World Debut at the Geneva Auto Show 2002

Double your pleasure, double your fun - Rinspeed Presto

RINSPEED DESIGN, the Swiss creative source for innovative automotive concepts and fantasies, presents a very special attraction on the occasion of its 25th anniversary:

RINSPEED PRESTO.

The Rinspeed Presto transforms itself in a few seconds from an under-3-meter long two-seater roadster - presto! - into a 3.7-meter long four-seater with plenty of room for the rear-seat passengers. The additional space can also be used as a pick-up bed for cargo when the rear-seat backrests are folded down.

The magical trick

This almost magical transformation is made possible by a centrally located electric motor, which stretches the vehicle with the help of two mechanical screw-and-nut gears by exactly 746 millimeters to its full extended length of 3.74 meters. The longitudinal members run on low-friction precision rollers and disappear like a drawer in the rear of the floor pan. Despite its variable length the engineers succeeded in designing the adjustable Presto floor pan with the torsional rigidity necessary for a roadster. To ensure absolute operational safety the extension mechanism also features self-locking safety latches.

The environment friendly propulsion

A four-cylinder, 1.7-liter common-rail turbo diesel engine in ***dual-fuel configuration,*** based on a Mercedes-Benz engine, provides future-oriented and highly environmentally friendly propulsion. The engine runs on a mixture of natural gas and Diesel fuel at a 40 to 60 ratio. Natural gas is a very clean-burning fuel, which consists almost entirely of methane with sulfur content near zero. However, since a Diesel engine has no spark plug to act as an ignition source, operation on natural gas alone is technically impossible.

The operating principle of the dual-fuel engine is simple: Natural gas is injected into the intake air of the engine. Just like in the production engine the Diesel fuel is injected into the combustion chamber where it ignites a mixture of natural gas and air rather than just plain air.

To configure the turbocharged in-line engine for dual-fuel operation, a number of modifications are required, including installation of a tank for the natural gas and a gas-injection system. At the heart of the modifications is a reprogrammed engine management system. Should the system malfunction it reverts to the standard Diesel mapped ignition, thus offering the same level of reliability as the production car.

This technology has enormous potential for reducing exhaust emissions and fuel consumption. Emissions of nitrous oxides and carbon dioxide can be lowered by as much as 10 percent compared to the already extraordinary low level of the production engine. Particulate matter emissions can be lowered by up to 40 percent. With emissions this low the dual-fuel engine easily meets all existing and currently planned emission limits. Fuel consumption can be improved by up to 10 percent compared to a production engine.

The dual-fuel engine is compelling proof that environmental protection and driving fun can go hand-in-hand: The four-valve engine develops maximum power output of 120 hp / 88 kW at 4'200 rpm, and produces maximum torque of 224 Nm at just 1'600 rpm. Performance is boosted accordingly: The 865-kg quick-change artist accelerates from 0 to 100 km/h in approximately 10.5 seconds and reaches a top speed of approximately 180 km/h.

Give me a smile

From the first glance the smiling face of the Presto is universally appealing. The contoured drooping hood sports a mouth-shaped front grill whose upturned corners definitely appear to signal 'Hi – I am in a good mood.' The body of the Presto itself tapers off into a front spoiler, a bumper in the traditional sense of the term is non-existent. The headlights of the Presto come from the Mercedes C-Class sports coupe.

In its role as a quick, highly maneuverable city speedster the Presto appears stocky yet sporty, thanks to extremely short front and rear overhangs. With a wheelbase of 1'750 millimeters and an overall length of 2.99 meters it can fit even in the smallest parking spaces.

As a four-seater with a wheelbase of 2'496 millimeters the roadster appears much sleeker, poised to strike. The ***Remus*** side pipes are more than just a sporty styling element. They also allowed the engineers to avoid a variable and complicated exhaust routing. During the transformation process the body glides past the side pipes with interference. Since the Presto does not have any doors, the upper side pipes are designed to swing out and make entering and exiting the vehicle easier for the little ones.

The entire body of the Presto consists of Pre-Preg-Composite, a modern plastic material rarely used in vehicle design for cost reasons. It offers extraordinary stability at comparatively low weight.

Show me the way

The creators of the Presto came up with a very special solution for the vehicle rear and front: Instead of conventional light signals the Rinspeed Presto informs other drivers in writing about the intent of its driver. The innovative lighting technology with powerfully bright LED lights is contributed by ***in.pro***. During braking the international word 'Stop' appears on the brake lights, and during turns 'Turn' appears on the appropriate signal. With lights turned on, the taillights proclaim the vehicle's name, 'Presto', to those who follow. A color camera integrated into the taillights reveals any potential obstacles to the driver in the rearview mirror.

The Presto shows its noble heritage in the interior, too. The dashboard comes from the A-Class and the seats are from the smart. The fiery-orange interior is as versatile as the body. The comfortable two-seater turns into a spacious pick-up or four-seater roadster at the push of a button. The rear-seat passengers can enjoy more leg room than in an A-Class with long wheelbase. In addition, the rear seats can be folded down individually and make almost any interior configuration possible.

Interior reflections

Exclusive reflective upholstery materials from ***Xmobil*** create an eye-catching yet comfortable atmosphere. Entertainment in hi-fi quality is provided by a ***Sony*** stereo system whose sound is transmitted via wireless headphones. ***Foliatec*** contributed many clever styling elements for the interior as well as the exterior.

A Meta-Sat anti-theft system gives thieves no chance. With GSM and satellite wireless communications the Rinspeed Presto can be traced, located and immobilized by remote control. The Meta-Sat system is combined with a keyless-entry system from ***in.pro.***, which deactivates the security system from a distance of 10 feet.

Tires and more

The Rinspeed Presto runs on one-piece ***Antera*** wheels (7.5x17 with a offset of 17 mm in front, 8.5x17 with 52 mm offset in the rear), on the front axle individually suspended on custom-developed ***Eibach*** springs. In the rear a semi-independent suspension also feature custom ***Eibach*** springs. To complement the low-emission nature of the Presto, Rinspeed designers chose SportContact 2 tires by ***Continental*** (205/50 front and 235/45 rear), which underscore their fuel-saving bionic design with green tire treads.

Swiss made

Rinspeed-C.E.O. Frank M. Rinderknecht (46) used highly advanced technology and a Swiss-based network of automotive and natural-gas specialists (Gasverbund Mittelland AG and SVGW) for his project. Although there is no automobile production in Switzerland to speak of, there is a very active automotive supply industry there. Many highly innovative prototypes have been developed and manufactured in Switzerland. The competent team translated initial sketches into a fully functional prototype in just four months.

Esoro

Swiss based ESORO is an innovative and independent engineering company that delivers solutions for the automotive industry. The company is well known for its innovations in the areas of composite materials, production technologies, lightweight construction and fuel cell vehicles. ESORO's prototypes are renowned for their originality, quality, design and fuel efficiency. Looking back at a number of impressive prototypes - the last one being a Swiss developed Fuel-Cell-Vehicle called “HyCar”-, ESORO has proven their engineering competence. At this time, ESORO develops a new and very efficient technology for thermoplastic composite materials for the automotive and aeronautical industries.

ESORO was hired already the third time as general contractor for the entire project, including for project management, engineering, design and manufacturing of the Presto. ESORO completed the challenging task on schedule with the help of three of its best Swiss-based suppliers.

Schwaller Movement Engineering

Schwaller Movement Engineering - a supplier of prototype parts and experimental vehicles to the Sauber Formula 1 team and German motor sports and vehicle manufacturers - was commissioned for the complex structural chassis modifications and metal fabrications.

Protoscar

Protoscar SA - based in Southern Switzerland - oversaw the design and animation on a sophisticated 3D CAD system for the Presto. Protoscar is specialized in 3D design, animation and conceptional work in the automotive sector and for other industrial fields.

Logos

Logos Advanced Composites manufactured the moulds and composite parts of the Presto. Logos is specialized in the manufacturing of high quality composite parts in the Prepreg-process.

GVM - the largest regional Natural gas company of Switzerland - partners with Rinspeed

GVM which stands for „Gasverbund Mittelland“, the biggest regional gas transport company in Switzerland, teamed up with Rinspeed.

The natural gas vehicle (NGV) version shown by GVM and Rinspeed includes the concept car Presto, a Mercedes-Benz 170 CDI A-class and the GVM monovalent SMART.

The Presto is driven by a natural gas engine uses the dual fuel natural gas diesel combustion process. The same converted engine provides power to the A-class Mercedes-Benz in a clean and environmentally friendly way. The GVM NGV SMART, runs on natural gas only (monovalent mode) and has a range of about 300 km.

Natural gas as an alternative fuel is becoming more and more popular in Switzerland too.

Natural gas is a clean burning, environmentally friendly fuel and offers a sustainable alternative for vehicles. In times where the intensity of travel increases and goes more and more towards individual motorization the emissions of this sector are causing levels of pollution which can no longer be tolerated (c.f. Italy in January). For the time being only natural gas offers a valuable and practical alternative with an infrastructure in place. Natural gas is a fuel for the future, present today. Because of its simple chemical structure and its combustion properties natural gas is an inherently clean fuel. There is a big potential to massively reduce the emission of internal combustion engines i.e. soot, particles, nitrous oxides, carbon dioxide and hydrocarbons responsible for smog and ozone formation as well as global warming. Heavy duty natural gas engines produce less noise than their diesel analogs. As an additional benefit the use of natural gas diminishes the oil dependency of the fuel supply. Today natural gas is used predominantly in stationary applications like space heating. But you can drive on natural gas as convenient as with diesel or petrol.

The future of mobility belongs to natural gas.

The engines, power trains, vehicles are serial products offered by many automobile manufacturers. Refuelling is easy and possible at more than 40 refuelling sites all over Switzerland. The refuelling infrastructure will be continuously expanded so we will see fifty public stations at the end of 2003. Range is no problem. Most natural gas cars are bivalent they can run on natural gas or petrol anyway.

A word from our most important supporters: our partners

Antera

Antera took up the challenge of producing special wheels with high-gloss rims to carry these Continental tires. An Italian company, it is famous for its avant-garde wheel designs and for the unusual technical principles which it adopts. For example, the tire valve is hidden behind the hub cover made of titanium so that the wheel's overall appearance is not affected by the valve protruding from the rim.

Continental

Most motorists say they enjoy being at the wheel of their car and they especially like sporty driving. At the same time the number of more powerful cars is also rising. Continental's new tyre, the **ContiSportContact 2**, is specifically designed to meet the demands of drivers of fast cars such as Porsches, the Mercedes SLK or BMW Z 3. And Germany's leading tyre and suspension specialist expects the market for performance tyres able to handle speeds of up to and over 240 km/h (150 mph) to grow by approximately 40% in the course of the next five years.

Eibach

With regard to suspension technology, the company Eibach, one of the leading suspension components manufacturer supported Rinspeed with the Presto. The company Eibach which is specialized in suspension technology and works for the most important motor sports teams worldwide - among others also for the most part of the Formula 1 field - developed the springs and the stabilizer bars for the Rinspeed Presto. Its suspension developments gave Eibach a first-class name worldwide. Several decades of experience in the world market have enabled Eibach to offer, today, complete suspension systems that consider the interrelating of the most important suspension components - spring, damper, stabilizer bar - as an interactive function, a very important aspect. The Presto is the ideal platform to demonstrate Eibach’s capabilities.

Folia Tec - innovative partner

Presto - the snappy city car which by the push of a button can be extended by 75 cm and transformed into a four-seater roadster/ pickup - is full of surprises. Numerous FOLIA TEC® products from the latest range of the German Carstyling Factory contribute to the success of this innovative creation by the Swiss concept car studio Rinspeed: with PEDAL-Set Colorline, silver BRAKE-CaliperLacquer, SHORT-SHIFT Fiberstyle, ALU-RaceGrid, DOOR-Pins, STEP DoorSillCovers, ALU LicencePlateScrews, INTERIOR Colorspray, INSTYLE-InteriorMirror and NEON-Lights in all variations, the concept car features a comprehensive selection of cool FOLIA TEC® ideas for individual carstyling. So the Mercedes A-class is „presto, presto“ transformed into a personality which is certain to cause a sensation at the Geneva Motor Show.

FOLIA TEC®, the Carstyling Factory from Nuremberg, was founded more than 20 years ago as a supplier of individual carstyling accessories: AutoglassFilms, Exterior and Interior Styling Accessories, Wheel Accessories, Engine Design, Neon and Special Effects. The do-it-yourself products are always an innovative step ahead of current trends. International success is ensured by business partners around the globe.

In.pro. - "Everything that makes cars fun …"

Following a successful involvement in the last Rinspeed concept vehicle, the Advantige R^{one}, the north German automobile accessory specialist in.pro. is delighted to be providing support to Rinspeed for the appointments of the new concept car - the Presto - as well. in.pro has stood for

high-quality, innovative automobile accessories in the sectors design, interior, comfort, safety, and fun for more than 20 years. Technology freaks and aesthetes are equally enthusiastic about the more than 4'000 in.pro. products, for in.pro.'s highest priority is the joy the customer has with his or her car. For a very reasonable price, everybody can enhance their vehicle in an optical (e.g. with design products as clear glass taillights), more comfortable (e.g. aftermarket remote controls) or safer (e.g. alarms or parking systems) manner. The new ideas are created by a team of development engineers and trend scouts. For the efficient realization of the first idea to ready-made products for the customer, in.pro. employs more than 45 people in their headquarters at Henstedt-Ulzburg and maintains a world wide dealer network of more than 300 partners. "It was an important factor for our cooperation that the new ideas and products initiated and realized on the Presto-project remain not only conceptional studies, but soon find their way to the new in.pro. catalogue for our customers to order for their very own car" says in.pro.'s C.E.O. Jörg Knoblich.

Remus

Stainless steel, laser precision, optimal performance and the typical REMUS sound, these are the four characteristics that distinguish REMUS sport exhausts. Through their involvement in motor sports and their close cooperation with world champions like Jacques Villeneuve or Damon Hill, European champions and other champs, REMUS gains important knowledge for the development and production of high quality silencers. High quality comes first for REMUS and it is attained by using stainless steel in combination with other high grade raw materials. Tests have shown that this combination guarantees best results under thermal and mechanical stress. The wage: REMUS will take a leading position in the favor of the public. The success of the sponsoring activities of REMUS is impressively documented by the readers' survey of numerous specialist publications.

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