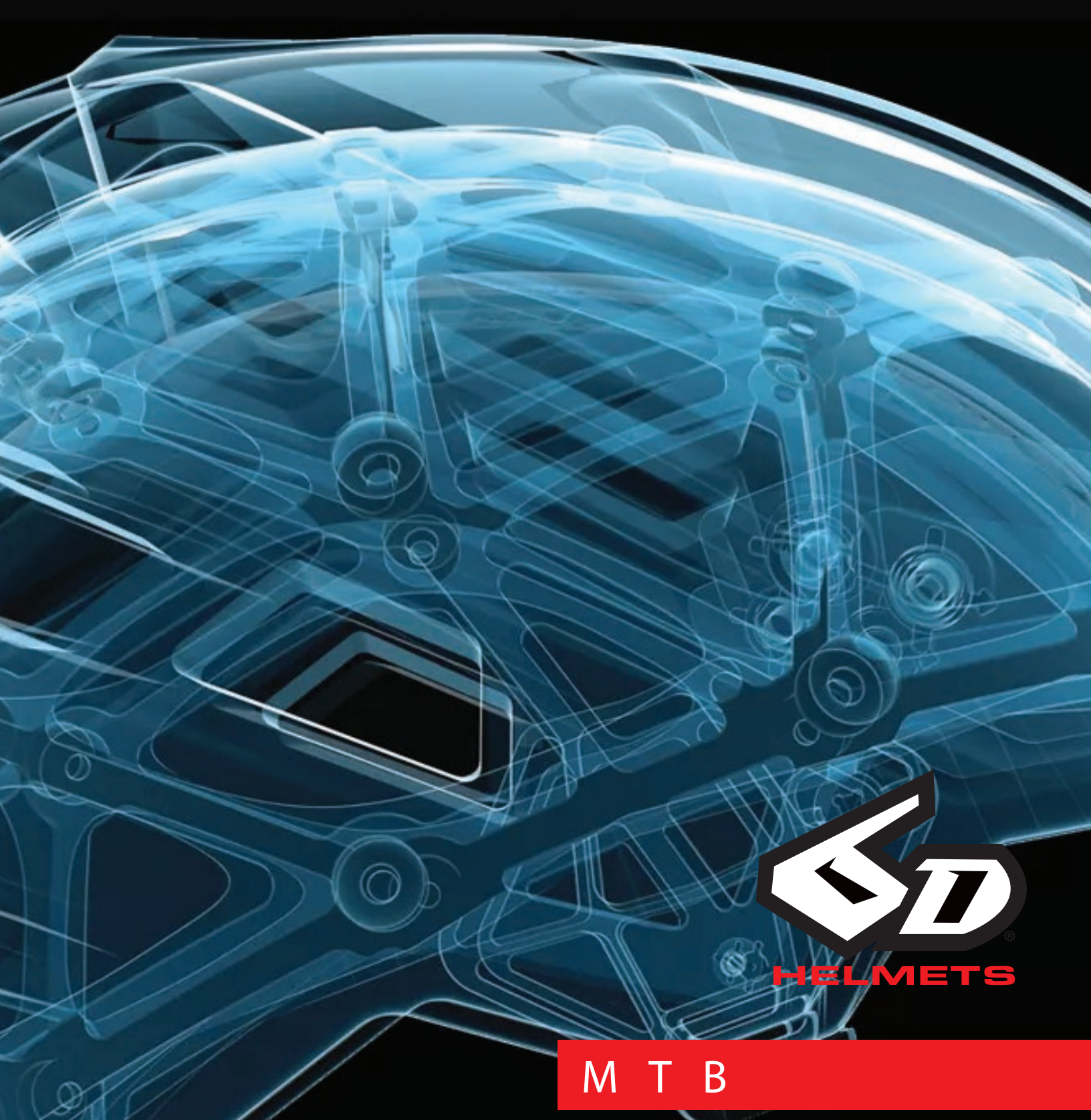

6D HELMETS

MTB

AUSTRALIAN DEALER CATALOGUE

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ATB-1T
"MTB ACCESSORY
OF THE YEAR"
- INTERBIKE

A HELMET WITHIN A HELMET

DEDICATED TO THE RELENTLESS PURSUIT OF BRAIN PROTECTION.

6D's revolutionary Omni-Directional Suspension technology has single-handedly inspired the helmet industry to get serious about improving helmet design. Today, nearly 7 years later, a few manufacturers have responded with improved offerings while others rely on marketing hype and brand strength to communicate their interests. Still others have ignored the opportunity to improve their products all together!

6D's proprietary Omni-Directional Suspension (ODS) was the catalyst for these alternate methods of protection making their way to the market and remains the top preforming technology available today. Simply stated, ODS is "Suspension For Your Head".

WORLD WIDE PATENTS:
United States US 8,955,169 B2
United States US 9,820,525
Europe E2 672 853 B1
China ZL 201280017579.I

- ODS reduces energy transfer to the brain by means of its suspended inner liner
- ODS uncouples the inner liner from the outer liner and shell assembly
- ODS reduces both angular and linear accelerations, at all impact velocities and all impact angles
- ODS significantly improves low-threshold impact mitigation
- ODS is not constrained by the shape of the human head (unlike every other system that is mated to the inner surface of the helmet liner including MIPS, Flex, Turbo 360, LDL, Meds, Fluid, Pod, etc.)
- ODS is rebuildable in select models*

PATENTED ODS OMNI-DIRECTIONAL SUSPENSION

EDUCATION IS KEY:

We encourage you to explore the benefits of ODS and how it compares to traditional helmet designs as well as the emerging technologies from other manufacturers. 6D's patented ODS dual-liner system is the only technology providing significant reductions in angular acceleration while simultaneously reducing low-threshold energy transfer to the brain.

6D's ODS technology is so impressive in fact, that it was awarded the $500k Grand Prize in the NFL's Head Health Challenge III in 2017. Achieving this award of recognition and success within the Head Health Challenge further validates the excellent properties and benefits of the ODS technology.

TIME-TO-PEAK (TTP)

Time-to-Peak (TTP) is how long it takes the energy of an impact to reach maximum G-force. Deceleration time is the single most beneficial component in reducing the severity and magnitude of any impact — the more time, the less energy transferred. ODS buys time during the impact event!

BROAD RANGE PROTECTION

Across the entire range of potential impact velocities, the 6D helmet with ODS technology consistently outperforms competitive designs. 6D extensively engineers the shell, liners, damper systems, and ODS to provide the best possible impact mitigation performance across all impact velocities for both angular and linear accelerations.

OMNI-DIRECTIONAL SUSPENSION (ODS) - EXCLUSIVE IN 6D.

6D's Omni-Directional Suspension (ODS) technology is the key to what sets the 6D helmet apart from any other helmet or helmet technology available. ODS reduces energy transfer to the brain by means of its suspended dual-liner system, effectively providing a helmet within a helmet.

ODS COMPARED TO COMPETING NEW TECHNOLOGIES:

Competing manufactures have scrambled since the introduction of the 6D helmet to address the need for improved helmet performance. The challenge for each of them is the natural shape of the human head. Its oval shape restricts the helmet from slipping in relation to the skull in two of the three primary axis X, Y and Z. This is because the inner surface of the helmet's liner binds under rotation with the 4 corners of the skull in one direction, and the cheek bones and jaw in the other direction.

For example, shear-plane technology (such as MIPS) mated to the helmet's inner liner surface is designed to improve the amount of slip that your head naturally has within the helmet. If the head cannot move very far (because it's fit properly) and the shape of the skull naturally constrains its movement, then these types of systems are restricted to how much effective work they can do in the athlete's benefit. Additionally, a 1-dimensional shear-plane (MIPS) solution has no ability to mitigate linear accelerations.

Other designs mated to the helmet liner's inner surface unfortunately face the same challenges of constraint. In general, they are bumpers with low standoff height providing little true shearing space and capability, especially if they are already compressed to some degree by the head form during the fitting process (which is highly likely). Most of these designs provide only a few millimeters of additional cushion, acting much like a comfort liner.

6D's ODS technology is designed with its shearable suspension system sandwiched between two energy absorbing compressible liners which are shaped more spherical, like a ball and socket. This superior positioning of the technology allows for 6-degrees (6D) of free-motion displacement during any impact, regardless of your head shape, the angle of impact, or how tight your helmet fits!

ATB-1T EVO

IT ISN'T JUST STRAIGHT-ON IMPACTS THAT PRESENT A DANGER TO RIDERS, ANGULAR ACCELERATION ALSO FACTORS IN WHEN TALKING ABOUT SERIOUS HEAD INJURIES / 6D IS PUTTING SAFETY ABOVE ALL ELSE - PINK BIKE

	XS/S	M/L	XL/XXL
Neon Yellow/Grey Matte	22-0664	22-0666	22-0668
Silver Matte	22-0674	22-0676	22-0678
Aqua/Grey Matte	22-0624	22-0626	22-0628

HELMET SIZE AND VOLUME

Don't be fooled by marketing hype. Think about it… In a crash event the head form is coming to an instantaneous extreme stop. You want to have this happen over the most time and distance possible to reduce the severity of the deceleration on the brain. A small shelled helmet obviously compromises this as the head will bottom out on the shell (causing accelerations to skyrocket) unless the manufacturer utilized extra stiff EPS to manage the extreme impact force. So while you might get a similar maximum "G" figure at the certification test velocity as a larger shelled helmet, the stiff EPS is grossly ineffective at managing energy at the lower velocities of most crash events.

HOW OMNI-DIRECTIONAL SUSPENSION WORKS:

At the onset of any impact the ODS system's isolation dampers activate immediately addressing the forces applied to the helmet. The isolation dampers compress and shear in response to the impact thereby reducing the transfer of that force to the inner helmet, head form, and brain. If the force applied to the helmet is more extreme, the isolation dampers transition the energy management job to the two energy absorbing compressible liners which are designed to manage higher velocity impacts in a more traditional manner. This dual-liner system allows ODS to manage impact forces in a superior manner to the other competing technologies in the marketplace.

A T B - 1 T E V O

MTB ACCESSORY OF THE YEAR - INTERBIKE 2016

	XS/S	M/L	XL/XXL
Black/Grey Matte	22-0504	22-0506	22-0508
Black/Teal Matte	22-0524	22-0526	22-0528
Olive/Black Matte	22-0544	22-0546	22-0548

ANGULAR ACCELERATION

The medical community has determined that angular acceleration (rotational force generated during oblique-angle impacts) is the primary cause of concussion and traumatic brain injury.

Traditional helmets are directly "coupled" to the head preventing any ability to mitigate angular acceleration forces. Scientific laboratory testing proved that when subjected to identical impacts, a helmeted head sustained the same degree of angular acceleration as an un-helmeted head*.

ODS technology "uncouples" the helmet from the head form. The suspended dual-liner assembly compresses and shears omni-directionally when subjected to oblique impacts thereby reducing the transfer of angular acceleration forces to the head and brain.

Competing technologies including MIPS, Flex, Turbo 360, LDL, Meds, Fluid Pod, etc. are all trying to uncouple the relationship of the head and the helmet. Each however, is challenged with the same issue; the natural oval shape of the human head. That shape restricts movement. While some of these technolgies function better than others, none provide the well-rounded performance of Omni-Directional Suspension.

* Experiments conducted by David C. Viano, PhD, Bioengineering

ATB-1T EVO

5-STAR RATED - MOUNTAIN BIKE ACTION

	XS/S	M/L	XL/XXL
Black/White Gloss	22-0514	22-0516	22-0518
Orange/White Gloss	22-0554	22-0556	22-0558
White/Red Matte	22-0534	22-0536	22-0538

LOW-THRESHOLD ENERGY

Recent medical research has provided
alarming conclusions surrounding the causes, severity, and long-term effects of concusions. Even seemingly minor concussions may have much more serious long-term effects on the brain. Repetitive low-velocity impacts are cumulative apparently causing buildup of tau proteins and deterioration of the brain's healthy condition.

To meet the various mandatory global certification standards' high-velocity requirements, helmets incorporating add-in shear plane technologies such as MIPS to
address rotational force are still way too stiff to effectively absorb energy from impacts at lower velocities.

With this well noted, the vast majority of impacts one might experience in real-world accidents qualify as low-threshold energy impacts; impacts well below certification standards pass/fail velocities, but severe enough to sustain a concussion or a traumatic brain injury (TBI).

ODS starts working the instant any force is applied to the shell, making the helmet more compliant and progressive over the broad range of impact velocities experienced in the highest percentage of 'real world' crashes, while still exceeding the requirements of the global standards.

6D ATB-1T

First introduced in 2016, the ATB-1T is the world's first ¾ coverage helmet with ODS technology. An engineering masterpiece, the ATB-1T has been painstakingly crafted to deliver all of the exceptional benefits of ODS into a more effective protective device. The ATB-1T reduces angular acceleration energy transfer by means of the 3-dimensional displacement capability of ODS when subject to impacts. Low-threshold energy accelerations are also dramatically reduced providing a more forgiving helmet over a much broader range of energy demands.

The ATB-1T is certified to exceed both the EN 1078 and CPSC 16CFR 1203 standards.

PATENTED ODS OMNI-DIRECTIONAL SUSPENSION

NOTES

LIKE NOTHING ELSE

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