

VIX PROTECTION

— 2026-27 SEASON EDITION

THE COMPLETE GUIDE TO

Cut protection for ski racers

What every coach, racer, and parent needs to know this season.

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What cut protection is *built to prevent*

A ski laceration usually starts with an ordinary fall. A binding releases, a ski flips or crosses underneath the racer, and a sharpened steel edge meets an unprotected leg.

The consequences can range from stitches and missed training to surgery, lasting damage, or a life-threatening bleed.

6.8%

of surveyed U.S. racers ages 10-24 reported a laceration in the 2018-19 season. **One self-reported season, not a lifetime estimate.**

Standard gear isn't cut protection

Race suits, ski pants, and ordinary base layers are built for speed, warmth, moisture management, and abrasion, not for a sharpened ski edge. A racer can be fully equipped and still have no tested cut resistance between the edge and skin.

What changes with a protective layer

ORDINARY SKI CLOTHING

Built for the mountain

Designed for aerodynamics, warmth, moisture, and abrasion. It isn't tested against the cutting force of a ski edge.

CUT-RESISTANT BASE LAYERS

Built for the edge

Worn next to the skin under the race suit. Protective fibers resist and spread the cutting force before the edge reaches skin.

THE LIMITS

Certified layers don't make a racer invulnerable. They provide tested, supplementary resistance to the cutting forces ordinary ski clothing is not designed to withstand. Severe case reports document injuries involving muscle, nerves, blood vessels, joints, and bone.

What the 2026-27 FIS rules *require*

FIS first made certified cut-resistant undergarments mandatory at Level 0-1 events in **2025-26**. For **2026-27**, FIS expanded the rule to every FIS Alpine Skiing event, including FIS Masters.

Who must wear it

At every FIS-sanctioned Alpine Skiing event, including World Cup, Continental Cup, lower-level FIS races, and FIS Masters, racers must wear FIS-DITF 2021-certified undergarment pants with at least **3 stars** of protection.

Protection is required everywhere between the iliac crest and the onset of the ski boot. The garment must carry a non-removable conformity label on the back of the lower left leg, above the boot-cuff area.

RATING		CUTTING FORCE WITHSTOOD		WHAT IT MEANS
1 star	★☆☆☆☆		100N	Below mandate minimum
2 stars	★★☆☆☆		200N	Below mandate minimum
3 stars	★★★☆☆		300N	Mandate minimum
4 stars	★★★★☆		400N	Above minimum
5 stars	★★★★★		500N	Maximum available

FIS strongly recommends cut-resistant shirts or full-body suits in addition to the mandatory pants.

For racers in non-FIS youth or domestic events, the FIS mandate doesn't automatically apply. National federations, clubs, and academies can set their own requirements, so confirm the rule that applies to your racer.

National requirements, 2026-27

FEDERATION	CURRENT DIRECTION
Italy (FISI)	3-star pants for national, regional, and provincial calendar races, all listed categories, and training
France (FFS)	3-star from U12 in the stated competition/training framework; promotion-race wording is separately "strongly recommended"
USA (USSS)	No additional nationwide non-FIS mandate verified when checked
Canada (ACA)	No additional nationwide non-FIS mandate verified when checked

CHECK YOUR LOCAL RULE

Clubs and academies may set their own rules, and requirements change every season. Verify with your club and federation before buying or traveling.

How to choose *cut protection*

Start with the standard, not the logo.

What the FIS rating measures

SKI-SPECIFIC FIS-DITF tests fabric against a standardized cutting blade under controlled force.	EVERY DIRECTION COUNTS Fabric is tested at 0, 45, and 90 degrees. The weakest direction determines the rating.	4 OF 5 MUST PASS Four of five samples must withstand the required force, so one strong sample doesn't pass the fabric.
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For an FIS-level layer, look for three things

01 Certification At least 3-star FIS-DITF 2021 certification.	02 The label Non-removable, on the back of the lower left leg.	03 Coverage Everywhere between the iliac crest and the onset of the ski boot.
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EN388 and ANSI aren't FIS compliance standards. A familiar name or a tough-sounding material doesn't necessarily mean a layer passes.

Brand comparison

BRAND / TOP OPTION	HIGHEST FIS RATING	APPROX. PRICE (USD)
VIX	★★★★★	\$449
DISTON	★★★★★	\$545
Energiapura	★★★★★	≈\$375
POC	★★★★★	\$440
SHRED / Iron-IC	★★★★★	\$300
SYNC	★★★☆☆ BELOW 3-STAR MINIMUM	\$449

Checked August 29, 2026. Each row shows the highest-rated current ski-specific leggings option we found. Prices are approximate USD and vary by market. Inspect the physical CRG 2021 label and star count.

AFTER THE CHECKS Once a layer passes the certification, coverage, and label checks, there isn't one right choice for every racer. Protection level, comfort, fit, and price are how you choose among the options.

The table tells you which layers qualify. The next question is which one a racer will want to wear every day.

Why racers *choose VIX*

≈75%

of 482 FIS Alpine World Cup starters wore VIX in 2025-26, based on a VIX roster audit.



OFFICIAL SUPPLIER



Ski Austria

OFFICIAL SUPPLIER

VIX carries the maximum 5-star rating, but the rating alone isn't why racers choose it. They choose it because it pairs maximum-rated protection with comfort, and because the racers around them already wear it every day.

Maximum-rated protection

VIX was the first brand to achieve **5-star FIS certification**. DISTON now shares that rating, so five stars prove the protection level but no longer set VIX apart on their own.

Comfort racers notice

Protection only works on the days it's worn. VIX spent years making protective fabric feel like a regular base layer: snug, flexible, and easy to forget under a race suit.

"VIX leggings are by far the most cut-resistant and comfortable product out there. Athletes only stay safe if they wear it every time and with VIX, once the fit is right, they never take it off."

SASHA REARICK · HEAD COACH, APEX2100 INTERNATIONAL SKI ACADEMY

Protection in the real world

UHMWPE FIBERS

UHMWPE is the polymer family used in body armor and is **up to 15x stronger than steel by weight**. The fibers catch and distribute the edge's force across the knit.

STAINLESS STEEL WIRE

VIX combines the UHMWPE fibers with stainless steel wire. The wire adds a physical barrier between the ski and skin.



"My ski cut through everything, except for my VIX leggings. If I hadn't worn VIX I would've had a deep cut in my thigh and probably missed several races."

ATLE LIE MCGRATH · NORWEGIAN WORLD CUP ALPINE SKI RACER

Fit, briefly

VIX should fit snug, not tight, with full range of motion. Measure waist, hip, and inseam, then use the sizing guide linked on page 8. If you're between sizes, size up. VIX offers **90-day returns** and free sizing exchanges.

Do you need it? *The questions that matter*

QUESTION 1

“If the rule doesn’t apply, is it still necessary?”

The mandate settles the question for every racer entered in an FIS Alpine event, including FIS Masters. Racers in non-FIS events still need to check the local rule and make a risk decision. Most racers won’t experience a serious laceration, but cuts happen in training, at younger levels, and outside FIS events. Weigh exposure, potential severity, and budget.

QUESTION 2

“Training too, or just race day?”

Lacerations don’t only happen in races. Some coaches and academies require cut-resistant layers for training as well. Racers spend more days training than racing, making training the more likely setting for an incident.

QUESTION 3

“Will it be hot or restrict movement?”

That depends on the brand. Comfort is where cut-resistant layers differ most, and some do feel like chain mail. VIX is designed to wear like a regular base layer: snug, not tight, with full range of motion. Other products will feel different, so try the layer before race week.

QUESTION 4

“Is the cost worth it for a growing racer?”

It comes down to budget, how long the layer will fit, and whether it can be passed on. VIX Youth covers a range of builds, and VIX leggings often move through race programs the way suits and helmets do. VIX also offers 90-day returns and free sizing exchanges if the first size isn’t right.

QUESTION 5

“How long does a layer last?”

Certification applies to the product as tested. Follow the manufacturer’s current care, inspection, and replacement guidance instead of a universal season count. If a garment is visibly damaged, stop using it until the manufacturer advises whether it should be replaced.

QUESTION 6

“What’s the difference between cut-resistant and cut-proof?”

Cut-resistant means the fabric has been tested to resist a measurable cutting force. Cut-proof suggests complete protection, which isn’t physically possible. Even a **5-star** layer can be cut with enough force, the right angle, or repeated contact.

Why VIX exists

The test, the star ratings, and the focus on layers racers will keep wearing all trace back to what Victor Wiacek couldn't find after his own injury.

Victor, a former college racer and the founder of VIX, was in a routine GS race in **2019** when his outside ski popped off and he fell across its edge. It sliced through his thigh, cutting through muscle, nerves, and his IT band, and nicking his femoral artery.

"The only reason I survived, frankly, was because there was someone on the side of the hill within 30 feet of me who had medical training as well as a tourniquet on them. They slapped it on my leg within two minutes. Despite that, I still lost half the blood in my body."

VICTOR WIACEK · QUOTED BY AP (PAT GRAHAM), MARCH 24, 2025

He spent **two months** in a wheelchair.

When he was ready to return to snow, Victor bought every cut-resistant legging he could find. But there was no ski-specific certification proving any of them could withstand the forces of a real crash, so he built the world's first ski-specific cut-resistance testing machine to find out.

None of the existing options proved strong enough. He couldn't get back on skis knowing the same injury could happen again, so he decided to make his own.

2019 The race crash that nicked his femoral artery	2_{Mo} In a wheelchair before he could walk again	387 Fabric combinations tested to date	29 Machines built to date
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After **220-plus fabrics and 22 versions of his testing machine**, he had the first version of VIX: a cut-resistant undergarment that gave him peace of mind without changing how he skied. The testing never stopped, 387 fabric combinations and 29 machines so far, and he still never skis without it.

FROM PROBLEM TO STANDARD

Victor also worked with FIS to create what had been missing when he went shopping: an industry standard for measuring ski-specific cut resistance. That became the **FIS-DITF 2021** test, the same standard today's mandate uses.

THE MISSION

Reduce the risk and severity of ski-edge lacerations.

VIX exists to pursue that goal without changing how racers ski. Whether you choose VIX or another certified layer, tested cut protection should become routine on race day and in training. If you want help comparing options, understanding a rule, or getting the fit right, email info@vixprotection.com. We'll help whether or not you end up choosing VIX.

The *pre-season* checklist

Six things to check before the 2026-27 season.

- 01 ☐ **Check the event**
At every FIS Alpine event, including FIS Masters, a minimum **3-star** layer with protection everywhere between the iliac crest and the onset of the ski boot is mandatory. For non-FIS events, verify the current rule with your club and federation.
- 02 ☐ **Confirm the certification**
Look specifically for FIS-DITF 2021 certification. EN388 and ANSI aren't substitutes.
- 03 ☐ **Find the label**
The conformity label must be non-removable and located on the back of the lower left leg.
- 04 ☐ **Choose the protection level**
A certified 3-star layer meets the FIS minimum. Higher stars mean the fabric withstood more cutting force in the standardized test.
- 05 ☐ **Get the fit right**
If you're choosing VIX, measure waist, hip, and inseam, use the current sizing guide, and size up if you're between sizes.
- 06 ☐ **Leave time before race week**
Try the garment during normal movement and follow its current care instructions. Don't wait until race week to discover a rule, label, or fit problem.

If anything is unclear, ask the club before travel. Coaches should share the checklist early enough for racers to choose and try the gear.

FOR THE LATEST

CURRENT RULES	vixprotection.com/blogs/articles/fis-cut-resistant-mandate
CERTIFIED LAYERS	vixprotection.com/pages/shop
SIZING GUIDE	vixprotection.com/blogs/articles/sizing-guide
QUESTIONS	info@vixprotection.com

BEFORE THE SEASON

Check the rule early and leave time for sizing.

Rules, certification, and product information can change. Use the links here for the latest details.

Sources checked August 29, 2026: FIS 2026/27 equipment specification §§3.5.3.3-3.5.3.4; FFS equipment rules, p. 3; FIS Alpine Agenda §3.0.9; U.S. racer survey; severe-laceration case series.

Stay safe and see you *on the slopes!*