

CES 2025: Italdesign's Quintessenza Concept Showcases Legendary Company's Design Vision and Innovative Solutions

- Quintessenza: a distinguished design with advanced technical solutions
- Italdesign USA: vertically integrated services to provide mobility solutions across North America
- A new partnership with Elaphe integrates innovative in-wheel motor technology on the Quintessenza

After its U.S. debut at the Pebble Beach Concours d'Elegance in August 2024, Quintessenza returns under the spotlight at CES 2025 in Las Vegas. Combining beauty with sustainability, technological innovation with functionality and flexibility of use, Quintessenza acts as an ambassador of Italdesign's skills, decades of mobility experience, and direct support to the American market thanks to the company's operational Italdesign USA subsidiary in Bloomfield Hills, Mich.

The strategic agreement with Elaphe on the occasion of Quintessenza's return to the United States is showcased through in-wheel electric motors fitted on the Quintessenza, technology engineered to help increase high performance, power, and usage and application flexibility.

Quintessenza Design Philosophy

The quintessential relationship between humans and nature occurs in many forms. The Quintessenza design philosophy is rooted in a human-centric approach. The project revolves around humans as the central figures, serving as both creators and users. As creators, humans are responsible for the show car's design, development, and construction. As users, Quintessenza connects the various elements of nature: water, earth, fire, and air. In this conceptual yet very tangible journey, humans emerge as the stars of their own world and determine how to interact with it.

Drawing on more than five decades of Italdesign heritage, the Quintessenza's design approach was inspired by the concepts of flexibility, freedom, sportiness, and duality in concept and architecture. The design is created by humans for humans. The vehicle embodies an Italian design that serves as a universal, boundless form of expression, seamlessly blending technology and human-machine interaction and connecting the car's occupants with the outside world.

The Quintessenza caters to the desires and requirements of free-spirited, youthful individuals seeking a vehicle for urban travel with their families, but who also like to get

away and explore nature. Positioned to serve a global market, this multi-role vehicle falls within the performance pickup and sport activity vehicle categories.

The Quintessenza also exemplifies Italdesign's new design philosophy, based on a modern interpretation of the concepts that have inspired the company for more than 55 years. Italdesign has consistently embraced the "beautiful and functional" principles, a human-centric approach combining Italian style with universal appeal and daily drivers' capabilities.

Exterior

Italdesign's Quintessenza has two souls. It embodies both the dynamic prowess of a GT and the versatile adaptability of a pickup truck, a potentially groundbreaking concept among current offerings. The challenge was to reimagine the automotive world's well-established architecture, proportions, and style and seamlessly integrate them into a fluid and dynamic design that is realistic and functional.

The exterior establishes a distinct yet balanced conceptual separation between the front and rear of the Quintessenza, accentuating both its aggressive stance and proportions. This emphasizes its dual nature as a sports car with off-road and load-bearing capabilities.

The front takes the sporty approach of an Italian GT supercar while also providing ample seating for 4 passengers. Its lines are muscular, yet tight and fluid. The rear design expresses functionality and usability with features commonly found on pickup trucks and off-road vehicles.

In this dual vehicle architecture all design elements seamlessly merge, evident in the proportions, the generous overhangs (especially in the rear), and in the unambiguous lines which are sporty but definitely practical.

Its front nose displays an aggressive and significantly sporty character, and the muscular design continues on the fenders and front bumper, which integrates form-follow-function active aerodynamic systems. In fact, a large double-rod-supported splitter with an active aerodynamic function extends from the bottom of the bumper. The splitter stays in a neutral raised position during off-road or low-speed driving and progressively lowers during high-speed sports driving to maximize downforce and simultaneously increase cooling airflow.

In a contrast color and made from natural fiber composite laminate elements, the two front fenders exude a strength and muscular presence that is rarely seen in traditional GT models, despite their inclusion of aerodynamic features typical of sporty racing-

inspired designs. The three-quarter view reveals upper furrowed fender profiles that end at the turn signals and help optimize side aerodynamics.

The large bonnet contains the entire aerodynamic flow control system (with airflow originating up front), the cabin ventilation system, and a spacious luggage compartment making best use of its EV architecture standards.

A distinguishing feature of the front is the bar headlight assembly. Outlined by the front trunk lid, the headlight assemblies feature a horizontal bar design, strongly inspired by the 13 vertical lines of the illuminated Italdesign logo, and include daytime running lights function that also serve as turn signals. The fenders also house the low- and high-beam headlights, consisting of two vertically-arranged bulbs.

Additionally, the strong muscularity of the top of the sides of the front trunk lid – a trademark of GT models – and the prominent front fenders with overhang create a connection with the car's rear, which leaves behind the sporty attitude in favor of flexible practicality.

With a 3240 mm (127.6 inch) wheelbase, the generous sides offer large, electrically-powered scissor doors. The doors are hinged to the A-pillar and run along the entire length of the sides to the C-pillar. A striking sill defines the lower part of the side and seamlessly connects the front and rear fenders, which frame 24-inch wheels featuring rims specially-designed for the Quintessenza and all-terrain tires.

Up top a large light-sensitive glass surface adds a distinctive aesthetic, extending from the windshield to the rear hard top creating the impression of being immersed in the scenery, also thanks to the backward position of the front cross member.

The C-pillars give the rear of the car a strong sporty and aerodynamic connotation, running contrary to the conventional square body design of classic pickup trucks. The view from above highlights this fierce design, revealing the unique shape and generous size of the removable hard top.

The theme of the four elements found on the front (with the fifth element—the Italdesign logo—in the center) is also referenced in the rear of the vehicle. A large lightbar extends across the width of the car's rear, taking inspiration from the vertical bars on the Italdesign logo. The text part of the logo is set in the middle. The turn signals are at the two ends of the lightbar. The two vertical elements of the reverse and brake rear welcome lights can be seen in the center of the rear trunk lid and lower part of the bumper. The brake lights are on the back of the two fenders and arranged like the low- and high-beam headlights, with two vertical bulbs on each side for the brake and rear fog light functions.

The large, partially-glazed hard top is fitted at the level of the C-pillars. It covers the rear trunk, follows the contours of the rear wheel wells and ends at the large tailgate, giving the car a very sporty style. Similar to the solutions on Targa-style sports cars, the hard top is completely removable in one piece and is replaced by a soft top, if needed. The rear also has a large electrically-powered tailgate hinged to the base of the bumper, giving easy access to the bed and to the two rear seats, which can be rotated 180 degrees to provide rear-facing panoramic view for a premium “stargazing” experience and feeling of connection with nature and the outside world.

Two aerodynamic fins that integrate the ADAS advanced driver assistance systems are present on the upper back of the roof, at the level of the C-pillars. They map the surrounding environment when the satellite signal is poor and offer multifunction lights indicating the car’s driving mode and braking when the hard top is removed.

Interior

Simple lines and clean surfaces define the interior. Similar to the exterior, the design is driven by a human-centric approach, usability, maximized efficiency, and the “never lost” concept providing a clear view of where you are headed in any driving circumstance.

The floating central dashboard extends through the door panels all the way to the back of the cabin and features three horizontal panels encircling the cabin. The dashboard’s main panel along the internal belt line is made of marble-based fabric and integrates air conditioning and human machine interface controls. Controls are hidden under the fabric and become visible only when in use through a projection system, accentuating the surface’s sleek design.

The top panel has a floating “bridge” suspended right below the windshield that provides supporting information such as a compass, dynamic functions, and warnings. The bottom panel integrates a projection system – this, too, hidden discreetly under the fabric – for the navigation display. The bottom part of the dashboard’s horizontal panel hosts the door opening controls. The air conditioning vents are housed in the dashboard’s bottom panel and can also provide ambient aromas to create a multi-sensory experience. With a clearly sports configuration, the steering wheel incorporates the main car controls, including the artificial intelligence interface, selector, modes, vehicle information, and more.

The vehicle interface system is on the top of the steering column. Numerous smartphone models fit horizontally in this dock, serving as the driver’s interface and displaying standard dashboard information like driving mode, speed, turn signals, battery level, date,

and time, etc. The driver can customize this information through the smartphone settings. Most on-board features can be customized via the user's smartphone and the driver's specific driving and usage preferences are updated once the smartphone is linked to the car.

Italdesign created a unique smartphone app for the Quintessenza that includes all of the vehicle's controls and the option to customize the driving experience, change the interior lighting, choose a preferred audio track and scent, and allow consumers to purchase accessories made especially for the Quintessenza.

A large console occupies the central part of the cabin, joining the four seats. Innovative haptic technology embedded in the upholstery integrates a number of vehicle controls into the front area of the console. These consist of the infotainment system's volume control as well as other interior controls such as those controlling the sensory experience and the various interior lighting. A large organizer and a refrigerated compartment are located on the back of the console.

The electrically-powered console slides along the length of the vehicle and are easily accessed by the four occupants, whether these are in the standard driving position or the two back seats are turned for a rear-facing view.

The two back seats are one of the main concept features of the Quintessenza. Thanks to their sporty symmetrical design on the longitudinal axis, they can be electrically and independently folded toward the back of the vehicle to allow passengers to fully enjoy the natural surroundings during a stop on a road trip in nature. With the hard top off and the back seats turned, travelers can create an open-air stargazing or camping experience.

The two ends of the seats adapt dynamically to comfort modes, reclining all the way to chaise-lounge position, and a waterfall light enhances the experience. When the two back seats are facing the rear of the vehicle, the central console slides automatically back to give access to the organizer and the refrigerated compartment.

UX-UI

Drawing inspiration from the "never lost" concept, the Quintessenza's UX-UI concept provides seamless integration between the occupants and the external environment. This means the driver has control of the vehicle at all times, including — and this is crucial — the navigation system. A concept that essentially envelops passengers with a continuous projection that starts at the dashboard's central panel and extends to the side panels and the rear compartment keeps them informed about the vehicle location and destination.

Thanks to the presettings on the smartphone and the vehicle's own localization system, the precise location of the points of interest, stylized graphics of the environment, and navigation information are displayed through a variety of internal projection systems tucked under the upholstery.

The Elaphe Quad-Motor In-Wheel System

Italdesign has partnered with Elaphe, an in-wheel technology pioneer, to integrate Elaphe's advanced propulsion architecture into its Quintessenza concept vehicle, another example of Italdesign's visionary and collaborative approach to innovative automotive design and engineering. With more than 20 years of industry experience, Elaphe has developed and integrated more than 30 e-machine designs and completed over 100 on-vehicle integrations across various vehicle segments.

The quad-motor in-wheel system fitted on the Quintessenza showcases the scalability of Elaphe's latest generation of Elaphe Sonic family in-wheel propulsion technology (21-inch Sonic.1 fits a 24-inch rim) with unmatched power-density directly in the wheels. Performance is significantly enhanced with this system, almost tripling the power output compared to the vehicle's original three-motor setup. It also helps the Quintessenza shift effortlessly between off-road driving conditions and a sporty on-pavement drive thanks to high-precision individual wheel control, demonstrating unmatched versatility in electric mobility and blending practicality with a more engaging driving experience.

20 times faster wheel control compared to the previous on-axis motors, enables improved traction with Elaphe traction control, energy regeneration, sharper cornering stability, and a more engaging driving experience than conventional solutions.

The other Elaphe in wheel motor features include:

Vertical motion control uses the suspension's virtual pivot point, which generates vertical force on the chassis when motor torque is applied. With a low rotational inertia and high torque control responsiveness on the outer diameter of the wheel, it is capable of delivering up to 500 Nm/ms in both directions. This allows chassis control during dynamic cornering situations, improving vehicle posture and stability. Such a feature could replace or complement various conventional semi-active and active suspension systems, thus improving vehicles dynamics and simplifying a vehicle's architecture while helping reduce vehicle production costs.

Elaphe Vibroacoustic technology (patent pending) uses proprietary inverter software to control electric motor vibrations, transferring them to the vehicle's structure to produce

authentic motor sounds and vibrations. This feature generates sound inside and outside the vehicle cabin without conventional sound speakers and allows for customizable sound profiles tailored to different driving modes, unique sound signatures for brand identity, and essential safety functions like vehicle awareness and reversing alerts.

Vibrational haptic feedback uses the same technological principle as vibroacoustic technology but works in a different frequency range. It can be used for safety or driver engagement and assistance functions, immersing the driver deeper in the driving experience or informing them about the surroundings, road conditions or current state of the wheel and tire (lane assistance, wheel slipping, driver alertness warnings, etc).

TECHNICAL SPECS

BODY

Length	5561 mm (218.9 inches)
Height	1580 mm (62.2 inches)
Width	2200 mm (86.6 inches)
Wheelbase	3240 mm (127.6 inches)
Front overhang	1003 mm (39.5 inches)
Rear overhang	1318 mm (51.9 inches)
Body	Lightweight Aluminum Structure
Seats	2+2
Ground clearance:	adjustable 200-280 mm (7.9 – 11 inches)

POWERTRAIN (estimated values)

Battery	150kWh/800V
Power	1600kW
Range	750 Km (466 mi)
Acceleration	0-100 Km/h < 2,5 seconds < 2,2 seconds with high performance tires
Drivetrain	4x in-wheel drive architecture (2x300 kw front + 2x500 kW rear)

ITALDESIGN GROUP PROFILE

Italdesign is a state-of-the-art customer-centric, method- and fact-based company operating in Styling, Engineering, Production and New Mobility Solutions. Headquartered in Moncalieri, Turin, Italy, with over 1,000 employees working in Italy and abroad, for more than 50 years, it has been collaborating with major and emerging national and international players in the mobility, product, and transportation design world.

Besides being a proven World Class coachbuilder, Italdesign has become a system developer within automotive Electronics such as Infotainment, ADAS or High Voltage Battery Systems. Open to partner in solutions for Software Devined Vehicles SDV.

Italdesign can provide an organic and integrated set of methods, techniques and tools aiming to the industrialization of new products and offers services for every phase of the process that leads from the initial idea to series production, including the turnkey process.

From consultancy to creativity, from engineering to production of pre-series prototypes and street-legal ultra-limited series, project management, testing and validation activities, stretching to homologation, legal responsibility for product release and assistance during start of series production of the finished product. Not to mention the mission of being an incubator and an acceleration platform for innovative technologies and radical prototyping: Italdesign is a reliable and expert partner and enabler, and a hub combining first-rate services with cutting-edge technology and strategy partnerships.

The company has been awarded with more than 200 design awards worldwide and has been named Top Employer Italy over the last years since 2016.

ITALDESIGN USA LLC COMPANY PROFILE

Bringing Italian Excellence to the Heart of the American Automotive Industry.

Headquartered in Bloomfield Hills, Mich. — in the heart of the Motor City area — Italdesign USA, a subsidiary of Italdesign LLC Group, offers a full spectrum of automotive services tailored to the diverse needs of the North American automotive market. Whether partnering with established manufacturers or pioneering startups entering the automotive sector, Italdesign USA provides end-to-end solutions, including creativity, design, whole vehicle development, advanced electrics and electronics development, prototype production, integration, testing, and validation.

Its fully integrated, turnkey approach enables Italdesign USA to support clients at every stage of their journey. From a blank sheet of paper to production-ready vehicles, Italdesign USA offers seamless support through each step of the process. With creativity embedded in the company's DNA and unmatched engineering expertise, Italdesign USA delivers the comprehensive expertise that has made the Italdesign Group a unique name in the automotive sector for over 55 years.

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