



---

SPRING 2019 CATALOGUE





2017 & 2018 Ironman World Champion Patrick Lange, aerodynamic optimisation by Swiss Side.  
PHOTO: THOMAS STÖCKLI

## CONTENTS

---

- 04 PRO ATHLETE TEAM
- 08 SWISS SIDE HADRON
- 10 HADRON ULTIMATE AERO WHEELS
- 12 HADRON CLASSIC AERO WHEELS
- 14 ACCESSORIES
- 16 FORMULA 1 CONNECTION
- 18 4-ARM AERO DEVELOPMENT PROCESS
- 20 COLLABORATION PROJECTS
  - TEAM SKY
  - PROJECT 101
  - DT SWISS
  - CUBE
- 24 CONTACT

---

 SWISS SIDE

## PRO ATHLETE TEAM

---



PHOTO: ISAAK PAPADOPOULOS



PHOTOS: INGO KUTSCHE

### PATRICK LANGE

2017 & 2018 IRONMAN WORLD CHAMPION  
IRONMAN HAWAII COURSE RECORD HOLDER

Immediately after Patrick's record breaking time at the 2017 Ironman World Championship race in Kona, Patrick, Swiss Side, Canyon and Sauber Engineering embarked on a collaboration dubbed Project 101, aiming to shave at least 101 seconds off of his 2017 time. This partnership successfully broke the magic 8-hour by not just a mere 101 seconds, but by an astonishing 7min 21sec, with a time of 07h 52min 39sec, crowning him as the 2018 World Champion.



PHOTO: JESPER GRONNEMARK

## PRO ATHLETE TEAM



**LAURA PHILIPP**

1 X IRONMAN VICTORY (FASTEST DEBUT TIME, NEW GERMAN LONG DISTANCE RECORD AND NEW COURSE RECORD)

13 X IRONMAN 70.3 VICTORIES  
2 X WORLD CHAMPIONSHIP PODIUM



**DANIELA RYF (DT SWISS AERODYNAMICS BY SWISS SIDE ATHLETE)**

4 X IRONMAN WORLD CHAMPION VICTORIES  
4 X IRONMAN 70.3 WORLD CHAMPION VICTORIES

PHOTOS: INGO KUTSCHE



**ANDREAS RAELELT**

5 X PODIUM AT IRONMAN WORLD CHAMPIONSHIPS



**MICHAEL RAELELT**

2017 IRONMAN 70.3 EUROPEAN CHAMPION  
WORLD RECORD HOLDER IN MIDDLE DISTANCE TRIATHLON



**DANIELA BLEYMEHL**

4 X IRONMAN/CHALLENGE VICTORIES



**MAURICE CLAEL**

2018 IRONMAN 70.3 VICHY WINNER  
3RD PLACE IRONMAN SOUTH AFRICA 2018



**ANDREAS DREITZ**

10 X IRONMAN 70.3 VICTORIES  
2 X IRONMAN/CHALLENGE VICTORIES



**JULIA GAJER**

6 X IRONMAN 70.3/CHALLENGE VICTORIES  
2 X IRONMAN VICTORIES

# SWISS SIDE HADRON AERO WHEELS



## RECORD BREAKING WHEELS

### HADRON ULTIMATE

Aided by the world's fastest wheels, Patrick Lange broke the course record in his victories at the 2017 & 2018 Kona Ironman World Championship. Bringing more than 50 years of Formula 1 race development, the Swiss Side team developed the HADRON Ultimates to minimize drag while maximizing aero stability and predictability in the wind. Manufactured in partnership with DT Swiss, these rims offer the highest possible Swiss precision, quality and durability; tubeless ready, full carbon construction, DT Swiss 240s hubs and SINC Ceramic Bearings.

### HADRON CLASSIC

Offering a slightly stiffer wheel with heavier gauge Aero Comp spokes, the HADRON Classics deliver maximum aero performance and durability at an accessible price. The full carbon HADRON Classic rims are tubeless ready, using the same award winning rim profiles as the HADRON Ultimates. The Classics are custom-built, utilizing Swiss Side's exacting specifications. Manufactured in collaboration with DT Swiss, once again the highest possible Swiss precision, quality and durability are assured.

## PATRICK LANGE

Winning on Swiss Side HADRON Ultimate Aero Wheels



PHOTO: THOMAS STÖCKLI

# SWISS SIDE HADRON ULTIMATE AERO WHEELS

AVAILABLE AT SWISSSIDE.COM



HADRON ULTIMATE 800



HADRON ULTIMATE 800 DISC



HADRON ULTIMATE 625



HADRON ULTIMATE 625 DISC



HADRON ULTIMATE 485



HADRON ULTIMATE 485 DISC

## 2019 WHEELS SPECS

### HADRON ULTIMATE 800

Back to back Ironman World Championship winning and record braking performance, the HADRON Ultimate 800 is ideal for time trial and triathlon racing. With their deep profiles, these wheels are engineered to deliver maximum speed and thrust in medium to low wind conditions. Available in both rim brake and disc brake versions, the HADRON Ultimate 800 is the benchmark for aerodynamic performance.

**WEIGHT** Front: 791g (Disc Brake 826g) / Rear: 936g (Disc Brake 959g) / Set: 1727g (Disc Brake 1785g)

**RIM** Aero Profile Height: 80.0mm / Max. Rim Width: 28mm / Brake Track Width: 23mm

**HUB** DT Swiss 240s (Shimano, SRAM, Campagnolo compatible 10&11 speed), SINC Ceramic Bearings

**SPOKES** DT Swiss Aerolite and Aero Comp Straightpull / DT Swiss pro lock hidden aluminium nipples  
Front: 16 radial / Rear: 21 (2:1 pattern) / Disc Brake: 24 spokes front and rear

### HADRON ULTIMATE 625

Maximum aerodynamic performance with the widest operational range, the HADRON Ultimate 625 is designed for race-worthy speed and unmatched thrust in medium to high wind conditions. Available in both rim brake and disc brake versions, the HADRON Ultimate 625 offers incredible all-around performance, whether on mountain passes or flat time trial courses.

**WEIGHT** Front: 724g (Disc Brake 746g) / Rear: 889g (Disc Brake 880g) / Set: 1613g (Disc Brake 1626g)

**RIM** Aero Profile Height: 62.5mm / Max. Rim Width: 27mm / Brake Track Width: 23mm

**HUB** DT Swiss 240s (Shimano, SRAM, Campagnolo compatible 10&11 speed), SINC Ceramic Bearings

**SPOKES** DT Swiss Aerolite and Aero Comp Straightpull / DT Swiss pro lock hidden aluminium nipples  
Front: 16 radial / Rear: 21 (2:1 pattern) / Disc Brake: 24 spokes front and rear

### HADRON ULTIMATE 485

Top level aero performance on any course, in any conditions, the HADRON Ultimate 485 is at home speeding down twisty mountain passes, as well as time trial and triathlon courses. Their shallow rim profiles are designed to maximise handling in high wind conditions by minimising the response and sensitivity to gusty crosswinds. Available in both rim brake and disc brake versions.

**WEIGHT** Front: 691g (Disc Brake 687g) / Rear: 838g (Disc Brake 820g) / Set: 1529g (Disc Brake 1507g)

**RIM** Aero Profile Height: 48.5mm / Max. Rim Width: 25mm / Brake Track Width: 23mm

**HUB** DT Swiss 240s (Shimano, SRAM, Campagnolo compatible 10&11 speed), SINC Ceramic Bearings

**SPOKES** DT Swiss Aerolite and Aero Comp Straightpull / DT Swiss pro lock hidden aluminium nipples  
Front: 20 radial / Rear: 24 (2:1 pattern) / Disc Brake: 24 spokes front and rear

ALL HADRON ULTIMATE WHEELS ARE UCI APPROVED.

# SWISS SIDE HADRON CLASSIC AERO WHEELS

AVAILABLE AT SWISSSIDE.COM



HADRON CLASSIC 800



HADRON CLASSIC 625



HADRON CLASSIC 625 DISC



HADRON CLASSIC 485



HADRON CLASSIC 485 DISC

## 2019 WHEELS SPECS

### HADRON CLASSIC 800

The pinnacle in affordable aero performance, the HADRON Classic 800 is designed to generate untapped speed and thrust in medium to low wind conditions. Equally at home performing in time trial and triathlon racing, this wheel is available in rim brake version only. The HADRON Classic 800 is simply the fastest, most accessible aero wheel on the market.

**WEIGHT** Front: 861g / Rear: 1004g / Set: 1865g

**RIM** Aero Profile Height: 80.0mm / Max. Rim Width: 28mm / Brake Track Width: 23mm

**HUB** DT Swiss 370 Classic (Shimano, SRAM, Campagnolo compatible 10&11 speed)

**SPOKES** DT Swiss Aero Comp / DT Swiss pro lock hidden aluminium nipples  
Front: 16 radial / Rear: 21 (2:1 pattern)

### HADRON CLASSIC 625

Delivering unprecedented aerodynamic performance with the widest operational range, the HADRON Classic 625 excels in medium to high wind conditions. Designed to deliver maximum speed and thrust, in road racing, time trial and triathlon courses, this wheel is available in both rim brake and disc brake versions. The HADRON Classic 625 offers incredible all-around performance at an affordable price.

**WEIGHT** Front: 795g (Disc Brake 808g) / Rear: 953g (Disc Brake 956g) / Set: 1748g (Disc Brake 1764g)

**RIM** Aero Profile Height: 62.5mm / Max. Rim Width: 27mm / Brake Track Width: 23mm

**HUB** DT Swiss 370 Classic (Shimano, SRAM, Campagnolo compatible 10&11 speed)

**SPOKES** DT Swiss Aero Comp / DT Swiss pro lock hidden aluminium nipples  
Front: 16 radial / Rear: 21 (2:1 pattern) / Disc Brake: 24 spokes front and rear

### HADRON CLASSIC 485

The HADRON Classic 485 offers top-level aero performance, whether on twisty mountain passes, flat time trial courses or everything in-between. These wheels excel by minimising negative response and sensitivity in gusty winds. Available in both rim brake and disc brake versions, the HADRON Classic 485 offers incredible all-around performance at an affordable price.

**WEIGHT** Front: 772g (Disc Brake 749g) / Rear: 919g (Disc Brake 896g) / Set: 1691g (Disc Brake 1645g)

**RIM** Aero Profile Height: 48.5mm / Max. Rim Width: 25mm / Brake Track Width: 23mm

**HUB** DT Swiss 370 Classic (Shimano, SRAM, Campagnolo compatible 10&11 speed)

**SPOKES** DT Swiss Aero Comp / DT Swiss pro lock hidden aluminium nipples  
Front: 20 radial / Rear: 24 (2:1 pattern) / Disc Brake: 24 spokes front and rear

ALL HADRON CLASSIC WHEELS ARE UCI APPROVED.

# SWISS SIDE ACCESSORIES

## HADRON COLOUR DECAL SHEETS

Customise your wheels with these decal kits. Offered in green, yellow, blue and white for Swiss Side HADRON Ultimate and HADRON Classic 485/625/800 aero wheels. One decal kit per one wheel. Decal kit covers the stripes and crosses. It does not include decals for the other Swiss Side branding.



## HADRON STEALTH BLACK-OUT DECAL SHEETS

Stealth decal kits transform 2018 (or later) HADRON Ultimate or HADRON Classic wheels into sexy all black wheels. These decals are applied directly over the top of the original wheel decals.



## DOUBLE WHEEL BAG

Protect your wheels with our Swiss Side double padded wheel bag. Clamshell design allows for easy packing and unpacking.



# SWISS SIDE SPARE PARTS

## SINC CERAMIC BEARING KIT

The very best in bearing technology, the high quality DT Swiss SINC ceramic bearings have an optimized sealing system guaranteeing perfect functionality with minimum friction in all conditions. The ceramic bearings also improve durability for longer life.

**NOTE:** Exclusively available for HADRON Ultimate aero wheels.



## BRAKE PADS

The carbon specific SwissStop Black Prince Flash Pro are approved for Swiss Side HADRON Ultimate and HADRON Classic aero wheels. Always use Swiss Side approved brake pads for carbon wheels.



## TUBELESS READY RIM TAPE

Replacement DT Swiss Tubeless Ready tape for Swiss Side HADRON aero wheels. This tape can also be used as rim tape for tube-type set ups. 19mm x 10 metres, for two wheels.

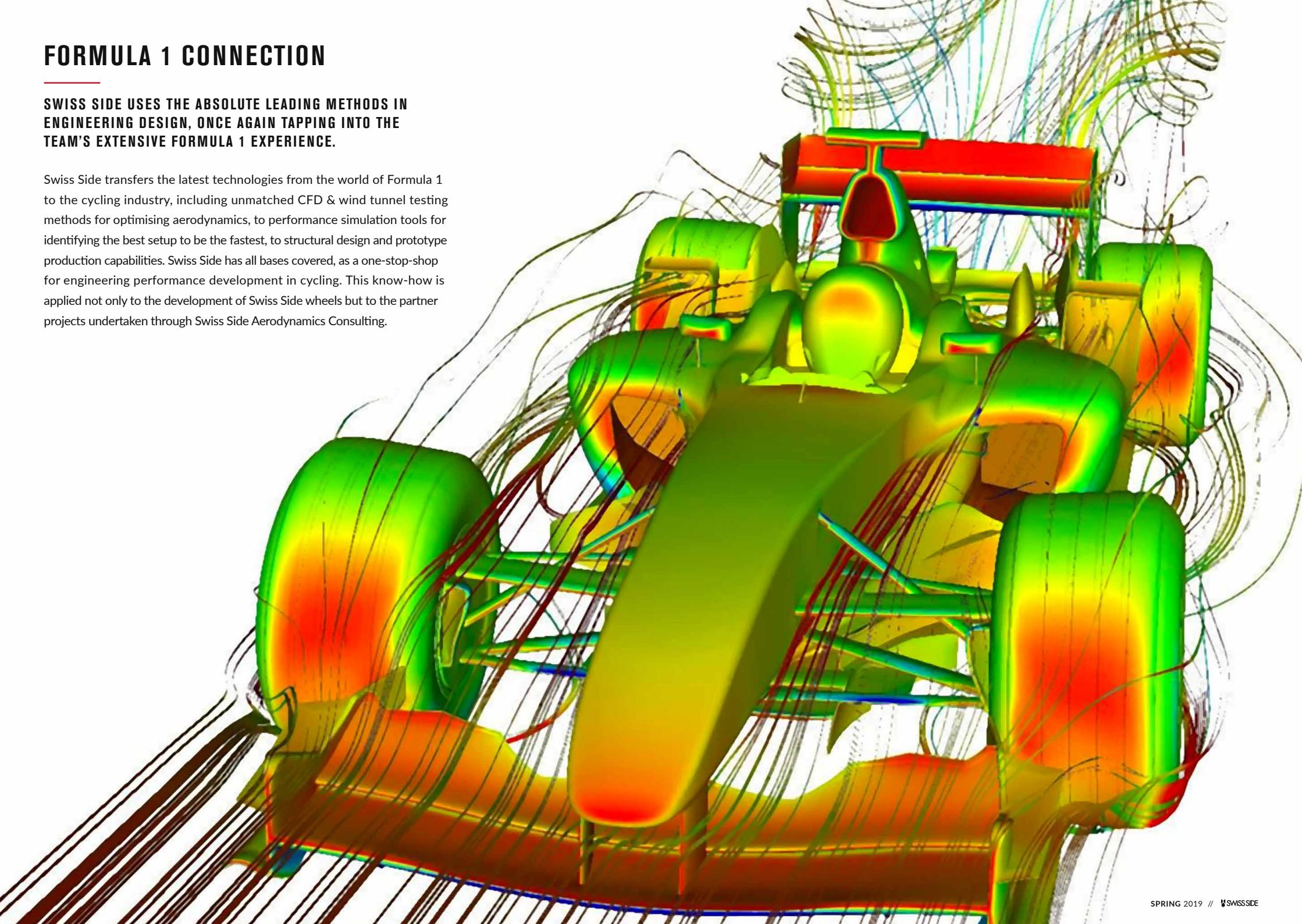
**NOTE:** Only for Tubeless Ready rims. Sealing milk and tubeless valves are not supplied with this tape.



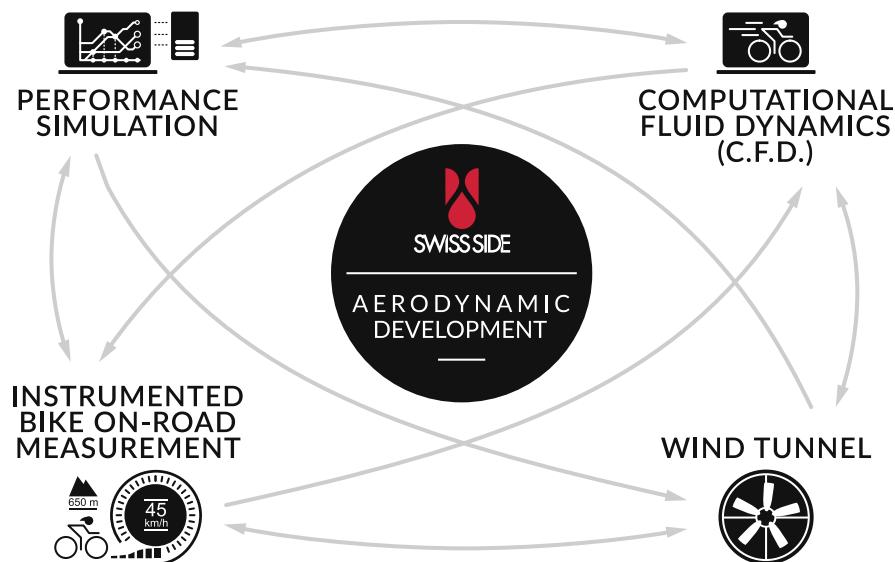
# FORMULA 1 CONNECTION

SWISS SIDE USES THE ABSOLUTE LEADING METHODS IN ENGINEERING DESIGN, ONCE AGAIN TAPPING INTO THE TEAM'S EXTENSIVE FORMULA 1 EXPERIENCE.

Swiss Side transfers the latest technologies from the world of Formula 1 to the cycling industry, including unmatched CFD & wind tunnel testing methods for optimising aerodynamics, to performance simulation tools for identifying the best setup to be the fastest, to structural design and prototype production capabilities. Swiss Side has all bases covered, as a one-stop-shop for engineering performance development in cycling. This know-how is applied not only to the development of Swiss Side wheels but to the partner projects undertaken through Swiss Side Aerodynamics Consulting.



# 4-ARM AERODYNAMIC DEVELOPMENT PROCESS



AERODYNAMIC DRAG IS THE SINGLE MOST IMPORTANT PERFORMANCE PARAMETER IN CYCLING.

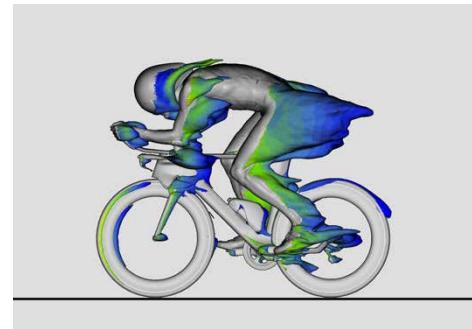
Swiss Side is revolutionising cycling aerodynamics with an unprecedented, unique 4-arm, interlinked aerodynamic development process. This delivers true "real world performance" out on the road where it matters.

## INSTRUMENTED BIKE



1. RIDER POSITION SENSORS
2. STEERING ANGLE SENSOR
3. ON-BOARD CAMERA
4. CUBE AERIUM SUPER HPC
5. WHEEL SPEED SENSOR
6. BIKE ANGLE SENSOR PITCH/ROLL
7. PIONEER POWER METER
8. PEDAL CADENCE
9. STEERING TORQUE MEASUREMENT
10. RIDER BODY WEIGHT
11. GPS UNIT
12. EVENT BUTTON
13. YAW PROBE
14. PITOT-STATIC PROBE
15. HADRON 800 WHEEL SET

## COMPUTATIONAL FLUID DYNAMICS (CFD)



With know-how and the latest methods taken directly from the closed circle of Formula 1, Swiss Side takes CFD simulation to new levels in the cycling industry.

In particular, a combination of steady state and transient (real time) flow simulation methods provide a depth of understanding not possible with other methods. In addition, backed up with extensive wind tunnel correlation testing, Swiss Side's CFD methods are second to none in terms of closeness to reality.

## WIND TUNNEL TESTING



Simply put, Swiss Side's wind tunnel testing methods are the most advanced and comprehensive in the cycling industry.

Unique measurement systems have been developed such as steering torque for front wheel characterization, as well as laser positioning systems for complete rider testing.

In-house developed data processing tools supply information, which when combined with the additional data simulation provide an unequalled level of understanding and aerodynamic development capability.

## REAL WORLD MEASUREMENTS AND PERFORMANCE SIMULATION FOR ANY COURSE



Dubbed the, "Wind tunnel for the road." The Swiss Side CdA measurement device is a next-generation on-board aero computer. It combines the understanding learnt from years of research on the instrumented bike, into a compact system which can be fitted onto any bike, enabling riders to easily measure and understand their aerodynamic drag. This information thereby gives them the ability to improve their equipment, position and setup, increasing speed and saving time on the road.

# COLLABORATION PROJECTS



PHOTOS: MARCEL HILGER

## PROJECT 101

“JP and the Swiss Side team are the measure of aerodynamics. Using techniques learnt from F1 Engineering, Project101 has brought my aerodynamics on the bike to an optimum. This only works if you work with people who are always innovative, always quick and always driven by the search for more.))

– Patrick Lange

### SWISS SIDE AERODYNAMICS + TEAM sky

Swiss Side is the Official Race & Aerodynamics Simulation Partner of Team Sky, enhancing the team's performance strategy around racing, with a specific focus on time-based events. The performance strategy covers everything that can have an impact on racing, including equipment choices, environmental conditions, road conditions, landscapes and physiological capabilities of individual and groups of riders. Coupling aerodynamic measurements using Swiss Side's CdA (aero drag) measurement device, aligned with multiple other data sources, all data is then fed back into the 'virtual pitwall' tool for determining the best possible setup and race strategy for any particular rider and event.



### SWISS SIDE AERODYNAMICS + CANYON

Patrick Lange's 2017 Ironman World Championship ended just 101 seconds away from finishing the course in under 8 hours.

Project 101 was a special project developed for Patrick's 2018 quest for a second consecutive world championship, with the aim of making Kona's fastest ever Ironman, even faster! This collaboration between Swiss Side, Canyon and Sauber Engineering produced a totally customised aero cockpit, perfectly sculpted to Patrick's arm shape, contour and position.

This dream team successfully designed the winning combination using the latest technologies and innovations from Formula 1, including 3D printing metal processes.



## COLLABORATION PROJECTS



DT SWISS ARC & ERC 1100 DICUT WHEELS

**SWISS SIDE**  
AERODYNAMICS



**DT SWISS**

The Swiss Side Aero experts partnered with DT Swiss, to develop their new revolutionary AERO+ concept. The new ERC 1100 DICUT and ARC 1100 DICUT wheel sets herald the begin of a new aero era for DT Swiss.

Wheel aero development by Swiss Side.

**SWISS SIDE**  
AERODYNAMICS + **CUBE**

After the highly successful development of the CUBE Aerium C:68 in 2015, Swiss Side and CUBE have formed an official partnership. By combining their respective areas of expertise,

the two brands have pursued a goal to develop the fastest triathlon time trial bike in the world, the 2018 CUBE Aerium C:68.  
Bike aero development by Swiss Side.



CUBE AERIUM C:68 (2018)



CUBE AERIUM C:68 (2017)



Swiss Side is a registered trademark of BANT Engineered  
Design GmbH, Bönirainstrasse 14,  
8800 Thalwil, Switzerland

Connect with us online to find out about the latest  
products, aerodynamic innovations, receive special  
deals and win free gear!



[contact@swissside.com](mailto:contact@swissside.com)  
[swissside.com](http://swissside.com)

