

SEAT drives forward with CNG line-up

- **SEAT is committed to reducing its environmental impact by expanding the role of compressed-natural gas in its fuel mix**
- **The brand has one of the most comprehensive CNG ranges, including the Mii Ecofuel, Ibiza TGI, Arona TGI and Leon TGI, offering a vehicle to meet every customer's needs**
- **CNG is an affordable, reliable and ready to go sustainable alternative to conventional combustion fuels such as petrol and diesel, offering emissions and cost reductions**
- **The European CNG network is expanding rapidly, with SEAT selling vehicles in markets including Spain, Italy and Germany, among many others**

Martorell, 08/04/2019. SEAT continues to spearhead the introduction of compressed natural gas (CNG) technology, giving customers the widest choice of vehicles that are cleaner, more sustainable and offer even greater efficiency.

The brand's range includes the Mii Ecofuel, Ibiza TGI, Arona TGI and Leon TGI, meaning there is a CNG-powered vehicle to suit every lifestyle and taste, and take advantage of the fast-growing CNG network in Europe, together with most relevant advantages of Natural Gas Mobility which are sustainability and very low cost per kilometre.

Each vehicle has been designed and developed at SEAT's headquarters in Martorell, and represents a further step in the firm's vehicle development programme, showcasing the benefits of using CNG as the primary fuel, a fuel that offers a reduced environmental impact, but doesn't diminish driving pleasure.

“SEAT is committed to boosting CNG as a sustainable alternative to conventional fossil fuels. It provides the opportunity to reduce CO₂ emissions without impacting on our vehicles' distinctive characteristics,” said Luca de Meo, President of SEAT. **“And thanks to the technology's compatibility with renewable bio-methane, it makes it an important part of the fuel mix as we move towards low emission mobility.”**

A CNG vehicle reduces CO₂ emissions by about 25% compared to a petrol driven equivalent. As well as ecological and tax benefits, TGI technology offers exceptionally low costs per kilometre, up to 50% cheaper than a petrol equivalent model and 30% cheaper than a diesel – and with the further improvements SEAT has made to the technology, now it can go even further before needing to be refuelled.

The major development is the introduction of a third CNG tank; in the case of the Ibiza and the Arona, the CNG range-only now reaches up to 360km (based on WLTP), while the Leon can reach up to 440km (based on WLTP). This new configuration meets the demands of TGI customers who wanted an increased mileage in CNG mode.

With CNG technology SEAT has the advantage of being able to offer customers a real alternative that is both effective and modern, in a vehicle that costs virtually the same as an equivalent Diesel model. Plus, the maintenance costs of the TGI models are similar to those of traditional combustion engine vehicles. The move means that vehicles are cleaner and even better value for money, helped greatly by CNG's efficiency over other fuels.

SEAT is also supporting the development and availability of renewable bio-methane, which neutralises CO₂ emissions generated through vehicle use. Only a pure electric vehicle running on 100% renewable energy would offer a better overall outcome.

New configuration with higher CNG range

SEAT's decision to increase mileage in CNG mode rather than petrol has come as a result of the demand by SEAT customers who currently use a CNG vehicle: drivers are systematically ending up choosing to use CNG since they are aware of the vehicle's increased sustainability, the considerable savings on fuel, and they already know where the nearest supply points are on their regular driving routes.

The Mii Ecofuel, the Ibiza TGI and the Arona TGI use tanks made of high-strength steel, while the SEAT Leon 1.5 TGI EVO is fitted with a combination of one high-strength steel tank, which is smaller and located ahead of the rear axle – and two new large tanks located behind the rear axle, that are manufactured in a carbon fibre composite construction, significantly reducing their weight and optimising weight distribution.

And while the Mii, Ibiza, Arona and Leon all use natural gas as the main fuel, should the outside temperature fall below -10°C, the engine will start in petrol mode whilst the gas injectors are heated to working temperature before activating the CNG circuit. The switchover happens automatically, and the driver doesn't perceive any difference to the vehicle's performance or dynamics, but the approach means vehicles can cope in all conditions.

In normal driving scenarios, SEAT's CNG vehicles only use petrol as an alternative fuel when the CNG tanks are empty, although with significant gas ranges, the need to use petrol should be infrequent. But even in the event of using the petrol tank, the switch is so seamless that the driver is unlikely to notice.

The SEAT Leon is manufactured on the MQB-A platform (Modularer Querbaukasten), and both the Ibiza and the Arona use MQB-AO technology. These platforms give greater manufacturing flexibility and a more robust implementation, as well as achieving a very light, functional, safe body with enormous structural rigidity. All the TGI versions comply with the highest crash safety standards.

The Ibiza, the Arona and the Leon are produced at the SEAT plant in Martorell, Spain, while the Mii Ecofuel is manufactured at the Bratislava plant in Slovakia. Each model is assembled on the same line as other vehicles in SEAT's line-up, but each has been adapted to meet the demands of using CNG as the primary fuel.

The CNG-fuelled vehicles incorporate two (Mii Ecofuel) or three (Ibiza, Arona and Leon TGI) CNG tanks, a filling nozzle located behind the petrol filler cover, gas pressure sensors and an electronic two-stage pressure regulator that effectively controls gas distribution to the CNG engine – both Ecofuel and TGI versions – are substantially modified and have many specific parts essential for an optimum operation in both gas and petrol modes, as well as parts specially adapted to the characteristics of the combustion of natural gas (reinforced pistons and optimized piston rings, reinforced bearing shells, adapted camshafts, valve guide material and reinforced valve seats, nitrided exhaust valves, lambda sensor and catalytic convertor optimized for methane conversion, etc.).

Although CNG is stored at high pressure, (approximately 200bar), the storage tanks are built and homologated to withstand more than twice their maximum working pressure. The high-pressure pipe sections are made of stainless steel and electronic safety valves isolate each section of the high pressure circuit. The tanks themselves are fitted with thermal fuses that open in the unlikely event of extreme heat to release the gas which is then safely dispelled.

A range of characters

SEAT has developed a family of CNG vehicles to match its diverse customer base. The Mii, Ibiza, Arona and Leon provide the widest choice of vehicles to meet the demands of any lifestyle, whether it is negotiating tight city streets or planning journey's further afield.

All blend SEAT's renowned driving dynamics, practicality and character with even greater efficiency and reduced emissions.

- **New SEAT Arona TGI**

This is the first SUV in the world to use CNG technology and it enters one of the fastest growing segments in Europe. With three CNG tanks totalling 13.8 kg in capacity, it can achieve a range of up to 360km in CNG mode (based on WLTP). Its 9-litre petrol tank offers an additional 150km*, giving it a total range of 510km.

The new SEAT Arona TGI is available in all versions – Reference, Style, Xcellence and FR – featuring a 1.0 TGI three-cylinder, 12-valve engine, able to deliver 90PS between 4,000rpm and 5,500rpm, and a maximum torque of 160Nm between 1,800rpm and 3,800rpm. This engine is equipped with a six-speed manual transmission to increase its efficiency and offer the smoothest of drives. Reaching a top speed of 172km/h, the Arona TGI goes from 0 to 100km/h in 13.2 seconds.

The Arona TGI is an expressive vehicle with a distinctive crossover look. It offers an extensive range of options to meet the different needs of every driver, including 68 possible colour combinations. The body to ground height is 190mm; it offers 282 litres of luggage space, and measures in at 4,138mm in length, 1,780mm in width and 1,552mm in height.

In terms of passive, active and preventive safety, the SEAT Arona TGI marks a turning point in the segment. It offers driving assistance systems such as the city driving 'Front Assist' with pedestrian recognition, 'Hill Hold Control', full LED headlights, tiredness recognition, rain sensors and lights

and multi-collision braking system, while optional extras include rear cross traffic alert – to back out of a parking space safely – blind spot detector, or parking assistance system ‘Park Assist’ – which works for both parallel parking and 90 degree backing up.

When it comes to connectivity and technology, SEAT is renowned for its infotainment systems, and the Arona has been fitted with the same sophisticated system available in the whole SEAT range. Technologies including keyless entry and start system, rear view camera, 8" colour display touchscreen and the wireless phone charger with GSM signal amplifier are all available. The Arona’s Full Link infotainment system ensures the SUV is kept fully connected and syncs the phone to the car through Apple CarPlay or Android Auto. It includes all the latest apps such as Shazam – to automatically recognise favourite songs playing at the touch of a button; and Amazon's personal voice assistant Alexa, enabling drivers to optimise their time at the wheel, helping with tasks such as managing their personal agenda, playing music, programming the navigation system with their points of interest, getting personalised news, or searching for the nearest SEAT dealer. Amazon's Alexa app not only offers more in-car functions, but also simplifies access to those the driver uses most and therefore helps avoid distractions.

- **SEAT Ibiza TGI**

The Ibiza reintroduces CNG into the range, this time with an extra gas tank, taking the total to three. With a total capacity of 13.8 kg providing a range of up to 360km (based on WLTP) in gas mode and a 9-litre petrol tank adding another 150km*, has a total range of 510km.

The SEAT Ibiza TGI is available with all of the trims, and comes with the same 1.0 TGI engine fitted in the Arona, and a six-speed manual transmission. Delivering a maximum of 90PS between 4,000rpm and 5,500rpm, its maximum torque of 160Nm is available between 1,800-3,800rpm. In terms of performance, this translates to a maximum speed of 180km/h, taking 12.1 seconds to reach 100km/h from a standing start.

The exterior of the Ibiza TGI measures in at 4,059mm in length, 1,780mm in width and 1,444mm in height, with a wheelbase of 2,564mm. However, just as in the Arona, the interior feels roomy. The front benefits from 1,425mm in total width and 1,022mm in maximum height from the seats adjusted to the lowest position, to the roof. Similarly, the rear seats are 1,403mm wide, offer a maximum height of 957mm, as well as a great amount of leg space. The boot capacity of is 262 litres.

Some of the equipment fitted as standard in the Ibiza TGI include the city driving Front Assist braking assistant, cruise control, tiredness recognition, Full Link connectivity system, keyless entry and start system, full LED headlights, and the navigation system with an 8" colour touch display offering the latest in cutting-edge tech such as Amazon's Alexa assistant and the Shazam app.

- **SEAT Leon 1.5 TGI EVO**

SEAT's most efficient compact car has been upgraded to deliver 130PS of power versus the 110PS previously available. Now it's also available in Xcellence and FR – in addition to the Style

trim – as a five-door and ST estate version, with a choice of a six-speed manual transmission, or an automatic seven-speed DSG.

The new SEAT Leon 1.5 TGI EVO benefits from a third high-strength steel CNG tank, to add to the two new composite carbon fibre tanks located under the boot floor.

The three tanks' total capacity is 17.3 kg, giving the Leon TGI a range of up to 440km (based on WLTP) with either a manual or DSG gearbox, in CNG mode. In addition to this, it has a 9-litre petrol tank, adding an extra 140km*. In total, the Leon reaches a staggering 580km before it needs refuelling with a manual or DSG transmission.

The new 1.5 TGI EVO engine is a four-cylinder unit with four valves per cylinder and a capacity of 1,498cc. It has a variable geometry turbo, and a Miller cycle combustion process to maximise efficiency and performance. All in all, the engine delivers 130PS between 5,000rpm and 6,000rpm and maximum torque of 200Nm between 1,400rpm and 4,000rpm.

The performance of the new 1.5 TGI EVO engine is a significant improvement over the previous 1.4 TGI 110PS version, boasting a new top speed of 206km/h and an improved acceleration by almost a second over previous versions and types of transmission: it can now reach 100km/h in just 9.9 seconds.

Exterior dimensions total 4,282mm in length, 1,816mm in width and 1,459mm in height – while the ST version measures 4,549mm, 1,816mm and 1,454mm respectively, with a wheelbase of 2,636mm in both bodies, and a boot capacity of 275 litres in 5-door version and 482 litres in the ST estate.

The Leon TGI includes an array of safety and convenience features including Adaptive Cruise Control (ACC), Front Assist automatic emergency braking assistant with pedestrian sensor, Traffic Jam Assist, Lane Assist to prevent drifting into the wrong lane, High Beam Assist, Tiredness Recognition. It also has a rear view camera, wireless phone charger with GSM signal amplifier, 'Full Link' infotainment system to connect phones via Android Auto or Apple Car Play, apps such as the Alexa personal voice assistant by Amazon, and song recognition app Shazam. The Navi System Plus system enables passengers' devices to connect via WLAN to the infotainment system.

- **SEAT Mii Ecofuel**

SEAT's most urban model, with its 1.0 Ecofuel 68PS engine, can run for 290km (based on WLTP) with its two high-strength steel tanks totalling 10.9kg capacity. It also has a 9-litre petrol tank adding another 150km*, providing a total range of 440km.

The SEAT Mii's port-injected 1.0 Ecofuel engine is coupled to a five-speed manual transmission, and offers a maximum output of 68PS at 6,200rpm, and a maximum torque of 90Nm at 3,000rpm. This translates to a maximum speed of 164km/h, hitting 100km/h in 16.3 seconds.

The SEAT Mii comes in a five-door version and is the ideal size for city driving at just 3,557mm long, 1,645mm wide and 1,478mm high, with a wheelbase of 2,420mm. The diminutive dimensions don't mean it's a tight fit inside, the Mii offers a spacious interior, with ample room for the occupants, with an impressive 1,369mm width in the front seats and 1,388mm in the rear seats, with a surprising luggage capacity of 213 litres.

A bright future

CNG is incredibly efficient: the energy generated by 1kg of compressed natural gas is equivalent to 2 litres of LPG, 1.3 litres of diesel and 1.5 litres of petrol. Because CNG is cheaper than both diesel and petrol, customers can enjoy longer driving ranges at a reduced cost per kilometre.

Add to this the ability to refuel in a similar time to petrol and diesel, and without the increased initial vehicle costs, and CNG is positioned to play an important part in the future fuels mix, helping maintain our mobility needs.

The CNG network continues to grow rapidly in Europe, helping the market and individual customers to reduce the amount of CO₂ emitted into the atmosphere.

SEAT's comprehensive CNG vehicle line-up, selling vehicles in several markets, including Spain, Germany and Italy, makes it well positioned to grow the technology's reach. Expanding CNG usage will not only reduce our environmental impact and give customers fuel price savings, but do so with vehicles that provide the most driving enjoyment.

TGI models summary of ranges (CNG range based on WLTP):

	CNG tank capacity	Range in CNG mode	Petrol tank capacity	Range in petrol mode*	TOTAL range
SEAT Ibiza 1.0 TGI 90 PS	13,8 Kg	360 Km	9 litres	150 Km*	510 Km
SEAT Arona 1.0 TGI 90 PS	13,8 Kg	360 Km	9 litres	150 Km*	510 Km
SEAT Leon 5p 1.5 TGI 130 PS (manual)	17.3 Kg	440 Km	9 litres	140 Km*	580 Km
SEAT Leon 5p 1.5 TGI 130 PS (DSG)	17.3 Kg	440 Km	9 litres	140 Km*	580 Km
SEAT Leon ST 1.5 TGI 130 PS (manual)	17.3 Kg	440 Km	9 litres	140 Km*	580 Km
SEAT Leon ST 1.5 TGI 130 PS (DSG)	17.3 Kg	440 Km	9 litres	140 Km*	580 Km
SEAT Mii Ecofuel 1.0 68 PS	10.9 Kg	290 Km	9 litres	150 Km*	440 Km

* Estimated figure

SEAT is the only company that designs, develops, manufactures and markets cars in Spain. A member of the Volkswagen Group, the multinational has its headquarters in Martorell (Barcelona), exporting 80% of its vehicles, and is present in over 80 countries on all five continents. In 2018, SEAT sold 517,600 cars, the highest figure in the 68-year history of the brand, posted a profit after tax of 294 million euros and a record turnover of close to 10 billion euros.

The SEAT Group employs more than 15,000 professionals and has three production centres – Barcelona, El Prat de Llobregat and Martorell, where it manufactures the highly successful Ibiza, Arona and Leon. Additionally, the company produces the Ateca in the Czech Republic, the Tarraco in Germany, the Alhambra in Portugal and the Mii in Slovakia.

The multinational has a Technical Centre, which operates as a knowledge hub that brings together 1,000 engineers who are focussed on developing innovation for Spain's largest industrial investor in R&D. SEAT already features the latest connectivity technology in its vehicle range and is currently engaged in the company's global digitalisation process to promote the mobility of the future.

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