THE NEXT LEVEL OF BRAIN PROTECTION

RAISING THE BAR.
INTRODUCING THE NEW ATR-2 WITH ADVANCED ODS.

TECH SPECS

- ADVANCED ODS TECHNOLOGY
- ULTRALIGHT Lining
- REMOVABLE
- WASHABLE 3D+ LID LINER
- RACE PROVEN
- EMERGENCY RELEASE CHEEK PADS
- AIR GAP VENTILATION SYSTEM
- 5 YEAR WARRANTY

WHAT'S DIFFERENT, AND WHY IS IT IMPORTANT?

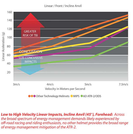
The ATR-2 with advanced ODS is evolved to provide improved performance in both linear and angular acceleration mitigation, and is also easily rebuildable for a potentially longer service life. This improves rider safety and saves the consumer money.

Hover mouse over ATR-2 cutaway to learn more about advanced ODS features

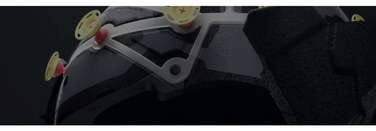
BROAD-RANGE PROTECTION

The Most Compliant Energy Management Solution Available

From low to high velocity impacts the ATR-2 out-performs the named competitors by significant margins. The advanced ODS system is there to manage shearing loads while managing linear compressions with a combination of isolation dampers and variable height EPP damping levers.



Low to High Velocity Linear Impacts, Incline Anvil (45°), Forehead: *Across the broad spectrum of energy management dominate field experienced by off-road racing and riding enthusiasts, no other helmet provides the broad range of energy management mitigation of the ATR-2.*



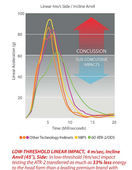
LOW-THRESHOLD ENERGY

Low Velocity Impacts Are the Most Frequent Common Type of Off-Road Accidents

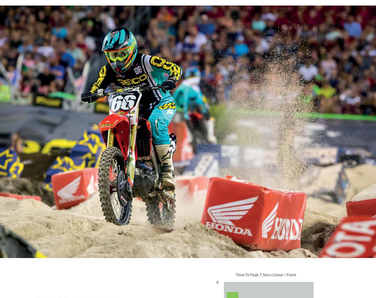
Medical research has provided alarming conclusions surrounding the causes, severity, and long term effects of concussions. Even seemingly minor concussions may have much more serious long-term consequences.

No other helmet company cared about low threshold energy transfer before ADS brought the issue to light in 2013. This is the most critical performance range of helmets and covers all impact velocities below the certification standard's requirements for both linear and angular accelerations.

Low Threshold Energy is the most concerning problem facing the athlete today. Illustrated in this simple graph, the ATR-2 with advanced ODS is the only helmet that provides substantial protection at, or above the concussion threshold for an adult male and accurately represents the overall 80% Omni-Directional Suspension (ODS) liberty working the instant any force is applied to the shell, its suspension liner liner inserts and shears under crash impact loading thereby reducing energy transfer to the brain.



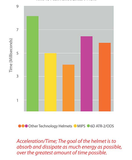
LOW-THRESHOLD LINEAR IMPACT, 4 m/sec, Incline Anvil (45°), Side: *In low-threshold (4m/sec) impact testing the ATR-2 transferred as much as* ***33% less*** *energy to the head form as a competing premium brand with MIPS, and as much as* ***21% to 27% less*** *than other premium brands with proprietary technology added.*



TIME-TO-PEAK (TTP)

Time-To-Peak Technology Energy Transfer to the Brain.

Time-To-Peak (TTP) is the measurement of time (in milliseconds) it takes the energy of an impact to reach maximum speed (Criteria). Decelerate time is the singular most beneficial component of reducing the severity and magnitude of any impact. The more time, the less severe the energy transfer will become. 40% advanced ODS technology buys time.



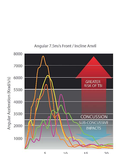
Acceleration/Time: The goal of the helmet is to absorb and dissipate as much energy as possible, over the greatest amount of time possible.

ANGULAR ACCELERATION

Angular Acceleration Helps to Rule Primary Cause Of Concussion

Angular acceleration-rotational force is generated from oblique angle impacts to the helmet surface resulting in shearing, stretching, and tearing of the soft tissues within the brain. The medical community has determined that angular acceleration is the primary cause of concussion, traumatic brain injury and worse.

Dr. Hansoo Kim and Dr. Wayne State University "has proven that a helmeted head sustained the same degree of angular acceleration as the un-helmeted head when subjected to identical impacts. This is because the helmet is directly "coupled" to the wearer's head. One of the major benefit features of Omni-Directional Suspension (ODS) is that it effectively "uncouples" that relationship allowing the shell and outer liner to drive independently to the inner layer and the head form, thereby scrubbing off a high percentage of the angular acceleration force.

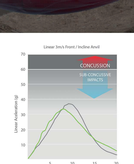


ANGULAR ACCELERATION IMPACT, 7.5 m/sec, Incline Anvil (45°), Front: *In angular impact testing the ATR-2 transferred as much as* ***37% less*** *angular acceleration to the head form as a competing premium brand with MIPS, and as much as* ***21% to 37% less*** *than other premium brands utilizing their own proprietary "rotational technology"*

THE NEXT LEVEL

ATR-2 vs ATR-1

The new ATR-2 with advanced ODS provides substantial improvements in performance over the current ATR-1 across the entire range of energy demands, low, mid, and high velocity accelerations for both linear and angular accelerations.



Looking for dependable motorcycle helmets? Rely on SD Helmets for quality and long lasting products.