

PRESS RELEASE 2018











Crafter_01

Crafter_02

Crafter_03

Crafter_04









Crafter_05

Crafter_06

Crafter_07

Crafter_08









Crafter_09

Crafter_10

Crafter_11

Crafter_12









Crafter_13

 $Crafter_14$

Crafter_15

Crafter_16









Crafter_17

Crafter_18

Crafter_19

Crafter_20









Crafter_21

Crafter_22

Crafter_23

Crafter_24



Crafter_25



Crafter_26



Crafter_27



Crafter_28



Crafter_29



Crafter_30



Crafter_31



Crafter_32



Crafter_33



Crafter_34



Crafter_35



Crafter_36



Crafter_37



Crafter_38



Crafter_39



Crafter_40



Crafter_41



Crafter_42



Crafter_43



Crafter_44



Crafter_45



Crafter_46



Crafter_47



Crafter_48







Crafter_50



Crafter_51



Crafter_52



Crafter_53



Crafter_54



Crafter_55



Crafter_56



Crafter_57



Crafter_58



Crafter_59



Crafter_60



Crafter_61



Crafter_62



Crafter_63



Crafter_64



Crafter_65



Crafter_66



Crafter_67



Crafter_68



Crafter_69



Crafter_70



Crafter_71



Crafter_72







Crafter_74



Crafter_75



Crafter_76



Crafter_77



Crafter_78



Crafter_79



Crafter_80



Crafter_81



Crafter_82



Crafter_83



Crafter_84



Crafter_85



Crafter_86



Crafter_87



Crafter_88



Crafter_89



Crafter_90



Crafter_91



Crafter_92



Crafter_93



Crafter_94



Crafter_95



Crafter_96

The new Crafter -

Media Launch, Auckland, NEW ZEALAND, July 2018

In summary		
 Think outside the (white) box; Volkswagen's all-new Crafter range delivers for Australian customers 	08 >	
In brief		
> The new Crafter - The new dimension	11 >	
> Pricing	13 >	
In detail		
> Exterior design	17 >	
> Interior design	19 >	
> Powertrain, derivatives and engines	24 >	
> Drive system variety	28 >	
> Gearboxes	30 >	
> Functionality	35 >	
> Connected infotainment	41 >	

Important:

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Think outside the (white) box: Volkswagen's all-new Crafter range delivers for Australian customers

- All new design and construction 100% Volkswagen
- Newly developed engines and transmissions
- The latest safety and driver assist systems
- Medium, long wheelbase and long wheelbase with overhang van, single and dual cab-chassis body styles to be available
- Front, rear and 4Motion all-wheel drive with manual and auto configurations to be available

Auckland - Volkswagen Commercial Vehicles Australia has launched a large compliment of its all-new Crafter range, which for the first time brings with it a raft of new safety, driver assist systems and infotainment features, as well as a plethora of body sizes and styles that Crafter customers expect from Volkswagen's large van family.

First appearing on Australian roads in late 2017, Volkswagen Commercial Vehicles first introduced its value-focused Runner Edition in limited numbers, which proved extremely popular with customers looking for a practical vehicle for workhorse duties.

Now, Volkswagen is introducing the next phase of the Crafter rollout, with the TDI410 Front Wheel Drive range on offer, paired with either a manual or automatic transmission. In quarter one, the range will be completed with the arrival of the Front Wheel Drive TDI340 automatic transmission, 4Motion equipped models with manual and automatic transmissions, the rear-wheel drive with rear single tyre specification in manual, the rear-wheel drive with rear dual tire specification in automatic, as well as an additional long wheelbase model with overhang.

From now, all models in the new Crafter range will be available either in-stock from Volkswagen's national dealer network, or by customer order.

Designed and developed in its entirety in a new purpose-built European facility, the new Crafter range represents the latest step in the Volkswagen's evolution of its light commercial vehicles, offering unprecedented levels of equipment, versatility and customisation to suit the most specific of requirements.

Of course, it should be. Prior to the commencement of the new Crafter's production, Volkswagen famously conducted wide ranging research with existing Crafter customers, bodybuilders, converters and international markets to ensure that the new addressed crucial needs on the job, such as brighter, LED lights in the cabin – as required by delivery drivers who need to read small-print labels, and a newly designed seating configuration to improve ingress and egress of the vehicle, sparing the backs of drivers throughout the working day.

In short, despite its intentional utilitarian, 'blank canvas' design approach, Volkswagen's biggest vehicle remains so much more than the sum of its parts; and as those customers in-the-know can attest to, the Crafter is so much more than a big white box.



The new Crafter Range:

The new Crafter - The new dimension

Economical, functional and innovative like never before

- Greater payload and cargo capacity offer outstanding functionality
- Optimised dimensions for maximum everyday practicality
- Available with front, rear or 4MOTION all-wheel drive, with manual or automatic transmission
- 4 body styles, 3 lengths, 3 heights total of 59 derivatives
- Highly economical thanks to reduced fuel consumption
- Cutting-edge driver assistance systems for increased comfort and convenience

Optimum benefits to meet customer-specific requirements from numerous commercial vehicle sectors: the new Crafter provides customer-focussed transport solutions with extreme economy.

With extra payload, greater cargo capacity, optimised external dimensions and a formidable multitude of drive assist systems and derivatives, the new Crafter impresses with exemplary functionality and provides practical everyday solutions for all transport requirements.

Robust, durable and reduced-consumption commercial vehicle engines and well thought-out preparations for manufacturers provide optimum benefits and key functional and economic advantages for diverse customer groups.

A newly developed and finely tuned chassis along with innovative driver assistance systems provide a whole new level of comfort for this category. They also facilitate impressive handling and noticeably increased safety.

The completely new design concept featuring well thought-out interior storage options not only shows the Crafter's innovations visually; but in combination with further measures that optimise the aerodynamics also produce, at 0.33, the best drag coefficient in the Crafter's vehicle class.

Economical, functional, practical, reliable and eco-friendly – plus with innovative technology on board, safer and easier to drive than ever before: those are the characteristics that make a winning case for the new Crafter.

A new plant for the Crafter

State-of-the-art production at a new plant built especially for the Crafter in Wrzesnia, Poland

A new production facility has been built in Wrzesnia, Poland, especially for the new Crafter. The facility is the brand's second production site in Poland; the other is the Volkswagen plant in Poznan-Antoninek, which has been operating for more than 20 years now. The Crafter plant covers an area of approximately 540 acres, which is equivalent to around 300 football pitches. Up to 3,000 people will work at the Wrzesnia plant when the facility is operating at full capacity. Several supply companies will also open up factories in the area, which will create additional jobs for the surrounding region.

Crafter Range Price List:

MEDIUM WHEELBASE VAN	
Crafter 35 TDI340 MWB Van 6 Spd Man 'RUNNER' FWD	\$48,490
Crafter 35 TDI340 MWB Van 8 Speed AT FWD	\$52,490
Crafter 35 TDI410 MWB Van 6 Spd Man FWD	\$52,490
Crafter 35 TDI410 MWB Van 8 Speed AT FWD	\$55,490
Crafter 35 TDI410 MWB Van 6 Spd Man 4Motion	\$56,990
Crafter 35 TDI410 MWB Van 8 Speed AT 4Motion	\$59,990
Crafter 50 TDI410 MWB Van 8 Speed AT 4.49t RWD Dual Tyre	\$62,490
Crafter 50 TDI410 MWB Van 8 Speed AT 5.5t RWD Dual Tyre	\$65,490
LONG WHEELBASE VAN	
Crafter 35 TDI340 LWB Van 6 Spd Man 'RUNNER' FWD	\$51,990
Crafter 35 TDI340 LWB Van 8 Speed AT FWD	\$55,990
Crafter 35 TDI410 LWB Van 6 Spd Man FWD	\$55,990
Crafter 35 TDI410 LWB Van 8 Speed AT FWD	\$58,990
Crafter 35 TDI410 LWB Van 6 Spd Man 4Motion	\$60,490
Crafter 35 TDI410 LWB Van 8 Speed AT 4Motion	\$63,490
Crafter 50 TDI410 LWB Van 8 Speed AT 4.49t RWD Dual Tyre	\$65,990
Crafter 50 TDI410 LWB Van 8 Speed AT 5.5t RWD Dual Tyre	\$68,990

LONG WHEELBASE WITH OVERHANG VAN	
Crafter 35 TDI340 LWB w O/H Van 8 Speed AT FWD	\$58,490
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Crafter 35 TDI410 LWB w O/H Van 8 Speed AT FWD	\$61,490
Crafter 50 TDI410 LWB w O/H Van 8 Speed AT 4.49 RWD Dual Tyre	\$68,490
Crafter 50 TDI410 LWB w O/H Van 8 Speed AT 5.5t RWD Dual Tyre	\$71,490
Crafter Chassis	
SINGLE CAB CHASSIS	
Crafter 35 TDI340 LWB SCC 8 Speed AT FWD	\$48,290
Crafter 35 TDI410 LWB SCC 8 Speed AT FWD	\$51,290
Crafter 35 TDI410 LWB SCC 8 Speed AT 4Motion	\$55,790
Crafter 35 TDI410 LWB SCC 6 Speed MT RWD Single Tyre	\$52,790
Crafter 50 TDI410 MWB SCC 8 Speed AT 4.49t RWD Dual Tyre	\$56,790
Crafter 50 TDI410 MWB SCC 8 Speed AT 5.5t RWD Dual Tyre	\$59,790
Crafter 50 TDI410 LWB SCC 8 Speed AT 4.49t RWD Dual Tyre	\$58,290
Crafter 50 TDI410 LWB SCC 8 Speed AT 5.5t RWD Dual Tyre	\$61,290

DUAL CAB CHASSIS		
Crafter 35 TDI340 LWB DCC 8 Speed AT FWD	\$51,790	
Crafter 35 TDI410 LWB DCC 8 Speed AT FWD	\$54,790	
Crafter 35 TDI410 LWB DCC 8 Speed AT 4Motion	\$59,290	
Crafter 35 TDI410 LWB DCC 6 Speed MT RWD Single Tyre	\$56,290	
Crafter 50 TDI410 MWB DCC 8 Speed AT 4.49t RWD Dual Tyre	\$60,290	
Crafter 50 TDI410 MWB DCC 8 Speed AT 5.5t RWD Dual Tyre	\$63,290	
Crafter 50 TDI410 LWB DCC 8 Speed AT 4.49t RWD Dual Tyre	\$61,790	
Crafter 50 TDI410 LWB DCC 8 Speed AT 5.5t RWD Dual Tyre	\$64,790	

^{*}Retail pricing only. Excludes dealer and statutory charges

For further information:

Paul Pottinger, General Manager, Corporate Communications

T: (02) 9695 6196 M: 0434 755 158 E: paul.pottinger@volkswagen.com.au

Kurt McGuiness, Public Relations and Brand Experience Manager

T: (02) 9695 6198 M: 0413 135 334 E: kurt.mcguiness@volkswagen.com.au

Prices subject to change without notice. The Recommended Retail Price is a suggested retail price only. It does not take into account cost savings which may be realised by dealers under The New Tax System. Dealers have an independent obligation to comply with the price exploitation provisions in the Trade Practices Act 1974 (Cth), which may require them to adjust this RRP. Prices quoted are Manufacturer List Prices excluding dealer delivery charges, which may vary from dealer to dealer and statutory charges, which vary from state to state.



In detail - Exterior design

A new design concept from the ground up

From the very first glance, it's clear that the new Crafter is based on an entirely new design concept. The front section draws unmistakably on the modern, current design of its 'little brother', the sixth generation Transporter. The exterior design of the new Crafter is heavily based on the idea that the Transporter, which is the heart of the commercial vehicle brand, is given a big brother that displays never before seen quality in terms of interior and exterior surfaces, robustness and sophistication. In contemporary, elegant style, the new front, which rises up in a straight line, has been given a more dynamic, exclusive look with optional LED headlights and chrome trim on the radiator grille.

While its appearance is modern and aesthetic, like that of the sixth generation Transporter range, concealed inside are the biggest possible payload, large cargo capacity, a comfortable driver's workplace and cutting-edge technology. Despite the new Crafter's optimised external dimensions, it has nevertheless been possible to retain or even increase the load length and loading height / ground clearance. The new dimensional concept thus significantly improves the new Crafter's suitability for urban and everyday use.

A further key effect of the new exterior design with optimised external dimensions is that, in combination with other wind-optimising measures, the new Crafter thus achieves a drag coefficient of 0.33, the best in its class.



Interior design

The new dimension: maximum capacity and everyday practicality

The new Crafter is extremely versatile, cleverly combining extensive cargo capacity with minimal external measurements, making it manoeuvrable yet also very firm in its handling, regardless of the load it is carrying. The new Crafter is far superior to both its predecessor and its rivals in terms of cargo area length and capacity.

Helped by the completely redesigned internal and external dimensions, the new cargo space provides a large load capacity and high payload. In addition, the optimised overall dimensions make the new Crafter considerably more agile in city traffic, something that is further aided by helpful driver assistance systems such as sensor-controlled Side Protection, Park Assist, Rear Traffic Alert, and numerous others.

With front-wheel drive, the new Crafter achieves a cargo capacity of up to $18.4 \, \text{m}^3$ and a maximum cargo space height of $2,196 \, \text{mm}$ with a permitted total weight of $3.55 - 4.0 \, \text{tonnes}$. Load width between the wheel arches is $1,380 \, \text{mm}$ and cargo space length is $4,855 \, \text{mm}$.

In the case of the rear-wheel drive Crafter, the permitted total weight ranges from 3.55 to 5.5 tonnes. The load width on the heavy vehicles with dual rear wheels has been increased in comparison to the previous model by 402mm, thus allowing it to be loaded using a wider range of standard carriers.

In concrete terms this means, for example, that across all derivatives the new Crafter provides the greatest possible capacity in its class for loading Euro pallets and roller containers. In the longest variant of the new Crafter there is, for example, space for up to nine roller containers. In the medium-length variant with single rear wheels it is possible to load six Euro pallets (each $1.20 \, \text{m} \times 0.80 \, \text{m}$) or four Euro 3 pallets (each $1.00 \, \text{m} \times 1.20 \, \text{m}$).

The driver's workplace: optimum usage with great comfort

The workplace for the driver of a large van has to be configured so that it is exceptionally robust, easy to look after and ergonomic. In order to be able to fulfil these special requirements, the design of the cockpit interior elegantly follows a coherent and practical storage and usage concept: there are handy places for driver and front-seat passengers to store mobile phones, package scanner, laptop and tablet, water bottles and coffee mugs.

Also included in the design are storage compartments for a folding ruler, torch, sunglasses, documents, working gloves, tools and much more. Using this well thought-out and fully developed storage concept, all important implements of everyday work can thus be stowed safely, tidily and securely.

Volkswagen Commercial Vehicles is in addition ensuring that comfort comes as standard in the large van segment. What has become expected in the passenger car class for company cars and taxis, can no longer be missing in the large van category: the drivers of courier service vehicles, crew vans, emergency service vehicles or even mobile homes often spend many hours a day in the driver's seat of their vehicle. The new Crafter is the first van in the C/D segment to offer optional seats with the 'AGR' seal of approval from the 'German Campaign for Healthier Backs'. The driver's seat in the base version offers longitudinal & height adjustment, electric 4-way adjustable lumbar support as well as adjustable armrests.

The driver's and front passenger seat can be upgraded to the AGR-certified ergoActive version: The ergoActive shock-cushioning seat includes the same functions as the Comfort seat 'Plus' and additionally offers an electric massage and suspension.

Also standard is the 2-seater bench front the front passengers making the van and single Cab Chassis a 3-seater and the Dual Cab Chassis a 7 seater (there is a 4-seater bench in the rear). The front bench offers storage underneath the seat. The bench is split so that you can fold up the seat separately making access to the underseat storage really easy. The backrest of the middle seat folds down and locks in. There are two cup holders and storage for a tablet, documents etc.

Further comfort is provided by diverse, features, such as electric windows as standard, firm side supports for increased seating comfort, seat cushion tilt and forward/back adjustment, two adjustable armrests on the driver's seat the optional single front passenger seat, a footrest for the person in the middle on the double front passenger bench seat that creates an ergonomic position, a non-reflective partition window with protective grille and a step integrated into the front spoiler for use when cleaning the windscreen.

The **Trendline Styling** Package includes diverse visual elements on both the interior and exterior, such as a chrome radiator grille, and chrome trim on various switches and controls. Also included in the Trendline specification are the front fog lights and cornering lights and an additional 12-volt plug socket in the cabin.

There are two 12-volt plug sockets provided as standard for the driver in the cockpit of the new Crafter (three with the Trendline Styling Package).

The new Crafter's **air conditioning** offers an appropriate variant for all purposes: The supply of warm or fresh air can be controlled manually for one uniform zone, or optionally for two zones (front and back).

Where necessary, these can be supplemented by a second air-conditioning unit, which is housed aerodynamically inside the vehicle rather than on its roof.

A second heat exchanger is optionally integrated into the vehicle heating system's water circuit and contains an additional fan and a vent in the cargo space or passenger compartment. A notable innovation here is the air duct system which is, for the first time, integrated into the floor: benefits of this approach mean it lies protected within the interior, only short feeder lines are required, and temperature regulation remains free of equipment, which is advantageous, for example, for superstructure manufacturer solutions, ambulances, refrigerated vehicles and camper vans. Furthermore, the vent integrated in the floor ensures an even distribution of air from the middle of the vehicle. Compared to the previous model this solution produces a weight reduction of 2.46 kg.

The new Crafter's **locking system** featuring central locking and wireless remote control as standard makes it possible to lock the cab remotely, so that, for example when working on a building site, personal valuables can be kept safe inside. Complementing this is its counterpart, the cargo space locking system, which is operated via a button on the instrument panel. Whenever the driver is frequently getting in and out of the cab, like a courier does, this ensures that the cargo is securely locked up.

Thanks to the 1,311 mm opening of the side sliding door, a minimal sill height of 570 mm on the front-wheel drive versions and using an optional 270-degree opening of the rear doors, **loading** the new Crafter is easy and can be optimised to the use in question.

For **securing cargo** the new Crafter provides a clever and well thought-out solution: in the cargo space it is possible to secure the load literally 'from all sides'. For this purpose rigging tracks in the form of patented airline profiles integrated on the sidewalls, the partition wall, in the roof and floor can be ordered ex-factory. The airline profile system offers the key advantage of a uniform concept for securing cargo, enabling a proven and standardised system to be used throughout and making it unnecessary to buy in any special equipment.

Furthermore, **interior storage roof racks** offer, for example, the possibility for installation firms to slide in long objects such as pipes or ladders up to a maximum loading of 50 kg in total.

The **universal cargo floor**, developed with leading European shelving and storage suppliers, is fitted with cabinet mounting points for the most popular makes, plus lengthways and transverse tracks with airline profiles.

Another significant advantage is that for all main suppliers of fitted units, it is possible to re-use existing cabinet systems from leased vehicles or previous models. The universal cargo floor is made of a 5-ply beech and hardwood composition, the top surface of which is sealed with a highly wear-resistant resin film coating. By virtue of its mesh texture, this anthracite-coloured surface coating is anti-slip and UV resistant. This overall composition of materials thus offers outstanding resistance to wear and tear thanks to a significantly higher level of wood hardness compared to other van floors of conventional design. This special strength makes it possible to take very high loads, both concentrated and spread, as for example is a requirement for certification to the new EN 27956 standard. This concept also allows the implementation of the rigging tracks into the universal cargo floor without the need for the tracks to be connected directly to the vehicle body.

A further feature of the new Crafter's universal cargo floor is its extreme environmental compatibility: the wood used is exclusively sustainably grown European beech and low-emission gluing systems are also used.



Powertrain, derivatives and engines

Great variety of powertrains and derivatives

Derivatives

The new Crafter range is available in three drive concepts with the new additions of a front-wheel drive and 4Motion all-wheel drive to the range.

An extremely wide range of derivatives is offered for the new Crafter, including for high tonnage versions. The new Crafter will be available in closed body versions as a panel van in various lengths and heights. On top of that come open variants as single or double cab versions with varying lengths and with or without diverse superstructure solutions, e.g. as a pick-up. Dependent on the type of drive system and tonnage, the vehicles are fitted with single or double wheels on the rear axle.

The choice of engines also depends on which drive system is selected: customers have a choice here between front, rear and 4MOTION all-wheel drive, and can also choose either an automatic or manual gearbox. Such variety is completely unprecedented in this segment!

That, however, is not all: depending on the model, there is also a choice of up to three **vehicle lengths**. The panel van is being offered as a 'medium wheelbase' version with a length of 5986 mm, as a 'long wheelbase' version with a length of 6836 mm or as a 'long wheelbase with overhang' version at 7391 mm. For the single-cab version factory-fitted aluminium tray there is a choice of two vehicle lengths: 6204 mm ('medium wheelbase), 7004 mm ('long wheelbase'). The vehicle length for the double cab with factory-fitted aluminium tray is either 6204 mm ('medium wheelbase') or 7004 mm ('long wheelbase').

On top of that come up to three different **vehicle heights** for the closed superstructures, so, depending on the model chosen, customers can configure their new Crafter exactly in line with their specific requirements. There is therefore the right combination of derivative, vehicle length and height, drive system, powertrain and gearbox for every customer.

Engines

With its engines newly developed on the basis of the modular diesel engine matrix ('MDB'). These engines have been specifically designed for the 'tough' requirements of a commercial vehicle, with longevity and robustness top development priorities. Extremely reliable engines designed for both local and long-distance operation ensure downtime is never a problem.

The 2.0-litre TDI 'EA 288 Commercial' engine, which has been further developed for the new Crafter, is available with front-wheel drive and two different power outputs: customers can choose between 340Nm or 410Nm diesel engine.

The 1,968 cm³ TDI engines are transversely mounted and tilted forward by eight degrees. This results in a greater installation height being available and less lengthways space being taken up by the mechanics – space that is then available for driver and load.

In the coming months, the powertrains on offer will be supplemented by the 4MOTION all-wheel drive system with transversely mounted engine and the rear-wheel drive system with longitudinally mounted engine.

Across the entire model series, fuel injection and combustion characteristics of these new engines are geared to the relevant requirements of the EU6 emission limits. Used here in addition to a common rail system with 2000 bar of injection pressure, are a newly conceived high-pressure exhaust gas recirculation system and a water-cooled charge air cooler. A variable intake manifold further ensures the necessary current swirl during the partial load phases. In all vehicle body and powertrain variants an oxidising catalytic converter with a downstream combination of diesel particulate filter and SCR catalytic converter are responsible for the treatment of the vehicle's emissions.

In the development of this new generation of diesel engines particular emphasis was placed on a torque curve focused on tractive force and improved transient performance of the turbocharger, so that as well as the reductions in fuel consumption and emissions it was additionally possible to achieve the improvements in motoring performance relevant to the commercial vehicles sector. The new 'EA 288 Commercial' engines' maximum torque levels are consequently available especially early. By virtue of a high torque level curve and superior performance when pulling away across the entire rpm range, the new Crafter scores with correspondingly excellent handling for its vehicle class and is thus equipped for all transport tasks.

The emissions treatment concept consists of an improved oxidising catalytic converter and a particulate filter with a special coating for reducing nitrogen oxides. For this purpose AdBlue is poured in ahead of the particulate filter. An ammonia trap inside the particulate filter's housing avoids any NH³ slip.

Together with the motor-related measures, it has thus been possible to achieve a clear reduction of NO_x emissions in particular across the engine's whole operating range.

Modular power take-off

A further key innovation of the newly developed 'EA 288 Commercial' engines is that the new Crafter is the first vehicle in its class to be offered with optional modular power take-off systems, available in the RWD drivetrain with a manual transmission. Generator output levels of up to 250 amps are provided for this.



Drive system variety

Front/transverse

Due to its fitted position being tilted 8 degrees forward, the transversely mounted engine takes up less space lengthways, so it was therefore possible to add to the capacity of the driver's cab and cargo compartment. A particular benefit of the front-wheel drive system is the access and loading height, which at around 570 mm has been lowered by 100 mm. Using this combination it was consequently possible to achieve a lower cargo floor and correspondingly large cargo capacity, which constitutes a major advantage especially for industries such as courier services, logistics and manual trades sectors. On top of this come payload and fuel consumption benefits as a result of redundant components, such as a propshaft.

Rear-wheel drive

From Q1 2019 the new Crafter will also be available with rear-wheel drive. The longitudinally mounted engine transfers its power via a proposaft to the powered rear axle – either with single or double wheels.

These qualities benefit in particular customers who need to carry heavy loads, for example, for mobile workshops, or for special applications such as tow trucks or cherry pickers and also construction vehicles.

4MOTION all-wheel drive

The 4MOTION all-wheel drive system in the new Crafter provides reliable traction on practically every surface, a high level of active safety and permanently excellent straight-line performance. Used in this context in the new Crafter is the Haldex coupling.

It enables a variable distribution of drive system power between the front and rear axles. The Haldex coupling is solidly mounted on a rear axle specially developed for the purpose. The provision of sufficient spring travel for this has already been taken into account in the development and design process. The new Crafter thus also provides an all-wheel drive system for the vehicle segment with heavy tonnage: at up to 4 tonnes the new Crafter advances powerfully and reliably when using the all-wheel drive system even on muddy building sites, in forests and up slopes.



Front/transverse

For transversely mounted engine versions with front-wheel drive, the engines with 340Nm and 410Nm get either a 6-speed manual gearbox or an 8-speed torque converter automatic gearbox. In addition, the TDI410 engine will also be available with 4MOTION all-wheel drive in the future.

8-speed torque converter automatic gearbox

Use of the newly developed AQ450 gearbox in the new Crafter represents the first time that an 8-speed automatic gearbox is being used in combination with a front-wheel drive and transverse engine configuration in the commercial vehicle segment. It is available for front-wheel drive versions and at a later time it will also be available for the all-wheel drive version.

In keeping with commercial vehicle requirements, a rugged design was defined, and gear ratios that were tuned for low fuel consumption and optimised driving performance were selected. This was achieved by various measures: for instance, the new AQ450 8-speed torque converter automatic gearbox has a differential with four bevel gears and a large ball mass. Furthermore, a specially designed torque converter was installed that was designed for commercial vehicle loads; various shaft bearings were reinforced; and the planetary gears have double bearings. In addition, the gearbox case was optimised for tough duty in the commercial vehicle segment; the overrunning clutch was reinforced; and a larger parking lock was integrated.

Rear/longitudinal

In the future, the Crafter versions with rear-wheel drive and longitudinally mounted engine versions will also be offered with a manual 6-speed gearbox or alternatively with a (differently designed) AL550 8-speed torque converter automatic gearbox.

Running gear

In comparison to the previous model, the new Crafter's running gear has also been fully redeveloped and impresses with a detailed and usage-specific fine-tuning that, to date, is unique in both qualitative and quantitative terms in this vehicle class. In line with the basic thought behind the vehicle concept, i.e. giving the agile and popular sixth-generation Transporter range a big brother, the clearly defined objectives - including in the development of the running gear - were a great usage-specific variety for the large number of available derivatives and diverse superstructures, plus safe and comfortable handling.

In the design and calibration of the running gear particular emphasis was placed on ease of handling in city traffic, extreme safety and non-tiring operation even on long journeys.

With this diversified running gear spectrum, it is possible to ensure a high level of comfort and safety in all payload situations for a large array of individual customer requirements.

The new Crafter has a comfortable McPherson strut-type front axle design. As part of the development process, particular value was placed on handling, great steering precision, comfort and safety in all payload situations. Using the principle inherent in the McPherson system of the shock absorber also taking over a part of the management task, it was possible in combination with a finely adjusted running gear set-up to achieve a style of handling similar to that of the smaller Transporter.

In light of the multitude of derivatives, the rear axle developed for the new FWD Crafter is a rigid axle that has a - dependent on derivative, sometimes progressive - parabolic spring. The special feature here means that through the linkage of the leaf springs a change of tracking is possible on the rear axle, which makes stability more pronounced and leads to a safe driving style. One of these rear axles has, for instance, been developed specifically for the large space concept, thus enabling the entry / loading sill height to be reduced by 100 mm.

In the case of RWD Crafter variants, a setup of live rear axle on leaf springs, with load-dependent damper and anti-roll bar is utilised.

This not only provides the extraordinarily large cargo capacity of 18.4 m³, but, for example, for a courier service driver also means a quite significant saving in time and effort spent getting in and out.

The new Crafter is equipped with stabilisers on both axles, enabling the roll angle to be correspondingly reduced. The increased level of stability achieved in this way thus optimises the style of handling desired in each individual case dependent on superstructure derivative and drive system.

Electromechanical steering

The most important running gear innovation is represented by the electromechanical steering being used for the first time in the new Crafter – and indeed this vehicle class. The electromechanical steering is a speed-adjusted electric assisted steering system that works only when needed by the driver.

The advantages compared to the previous model with hydraulic power steering are reduced fuel consumption, correspondingly reduced CO² emissions and new comfort and safety functions: driver assistance functions such as Driver Fatigue Detection, Lane Keep Assist, Park Assist and are all possible as a result.

A very good steering feel is also ensured by the individual adaptation of the level of powered assistance to the respective engine specification, vehicle specification and tonnage. The electromechanical steering in the new Crafter thus leads to a clear increase in agility and facilitates easier vehicle handling. A further benefit of this improvement in steering precision and sensitivity is a CO² reduction due to the adaptive energy consumption. As a consequence, running costs for the user are also reduced accordingly.

Furthermore, the optimised external dimensions and electromechanical steering lead, in combination with the newly developed and fine-tuned running gear, to clearly improved handling, which can be likened to that of the Transporter range.

Axle load

It has been possible to increase the front and rear axle loads, in some cases substantially. These are of relevance both for conversion and superstructure solutions. For the new Crafter with front-wheel drive and tonnage of up to 3.55 tonnes, the maximum front axle load is 1,800 kg, while the maximum rear axle load is 2,100 kg. In the same weight class with rear-wheel drive and single rear wheels, the front axle load remains the same, while the maximum rear axle load can be up to 2,250 kg. For the new Crafter with front-wheel drive and tonnage of up to 4.0 tonnes, the maximum axle load available at the front is 2,100 kg, while at the back a little more is allowed: the maximum rear axle load is 2,380 kg.

Brakes

Up to a permitted total weight of 4,000 kg the new Crafter with front-wheel drive and transversely mounted engine has on the front axle robust, extremely reliable and low-maintenance 16" double-piston floating calliper disc brakes with performance reserves in case of any thermal strain on the brake system $(2 \times 48 \text{ mm}, 303 \times 28 \text{ mm})$ internally ventilated brake discs).

In use as rear wheel brakes are modern 16" single-piston combination calliper disc brakes (1 x 48 mm, 300 x 22 mm brake discs, likewise internally ventilated) with a driving and parking brake function. The combination caliper disc brakes provide among other benefits the key advantage of easier access to the brake pads, which therefore makes servicing easier and as a result brings down maintenance costs.

This modern solution of combination caliper disc brakes thus optimises the brake system used in the previous model, for which floating caliper disc brakes were fitted as the driving brakes and a duo servo drum brake as the parking brake.

Furthermore, available on standby is a tandem brake power booster in the master cylinder with electronic brake signal sensoring that has generous power reserves for all driving situations.

Further sophisticated enhancements are also provided by the brake system's controls in the new Crafter: the handbrake lever of the mechanical parking brake system has been placed with a full gaiter cover in a user-friendly position next to the driver's seat. The pedals' design has also been optimised to the force used upon them and equipped with non-wearing electronic sensors to monitor the relevant operating positions.



Functionality

Second battery management

To safeguard the energy management system the new Crafter can be fitted with second battery with a capacity of 92 Ah (AGM) deep cycle optionally with second battery monitoring. The second battery provides an emergency start function if the starter battery's charge is low. For monitoring the starter and second battery the system outputs warning and shut-off levels depend on the charge status - any total discharge of the batteries is thus largely ruled out. The battery charge status and battery voltage are output via the customer-specific functional control module.

Customer-specific Functional Control Module

In order to satisfy the diverse requirements of conversion and superstructure manufacturers who particularly need and wish to influence vehicle information, a special control module is being used in the new Crafter: the 'Customerspecific Functional Control Unit'. It is only possible here to list a few examples of the multitude of features of these control modules: they vary from a roof sign lighting function for ambulances, through a generator charge checking function, a total discharge status indicator and a working speed regulator, to speed restriction, deactivation of the automatic engine stop-start system and much more.

Compared to the previous model, the new version of the customer functional control module offers more digital inputs, twice as many analogue inputs and, new to this version, 24 outputs. In addition to the free programmability and freely configurable inputs and outputs already mentioned, plus the range of set functional packages (e.g. working speed regulation), the new base variant also offers monitoring of the second battery.

As an option, customers can choose the MAX variant, which facilitates the aforementioned functions relating to the display of vehicle information and the control of the bodybuilders functions over a **smart device** via WLAN, Bluetooth or USB and operation of the superstructure manufacturer's special functions over the user's own smartphone or tablet – an innovation in this segment.

Gearbox-side power take-off

For use as a work tool and for commercial interior works it will be possible in future, dependent on the vehicle derivative selected, for customers to select the power take-off module: dumpers, cherry pickers, workshop vehicles, snow-clearing vehicles or, for example, refuse collection vehicles can draw off up to 40 kW (180 Nm at c. 2,300 rpm) from the power take-off.

The functionality is represented here via the superstructure manufacturer's programmable customer Function Control Unit via working speed regulation and an engine with remote stop/start function.

Driver assistance and comfort systems in the new Crafter

The new Crafter sets entirely new standards for driver assistance and comfort systems in the large van segment: the objective here is to optimise occupant protection and the potential for avoiding accidents through the use of active and passive safety concepts in all payload situations.

Thanks to the electromechanical steering, being used for the first time in its class, the new Crafter provides an outstandingly wide array of active driver assistance systems, such as active Lane Keep Assist, Park Assist and Rear Traffic Alert. It also already provides the technical basis for future systems, extending all the way to autonomous driving. On top of this some assistance systems, some available as options, such as Adaptive Cruise Control (ACC), the standard Front Assist with City Emergency Braking system, the standard Multi-Collision Brake System, the Crosswind Assist system and much more. In terms of passive safety too there is an extensive range of warning systems available for driver and front-seat passengers. In addition to standard front, side and curtain airbags, these include reversing camera, front and rear parking distance monitor and the optional Rear Traffic Alert, plus the sensor-based side protection system developed specially for the new Crafter.

In addition, optional LED headlights, cornering fog lights ensure a clear view of the road ahead at night. The new Crafter's mobile services have also been tailored exactly to customers' requirements.

With the Crafter, the first and to date only vehicle of its class to feature it, this extra technical innovation thus ensures extreme safety and an outstandingly comfortable ride. The new driver assistance and safety systems also make it possible to reduce downtime for repair significantly thus contributing appreciably to the vehicle's improved cost-efficiency.

One of the assistance systems being offered on the Crafter for the first time in the large van segment is Adaptive Cruise Control. Already familiar from the Caddy and Transporter and passenger car class, ACC uses sensors to measure how far away and how fast vehicles ahead are travelling in order to regulate speed and the distance to the vehicle in front. The driver sets the desired following distance and speed via corresponding buttons on the multifunction steering wheel. By pressing on the throttle, the driver can interrupt the ACC system and increase acceleration. Pressing the brake pedal leads in turn to the immediate deactivation of the ACC function.

Another innovation that Volkswagen Commercial Vehicles is offering for the Crafter, as a pioneer in this vehicle class, is active Lane Keep Assist: A multifunction camera tracks the vehicle's own lane, and in the event of any unintentional departure from that lane it is automatically and gently steered back into line by the electromechanical steering. It is thus possible to avoid or reduce the severity of accidents caused by unintentionally leaving a lane. The driver can, of course, overrule the system at any time with minimal effort.

For entering and leaving parking spaces there is convenient assistance available for the driver: the Park Assist system helps the driver by totally taking over the steering movements when parking.

In addition, Rear Traffic Alert provides a warning of any traffic crossing the vehicle's path at the rear when exiting a parking space or manoeuvring. Via sensors in the rear bumper the system is able to monitor the side area behind the vehicle a great deal earlier than the driver. In the event of another vehicle starting to get too close, the driver is warned by a beep. If the driver fails to react, the system is able in the event of an imminent collision to minimise the consequences of any accident or ideally to prevent one by activating the brakes. It also avoids the risk of accidents through an automatic emergency braking function which is active in any critical situations.

Another extremely helpful innovation for the large van segment is represented by the sensor-controlled Side Protection system newly developed by Volkswagen Commercial Vehicles. Ultrasound sensors on the front, rear and sides of the vehicle monitor the vehicle surroundings when it is stationary or moving slowly so that, especially in city traffic, any collisions due to the blind spot or any inability to see well down the side of the vehicle can be avoided.

Building on this, the monitoring system is supplemented by two rear radar sensors so that the driver is warned of any possible collision due to the renowned 'blind spot' on the left and right, not only when going very slowly but also at speeds of 10 km/h and above, e.g. when changing lane. This function is accordingly called Blind Spot Monitoring.

Nearly a quarter (22 per cent) of all accidents involving injuries are collisions with more than one obstacle. In order to minimise the risk related to this scenario, the Multi-Collision Braking System is fitted as standard on the Crafter.

After a collision, it automatically initiates braking if the driver is no longer able to take action. Any secondary collisions can thus be prevented.

The Multi-Collision Braking system becomes active whenever two sensors working independently of each other register an accident. In this event, the system slows the vehicle down to 10 km/h in stages based on a pre-set rate of deceleration. The driver is, however, able to take back control of the vehicle at any time.

By means of radar, the Front Assist surroundings monitoring system, available as standard on the new Crafter, recognises critical distances to the vehicle in front and helps to shorten the stopping distance. In any dangerous situations the system warns the driver visually and audibly, as well as with a slight jolt of the brake. Front Assist reacts here in two stages: in the first the system warns the driver with audible and visual signals of any vehicle in front driving slowly or suddenly braking and of the associated risk of collision. In parallel it gets the vehicle ready for emergency braking – by applying the brake pads and preparing the brake assistant. If the driver fails to react to the warning, a one-off short jolt of the brake indicates in the second stage the imminent danger of a collision and the brake assistant's responsiveness is further increased. If the driver then hits the brakes, full braking power is immediately available. If the driver does not brake strongly enough, Front Assist increases the braking pressure to the required level, so that the vehicle comes to a stop before reaching the obstacle.

A further integral component of Front Assist and ACC is the City Emergency Braking function. It provides assistance at low speeds of under 30 km/h.

If the driver fails to see an obstacle, the system automatically applies the brakes and ensures that the speed of any collision is reduced. Ideally, it completely prevents the vehicle from running into the obstacle.

A feature that is particularly expedient and helpful for vehicles of this segment, which by their nature provide large side areas exposed to the wind is the Crosswind Assist, provided as standard as part of the ESP. In the event of strong side wind, it helps the driver to keep in lane by automatically applying the brakes.

The new Crafter is also equipped with a Driver Fatigue Detection, which, particularly on long-distance journeys, brings additional safety. It recognises any deviations from normal driving behaviour and recommends the driver take a break when this appears to be necessary. To do this, the system evaluates driving behaviour at speeds of 60 km/h and above and draws conclusions as to whether the driver is fit to drive. It evaluates various different signals, such as steering behaviour, length of journey time and time of day. In the event of any atypical actions, the system recommends the driver take a break by both an audible and visual signal.

The Rear View Camera is standard on all closed bodied models. It is activated by engaging reverse gear and relays a precise image in the radio screen of the area behind the vehicle. The path of travel is depicted using static guide lines. A particularly important element for the new Crafter is that the reversing camera is mounted above the rear opening and thus facilitates a clear view even when manoeuvring with the rear doors open, with the imagery displayed clearly on the Crafter 8-inch colour touchscreen.

Also available to help with parking (front and rear) is the standard Front and Rear Park Distance Control (PDC). Using a series of accoustic signals, it helps the driver manoeuvre into a parking space. As the vehicle gets closer to the obstacle the frequency of the beeps increases. If the distance to the obstacle is less than 30 cm, the beep is continuous.

For all vehicles with the 4MOTION drive system, Hill Descent Assist will be available as an option. By targeted application of the brakes to individual wheels, which the driver is not able to do singularly using the foot brake, and by cutting the engine speed, this system ensures a safe, controlled hill descent. As far as possible, it holds the vehicle at a constant walking pace when going down extreme inclines, with no actual braking required by the driver.

On vehicles with tow-hooks, electronic trailer stabilisation also utilises the components of the ESP system and thus contributes significantly to safety while driving with a trailer hooked up. The system recognises any vehicle instability caused by unadjusted speed when towing a trailer, and through systematic reduction of engine torque and slowing of individual wheels it settles down vehicle and trailer.



Connected infotainment

Radio and navigation systems

Alongside their conventional entertainment function, modern radio and navigation devices are becoming increasingly important as information and connectivity systems, especially in the commercial sector. The new Crafter offers cutting-edge infotainment systems for increasing optimum utilisation and efficient fleet management. The Crafter is being equipped for this purpose with the latest generation of radio and navigation systems only recently unveiled for the Caddy and Transporter range. For comfort and safety while driving, all systems have a Bluetooth hands-free phone function.

There is a choice of two radios / radio navigation systems for the new Crafter. The entry-level unit is the Composition Media radio. All radio and navigation systems at this level and above have an 8-inch touchscreen with colour display, which can be controlled using swipe and zoom hand movements similar to those used with modern smartphones.

For this new generation of devices Volkswagen Commercial Vehicles is using a display that works by means of proximity sensors: as soon as the user moves their hand close to the touchscreen, the system automatically switches from display mode to input mode. The display mode is distinguished by a format reduced to the essentials. In the user control mode, on the other hand, the elements that can be activated via touchscreen (Composition Media and above) are specially highlighted, thus making intuitive operation easier. The displays also have a function that lets users use swiping motions to scroll through lists or browse CD covers of their own media library that could, for example, be stored on an SD card.

The Composition Media radio also features a CD drive, a double tuner and phase diversity for the best possible radio reception and four speakers in the front. For passenger vans speakers are also available as an option in the back. There are out-of-sight USB connections adjacent to the glove compartment and on the dashboard near to the driver.

Bluetooth hands-free functionality and Voice Control both standard are also included. Customers can also add DAB+ digital radio reception.

The Discover Media radio and navigation system has even more comprehensive features. The navigation system provides pre-installed map data and has an associated second SD card reader. The package also includes free updates of the navigation maps.

The Discover Media system also has the additional functionality of Media Control, used via an app available for smart phones. Media Control allows passengers to access your on-board infotainment system via WLAN and select music comfortably or replicate the navigation route on their tablet without disturbing the driver.

Due to the increasing importance of digitised functions for vehicles and business processes for customers in the large van segment, the App-Connect integration function for Composition Media and Discover Media is also available as standard in the new Crafter.

This function makes it possible to show and operate selected smartphone apps via the touchscreen display. It, for example, allows operation of the radio via a tablet PC or smartphone connected to the infotainment system by Wi-Fi (compatible for all manufacturers via Mirror Link, Android Auto and Apple Carplay).

Of particular interest to fleet managers is the fact that the new Crafter is for the first time offering the integrated FMS fleet management interface as a preprepared gateway for telematics functions. This enables combination with all popular telematics solutions on the market and thus simple integration of the new Crafter into existing fleets. This combination of signal scope and telematics preparation straight from the factory, including the existing antenna, is to date unique in this segment.

