

FR 541 NOT THE FIRST BUT THE LAST

EMBARGO
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FR 541

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EXECUTIVE SUMMARY



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DT SWISS

ABSTRACT

Even if others before have not managed to match your riding style, the FR 541 will be present on every feature you want to hit. Its new shape gives it particularly attractive characteristics to resist your abuse for a long time. Push a little harder on the rocks and jump a little higher on the jumps; this new rim allows for improved impact resistance and better pinch flat protection to forgive you if your landing is farther away than expected. The optimization doesn't stop there; the rim weight is reduced compared to the previous FR model, allowing you to have a little less weight to pull on your first attempt of that new road gap. The FR 541 may not be the first rim to accompany you on your various adventures, but it aspires to be the last. Mount this rim with love and it will faithfully reward you.



FR 541 FEATURES

IMPROVED PINCHFLAT PROTECTION

Tests conducted with a leading tire supplier showed a 17% increase in pinch flat resistance compared to the previous FR 560 rim.

AVAILABLE IN 29" AND 650B WITH 28 OR 32 SPOKE COUNT

Ride in full 29", full 27,5" or mullet. The FR 541 is available in both sizes and both sizes are available in 28 or 32 spoke count.

WELDED RIM

The welding process on aluminum rims is the most resistant joining method of the DT Swiss aluminum portfolio.

INCREASE RESISTANCE WITH PHR SYSTEM

The PHR system increases the load-bearing surface of the nipples on the rim and reduces localized stresses.

PERSONALIZE YOUR RIDE

The FR 541 comes with three additional stickers to match your style.



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FR 541

INTRODUCTION

DT SWISS

NOT THE FIRST BUT THE LAST

Not the first, but the last. The FR 541 aspires to be the last rim you build on your bike. The new rim design enables improved impact resistance and a better pinch flat protection to fit your style and your lines. On the jumps, you will not have to pull more to fly more. The reduced rim weight will make sure that you gain altitude without too much effort. Mount this rim with love and it will faithfully reward you.

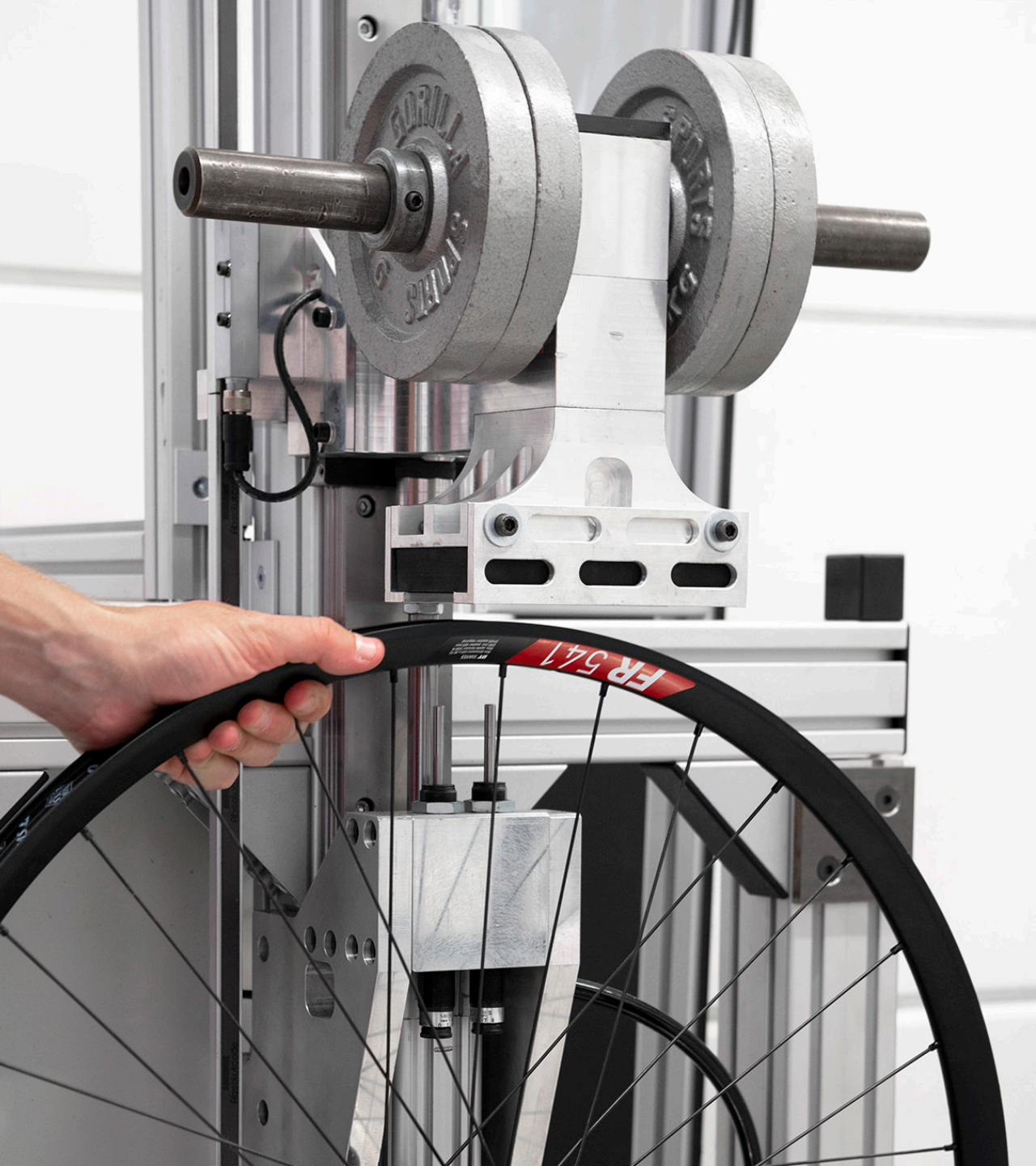


DEVELOPMENT AND TESTING CHALLENGES

The development of DT Swiss rims is constantly evolving, as is the MTB sport over the years. The level of resistance from our enduro intended EX wheels was already among the best on the market. On the freeride and downhill side, the FR 560 rim still had potential for improvement, which led us to the development of our new FR 541 rim.

The challenge during the development of the FR 541 rim was to make it stronger, lighter and still ready for the demanding circumstances of freeride and downhill MTB riding. To do so, we based it on our proven EX rim and added a substantial quantity of material in specific places of the rim profile.

The FR 541 rim has undergone in addition to internal DT Swiss testing sessions, tests with leading mountain bike tire manufacturers and showed a clear improvement in impact resistance and protection through pinch punctures.



DT SWISS

WHEELBUILDING MATTERS

A strong rim is indeed beneficial, but it is not an end in itself. When used on the most technical and steepest trails, several other factors come into play when it comes to wheel durability.

An essential factor that ensures the quality of a wheel is the spoke tension. The art of wheel building is to set the spoke tension as close as possible to the given maximum, while keeping the deviation of the tensions between them as low as possible.

If the wheel is well and equally preloaded, the load is distributed to almost all spokes in the upper half of the wheel. The tension of the individual spokes increases there, while the tensions of a few spokes decreases slightly in the area of the contact patch. This means that during a wheel rotation, each spoke is maximally loaded and unloaded once. If the preload is too low overall, this can lead to spokes being completely unloaded. As a result, the spokes can loosen further and are charged heavier.

The wheel is more unstable overall and the material tires prematurely. On the other hand, if the tensions were too high at peak loads, e.g. In a landing after a jump, the force on the spoke would be too high and the spoke would plastically deform. This over-stretching of the spokes reduces the tensions, and the wheel loses stability.



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FR 541

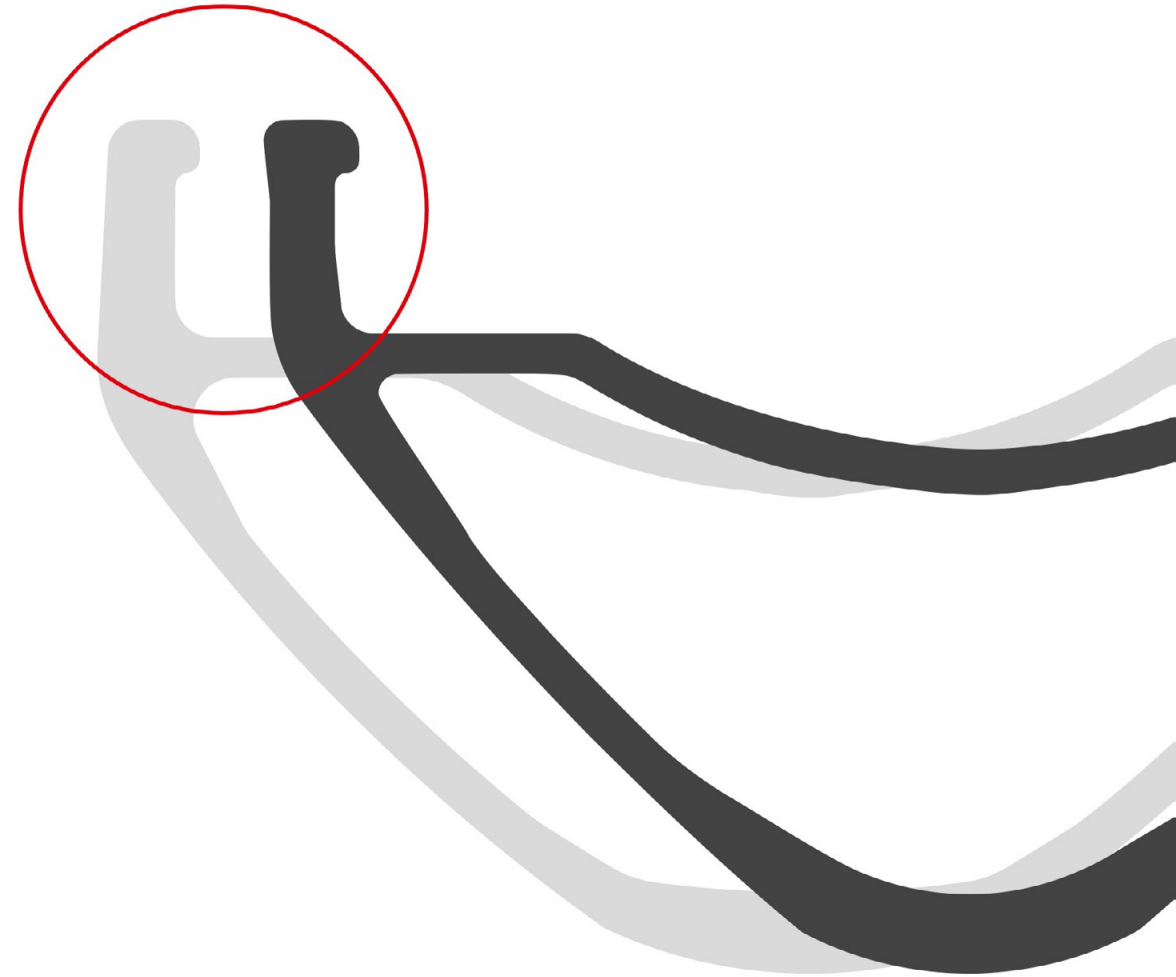
DEVELOPMENT

INCREASED IMPACT RESISTANCE

In order to increase the impact resistance, it was necessary to use a different profile design than the current freeride and downhill rim, the FR 560. Years of experience and knowledge in aluminum rim development allowed DT Swiss engineers to develop a more impact resistant rim. The profile of the FR 541 is based on the EX rim profiles but has had material added in specific areas, increasing the overall strength of the profile to create a rim adapted and durable to the practice of freeride and downhill.

■ **FR 541**

■ FR 560

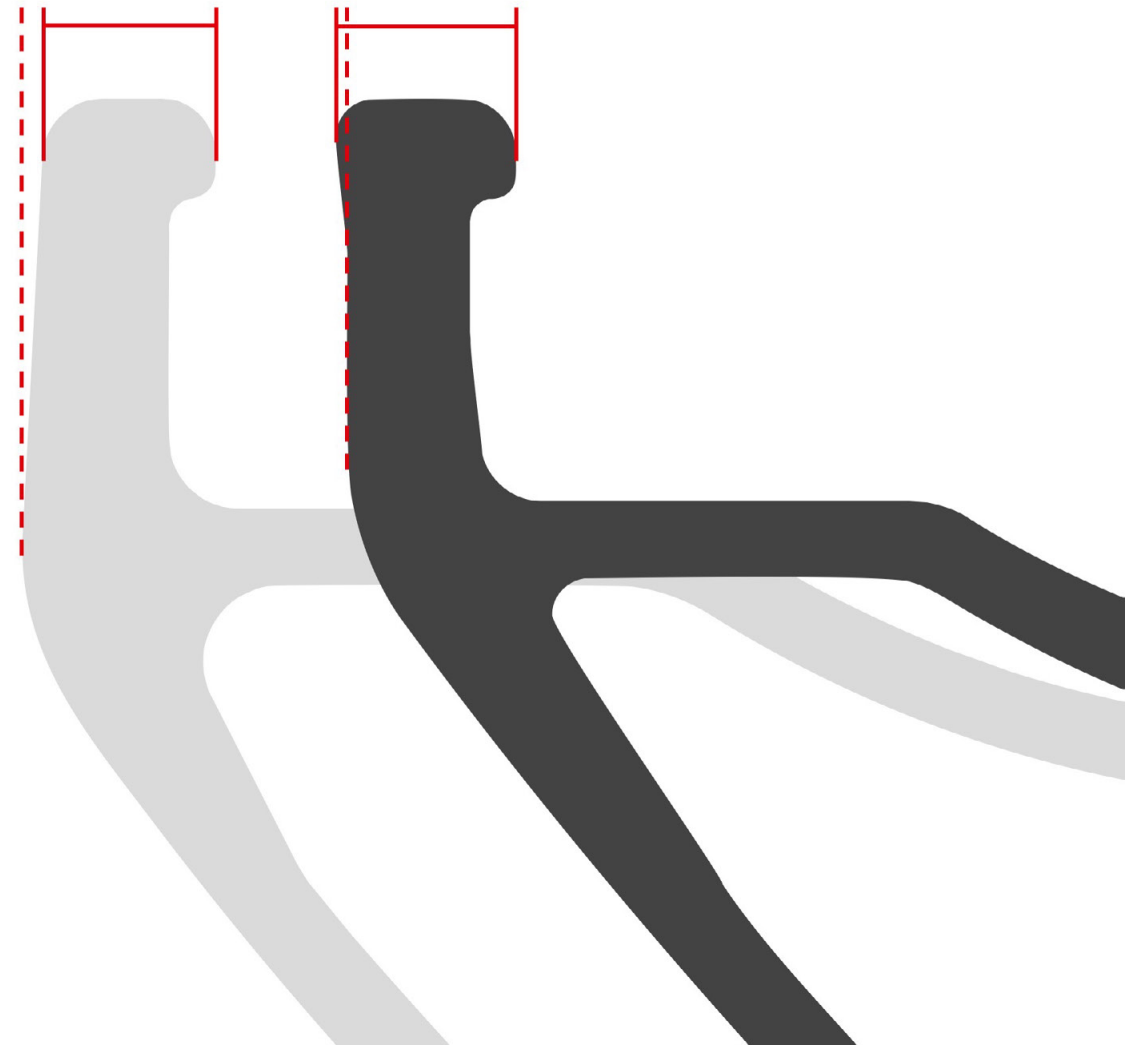


BETTER PINCHFLAT PROTECTION

The FR 541 also benefits from a specific feature particularly adapted to its field of use: an increased protection against punctures by pinching. This feature is due to a new shape of the rim hooks where the upper part has been widened. It is precisely this sidewall that will come into contact with the tire during compression and in many cases, pierce the carcass causing air loss. The widening and correct orientation of this surface allows the shocks to be distributed over a wider area, thus reducing the risk of punctures.

■ **FR 541**

■ FR 560



REDUCED WEIGHT

The FR 541 is lighter than the FR 560 due to the complete reworking of the rim profile while becoming more resistant.

In the case of downhill and freeride, a light rim makes a lot of sense. On one side, it means that getting up to speed will be easier, and on the other side, enhance the steering reactivity. That is exactly what's important when it comes to landing a big jump, or just flying over the roots fields to land into tight switchbacks!

Therefore, the FR 541 aspires to be your last rim. On the one hand by its new technical features and on the other hand, by what these new features allow during your riding session.

DT SWISS

4 COLOR OPTIONS STICKERS

Change the design of your FR 541 rim!

Aligned with the design language, the FR 541 rim comes with a red vinyl decal embodying DT Swiss. To fulfill the individual desires of ambitious cyclists, namely, to match the rim design to their bike, sticker variants in the colors, «gold», «chrome» and «black» are included for self-application.

Instructions for the self-application of the sticker: the high quality of the adhesive sticker enables an easy application and ensures an optimal hold.



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EXPERT TESTIMONIALS

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RIDER TESTIMONIAL

«The FR541 rim is awesome, definitely the strongest rim I have ever ridden on. The past few months I have been riding/racing hard, hitting European downhill trails and the rims haven't skipped a beat; no dings or dents. Being a heavy rider with not the smoothest style I demand a lot from my wheels and the new FR 541 exceeds expectations. Very excited to race on them.»

HAYDEN STEAD

PROFESSIONAL MTB RIDER



WHEELBUILDER TESTIMONIAL

«I have been working with DT Swiss components for many years, because I think they are of very good quality and their reliability is one of the best on the market. Since I sell mountain bikes, it often happens that I must replace rims and my choice almost always falls on DT Swiss. When I mounted the wheels with the FR 541, I recognized the usual build quality of the brand and the combination of this rim with DT Swiss spokes and hubs made the assembly quick and easy.»

MICHAEL BÄHLER
ONE80 BIKESHOP OWNER



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TECHNICAL SPECIFICATIONS

FR 541

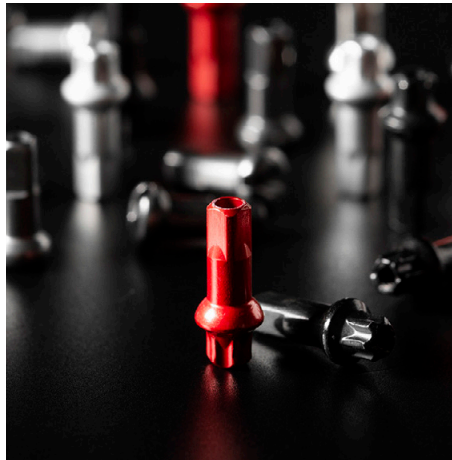
RIM DIAMETER	27.5" / 650B & 29" / 700C
MATERIAL	Aluminum
RIM JOINT	Welded
TIRE INTERACE	Hooked / Crotchet tubeless TC
INNER WIDTH	30 mm
ASTM CLASSIFICATION	5
RECOMMENDED MAX SYSTEM WEIGHT	140 kg
WEIGHT	From 570 g
PRICE	From 89.90 EUR / 135.90 USD



PRODUCT PAGE [available from September 14th, 2022]

<https://www.dtswiss.com/en/components/rims-mtb/free-ride/fr-541>

TECHNOLOGIES



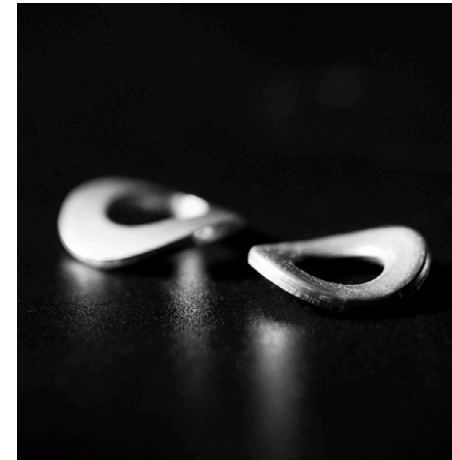
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PHR
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WHY WIDE
TECHNOLOGY

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