

### THE ARAI DIFFERENCE

When you think about how a helmet works to protect the head inside, if you think of absorption of the impact, you are partly correct.

That is, there is a limit to the amount of energy any helmet can manage to absorb. In this regard, it may be worth noting that the impact test speed for absorption by most standards is less than 28 km/h.

As the kinetic energy goes up in proportion to the square of speed, the amount of energy involved in a real crash can be far bigger than the level any make of helmet can manage to absorb.

However, the basic function of a helmet protecting the head from a severe blow of an impact is not only absorption.

As many riding impacts are off center, or come at an angle, the intrusion of energy might be diminished as the helmet may skip or slide over obstacles avoiding some of the energy.

This enhances the chance that energy getting into the helmet stays within the level absorption could handle. We refer to this as Glancing Off.

Did you know Arai is one of very few in the world aware of the importance of Glancing Off?

Witnessing such scenes repeatedly, Arai has come to believe that Glancing Off of the impact energy is a key to the enhanced head protection by helmets, and Arai has been working to elevate its level ever since.

Although there has been no literature or article referring to Glancing Off, we have studied the principles and functions of it through our own experiences and have been working to enhance its effectiveness independently.



The basis of Glancing Off is undoubtedly a Rounder, Smoother and Stronger Shell, but when it comes to designing the structure of it on that basis, there has been no simple solution or magic wand. The real crashes are too unpredictable.

Did you know what Arai has actually done to raise the performance level of Glancing Off?

We at Arai are proud to work for the protection of fellow riders, and feel it has become an important part in the meaning of our existence, but the unpredictable nature of some crash impacts can overwhelm even our helmets.

To live with such a fact, we have been struggling to enhance every aspect of a helmet's ability to protect, no matter how small, and believe there is always some room left for improvement hidden within the many details of Glancing Off, even though we did not know how much each improvement would add.

This accumulating, building and evolving of numerous improvements, for the enhancement of Glancing Off, has been the foundation of the difference of Arai through our long history.

Today, many in the world say that the protection performances shown by Arai are different from others.

There is an old saying; "The whole can be far greater than the sum of its parts." If you consider some extreme performances shown by Arai, you might find some truth in that old saying.

Even though most of those parts may not be readily visible or likely to serve as a sales feature, they contribute to the cost of seeking to improve performance. But we have come to be convinced that this is the way to the enhancement of head protection against severe and unpredictable crash impacts.

Knowing that no one and nothing is perfect, we believe these extra efforts are worth the additional costs, especially considering that what we are seeking to protect is priceless.

Michio Arai

Owner and CEO, Arai Helmet, LTD.

### **GLANCING OFF**

I helmets protect the rider's head through both glancing off and energy absorption.

**MOVING** 

FORWARD

### **HOW DOES A HELMET PROTECT YOUR HEAD?**

HEAD PROTECTION CAN BE CALLED MANAGING IMPACT ENERGY. EXCEPT MANAGING THAT ENERGY IS NOT JUST ABSORBING IT.

In the event of an impact, energy is created, and the role of a helmet is to 'appropriately manage the impact energy' to protect the rider's head. That energy management is generally achieved by 'absorption' of the impact energy around the head, thus protecting it. The outer shell deforms and the cells of the inner EPS liner crush, and that destruction manages impact energy by converting it into work. However, the truth is even the best helmet has limits to how much energy it can manage.

On the other hand, the helmet isn't only absorbing energy, but rather in a large crash when the rider's head is repeatedly protected by the helmet, we understand that it's working to manage impact energy in another important way.

That is 'glancing off'. Many people probably don't even realize this, but at the moment a helmet is impacted, if struck off center it can slide on the crash surface, minimizing the impact energy that might otherwise be transferred to the rider's head. Therefore, if not directed toward the center of the helmet. the head inside can be protected, even with high energy levels and the liner's limited energy absorption ability. Even in extreme crashes we've witnessed 'glancing off' and 'energy absorption' as two halves of energy management that work together to increase the chances of head protection. This holds true for any kind of helmet.

Here is the moment of impact. The rider tenses up, and the helmet contacts the ground. You can imagine what the helmet has to do next.

ability' there will be a limit regardless of any manufacturing technique employed. because of the limited amount of space between the shell and rider's head necessary to manage impact energy (see below "The Limit of Absorption Ability"). And on a motorcycle, we have to prepare for impacts that far exceed our imagination. So it follows that glancing off is critical for supporting that. Arai's helmet exhibits results due to its strong shell combined with its round smooth surface and achieves the important goal of not letting energy into

GLANCING OFF WORKS TOGETHER

WITH ENERGY ABSORPTION INVISIBLE TO YOUR EYES.

However, helmet standards place their emphasis on impact absorption and do not show anything about glancing off. Glancing off is the synergy of various elements working together, and there is

the helmet.

When we talk about 'Impact absorption no set way to impact a helmet to test for it. There is a test for shell strength to resist penetration, though because it's difficult to put numbers to the the shell form and such for glancing off, there remains no definition. Any helmet makes use of glancing off, but due to the difficulty in numerically capturing each helmet's difference in ability, there are many cases where safety standards simply don't define glancing off.

> In addition to passing standards, Arai makes continual efforts to improve our helmets' glancing off ability and pursue gains in head protection.

As for the force involved, if you convert the force from the helmet drop test of the strictest helmet standard in the world, it amounts to merely 27.9km/h (or 7.75 m/s).



### THE LIMIT OF ABSORPTION ABILITY

The amount of energy in a crash can be expressed as distance and force, where distance is the physical space between the helmet shell surface and the rider's head, or in other words the helmet size. If you make the helmet userfriendly, there will be a limit to its size. Regardless of construction or material employed, there's still a limit to the space available in a helmet.

Illustration



'Energy Absorption' and 'glancing off' are two wheels that can do the job of preserving balance that can work together without bias or offset.

**ENERGY** 

ABSORPTION

### AIMING TO BE THE BEST IN THE WORLD

When it comes to proficiency in head of the smoothness of the helmet as protection, Arai has the goal of making a component above all others and a helmet superior to all others and continue to employ it in our approach. continues to make our helmets this way Head protection is the foundation of our today. We have seen this confirmed in belief in being the best in the world and many of our rider crashes over several we pursue the value of both glancing decades, and we pursue gains in off'and'impact absorption'equally. This protection even if just a little. Because is the difference of Arai. we come from this background, we've come to notice the importance

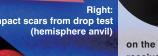
### **HELMET SCARS FROM IMPACTS**

is representative in helmet standards testing It numerically measures the impact when a helmet collides with ar obstacle straight on. Diagonal scars are left



on the helmet where it received a perpendicular impact. On the other hand impacts can be received from different angles and the scars flow horizontally from th impact point. \*See riding impact case examples





### THE NEVER-ENDING EVOLUTION OF GLANCING OFF.

SEEKING VARIOUS IMPROVEMENTS EVERY DAY: INTRODUCING ONE PART OF THE CHALLENGE

Glancing off cannot be adequately quantified as a basis of head protection. In actual crashes, an impact can come from any angle at any speed and cannot be prepared for. Also, the exact speed and angle of an impact cannot be replicated 100%. So as for the development of 'glancing off', there's nothing that can be done except to accumulate improvements that we think we should do through experimentation and small adjustments to combat every possibility.

### THE EVOLUTION OF FORM CONTINUES AS TIME GOES BY

From the scars left by actual rider impacts, we can gather that the helmet was able to slide past obstacles and not catch or snag because of its smooth surface. In other words, we surmise they exhibited 'glancing off' properties. So, the shape of Arai helmets will be round and smooth to the very end. We have kept the same basic shape since the beginning, and think it alleviates impact energy more so than a shell with an exaggerated shape with hard edges that may catch. Our helmets evolved from a cannonball shape when first introduced, into an egg shape today, to better blend the entire outer surface more smoothly. The current shape of an egg is a



The whole helmet has evolved to receive impact energy with its round surface to address obstacles, and reduce flat facets in the shell.

simple sphere evolved in nature for survival. Arai also evolved towards the egg shape with the notion to protect the rider's head as much as possible from impacts that might exceed expectations.

### FORM

THE EVOLUTION OF FORM CONTINUES AS TIME GOES BY

### R7:

The aero parts and vents that keep the rider comfortable break off in an impact by design. Our helmets are designed to avoid protrusions in the shell. They also have a continuous round and smooth spherical form maintaining a radius of no less than



75mm, which we call R75, in the specified head protection area of the helmet according to safety standards.

### VAS SHIELD

Designed for improved function, but more importantly to increase the continuous smooth shape of the shell. VAS aims to increase the 'glancing off' ability of the helmet by maintaining the smooth shape of the helmet above all.



\*The convex curved surface of the shell has a continuous radius of 75mm or more across its curvature.

### CONTINUALLY SEEKING THE STRONGEST MATERIALS AND BEST TECHNIQUES AT THE FOREFRONT OF TECHNOLOGY



Between the high strength fibers, special lightweight elastic fibers are sandwiched between, which is the Complex Laminate Construction (cLc). It offers a 20% weight reduction compared to making it with just all the same fiber.



The Peripheral Belt made of Super Fiber reinforces the helmet like the bands of a barrel for better protection. This special belt resists the spreading of cracks that form when the helmet receives a large impact and improves glancing off ability.

Shell strength is very important for enhancing 'glancing off'. In an actual crash, if the shell deforms or is completely destroyed it can no longer slide and will stop and catch on that point. A helmet that can't slide can't maintain its 'glancing off' ability and that impact energy can reach the rider's head. Since we've decided on being the number one helmet in the world for protection, we've pursued shell strength as well as weight reduction by accumulating improvements that embody the lifeblood of Arai. This evolved into the development of the cLc shell process (complex laminate construction) which encompasses both strength and lightness. Although the cost of the material utilized is 6 times higher than conventional fiberglass, Arai exploits its use for a stronger and lighter helmet. To resist cracks from spreading to the helmet's edge, the critical edges of the shell have a Super Fiber Belt which reinforces these areas like the bands of a barrel. The resin blend as well is evolved through our obsession with strength and weight reduction as we continue to accumulate various improvements.

### FOR MANY YEARS WE'VE SEEN OUR LINER'S PERFORMANCE TESTED

Even the best 'glancing off' ability alone won't protect the rider's head. 'Impact absorption ability' is necessary to pass even the strictest helmet standard in the world. In the impact absorption ability test, the shell surface deforms when it receives an impact with the helmet hitting obstacles of certain angles and shapes. If the impact surface is narrow, concentrating the impact energy, the EPS liner must naturally be thicker. However, while that makes it easier to pass helmet standards, making the EPS liner thicker only in the necessary places ends up distorting the helmet shape away from 'round and smooth'. It doesn't maintain a form ideal for making the most of 'glancing off'.

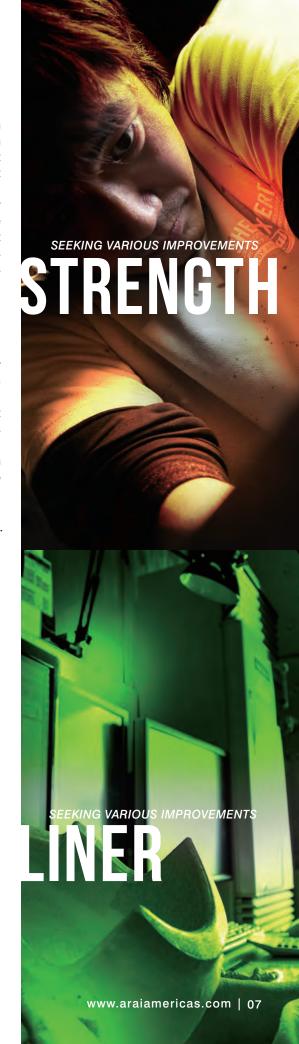
Arai's proprietary 1-piece multi-density EPS liner has finely-tuned sections with various densities. It can make the most of its 'glancing off' ability because the EPS density varies according to the corresponding shell surface, allowing the shell to remain 'round and smooth'. This 1-piece multi-density liner is indispensable for improved results in Arai's strength of the shell shape pursuing 'glancing off' performance.



The head form shape used in helmet testing is somewhat square, so the 'four corners' get tight inside the helmet, and we can see a tendency to make the shell square too.



Arai's proprietary 1PMDL (one piece multidensity liner) is the only one of its kind in the world and offers incredible protection by being fine-tuned to each shell size, in each model and in each head size, with varying EPS densities.



### SHAPE MATTERS

### **ONLY FROM ARAI**

Just like fingerprints, no two heads are the same. So how could you expect one helmet to fit every head? If you understand the value that a properly fitting helmet has on both the enjoyment of the ride as well as its performance in an impact, you can appreciate the need for more than one interior head shape.

Arai's interior shapes have evolved over decades, and as a result three basic shapes emerged: Round Oval, Intermediate Oval and Long Oval. Having these different options gives every rider the chance to find their ideal fit; you can even customize your helmet further with various head and cheek pads to achieve the perfect fit for you.

Only Arai gives every rider the opportunity to get the best fitting helmet possible.

### THREE ARAI HELMET SHAPES



### **ROUND OVAL | QUANTUM-X**

The Round Oval shape was designed for riders whose heads are slightly wider rather than elongated. The Round Oval shape was achieved by using an interior head liner that combines thicker front and rear pads with thinner side pads.







### **INTERMEDIATE OVAL** CORSAIR-X, DEFIANT-X, REGENT-X, RAM-X, CLASSIC-V, XD-4, XC-W and VX-PRO4

Our Intermediate Oval shape is our standard interior shape. The Intermediate Oval fits the majority of head shapes in the North American markets.







### LONG OVAL | SIGNET-X

The Long Oval shape was designed for riders with a narrow head and a more pronounced forehead. The Long Oval was created by increasing the space of the EPS liner front to back and decreasing the space side-to-side.







### EASY AS ONE. TWO. THREE.

### 1. MEASURE

Have the circumference of your head measured to get an idea of where to start. The image here shows the proper placement of a measuring tape to get the most accurate measurement.



### 2. TRY ON AN ARAI A HELMET NEEDS TO BE TRIED ON IN ORDER TO **DETERMINE A PROPER FIT.**

With an Arai helmet, regardless of your presumed head shape, a side-by-side test fit, like a Quantum-X against a Signet-X, will give an apples-to-apples comparison to find your best fit. And, not surprisingly, in some cases your *perfect* fit isn't the interior shape you thought you were.





### 3. MICRO FIT INTERIOR LINERS AND CHEEK PADS

Many Arai models feature removable cheek pads that have a 5mm peel off slice and removable head liners with a 5mm peel off slice on the temple pads. You can remove these to micro-fit if necessary without having to buy additional pads. Often this allows you to stay in your fitted size rather than the traditional solution of moving up a size, which decreases comfort and performance while increasing noise and movement. You can also order optional thicker or thinner head-liners and cheek pads allowing you to even further custom fit your Arai helmet. To order a liner of a different thickness, start with the Lining Code that matches your helmet size, then specify the desired thickness. For example, an optional 5mm liner for a large helmet would be specified as a *III-5mm* liner. All thicknesses of cheek pads will fit in all helmet sizes in their respective models.





### THE ARAI FIT



### **FACING A POTENTIAL PROBLEM**

Some riders are concerned about getting the helmet to fit over their faces. We found many riders wearing helmets up to two sizes too big. That's because when you can't get the helmet past your cheeks or jaw, you think it's too small, so you reach for a bigger size. But your brain is not in your face. It's important to focus on head size first, and adjust the cheek pads after if necessary. Arai created the Facial Contour System in our cheek pads too, that makes ingress and egress easier and cradles your face better once on, so you can find the perfect fit.

### THE PROPER CROWN FIT

The interior must fit snugly all around the crown of your head. You should feel a firm, even pressure at all the contact points around the interior perimeter, with no tight pressure points that could become uncomfortable over time. The perimeter pads should be supporting most of the helmet weight, with the top crown pad touching the top of your head and supporting only some of the helmet weight.

### THE PERFECT FIT

Over the last several years, we measured the head shapes of thousands of consumers across the U.S., providing us with the first hand information that led to the development of our latest Long Oval (L/O) helmet, the Signet-X. The Quantum-X is the Round Oval (R/O) counterpart to the Signet-X, and all other models have the Intermediate Oval (I/O) head shape, which make up our three fit packages. Head shape is vital for proper fit in addition to helmet size. Only Arai offers three unique head shapes in our helmets to achieve the best fit possible.

### DON'T GUESS SIZE

Try the helmet on for a while before you buy it. Have your head measured using the method we describe, and remember that if it feels too snug on your cheeks, our cheek pads are adjustable. Shape and fit can change as helmet models evolve so it's best to check.

### INTERIOR LINING THICKNESSES

CUBCVIB-A BC

CUBCVIB-A

### ■ STANDARD | ○ OPTIONAL

CIGNET-Y / OHANTHM-Y

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S	S	55–56	II			0		0			0		0				
M	М	57–58	III		0		0	0		0		0	0				
L	L	59–60	III		0	0		0		0	0		0				
XL	XL	61–62	IV			0		0			0		0				
XXL	XXL	63–64	٧								0						
XXXL	XXXL	65–66	٧														

		ANT-X			RAM-X			XD-4					
				12 mm	10 mm	7 mm	5 mm	12 mm	10 mm	7 mm	5 mm		
XS		0				0		0		0			
S		0		0		0				0		0	
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		VX-PRO4						
	12 mm	10 mm	7 mm	5 mm				
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XL		0		0				
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XXXL								
700tL								

\*HCM (Head Circumference Measurement) should be a starting point only in determining your helmet size. Determining the best possible fit should be from actual test fittings of Arai's various interior fit packages. Changes and updates can affect the standard pad thickness supplied with your helmet.

### CHEEK PAD THICKNESSES

CORSAIR-X RC

40mm and 35mm Cheek Pads are available by special request. Please see your local authorized Arai dealer or visit us at the araiamericas.com wehsite

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30

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XS

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	Thicker (mm)	Standard (mm)	Thinner (mm)		Thicker (mm)	S		
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L	25	20	15		25	ı		
XL	20	15	12		25	ı		
XXL	-	-	-		20	ı		
XXXL	-	-	-		-			

inner mm)	Thicker (mm)	Standard (mm)	Thinner (mm)
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20	30	25	20
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12	25	20	15
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CORSAIR-X

### SIGNET-X / QUANTUM-X DEFIANT-X / REGENT-X

25

25

25

20

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### RAM-X

rd	Thinner (mm)		Thicker (mm)	Standard (mm)	Thinner (mm)	Thicker (mm)	Sta (r
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ner n)		(mm)	(mm)	(mm)
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XC-W

		VX-PKU4	ļ.	 	CLASSIC-	V
	Thicker (mm)	Standard (mm)	Thinner (mm)	Thicker (mm)	Standard (mm)	Thinner (mm)
XS	30	25	20	30	25	20
S	30	25	20	30	25	20
M	35	30	25	30	25	20
L	30	25	20	25	20	15
XL	30	25	20	25	20	15
XXL	30	25	20	20	15	12
XXXL	-	-   -   -		-	-	-

r	Thicker (mm)	Standard (mm)	Thinner (mm)
	30	25	20
	30	25	20
	35	30	25
	30	25	20
	30	25	20
	30	25	20
	25	20	15



Perhaps the most fabled name in the entire Arai lineup, the Corsair has long been renowned as one of the most advanced, highest quality helmets available anywhere in the world. It represents the culmination of our vast experience in helmet design and unwavering focus on rider protection. And with features like the ingenious VAS shield mechanism, exceptional ventilation and an antimicrobial liner, the Corsair-X has certainly earned its place as our flagship model.





















INTERNAL AIR CHANNEL | Improved ventilation with an enhanced air extraction system, pulling hot/moist air from the eye port area through ducted channels behind the cheek pads that exhaust out the side cowl vents. This helps keep the rider cool and helps to reduce fogging.



PB-SNC<sub>a</sub> SHELL | A new resin (Z Resin) developed and blended in house, bonds the many layers and materials of the shell more securely using less resin, improving shell strength as well as reducing weight. The proprietary Super Fiber and special synthetic reinforcing fibers allow Arai to produce a stronger, yet lighter shell with excellent Glancing Off properties. The addition of the internal Structural net and Peripheral belt further strengthen the shell with minimal increase to weight or thickness.



SHIELD LATCH | The VAS latch captures and securely holds the shield closed to help resist unexpected opening. In addition to the de-mist function, the larger latch allows for intuitive and seamless shield operation, even with heavy gloves. Even in the de-mist position, the shield has a positive stop to resist unintentional opening, but with a slight pull on the lift tab to clear this stop the shield simply lifts with ease.



IC DUCT5 | The center IC Duct5 takes in 11% more air and the Type-12 diffuser intakes each take in 19% more air than the previous designs. All use a three-position slide gate to improve sealing for reduced noise and water intrusion. All Arai vents are lightly mounted to remain frangible, so they easily come off in an impact so as not to snag on obstacles or cause excess rotational force.





**CORSAIR-X FEATURES** 

### **CORSAIR-X RC CARBON**

Based on Arai's F1 GP helmet's GP-6RC technology, the Corsair-X RC uses the same carbon fiber found on the newest generation of commercial airliners, combined with Arai's own resin plus Zylon reinforcement.

## HAYDEN LAGUNA















Purpose-built for the street. A benchmark in comfort, quiet, stability and ventilation. Arai applied the same tireless 24-7 focus devoted to our race helmets to designing it, refining and adapting proven concepts to a new purpose. On the rounder end of the head shape spectrum, the Quantum series has always been the go-to helmet of choice. The Quantum-X brings that shape back in a feature-rich package.























### **QUANTUM-X FEATURES**

IMPROVED GLANCE OFF ABILITY | A smooth shell is key to a helmet's ability to slide across a surface or Glance Off an obstacle during an impact. Arai's VAS shield system lowers the pivot point by an average of 24mm, making the shell surface area in the critical temple area much smoother and better able to reduce impact energy getting into the helmet.

QVF AND QVR INTAKE/EXHAUST DUCTS | The Quantum-X features QVF three-position intake and QVR exhaust ducts for excellent air intake and exhaust performance when riding. Even when the front shutter is closed on the top duct, a side vent still serves as an exhaust vent.

FCS® CHEEK PADS | The contoured shape - combined with multiple layers of varying foam densities supported by a foam "spring" - cradles the face like nothing that has ever come before, even from Arai. The spring makes on-off easier, while helping to block even more wind noise.

ARAI ROUND OVAL SHAPE | The Quantum-X features a new round oval fit package that is designed to deliver a comfortable fit for riders with a round overall head shape.











SPINE FLUORESCENT

SPINE FLUORESCENT

YELLOW





















Purpose-built for the street, the Signet-X is a benchmark in comfort, quiet, stability and ventilation. Arai applied the same tireless 24-7 focus devoted to our race helmets to designing it, refining and adapting proven concepts to a new purpose. On the long, narrow end of the head shape spectrum, the Signet series has always been the go-to helmet of choice. The Signet-X exemplifies that shape in a feature-rich package.

























SIGNET-X FEATURES

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LONG OVAL FIT PACKAGE | The Signet-X's longer interior shape is specifically designed for riders whose helmets can cause painful forehead hotspots due to interior shapes that aren't made to fit their longish oval heads.



































You value independence. You're self-defining. What you believe in is Yours, and Yours alone. For riders looking to establish their own identity, the Defiant-X is your self-defining helmet.















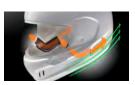


AGGRESSIVE STYLE | Still very much an Arai, just with a little bit of attitude. From the distinctive chin bar design, with hidden vent closures for a clean look, to the low-profile double side exhaust slots that help pull air through the helmet more efficiently.

**COMMUNICATION** | If you like to stay in touch while riding, Arai makes it easier to install your speakers with a molded recess in the ear pocket EPS base. Hidden behind the noise absorbing foam below the covers, the recess provides just enough room for the speakers to sit flush and not press against your ears.



INTERNAL AIR CHANNEL | Improved ventilation with an enhanced air extraction system, pulling hot/moist air from the eye port area through ducted channels behind the cheek pads that exhaust out the side cowl vents. This helps keep the rider cool and helps to reduce fogging.



5mm PEEL-AWAY CHEEK & SIDE-TEMPLE PADS | Arai's exclusive 5mm peel-away surface pads on both sides of the headliner and in the FCS® Cheek Pads give you the option of 10mm more interior width if needed (minimizing the need to purchase optional thickness pads). Yet another level of fit customization no other helmet brand offers.



























The all-new Arai Regent-X is designed to isolate you from distractions with the kind of comfort only Arai can deliver. Built with the same protection as our flagship Corsair-X model, the Regent-X features a new interior for both comfort and ease of taking it on and off.









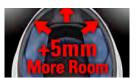




**REGENT-X FEATURES** 



easier to get the helmet on and off. But even with the larger opening, the helmet remains secure with the FCS2 cheek pads providing stability as well as effectively blocking external noise from getting inside.



REAR VENTILATION | New one-piece exhaust vent improves exhaust performance and aerodynamic stability. And as the extraction of heat build-up is important for both rider comfort and moisture build-up in the eye port area that can cause shield fogging, the top exhaust vent on the Regent-X remains open at all times.



FCS® CHEEK PADS | The contoured shape - combined with multiple layers of varying foam densities supported by a foam "spring" - cradles the face like nothing that has ever come before, even from Arai. The spring makes on-off easier, while helping to block even more wind noise.



INTERIOR | Adjustable perimeter liner and cheek pads allow owners to custom fit to their exact size requirement. Soft-brushed removable liner allows for easy cleaning, and provides incredible comfort.

















comes with the VAS-Z Pro Shade System shield pursuing protection in an evolutionary form that strives for glancing off. The open face that evolves everything — ventilation, interior, liner, and shell, bringing even more comfort as a touring model. The RAM-X raises the bar for the next generation of protection.













RAM-X FEATURES



COMPLETELY REDESIGNED SHELL AND SHIELD SYSTEM | The RAM-X features the newly developed VAS-Z shield system, with a lower pivot point that allows the shell to be smoother in the temple area improving the helmet's ability to slide more smoothly should it contact the ground or obstacles, contributing to gains in protection. This lower pivot position is possible due to the dual-pivot assembly, creating a "Variable Axis System" for which the system was named, allowing the shield to function where a single pivot could not.



VENTILATION | Utilizing the same diffusers as Arai's flagship Corsair-X model, with a revised stationary aero stabilizer wing to improve helmet stability and further reduce rider fatigue. Possibly the most ventilated open face helmet on the market today, and for those riding at slow speeds or in extreme temperatures we think you will agree.



LIGHTER | A new resin (Z Resin) developed & blended in house, combining several resins with different characteristics, bonds the many layers and materials of the shell more securely using less resin, improving shell strength as well as reducing weight.

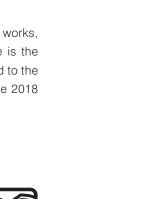


PRO SHADE SYSTEM | Up, down or in the middle, the new shield system adapts to many light conditions without sacrificing helmet impact absorption performance. The Pro Shade's unique design lets air pass through even at high speed.



GLASSES COMPATIBLE | Removable foam in the top of the earcup allows the arms of glasses to easily slide into the helmet. The earcups are easy to remove from the helmet and have removable covers for easy washing and access to this removable part.





**XC-W FEATURES** 



The XC-W is yet another example of Arai's decades-long tradition of improving on what works, and redefining how open-face helmets can look - and protect. The most telling feature is the extended coverage in the lower jaw-cheek pad area - extending 1 3/16" forward compared to the previous model (and traditional open-face ¾ helmets). The XC-W is color matched to the 2018 Honda Gold Wing Red, Silver and Blue motorcycles and comes standard with a peak.















TDF-3 FRONT VENT | Working with the DDL-4 exhaust vents, the TDF-3 front vent is designed to further improve intake airflow to the XC-W's interior. The sleek vent design minimizes drag and noise, but still captures enough air to keep riders cool. The closure toggle is easy to locate and operate, even with heavy gloves.



SIDE COWL EXHAUSTS | Completing the XC-W's advanced ventilation package, these exhaust vents further help in quick removal of stale interior air. The unique cowl, exclusive to the XC-W, provides exceptional airflow with a smooth aerodynamic style.



UNIQUE CHEEK PAD DESIGN | Adding to its distinctive look, the XC-W's cheek pad design is similar to that of a full-face helmet, with its full-coverage EPS base and removable covers. These pads also incorporate Arai's facial contour shape that provides a secure fit without excess pressure.



VENTED NECK ROLL | Arai's vented neck roll uses the prevailing airflow behind the rider's neck to further enhance ventilation by extracting more interior heat and stale air. Utilizes this aerodynamic effect to enhance rider comfort without adding weight.



ADJUSTABLE PEAK | The peak shields your eyes from the harsh sun glare during those long rides into the sun. And because Arai sweats even the tiniest details to make your ride better, there's also a matte-black band under the peak's leading edge to further reduce glare.



## **C**5



Heritage styling with modern luxuries, including traditional stiched faux leather edge trim and faux leather interior accents. Behind the vintage look are modern technologies: patented hidden interior ventilitation and Arai's uncompromising level of quality and protection. The Classic-V: Look cool. Stay cool.





FROST

























**CLASSIC-V FEATURES** 

ONE-PIECE, MULTI-DENSITY EPS LINER | Optimized from decades of research and development for maximum protection throughout the entire liner. Designed in concert with Arai's proprietary outer shell, the multi-density EPS beads are molded into a single liner, maximizing energy absorption requirements as needed in each area of the helmet. This tuning maximizes impact energy absorption ability while maintaining a uniform and compact helmet.

FOCUS ON PROTECTION | With a focus on protection, even our retro 3/4 helmet gets our peripherally-belted (PB-cLc<sub>o</sub>) shell, providing tremendous strength in an incredibly small and lightweight package. Adding reinforcement where needed, without increased weight or shell thickness.

**VENTILATION** | This smooth, retro helmet is actually fully ventilated: air enters via three intakes, flows over the head and exits through a multi-staged channel that leads to all-new Venturi exhaust ports.



BUTTON CLOSURE GOGGLE STRAP HOLDER | Completing the old-school look is the faux-stitched leather goggle strap holder that helps keep your goggle straps from sliding up the helmet when riding.









Offering three distinct configurations allows the user to choose which works best for their riding needs. The XD-4 is similar in appearance to the previous XD-3, but greatly improved in all-around performance. The combination of the new comfort headliner, with microfitting 5mm peel-away temple pads, and our patented FCS® cheek pad design, also with 5mm peel away layers, add a new dimension to the concept of helmet fit and customization. It takes a unique sense of commitment to continually strive to improve your product - especially when it's already regarded as the very best.











EXHAUST PORTS & SHELL SHAPE | These top-diffuser-vent ports nearly double the XD-4's airflow, while its shell shape provides better aerodynamic stability at higher street speeds in concert with its high-flow peak and side cowl vents. The high flow peak reduces drag at highway speeds and helps direct air into upper intake vents for improved



5MM PEEL-AWAY SIDE-TEMPLE PAD | Arai's exclusive peel-away side/temple crown pads give you the option of 10mm more interior width if needed. Yet another level of fit customization no other helmet brand offers.



BROW VENT FACESHIELD | Brow vents in the XD-4 faceshield provide airflow to the temple area of the head. Using the eye port to improve ventilation, avoiding additional holes in the critical forehead, Arai improves rider comfort while maintaining shell integrity and impact energy management performance.



FULLY REMOVABLE/REPLACEABLE/WASHABLE INTERIOR | Arai's Dry-Cool® technology keeps you drier and cooler for greater long-haul comfort. Easily removed/replaced for custom fitting or thorough cleaning after a long ride, race weekend or a season of casual touring, the Arai interior makes it easy.



WARNING: Although the XD-4-model shield will fit earlier XD versions, DO NOT INSTALL THIS SHIELD ON ANY EARLIER XD MODEL. As there are no receiving ducts for this shield's Brow Vents in earlier XD helmets, debris, insects, etc., might enter through the vents and interfere with the wearer's vision and/or damage the eyes. Further, if the XD-4 shield is tinted, light entering through the vent slots may distract the wearer.

### **GO CONFIGURE**

**XD-4 FEATURES** 

The XD-4 offers three distinct configurations depending on rider preference or riding conditions. Change the look every time you ride, or even during the same ride.







WARNING: The visor/peak supplied with the XD-4 helmet is not suitable for high-speed use. At such speeds, air catching a side or main surface of the peak may cause difficulty in returning the head to a forward and/or level position. To understand and prepare for this possible effect, you should first try to experience it at low speeds, gradually increasing speed so that you will know what to expect and determine when the peak should be removed for higher-speed riding.

### DEPART RED





















The latest expression of the ultimate off-road helmet, the VX-Pro4 evolved from the much-loved VX-Pro3 model. So it's still the perfect choice for MX, enduro and off-road use. Just as in every Arai helmet, the basic and simple organic shell shape is based on the R75 shape concept. The absence of exaggerated edges or protrusions on the shell should not be mistaken for a lack of imagination. It's a visual demonstration of our commitment to maintaining the integrity of the shell with crash impact performance.













**UX-PR04 FEATURES** 



A SMOOTH INSTEAD OF RIDGED SHELL | The shell itself is consistently round and smooth, maintaining the Glancing Off shape concept in areas above the acknowledged test line and influencing those below the test line. Here, the rounded chin bar maintains the same compact shell length as the previous model, the VX-Pro3. The result is less protrusion, which may be less likely to catch and dig in during a spill.



SHELL MATERIAL | In order to maximize performance, we precisely assemble the shell from multiple proprietary components. Super Fiber, one of the primary materials, costs up to six times more than standard fiberglass but provides 30% higher tensile strength and increased penetration resistance. The PB-cLc (Peripherally Belted Complex Laminate Construction) method demands precise and time-consuming assembly by master craftsmen from many individual pieces.



CHIN BAR VENT GRILL | Installed on the uniquely rounded chin bar, the stainless mesh grill is now mounted from the outside on the exterior vent cap and can be easily removed for cleaning or damage replacement. The vent cap is also designed to break away from the chin bar in the event of impact.



**REAR DUCT** The Air-Through top-rear-duct center brace also functions as a goggle-strap locator. The diffusers can be removed or replaced quickly and easily by removing a single screw on the rear-duct center brace.



IMPROVED PEAK | The peak is 14mm longer and 5mm wider than the previous model for improved ability to deflect roost and flying debris. To compensate for increased lift, the air outlets on the improved peak have been made larger as well. Made with durable, yet extremely flexible material, mounted with plastic screws designed to break on impact, so as not to snag on impact which could send energy into the helmet or cause excess



**EMERGENCY RELEASE SYSTEM** | The revised Emergency Release Cheek Pad system has the release tab repositioned and is easier to access by rescue staff. Pioneered by Arai, the concept behind the emergency release cheek pad design was to allow trained medical personnel easier access to an injured rider, reducing the chance of unintentional injury.







### **MODELS AT A GLANCE**

FEATURES AND BENEFITS  • STANDARD   • OPTIONAL	CORSAIR-X	QUANTUM-X	SIGNET-X	DEFIANT-X	REGENT-X	XD-4	VX-PRO4	RAM-X	CLASSIC-V XC-W
PB-SNC <sub>2</sub> Shell   The Peripherally Belted Structural Net Composite shell is created from Super Fiber and special synthetic fibers assembled by Arai experts, and provides superb tensile strength and flexibility and also features Arai's newly developed resins resulting in even more strength with less weight.	•								
<b>PB-ScLc<sub>2</sub> Shell</b>   The new Peripherally Belted Super Complex Laminate Construction shell combines multiple materials and techniques created internally by Arai over more than 6 decades of experience that deliver both performance and affordability.		•	•	•				•	
PB-cLc, Shell   The Peripherally Belted Complex Laminate Construction shell features a newly developed AR MAT which allows the Regent-X to achieve a lower cost without compromising weight or protection performance.									
<b>PB-cLc Shell</b>   The Peripherally Belted Complex Laminate Construction reinforces Arai's cLc shell for more strength and weight reduction adding more to Arai's accumulation of incremental improvements over decades of experience to pursue gains in protection.							•		
<b>PB-cLc<sub>2</sub> Shell</b>   The Peripherally Belted Complex Laminate Construction shell is the accumulation of years of Arai's experience in shell making, handmade with over 25 individual pieces bound by Arai's new proprietary resin and reinforced by the Peripheral Belt.									
<b>cLc Shell</b>   The Complex Laminate Construction contains a specially designed felt (AR MAT) that is sandwiched between the two layers of Super Fiber Laminate. The felt acts as a reinforcement layer without adding significantly to the weight of the helmet.									•
VAS Shield Mechanism   The Variable Axis System (VAS) incorporates a moving pivot point allowing for a lower shield mount position. A dual-function lever releases the cover plate and shield pin for quick shield removal.	•	•	•	•	•			•	
VAS Shield Demist Latch   This innovative latch captures and securely holds the shield closed to help resist unexpected opening. The demist function allows the shield to be opened just a bit while still fastened and is larger to allow for intuitive and seamless shield operation.	•	•	•	•					
VAS Max Vision BV Shield   This shield features brow vents and a cavity to receive the Pinlock lens insert and provides better visibility for all types of riding.		•		•					
Pinlock Lens Insert   This clear fog mitigating lens insert is made of a special material by Pinlock to absorb moisture and enhance visibility in all conditions.		•		•	0	0			
Pro Shade System   This shield system offers a convenient external shade to block ambient light, while functioning as an aerodynamic peak in the raised position.	0	0	0	0	0		(	•	
ES Chin Curtain   This curtain accentuates the egg-shaped form of the shell and blocks turbulent air from entering the underside; works with pull-down spoiler.		•	•	0					
Pull Down Spoiler   Helps to minimize wind noise and turbulence, this movable piece under the chin also aids with the extraction of hot air from the rider's face.		•	•			•			
FCS® Cheek Pad Design   Arai's patented Facial Contour System adds just the right amount of support by moving out of the way when putting the helmet on, but once the helmet is on, cradling the rider's face and jaw area.	•	•	•	•	•	•	•		
5mm Peel-Off Layer   This removable layer gives the rider a micro-fitting option to easily adjust the cheek pads to one size thinner cheek pad.		•	•	•			•	•	
Emergency Release Cheek Pads   These allow for easier access to an injured rider by sliding out via integrated pull tabs built into the cheek pad underside.		•	•			•	•		
Removable Neck Roll Pad   This removable pad allows easier cleaning and replaceability along the rider's neck for sound insulation and comfort.		•	•	•			•		
Anti-Microbial Interior Lining   Exclusive liner with anti-microbial material stays fresher between cleanings.		•	•	•			(	•	
Dry Cool Interior Lining   For all day comfort this moisture wicking material keeps you cool and minimizes the buildup of sweat.									
Brushed Nylon Interior Lining   Very comfortable soft material provides all day comfort for those long rides.									
Outward-Flaring Hyper-Ridge   Flares out to provide a larger opening for easier ingress and egress; the reinforcement band circles the bottom of the shell adding strength and lowering the helmet's center of gravity.	•	•	•	•	•			•	
Hyper-Ridge   The reinforcement band circles the bottom of the shell adding strength and lowering the helmet's center of gravity.						•	•	(	•
Brow Vents   Gives you more cooling air in the temple and forehead area without holes in the critical forehead section of the shell or impact absorbing liner.	•	•	•	•	•	•	(	•	
Cowl Exhaust Vent   Exhausts heat more efficiently; these vents are sculpted into the rear shell shape for optimal aerodynamic characteristics.	•	•	•			•	•	•	
Diffuser Type 12   These newly developed air diffusing top vent covers are 20mm longer than the previous design to improve stability and airflow.								•	
QVF Series Top Vents   The three-position front intake duct provides optimal cooling and aerodynamics.		•		•					
QVR Series Top Vents   This rear exhaust duct features a three-position sliding lever and stabilizing aerodynamics for a smoother ride.		•		•					
Chin Vent Shutter   This closable gate in front of the center vent allows the rider to block out extreme weather conditions. Can be opened in warmer weather.	•	•	•		•	•	•		
Removable Peak   This adjustable sun-blocking piece shields your eyes from glare.						•		П	•













### WARRANTY | WARNINGS

### **ARAI'S 5-YEAR WARRANTY**

V X ...

All Arai helmets are warranted against defects in materials and workmanship and are serviceable only for the properly fitted first user for five years from date of first use, but no more than seven years from date of manufacture. It should be replaced within five years of first use. Throughout the years, Arai has recorded the manufacture date on helmets in a standard month/year format (00/00).

While the manufacture date has always been recorded on the chinstrap, as it is a permanent part of the helmet, the position on the chinstrap has changed over the years for various reasons. Most recently, the date-of-manufacture can be found etched on the metal D-ring on the chin strap.



DATE OF MANUFACTURE LASER ENGRAVED ON METAL D-RING BUCKLE

### EVEN A HELMET AS GOOD AS AN ARAI WON'T LAST FOREVER

Like most major helmet manufacturers. Arai subscribes to the Snell Memorial Foundation benchmark of five years as the suggested usable lifespan of a motorcycle helmet. Why? Think of a helmet in terms of your body. No matter how good it may look, or how well you take care of it, age still takes its toll. Even with minimal use, a helmet is affected by things like the acids and oils in sweat, haircare products, cleaners, polishes, pollution. exposure to UV rays, etc. At about the five-year mark, helmet interiors begin to show wear and/or deterioration, which should serve as an alert to its overall condition.

The helmet's fit may begin to feel a little "loose," not as snug as it once did. This, as well as unseen aging and deterioration of the EPS liner and fiberglass shell can affect the helmet's ability to perform as it was originally designed in an impact. If a helmet suffers an impact and any doubt exists as to its further ability to protect, it should either be returned to the manufacturer for competent inspection or discarded and replaced.

These are the reasons to replace your helmet after five years. Of course, if your helmet becomes less than snug in fit, or damaged, it should be replaced before the five-year mark.

### WARNING: IF IT SOUNDS TOO GOOD TO BE TRUE. IT PROBABLY IS!





Common sense suggests that you can't buy a brand new, real Arai for \$200 or less. So, if you see an advertisement that appears to defy logic, walk away and hold onto your money.

We don't have eyes on the entire internet, but we've heard stories and even found a few examples of unscrupulous websites offering Arai Helmets at ridiculously low prices. Most of these sites use real Arai images, without license or permission, to lure you in. Some then switch to an image of the real helmet you're buying hoping that you won't notice. Check out the above photos of a real Arai next to a fake sold online.

Additionally, we have heard of other sites that look legitimate and show dozens of real Arai images, offering crazy low prices – but for that price you have to wait for a special bulk purchase direct from Arai. They take your money and tell you to wait. Eventually, after months, you get tired of waiting and press for information at which time you are told that Arai wouldn't make the deal. It is then up to you to get your pre-payment back.

Arai produces to order, through established wholesale distributors only, who then sell through established retail dealers from stock.

Therefore, we encourage everyone to be alert and use common sense when purchasing an Arai.

### **WARNING** | BUYING AN ARAI HELMET ONLINE

Online shoppers take care to be sure they are dealing with an authorized Arai e-commerce retailer. These dealers have agreed to follow guidelines to help customers make the best purchase possible — even long distance. To find an authorized Arai dealer, visit araiamericas.com.

### **WARNING** | BUYING FROM OTHER COUNTRIES

Each world market requires different helmet standards. Never purchase helmets from outside your market as they may not comply with legally required standards for your country, not to mention the fact that their interior fit may not have been designed for your market and as a result may be very uncomfortable.

Helmets purchased from outside a given market are not eligible for after-sales service or warranty claims. Arai and its authorized agents cannot endorse the continued use of a noncertified helmet.

**WARNING** | No helmet can protect the wearer against all foreseeable impacts. Nothing is a substitute for safe riding practices.



All Arai motorcycle helmets meet or exceed Snell standards in addition to mandated DOT standards. For further information on the Snell standard, check smf.org.

### **SHIELD SYSTEMS**

### **VAS-V BROW VENT MIRRORED SHIELDS**

For VAS faceshields on the Corsair-X, Signet-X, Quantum-X, Defiant-X and Regent-X.









OR RED VAS-V MIRROR GREEN

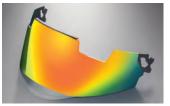
VAS-V MIRROR BLUE

VAS-V MIRROR SILVER

### RAM-X SHIELDS SYSTEM | VAS-Z



VAS-Z LONG-SHADE MIRROR BLUE



VAS-Z LONG-SHADE MIRROR RED



VAS-Z LONG-SHADE MIRROR SILVER



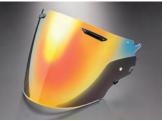
VAS-Z LONG-SHADE SMOKE



VAS-Z MIRROR BLUE



VAS-Z MIRROR GREEN



VAS-Z MIRROR RED



VAS-Z MIRROR SILVER



VAS-Z LIGHT SMOKE



VAS-Z SMOKE

### **XD-4 ANTI-FOG SHIELD**

XD-4 brow vent shield with anti-fog laminated film available in clear, light smoke, and dark smoke.



ANTI-FOG CLEAR



ANTI-FOG LIGHT SMOKE



ANTI-FOG DARK SMOKE











### SHIELD SYSTEMS

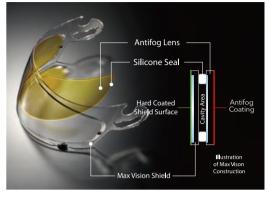
### VAS-V MAX VISION BROW VENT SHIELD

For VAS faceshields on the Corsair-X, Signet-X, Quantum-X, Defiant-X and Regent-X. Three shield options available (clear insert sheet only).









NOTE: A faceshield with pins, or a Max Vision Shield, is necessary for the installation

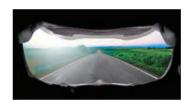
### PRO SHADE SYSTEM | VAS-V

SMOKE (INTENSE SUNSHINE)



CLEAR INSERT SHEET

raised and lowered by the rider depending on riding conditions. The external lens is designed to break away easily in the event of an impact and does not compromise the energy management capability engineered into the helmet shell.





The Pro Shade System not only offers a quick, convenient shade to block ambient light, but also acts as an aerodynamic peak to block sudden bursts of light with a subtle dip of your head, allowing your hands to stay on the bars, right where they need to be.

### **ENHANCE YOUR RIDE**

The Arai Pro Shade System shields are available for either the VAS or SAI shield system and will replace the faceshield of any current Arai full-face street helmet.

### ARAI PRO SHADE SYSTEM FOR VAS EQUIPPED ARAI **HELMETS**

The Arai Pro Shade System for VAS-equipped Arai helmets (Corsair-X, Signet-X, Quantum-X, Defiant-X, and Regent-X) offers a quick, convenient shade to block ambient light, but also acts as an aerodynamic peak to block sudden bursts of light with a subtle dip of your head, allowing your hands to stay on the bars, right where they need to be.

When raised, the external lens works like a peak, minimizing glare when the sun is higher in the sky. Lowering the lens reduces the amount of light entering the helmet, which is particularly beneficial when the sun is lower in the sky. The lens can be quickly and easily







### PRO SHADE SYSTEM OPTIONS

The Pro Shade System can be purchased either as a complete system, with the standard (80mm tall) dark smoke external lens installed, or just the Pro Shade ready base shield with pivot mechanism to allow you to purchase your external lens of choice (sold separately).















The Arai logo is a registered trademark of Arai Helmet, Ltd. Arai helmet features and graphic designs are the intellectual property of Arai Helmet, Ltd. The marks and names Air-Wing, Classic, Corsair, Defiant, Regent, FCS, Hyper-Ridge, Quantum, Ram-X, Signet, VAS, XD and VX-PRO are registered trademarks of Arai Helmet, Inc.

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