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.

INSIDE THIS GUIDE

02 What cut protection is built to prevent

03 What the 2026-27 FIS rules require

04 Do you need it?

05 How to choose cut protection

06 Why racers choose VIX

07 Why VIX exists

08 The pre-season checklist

What cut protection is *built to prevent*

Ski-edge cuts are the fourth most common skiing injury, behind broken bones, head injuries, and torn ligaments. That's the count of VIX founder Victor Wiacek, who nearly died from one (his story is on page 7).

A 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 result can range from stitches to surgery, lasting damage, or a life-threatening bleed.

1 in 7*

racers get cut by a ski edge at some point in their career.

*Our founder's estimate after seven-plus years of tracking.

Standard gear isn't cut protection

A racer can be fully equipped, suit, pants, and base layer, and still have nothing tested against a ski edge between the edge and skin. That's the gap a cut-resistant layer fills.

ORDINARY SKI CLOTHING

Built for the mountain

Race suits, ski pants, and ordinary base layers are designed for speed, warmth, moisture, and abrasion. None of it is tested against a ski edge.

CUT-RESISTANT BASE LAYERS

Built for the edge

Leggings 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 add tested resistance to a force ordinary ski clothing isn't built to stop, which lowers the odds and the severity of a cut. Page 4 explains why no layer is "cut-proof."

What the 2026-27 FIS rules *require*

In **2025-26**, FIS, the sport's international federation, required certified cut-resistant pants at the World Cup and continental cups. For **2026-27**, the rule covers every FIS Alpine event.

Who must wear it

Every racer at an FIS Alpine event, from the World Cup down to lower-level FIS races and FIS Masters, must wear cut-resistant pants under the race suit. The pants must be certified to **FIS-DITF 2021**, FIS's ski-specific cut test, with a rating of at least **3 stars**. Page 5 covers how to check that a garment qualifies.

RATING		CUTTING FORCE WITHSTOOD (NEWTONS)	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	RULE
Italy (FISI)	**3-star** pants for national, regional, and provincial calendar races, all listed categories, and training
France (FFS)	**3-star from U12** for competition and training; strongly recommended, not required, for promotion races
USA (USSS)	No nationwide rule beyond FIS as of August 2026
Canada (ACA)	No nationwide rule beyond FIS as of August 2026

Do you *need it?*

QUESTION 1

Our races aren't FIS. Do we still need it?

At FIS races it's required. Everywhere else, check with your club and federation, but read the rule as a signal: when the top of the sport makes something mandatory, it isn't a nice-to-have. Cuts happen in youth races and training too.

QUESTION 2

Just for races, or training too?

Both. Racers spend far more days training than racing, so that's where most of the exposure is. Some clubs and academies already require it in training.

QUESTION 3

Is it hot or stiff?

Depends on the brand; some feel like chain mail. VIX is built to wear like a regular base layer, and new pairs soften after two or three washes. Whatever you choose, train in it before race week.

QUESTION 4

Is it worth it for a kid who'll outgrow it?

It comes down to budget and how long it will fit. VIX youth sizes cover a range of builds, and leggings often get passed down through race programs like suits and helmets.

QUESTION 5

How do I care for it, and how long does it last?

For VIX: cold wash, mild detergent, air dry, no fabric softener. Heat and softener damage the protective fibers. With that care, VIX lasts multiple seasons. Retire any layer that's visibly damaged.

QUESTION 6

Is it cut-proof?

No fabric is. Cut-resistant means it's been tested to withstand a measured cutting force. Enough force, the wrong angle, or repeated contact can still cut through even a **5-star** layer.

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.

For an FIS-level layer, look for three things

01
Certification
At least 3-star FIS-DITF 2021 certification.

02
The label
Sewn in, non-removable, on the back of the lower left leg.

03
Coverage
From the top of the hip bone (iliac crest) down to the top of the ski boot.

Industrial cut ratings such as EN388 and ANSI, common on work gloves, don't count for FIS. 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. Before you buy, check the physical label (it reads "Conforms to FIS Specifications CRG 2021") and its 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 World Cup racers wore VIX in 2025-26.

US SKI & SNOWBOARD — OFFICIAL SUPPLIER

Ski Austria — OFFICIAL SUPPLIER

ALPINE CANADA ALPIN — 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, including Mikaela Shiffrin, Lindsey Vonn, and Marco Odermatt, already wear it every day.

Maximum-rated protection

VIX was the first brand to achieve **5-star FIS certification**. The fabric withstood 500N, the top of the scale, in every direction tested.

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

What it's made of

UHMWPE FIBERS

Ultra-high-molecular-weight polyethylene (UHMWPE) is the fiber 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.

PROTECTION IN THE REAL WORLD

Norwegian World Cup racer Atle Lie McGrath, after a crash:

"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 SKI TEAM

Why VIX *exists*

The ski-specific test behind today's star ratings exists because of 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

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.

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, and he still never skis without it.

2019	2 months	387	29
The race crash that nicked his femoral artery	In a wheelchair before he could walk again	Fabric combinations tested to date	Machines built to date

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 certified layer rated at least **3 stars**, covering hip bone to boot top, 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**
VIX should fit snug, not tight, with full range of motion. Measure waist, hip, and inseam, use the current sizing guide, and size up if you're between sizes. VIX offers 90-day returns and free sizing exchanges.

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.

FOR THE LATEST (RULES AND PRODUCTS CHANGE)

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

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