passenger weight (1 adult+1 child)	115 Kg	253,53 lb
Car weight (full load)	253 Kg	557,77 lb

#### Distributed loads:

- Midi bumper cars area	1,596 sqm	17,17 sqft
- Car distributed load	158,5 Kg/sqm	32,46 lb/sqft
- Car distributed load (included dynamic effect)	206,1 Kg/sqm	42,21 lb/sqft
- Miniscooter load	57,0 Kg/sqm	11,67 lb/sqft
- Maximum distributed load (including dynamic effect)	263,1 Kg/sqm	53,88 lb/sqft

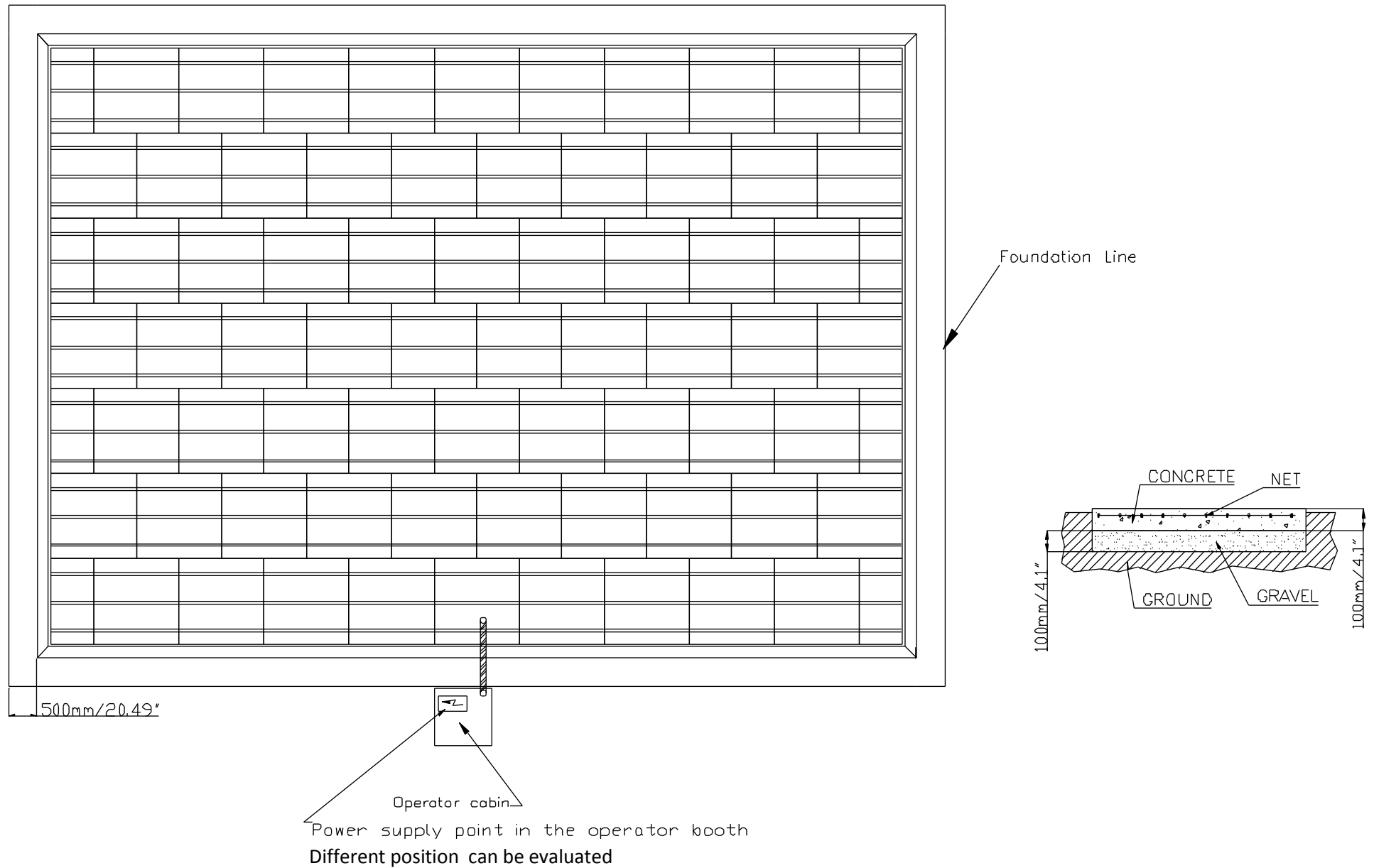
### ADULT BUMPER CAR

Car weight	265 Kg	584,22 lb
Passenger weight (2 adults)	150 Kg	330,69 lb
Car weight (full load)	415 Kg	914,91 lb

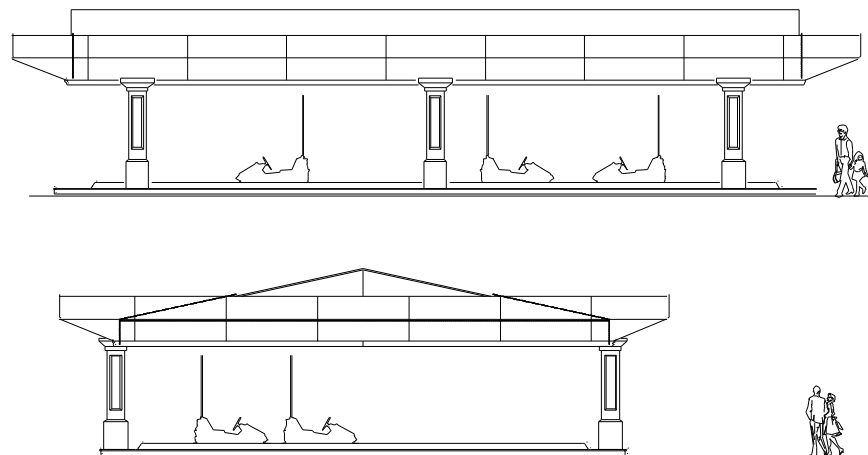
#### Distributed loads:

- Adult bumper cars area	2,296 sqm	24,71 sqft
- Car distributed load	180,7 Kg/sqm	37,01 lb/sqft
- Car distributed load (included dynamic effect)	234,9 Kg/sqm	48,11 lb/sqft
- Autoscooter load	65,0 Kg/sqm	13,31 lb/sqft
- Maximum distributed load (including dynamic effect)	299,9 Kg/sqm	61,42 lb/sqft

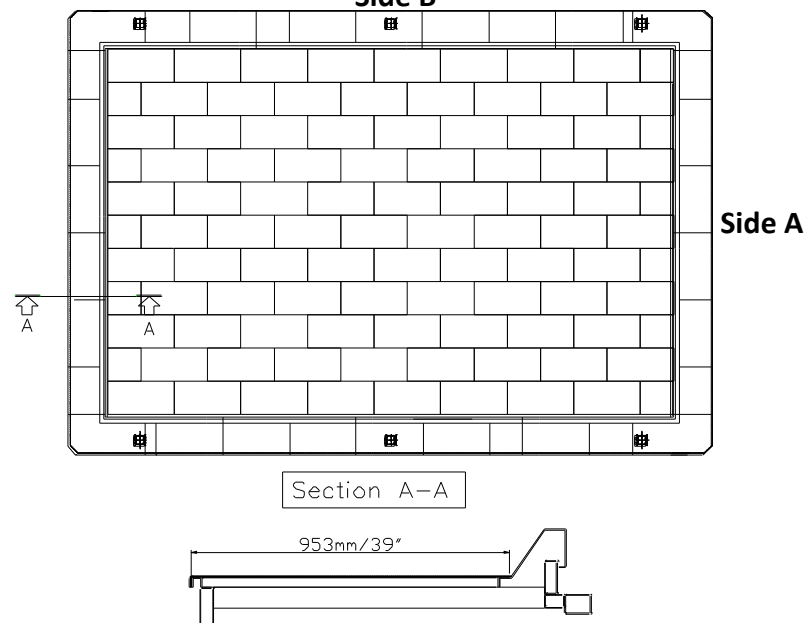
## Foundations



## Layout



## Floor drawing Side B



## Scooter OHS (Over Head System)

### MAIN FEATURES

Low-voltage power supply protection system	Max 120V DC
The floor is always connected to the negative pole	
Standard plate floor	
- 1 x 2 m / 3.3 x 6.6 ft	
- 1 x 1 m / 3.3 x 3.3 ft	
Plate floor thickness	
- 30mm (mini-scooter)	
- 35mm (auto-scooter)	
Plate floor are made from laser-cut steel plate and mounted on multiply wood panels	

### OPTIONS

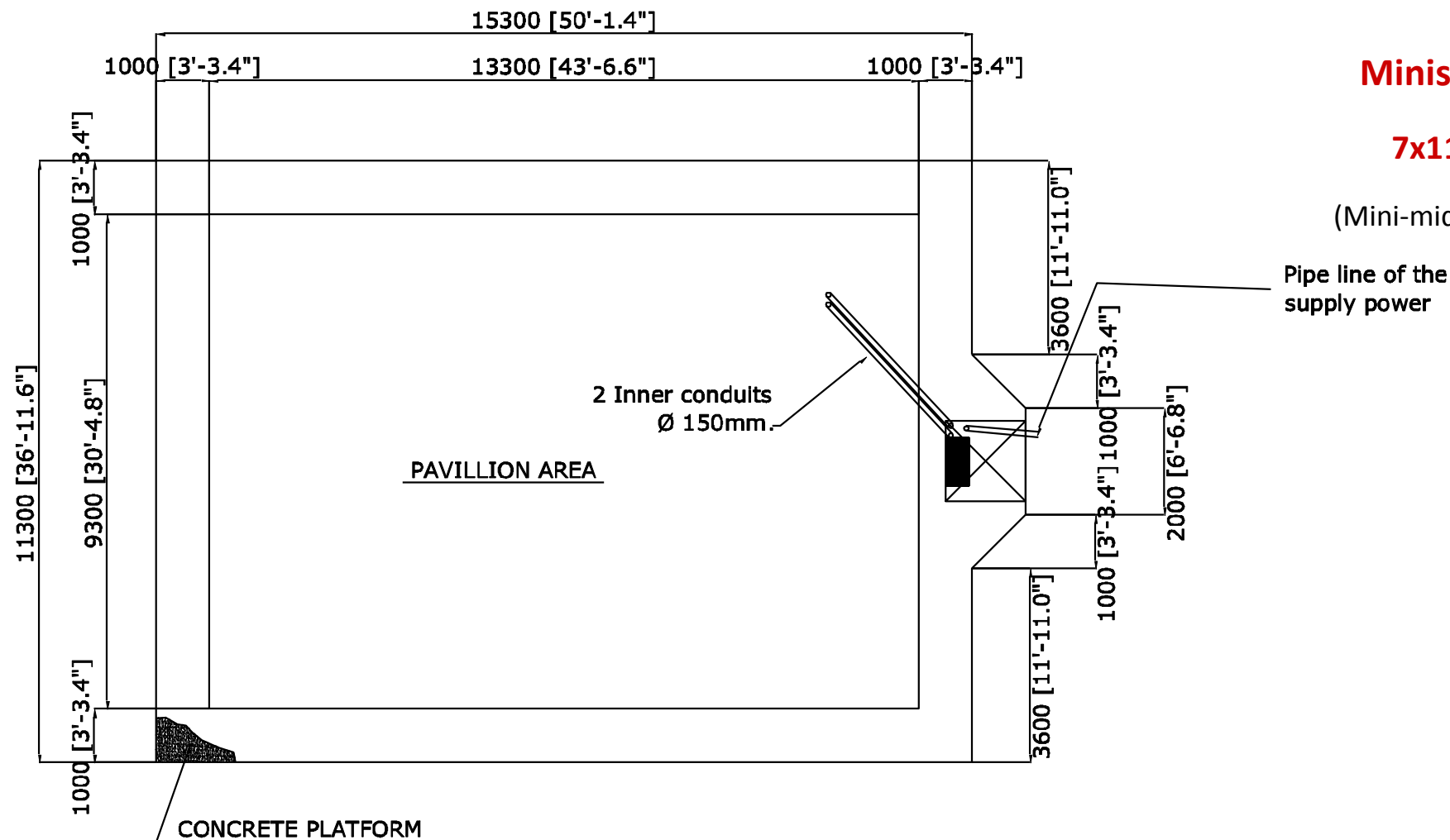
Token unit
Stainless-steel floor
Hot galvanized base and roof structures
Surround platform with aluminum or rubber edge
Fronts with decorations and special lights
Columns with decorations and special lights
"Countdown" automatic system for controlling and managing without operator
Power Transformer (Rectifier)
Cabin for operator
Motorized rotary brush with vacuum cleaner
Special interactive devices



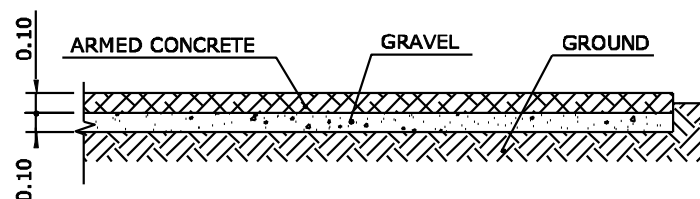
## Miniscooter OHS

### 7x11 Foundation

(Mini-midi bumper cars)



#### SECTION- B-B



MAXIMUM LOAD UNIFORMED DISTRIBUTED ON  
CONCRETE FOUNDATION 500Kg/sqm  
MAXIMUM FLOOR LEVEL CLEARANCE 2cm

LOADS DATA VALID FOR ALL THE DIMENSIONS

## Scooter OHS

### 24x12 Foundation

(Adult bumper cars)

