ROPE RUNNER

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Partner for design & technology: Engineering-Mechatronics Gmbh

The ROPE RUNNER *is an unforgettable experience!*
(Picture taken in Stoderzinken on the 1. of March 2013)

advantages

We calculate your ROPERUNNER-Ride in advance!
...We do not work on trial & error after track is finished

TüV approved; designed and manufactured on
international safty standards
for ropeways and amusement rides

Adventure for the whole family
...satisfies all from 8 to 88 years

Appr. **20- 50 Persons/h** capacity per line
(depending on length, altitude, sag, braking system)

Day and night
sunshine or rain
till -15°C (≙ 5F)

High quality with low
maintenance costs and
easy to operate

Ride characteristics
page 10

**Timeline to
your RR-Ride**
page 18

Projects
page 10 - 17

Supplies
page 18

Zip line planning

1 Parameters for planning:

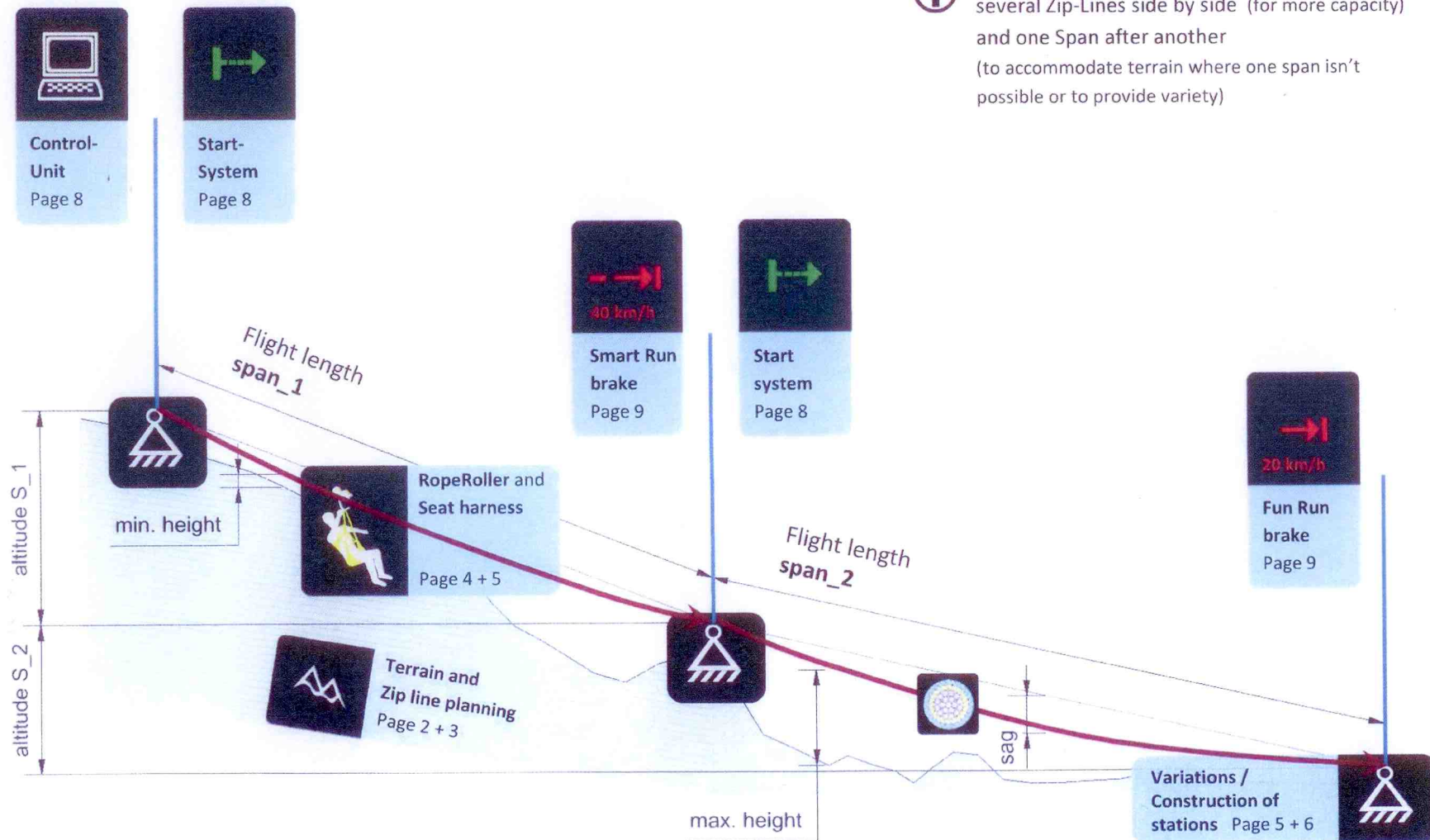| Zip line length	Altitude in % and (meters)		Capacity (max. P/h)
	Fun Run brake page 9 — 20 km/h	**Smart Run brake** page 9 — 40 km/h	
400m 1300ft	8 - 15 % (32-60m)	8 - 19 % (32-76m)	40
700m 2300ft	11 - 21 % (77-147m)	11 - 24 % (77-168m)	35
1100m 3600ft	12 - 25 % (132-275m)	12 - 28 % (132-308m)	30
1500m 4900ft	16 - 26 % (240-390m)	16 - 29 % (240-435m)	25
2000m 6550ft	22 - 28 % (440-560m)	22 - 31 % (440-620m)	22
2500m 8200ft	26 - 30 % (650-750m)	26 - 36 % (650-900m)	20

2 Every rope has its sag!

If you draw an arc between
the stations to simulate the
rope-line –> the arc should
start with 1° to 4° from the
bottom. ...and check ability
of terrain!

1° -> 4°
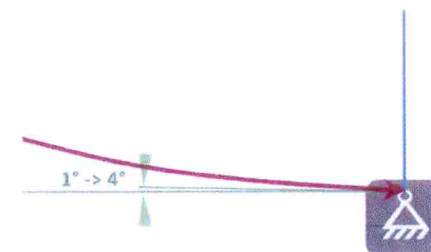
3 Let's talk about details of your RopeRunner Ride!
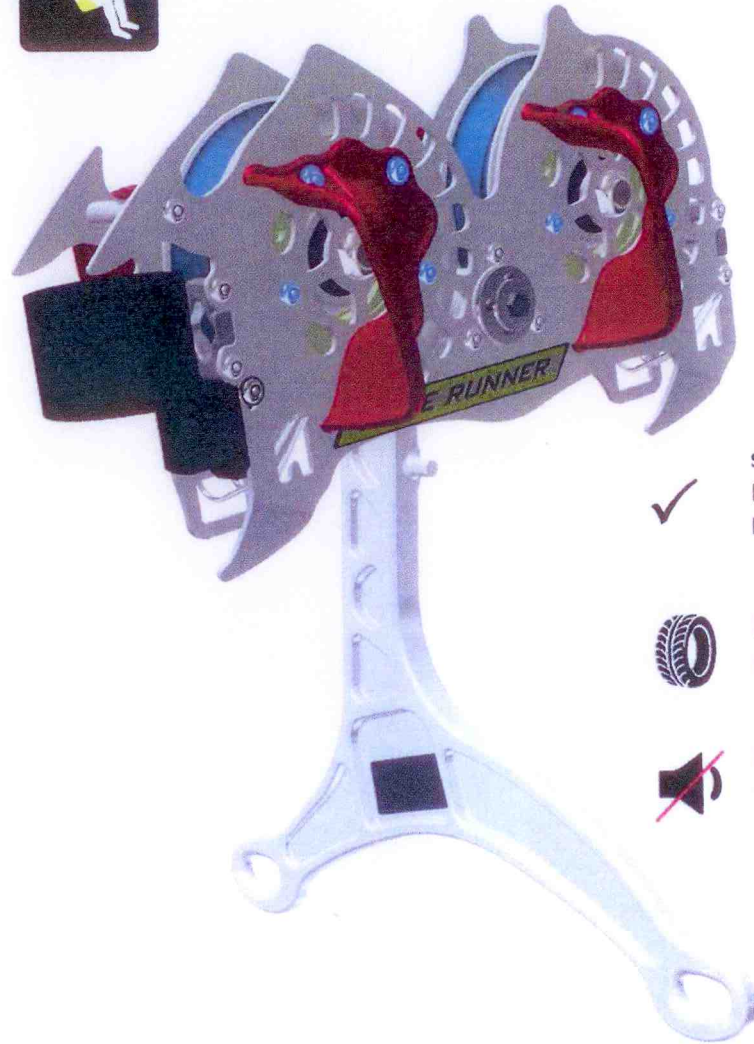
Ride overwiew

One Ride can have
several Zip-Lines side by side (for more capacity)
and one Span after another
(to accommodate terrain where one span isn't
possible or to provide variety)

Control-Unit
Page 8

Start-System
Page 8

Smart Run brake
Page 9

40 km/h

Start system
Page 8

Fun Run brake
Page 9

20 km/h

Flight length
span_1

Flight length
span_2

RopeRoller and
Seat harness
Page 4 + 5

**Terrain and
Zip line planning**
Page 2 + 3

**Variations /
Construction of
stations** Page 5 + 6

altitude S_1

min. height

altitude S_2

max. height

sag

Rope-Roller

up to 150 km/h
(90 mph)

✓ **stainless steel + aluminium**
Highend materials –
Robust and **build for lifetime**

longlife rubber - Ø 130mm
(for smoothness + silence)

Nearly silent < 50dB
(exept the shouts of participants)

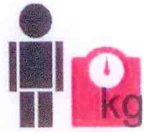Maintenance- and wear-free
Eddy current brake

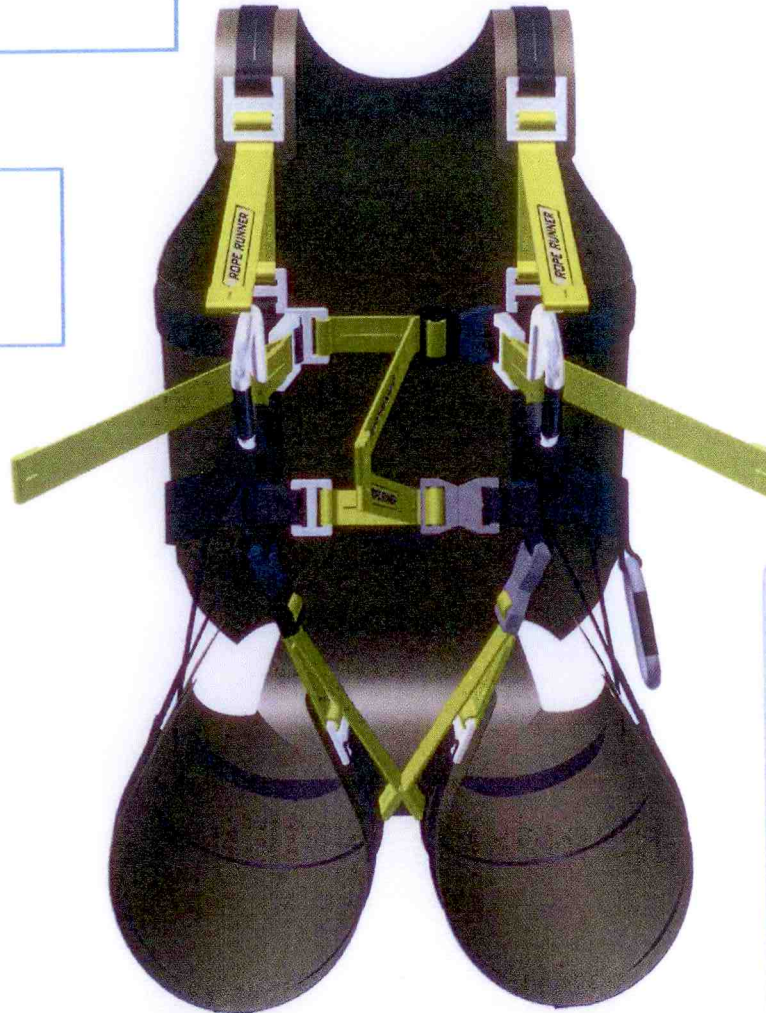e **Net weight under 3,5kg**
(7,7 lbs)

Ski- or Snowboard carrying

Seat harness

3- 4 sizes from 30 – 125kg (66-265 lbs)
Passenger weight; provide similar speed for all

3 sizes from 1.2 to 2.1m
body size
(3,9 – 6,9ft = 47 – 83inch)

small pocket to store your personal goods or a **big bag** to transport the Seat-harness and Rope-Roller
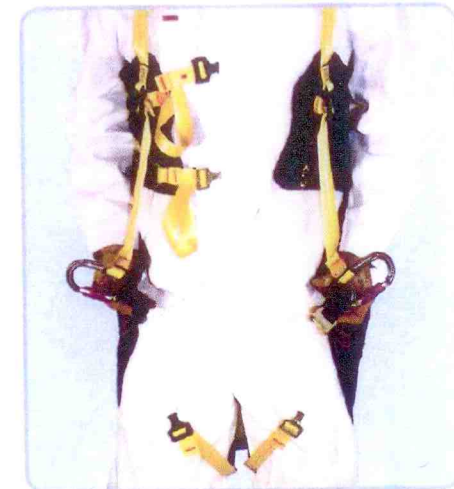
Distinctive comfort while hanging in the seat harness!

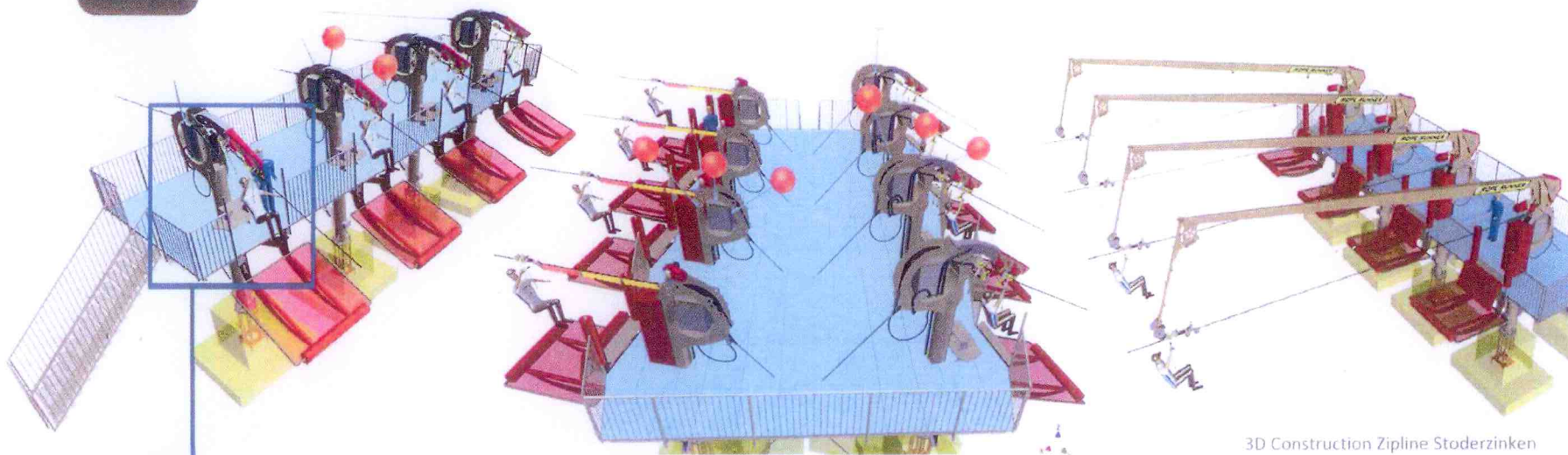**4x clip buckles** as used in aircraft vests – AustriAlpin©

Yellow strapes
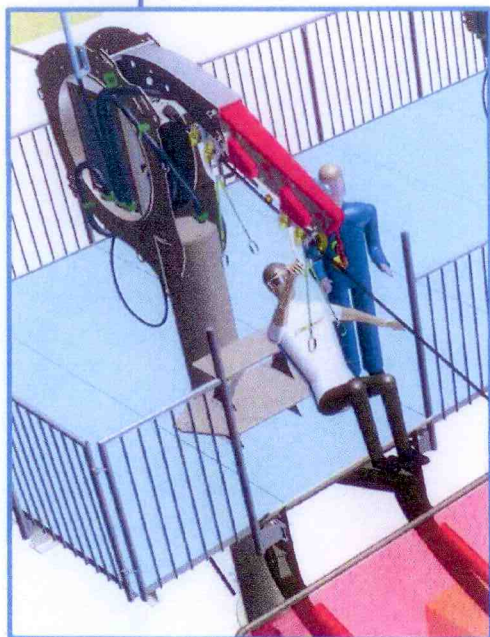- easy to tighten
- simply replaceable

Variations

3D Construction Zipline Stoderzinken

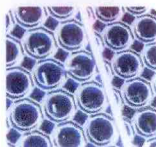Douple, triple or quadruple your capacity with fractional increases in cost. People love to "race" their friends!

For **more capacity** and an adventure side by side you can make more lines side by side. **i.e.: Zip Line 1 - ...4**

RopeRunner is available as a one span zip line attraction, or a multi span tour. Each span can have unique Ride characteristics. **i.e.: Top – Middle – Bottom station**

Protective Bumpers and build in fall protection UV + Water resistant!

rubber mats lie on galvanized steel decks!

LAN-Connection between top- and bottom-station fiber optic cable can be embedded in the cable / rope of zip line
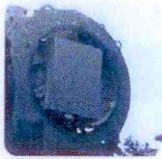
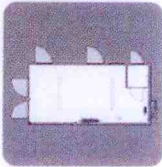Helicopter rigging available for difficult terrain access

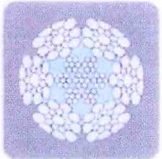Minimal space required for stations , costumized to terrain

Steel Construction **Zinc-Coated** (hot dip) Up to 30m towers; Integration in buildings possible
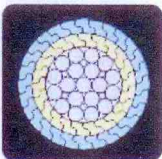
Operator cabin with dressing room, touch panel and storage for seat harness is optional!

Typ and diameter of the rope depends on track length and the rope sag!
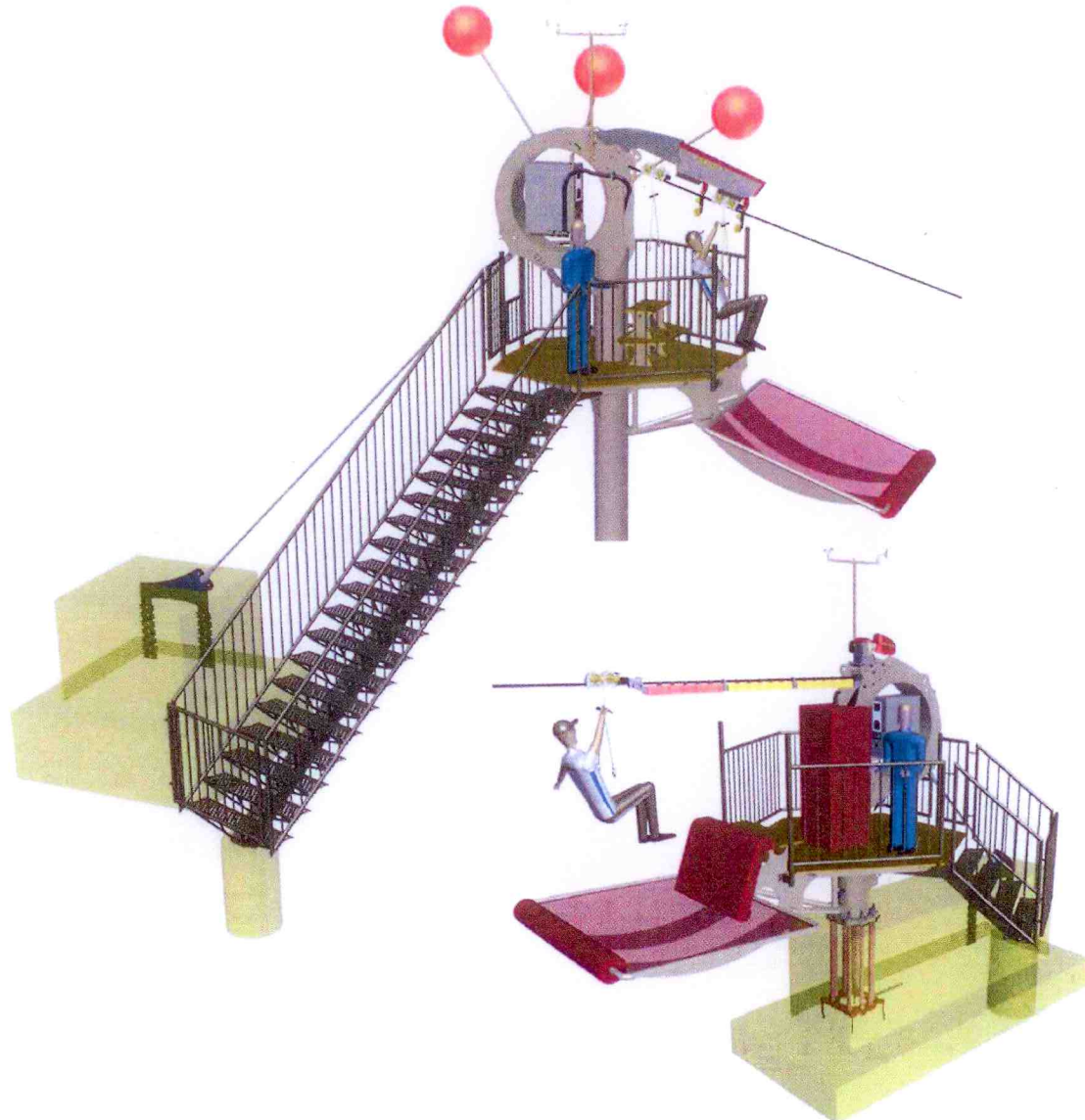
Compacted rope Ø15- 20 steel zinc-coated; non grease surface

Locked coil rope Ø20- 26 steel zinc-coated;

Bollard rope mounting leads to a rope-use for decades.

Control unit

pilz

Track monitoring with an approved safety – PLC
The control unit mainly helps the operator to have quickest, smartest and safest control of the complete ride. The unit only allows a green light, and release of trolley, if the last rider has dismounted and the brake has been reset.
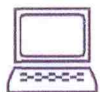
Wind (speed & direction) measuring on every station

temperature measurement and forst-proof electric cabin

Every data as the drive time, the number of Rides is logged. Every internal signal can be displayed via internet support.

All parameters (as Wind, Temp, ...) are displayed on a Monitor on each station!

Start-System

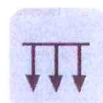## AUTO START – safe + fast as possible

control of take-off is linked to route monitoring
The person can start after the previous passenger has left the track-line and brake (Smart run / Fun run) sets ready again.
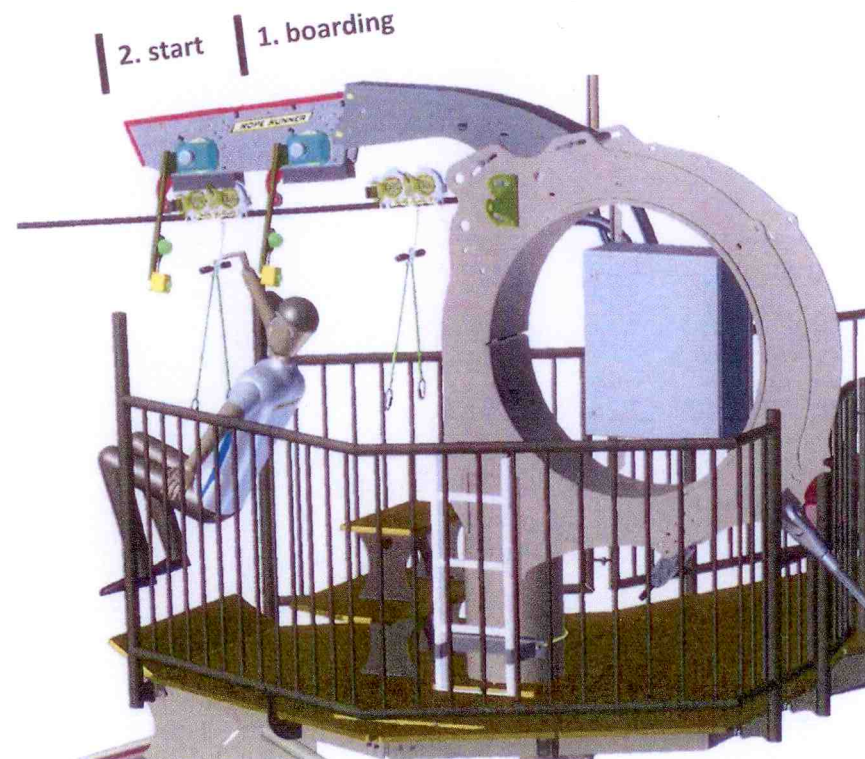
QUICK START Modus
Starts by pushing a button as zip line is open

All riders side by side start as all lines are cleared!

| 2. start | 1. boarding

arrival braking-system Fun-Run

max. **20** to **0 km/h**   in 2,2m   (max. 1,3g)

→| 20 km/h

arrival braking-system Smart-Run

max. **40** to **0 km/h**   in 11m   (max. 1,3g)

- →| 40 km/h

AUTO Park-in ensures Pinnpoint landing

-Everyone moved to the exit = guarantee Ride **capacity**

No unpleasent bumps
(max. 1,3g force)

(i) After passinger left
– by pushing a button:

System resets brake and sends
"line is free" to the start system

Specially developed
**Polyurethane shock
absorbing system**

! Characteristics

Characteristics exclusive to ROPERUNNER

Ride

Lengths of span (With Low cable-sag – distances up to 2,5km)

Track mainly depends on your terrain!

 # Number and type of braking system

Zip lines side by side (for higher capacity and start en masse)

Single span or Span one after another

(dif. altitudes leads to dif. speed leads to a dif. braking system)

!Smart Run brake has more capacity as a Fun Run brake!

Terrain

Characteristic of the ground and reachability of the stations

As Method of mounting (by Truck or by helicopter)

As Mode of foundation (weight basic or Anchors in rocks)

Height and Construction of steel platforms

Including access & exit to the platform (Rope Bridge, Stairs, …)

Rope-Roller and Seat harness (# Number of …)

Uphill transport with self propellered Transport-roller

How will all Roperoller and Seat harnesses will be brought to top?

Supplies (seen on Page 17)

Projects

SERFAUS – AUSTRIA   "Serfauser Sauser"   since **2010**

1 Zip Line – 4 Span

	length	altitude	
1. Span	500m length	70m altitude	fun-run
2. Span	780m length	160m altitude	fun-run
3. Span	300m length	34m altitude	fun-run
4. Span	530m length	120m altitude	smart-run

HOCH YBRIG – SCHWEIZ "Sternen Sauser"   since **2011**

1 Zip Line – 2 Span

	length	altitude		
1. Span	1750m length	320m altitude	smart-run	up to 100km/h
2. Span	500m length	80m altitude	fun-run	

STODERZINKEN – AUSTRIA "ZIPLINE"   since **2013**

4 Zip Lines – 2 Span

	length	altitude		
1. Span	1500m length	300m altitude	fun-run	max. 95km/h
2. Span	1000m length	300m altitude	smart-run	from 0 to 70km/h in 5s

INDOOR SKI AREA – **DUBAI**   since **2014**

2 Zip Lines – 1 Span

	length	altitude		
Span	130m length	24m altitude	smart-run	max. 45km/h

ORELLE / VAL THORENS – FRANKREICH   since **2014**

1 Zip Line (plus line for aircraft warning bulb + Transport-Roller)

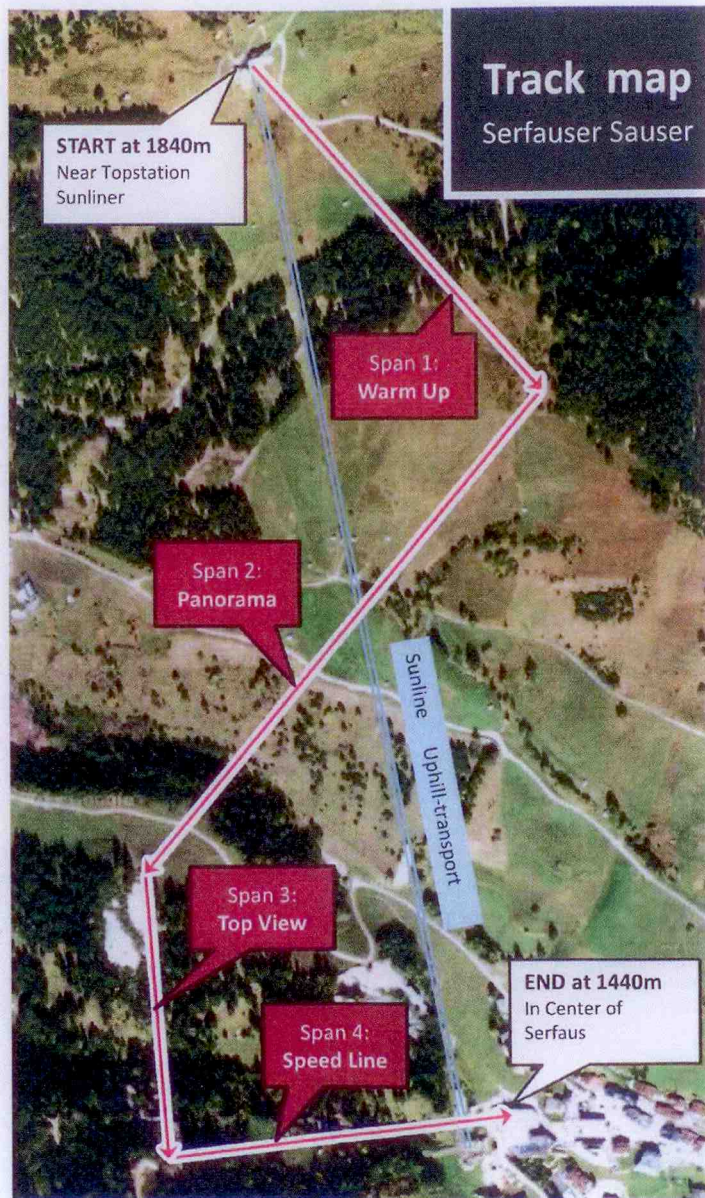|	length	altitude		
Span	1300m length	230m altitude	smart-run	max. 100km/h
	Starting above 3230m sealevel			

OBERAUDORF (Hocheck-Bahnen) – GERMANY   since **2014**

1 Zip Line (plus Seil für Transport-Roller)

	length	altitude		
Span	650m length	142m altitude	smart-run	max. 80km/h

Track map
Serfauser Sauser

START at 1840m
Near Topstation
Sunliner

Span 1:
Warm Up

Span 2:
Panorama

Sunline   Uphill-transport

Span 3:
Top View

Span 4:
Speed Line

END at 1440m
In Center of
Serfaus

SternenSauser Hoch-Ybrig / Schweiz

www.impuls-event.ch

SternenSauser Hoch-Ybrig / Schweiz

Span 1 – 1.750m length
320m altitude

Span 2 – 500m length
80m altitude

13/20
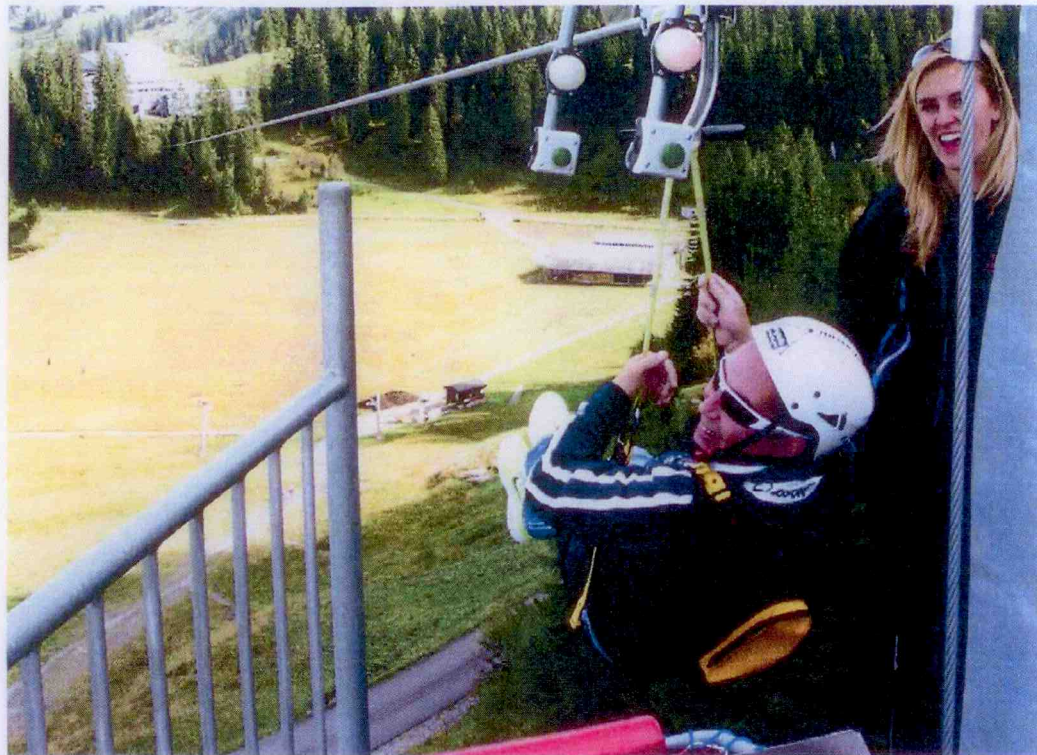
Zipline Stoderzinken - Steiermark

zipline
fly like an eagle
STODERZINKEN

START – Span 1
1500m length
300m altitude
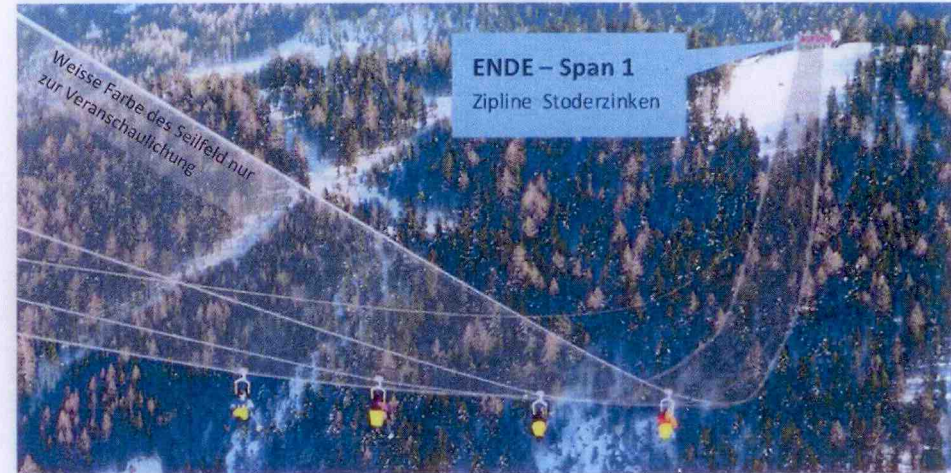
ENDE – Span 1
Zipline Stoderzinken

Weisse Farbe des Seilfeld nur zur Veranschaulichung
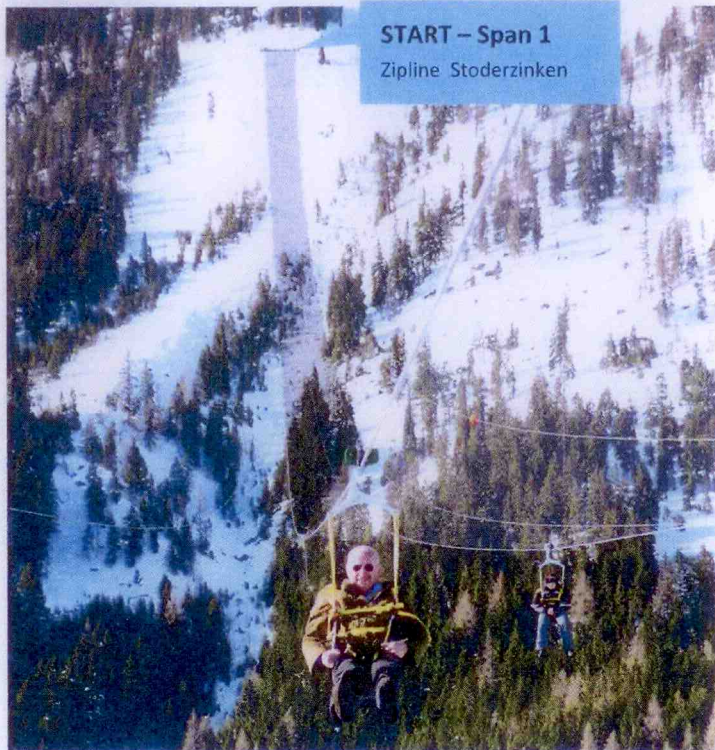
START – Span 1
Zipline Stoderzinken

END – Span 1
Middle-Station

START – Span 2
1000m length
 300m altitude

END – Span 2
Zipline Stoderzinken

Weisse Farbe des Seilfeld nur zur Veranschaulichung
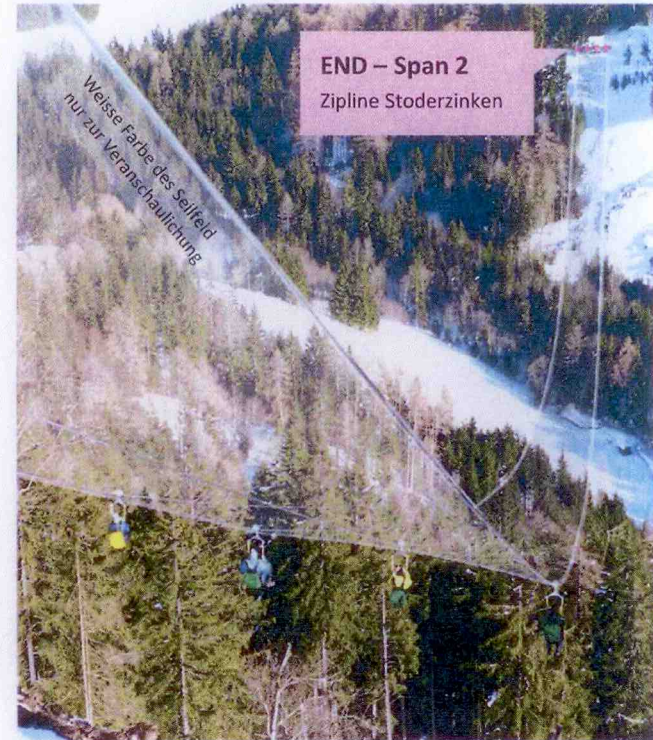
START – Span 2
Zipline Stoderzinken
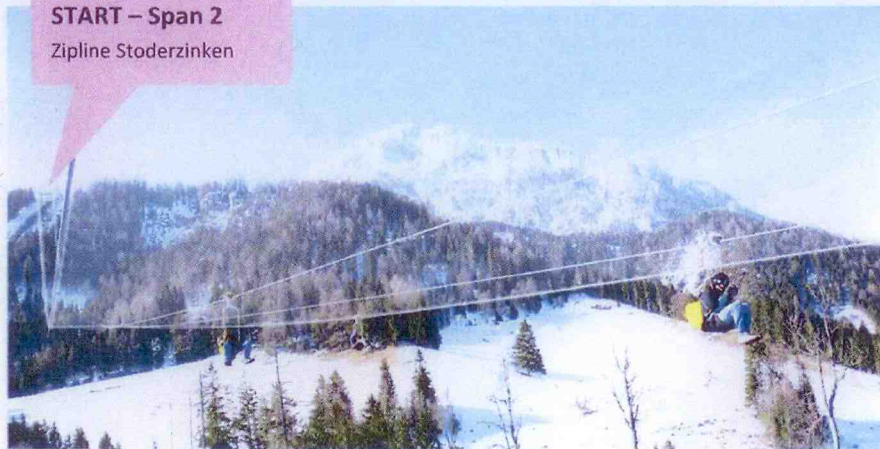
END – Span 2
Bottom-Station

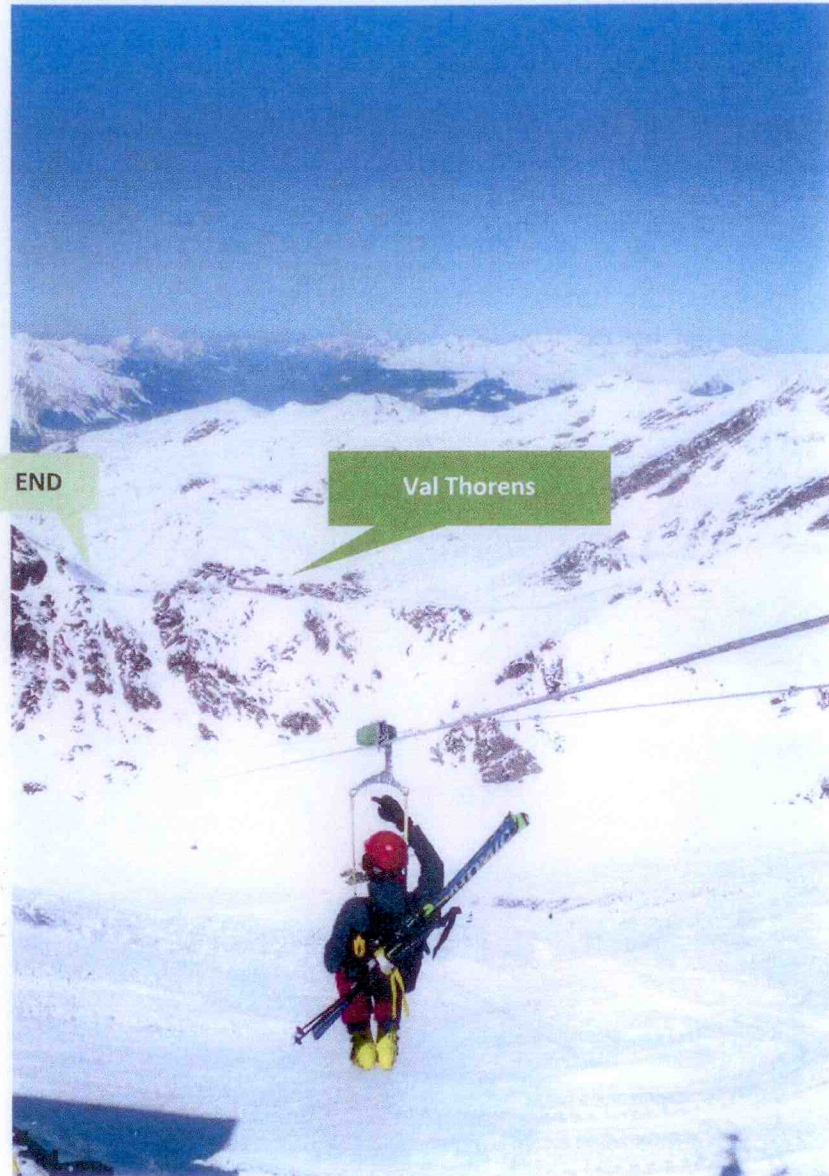# Tyrolienne Orelle > Val Thorens - France

FIRST Zipline above 3000m sealevel

...connect two Glacier – Ski-resorts

First battery-powered- automotive- Transport-RopeRoller

START – above 3230m
near Orelle / du Bouchet

END – still above 3000m
now in Val Thorens

END

Val Thorens

Start in Orelle
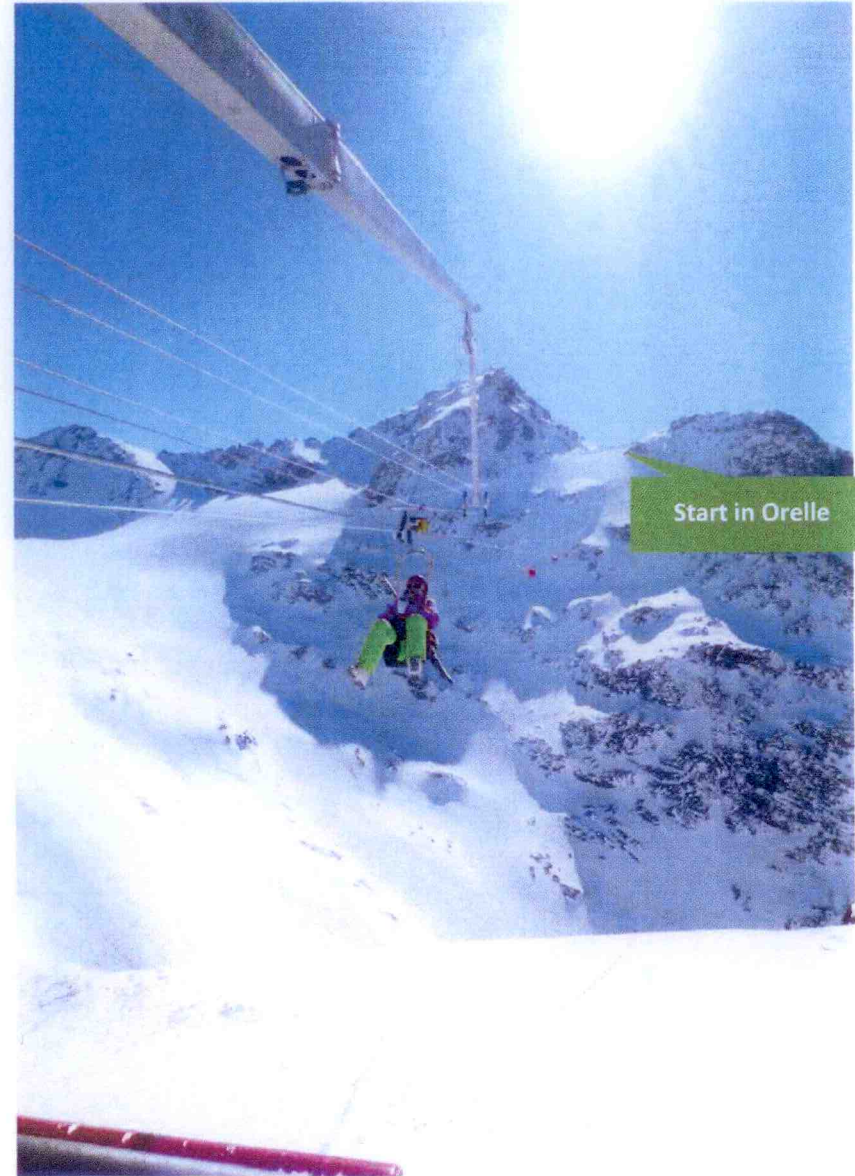
timeline

① **Find a track** (Info see Page 2)
And **Characterize** your RopeRunner-Ride
(Settings on Page 10)

② Start the project and fix the **Quotation** to your Ride!
as obtaining for the **permission of your authority**

③ Resolve the opening date and **Finalize the contract**
foundation work – mounting
– **initialize, approve and opening!**

All from one source
– from Arrangement over the **first test flights** to the approval by a
Technical Control Board (TüV) as hand-over the keys and support.
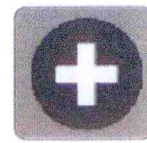
supplies

ⓘ Give the ride your own name and a special topic.
We can design and mount your advertisement!

◎ Picture- and **Video-souvenirs** in your web presence and
i.e. on **social network**

⌂ Decide which building for sales and the operator
and a electric control cabinet is needed.

Get a membrane roof to have a weather proof
for the waiting guests and to present the ride at night
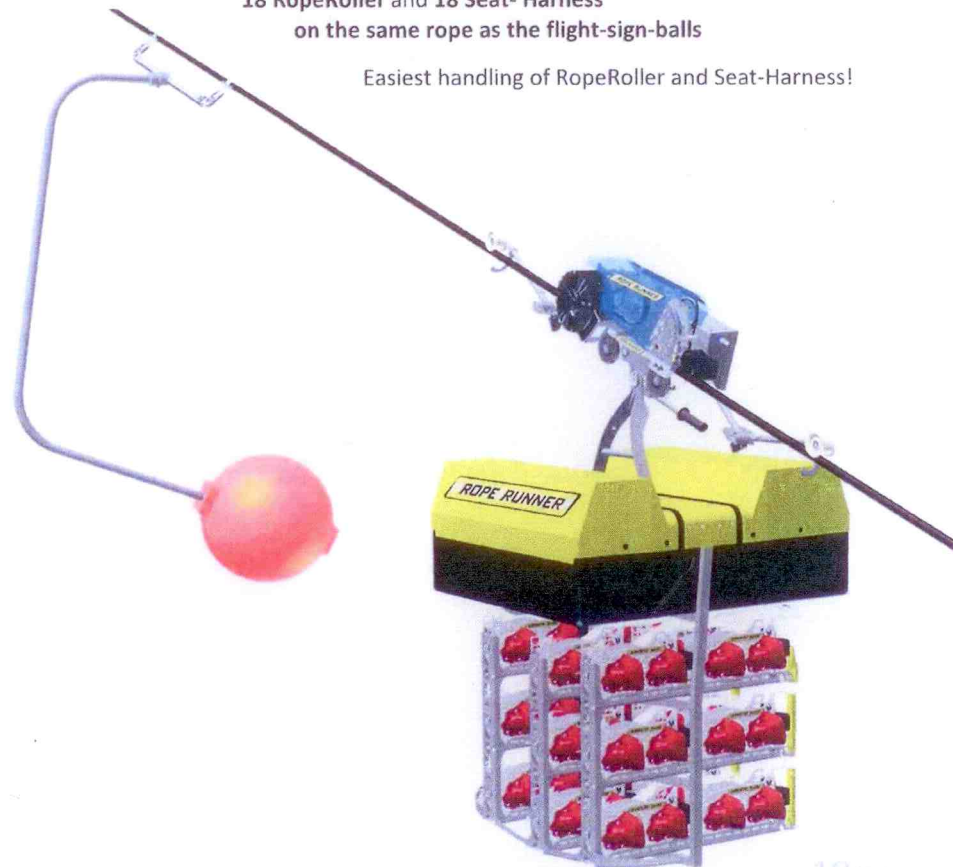
For **night operation** we costume your lighting system.

Uphill-transport

...ways to transport your RopeRoller and Seat harness back to the start!
Which Type of transport mainly depends on your Track circumstances and
your facilities for transport.

A   **Tranport via Ropeway** (chair-lift or cable cabin)

B   **Transport via Bus or Taxi**
Seat harness with a bag for the RopeRoller

C   **Transport with battery- propellered Transport-Roller**
     18 RopeRoller and **18 Seat- Harness**
     on the same rope as the flight-sign-balls

     Easiest handling of RopeRoller and Seat-Harness!

Transport-Roller...

Speed up to 10 m/s
(up to 7 kW power)

615 Wh Battery
(700m altitude)

ROPE RUNNER