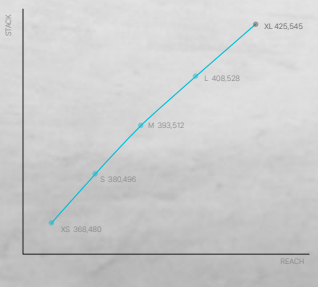
*Dynamic pressure in the tunnel = Rho / 2 * v²*

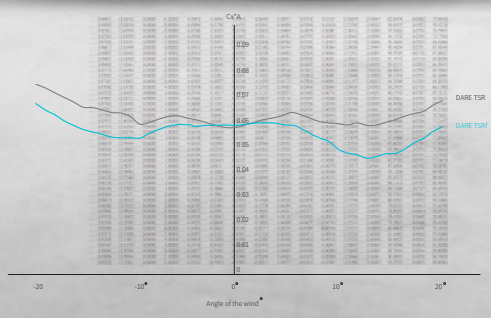
TSR IF

#THEWINNINGFORMULA

Drag coefficient *rho = 1,184 kg/m3, standard conditions*

$$(Cx*A) = \frac{Fx}{q}$$





The TSRf's Mission

To carry you to that amazing moment of crossing the triathlon finish line and make sure you're already looking forward to the next one.

CFD Analysis and GST Wind Tunnel Testing in Germany

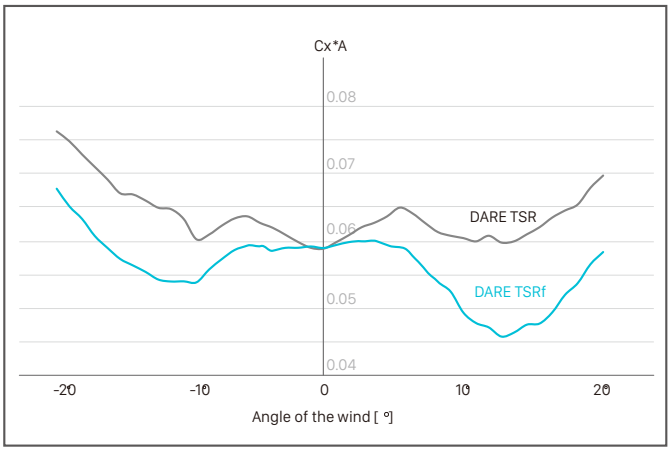
Every part of the TSRf was designed with intent. In the early stages of development, we used CFD to model what wind resistance would look like from every five degrees with wind speeds of 45km/hr, since in a real-life scenario wind could be blowing from any direction. Taking the numbers from this analysis and experience from the first generation of TSR's, we were able to further refine our tube shapes for cleaving through wind.

Our designers meticulously optimized the head tube, top tube, and seat stays for top aerodynamic performance regardless of wind direction. Meanwhile, chain stays that bend upwards like the vertical stabilizers of fighter jets help keep the TSRf steady, which in turn helps maintain cruising speed.

These details produced great results during wind tunnel tests in Germany. In order to comply with UCI standards and to lower drag, the handlebars and front fork designs were further revised and resulted in even better numbers later on.

RIDING WITH THE WIND

Drag comparison of TSR and TSRf

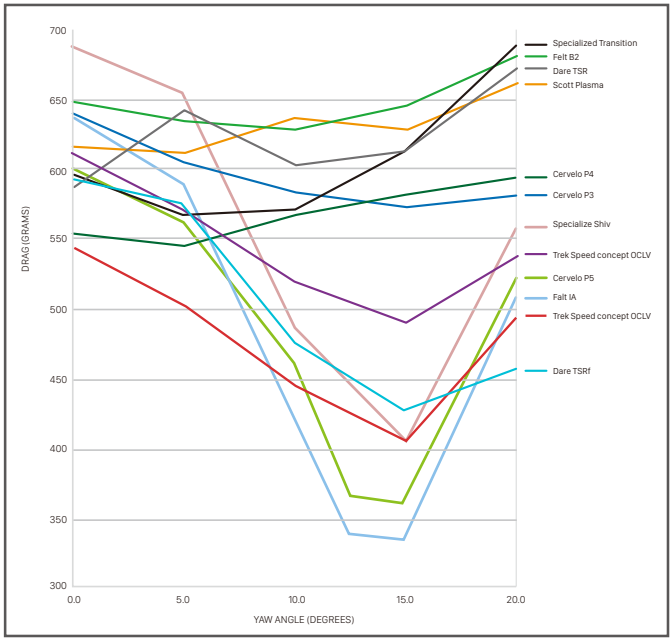


CHALLENGING YOURSELF

One of the main goals of the TSRf is reducing the effects of crosswinds. Considering CFD analysis results and our experience from the first generation of TSR's, we redesigned the TSRf's head tube aero cover and minimized the space between its fork and wheel set. Testing this in the GST wind tunnel revealed a 15 to 20 percent decrease in wind resistance compared to before, as well as significantly low wind resistance from every angle.

Photo and info from: DARE GST wind tunnel test data

Drag comparison of TT bikes



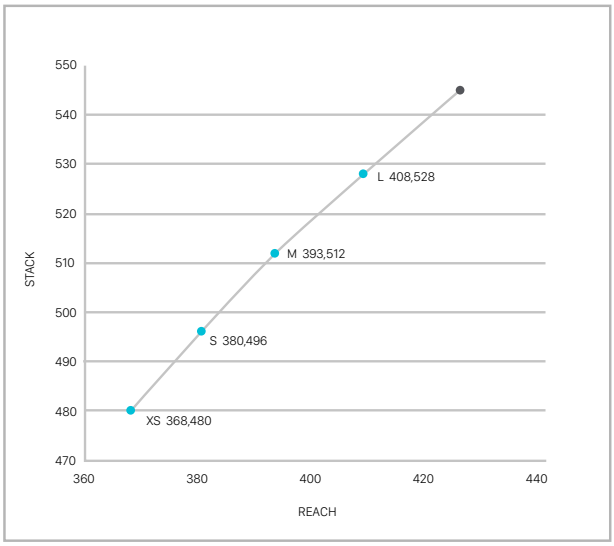
TOP PERFORMANCE

When we calculated the TSRf's drag from the wind tunnel's drag coefficient numbers and compared it with online data (this comparison is an estimation, as every brand uses a different wheelset, which may affect the outcome), we found that the TSRf's design under UCI rules would not be the number one performer. However, looking at the stats in general, the TSRf is definitely among the best in performance, and also offers affordable pricing and time trial-ready specs.

資料來源: Trek speed concept white paper + FELT Wind tunnel data + DARE GST wind tunnel test data

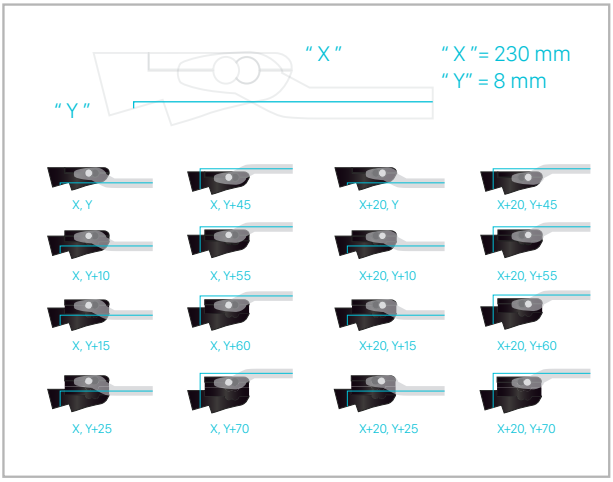
MAN AND BIKE AS ONE

Mastering a triathlon bike requires setting the seat correctly, so that the physical pressure that builds up from riding over long distance is reduced as much as possible. Many of the TSRf's design elements help to find the right bike fit for each individual.



LINEAR GEOMETRY

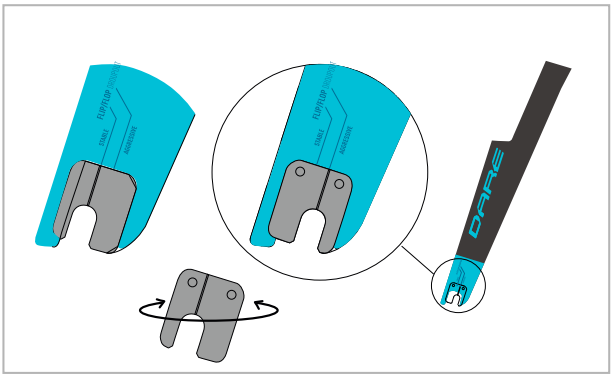
DARE has always strived to design bikes that are capable of fitting every rider, achievable by allowing reach and stack to be adjusted by linear increments. What seems like a simple function is actually quite complicated to deliver, and so many brands prefer not to offer this option. This adjustability, however, ensures that riders don't have to compromise in any detail of their bike fit or use additional parts to obtain the correct fit.



SIMPLE AND ACCURATE FIT ADJUSTABILITY

There are 16 possible installation positions for the TSRf's aerobars, and each position is marked by a system of numbers so that the fitting process is much easier.

Handlebar extensions, armrests, and seat post angle are also able to be adjusted incrementally over a wide range, helping riders find their most accurate fit.



TWO FORK RAKE OPTIONS

The fork's left and right dropouts can be tuned to two different rakes, depending on what's optimal for the particular time trial or triathlon race.

GUST OF THE WIND

BKT

Bullet + Kammtail Aero Tube

Wind tunnel testing confirmed that a combination of the bullet shape's ability to slip through wind and the Kamm tail shape's ability to streamline airflow results in an optimal tube design for high speed TT races.

TSIC

Total Synchronized Integrated Cable Routing

TSIC is an innovatively integrated internal routing system that conceals the derailleur cable and brake within the frame completely. In addition to perfect compact profile, turbulent flow and interference from cables for time trials are both configured to minimize air resistance.

CIA

CS Inline Aerofoil

To balance the TSRf while it rushes through turbulent airflow, DARE designed the chain stays after vertical stabilizers on fighter jets. After wind flows past the front half of the bike, it is directed downwards by the chain stays, contributing more stability to the triangle formed at the back half and increasing pedaling efficiency as well.

DI2I

DI2 Intergrate

Previously, the Di2 battery was mounted inside the seat post. It's now been moved to the down tube, eliminating the need to remove the seat post. There's also an additional mount for the new RS-910 Di2 controller that makes the process of charging and checking the battery much more intuitive.

APB

Aero Power BB

APB utilizes PF86.5mm wide axle BB to aid in profile design and a 3:1 down tube is joined with BB to maximize space! Therefore, a very high flexibility and rigidity-torsional resistance remains under high speed revolution during pedaling that provides TSR the best output efficiency.

IHS

Integrated Hidden Seatclamp

IHS is a seatclamp merged integrally with top tube. Other than the effects of hydrome-chanics, the compact top tube is shaped as a blade to provide a stunning visual impact.

MAN BIKE AS ONE

AAS+

Aerodynamic Adjustable Seat Plus

The AAS+ (Aerodynamic Adjustable Seat Plus) provides adjustment capability of the seat tube angle between 73 and 80 degrees, allowing riders to switch to smaller angle for normal time trials or the larger, aggressive angle for standard Ironman competitions.

TSA

Transformer Stem Aerobar

The new and improved adjustable, aerodynamic stem and handlebar system is easy to understand and set up. There are 16 positions cyclists can choose from to install the reversible handlebars, which are portable and easy to assemble as well.

2FR

Two Fork ranks

Adjustable Fork Rake.The fork's left and right dropouts can be tuned for two different rakes (45/50), allowing riders choose between more stable or responsive handling.

THOUGHTFUL DETAILS

RAC

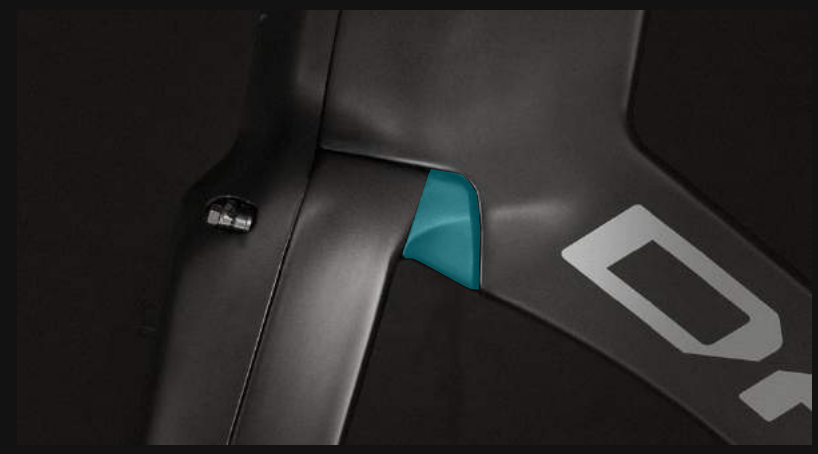
Rotating Angle Controller

RAC is a hidden stem steering limiter that guarantees riders to keep the bike forward. When in race, RAC prevents handle bar from colliding with the top tube due to the deflection of the bike head.

FAC

FORK AERO PART

In order to achieve significantly low wind resistance, the fork is equipped with a triathlon-specific airfoil clamp. (To meet UCI time trial standards, the clamp must be removed)



SMT

Supply Box Mount

The TSRf's top tube and stem are equipped with standard threads compatible with most storage bags or bottle cages on the market, convenient for pre-race preparations.

STANDARD COLOR

NEPTUNE

The new generation TSRf takes its paint to another level, with a fusion of electric blue and lake blue that expresses focus and energy during the increasing intensity of a time trial. It's also adorned with stag Rhaetulus Nordic totem graphics designed exclusively for the TSRf. Their shapes echo the antler-like form of aerobars, and combined with patterns of road markings and crosswinds, demonstrate the true spirit of the TSRf.

MYDARE CUSTOM COLORS

2019
MYDARE
CUSTOM COLORS PALETTE

The ideas of MYDARE color system are coming from “Nature”. We believe they are the best balance of fashion and classic.

In 2019, we add 2 chameleon and 4 gradient colors into MYDARE family to make your personal premium bike.

Solid

NIAGARA
NAVY
FLAME
MARSALA
SULPHUR
LEAF
DUST
LEAD
SNOW
STONE

Chameleon

SYMPHONY
SHALE

Gradient

GREEN-GOLD
BLUE-PINK
CORAL-BLACK
GRAY-WHITE

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DARE bikes Global
service@dare-bikes.com

EURO
Scandinavian
Uno-X Bikes AS
+47 481 08 584
bikes@unox.no
Lysaker Torg 35, N-1366 Lysaker, Norway

Spain
Haky Sport
+34-684-065-825
haky@dare-bikes.es

ASIA
Korea, South
VELOGIC
+82-2-2295-5757
http://www.velogic.co.kr
B1, 8 Geumhoro-3-gil, Seongdong-gu,Seoul, Korea

Thailand
Bike & Body
+66-64-565-9874
https://www.bikeandbodythailand.com
121/78 Huachang bridge Rajthevi Phayathai Road Bangkok Thailand 10400

Malaysia
PEGASUS CYCLES ENTERPRISE
+60-3-6211-5188
pegasuscyclesmalaysia@gmail.com B2-2, Plaza Damas 3, Jalan Sri Hartamas I, Sri Hartamas, 50480, Kuala Lumpur, Malaysia

China
DARE bikes China
Oscar@dare-bikes.com
13 Cycling Club
+86-13901200840

Taiwan
DARE bikes Taiwan
+886-2-8693-2330

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