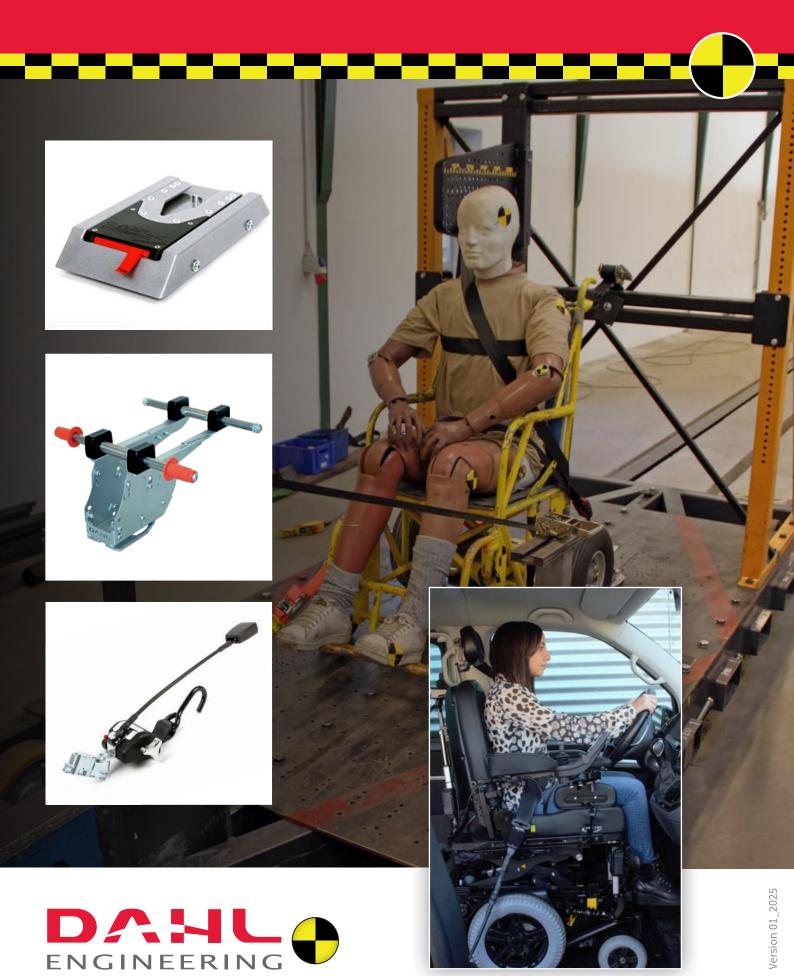
PRODUCT CATALOGUE 5



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DAHL ENGINEERING

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Safety







Dahl Engineering was founded by Claus Dahl Pedersen, who has more than 30 years' experience in the field of development, safety testing and production of seats and safety equipment for the automobile industry.

Dahl Engineering is a specialized business enterprise that offers development, safety tests and production of various special products and equipment for vehicles for the disabled, private cars, vans, buses, racing cars, ambulances, police cars, military vehicles as well as aids and appliances for people with disabilities.

In 2005 Dahl Engineering established a 900 m² factory building, containing Denmark's only test facility for dynamic tests (crash tests), a hydraulic tensile testing facility, a prototype workshop and production facilities for research, product development and manufacturing. In 2006, 2011 and 2018 the building was extended so that there now are 2.100 square meters under its roof.

Dahl Engineering is recognized as national test laboratory by the Danish Road Safety agency (Færdselsstyrelsen). Certification tests in accordance with EU directives and international safety standards, supervised by the accredited test institute TÜV Rheinland can also be performed on the company's test facility.

New areas of focus for safety

Safety in motor vehicles is continuously developing. New issues will always continue to appear, for which new solutions and technologies will need to be found. Most wheel-chairs and mobility aids for the handicapped are unable to withstand the loads they are subjected to during a road traffic accident. For wheelchair users transported by vehicle, this represents a considerable safety risk that only until recently has been the subject of only minor interest. Due to the introduction of EU-framework directive 2007/46, EU-regulation 2018/858, Annex II, Part III, Appendix 3, which addresses procedures for test and approval of restraining equipment and safety belts, new standards for the safety of wheelchair users in vehicles have been set.

In the past years there has emerged an increased focus on security when wheelchairs are used as seats in vehicles. This has i.a. led to wheelchair-tenderings requiring that the wheelchair and restraint system is crash tested together and thus lives up to ISO 7176-19. We receive an increasing number of enquiries about which wheelchair models are tested with our Docking system, and how the Docking system is correctly installed on the wheelchair.

We experience that car converters and occupational therapists want to assure themselves, that **they do not invalidate the CE label when mounting the Docking system**, which they do, if they do not follow the instructions of the wheelchair manufacturer.

With more than 25 years' experience in the development, safety testing and production of automotive equipment, Dahl Engineering possesses a wealth of knowledge in this area.

As a supplier of components, we are also able to offer close co-operation with regard to the development and testing/certification of components in the conjunction in which they are to be used.

Dahl Engineering is specialized in the supply of certified equipment that is tested such that international safety standards and EU safety requirements in motor vehicles are satisfied. This applies regardless of whether the products are for disabled or non-disabled use – where this is possible – with due consideration of the design and function of the aid and appliance concerned.

Dahl Docking Station

The safety standards for restraint equipment for wheelchairs are not as strict as the safety requirements for other equipment used in motor vehicles. Restraint equipment, according to the current ISO standard, only has to be able to withstand the load from a wheelchair with a weight of 85 kg.

At Dahl Engineering, we think that these requirements are inadequate, and have therefore developed the safest and most thoroughly tested system on the market. Dahl's Docking Station is supplied with the most comprehensive documentation material on the market, and is the first system to be tested and TÜV certified in a large number of vehicles for wheelchairs weighing 200 kg + user. We offer over 55 vehicle specific fitting kits.

Dahl Engineering is specialized in providing restraint equipment for wheelchair users, that meet the strict EU M1 safety requirements for cars in accordance with ECE regulations 14 and 17 (relating to the anchorage of seats and safety belts in motor vehicles) where this is possible – with due consideration of the design and function of the aid and appliance concerned. At the time of writing, we have also tested the Mercedes Sprinter 907/910, Freightliner Sprinter, and VW Crafter (-2016) according to FMVSS/CMVSS 207/210.

4-point WTORS

We have performed more than 150 tests of Dahl's 4-point WTORS in vehicles according to EU-regulation 2018/858, Annex II, Part III, Appendix 3, as well as ISO 10542-1:2012 and 7176-19:2022. Based on the number of tests, we have obtained TÜV approval for more than 85 vehicle specific fitting kits from 85 kg to 200 kg. Thus, Dahl Engineering's 4-point wheelchair restraints are at the very forefront of the latest EU safety requirements for wheelchair users in motor vehicles.

Car conversion

We offer car converters to cooperate in tests, where our products are being used, so that the converted vehicle meets applicable safety requirements. We can perform fatigue tests of the vehicle body according to TÜV Merkblatt 751. The purpose of the test is to determine if the vehicle's load carrying components will crack or collapse under the stresses it will be exposed to during years of use. The converted vehicle body can be exposed to 150.000 test cycles. Based on the tests performed, vehicle converter can then apply for acceptance of the conversion at the car manufacturer to obtain a so called "No objection certificate".



ECE regulation 17 H-point measurement



ECE regulation 14



Adaptation kits for the wheelchair

Dahl Engineering sets again new standards for flexibility and safety!

We are happy to announce that we can now offer two different types of docking stations, which can be used for numerous different transportation needs. Almost all the wheelchairs, which have been tested with our Dahl Docking Station MK II, are compatible with Dahl VarioDockTM.



Dahl VarioDock™

Our electrically height-adjustable Docking Station, enables fastening of wheelchairs with different ground clearances and seats with an integrated 3-point belt.

- Complies with ISO 10542-1, ISO 7176-19 and the strict test requirements in accordance with ECE Regulations 14 and 17 regarding test of seats and belt anchorages in vehicle category M1.
- Electrical height adjustment (from 61-91 mm).
- Tested for wheelchairs weighing up to 200 kg plus user.
- Approved for anchoring Dahl COMFORT Seat
- Crash tested and CE marked with approx. 160+ wheelchair models.

Dahl Docking Station MK II

is our second generation Docking Station, which enables the tiedown of wheelchairs from many different wheelchair manufacturers.

- Complies with ISO 10542-1, ISO 7176-19 and the strict test requirements according to ECE regulations 14 and 17 regarding testing of seats and seat belt anchorages in vehicle category M1.
- Height adjustment through use of spacers
- Tested for wheelchairs weighing up to 200 kg plus user
- Crash tested and CE marked with approx. 160+ wheelchair models.



Approved wheelchairs with our docking systems

According to the EU's medical directive, a wheelchair is classified as medical equipment class 1, and must be CE-marked and approved as such. Whoever installs or adapts non-approved equipment or installs the system in a way that falls outside the wheelchair manufacturer's specifications, breaks the CE-approval, and is considered a responsible manufacturer and is therefore responsible for the equipment's quality, safety, performance, and technical documentation according to requirements in the regulation on medical equipment.

If our docking systems are installed on a wheelchair that has been tested and approved by the wheelchair manufacturer, its CE-approval remains intact. It is strongly advisable, that the instructions in the wheelchair manufacturer's manual are followed closely.

Our new docking adaptation system for manual wheelchairs, the Dahl MADS™, (Multi Adjustable Docking System) has currently passed testing according to ISO 7176-19:2022 with the following wheelchairs: ETAC Cross 6, R82 Kudu.

At time of writing, the wheelchair manufacturers documentation including user and installation instructions are in progress and the adaptation kits are therefore not yet for sale. As soon as the documentation and MADS kits will be available for sale, the part no., crash test video and user and installation instructions can be found on our homepage.

Videos of crash-tests, as well as the wheelchair manufacturers' user and service manuals are available on our website.

Please contact the wheelchair manufacturer regarding approved equipment and ground clearance to ensure compatibility with our Dahl Docking Systems.

Possibility of fitting the docking lock plate is standard feature on wheelchair Possibility of fitting the docking lock plate adaptation kit available from Dahl Engineering		Retrofittable adaptation kit available from Wheelchair manufacturer	Adaptation kit <u>CANNOT</u> be retro fitted. Adaptation kit only available from wheelchair manufacturer if ordering option with wheelchair.	Compa- tible with VarioDock	
Baldertech F380 (280) Finesse tiltstol			Balder#HP20071413		1
Baldertech F380 Recaro Finesse tiltstol			Balder#HP20071413		1
Baldertech F390 (290) Finesse ståstol			Balder#HP20071413		1
Baldertech J335 (235) Junior tiltstol			Balder#HP20071413		1
Baldertech J340 (240) Junior ståstol			Balder#HP20071413		1
Baldertech Liberty RWD			Balder#HP20071413		1
Degonda T4 2x2		#503213			1
Degonda T4 Compact		#503213			1
Dietz Power Sango Advanced FWD SEGO			Dietz#5001168		1
Dietz Power Sango Advanced MWD SEGO			Dietz#5001168		1
Dietz Power Sango Advanced RWD SEGO			Dietz#5001168		1
Dietz Power Sango Slimline FWD SEGO			Dietz#5001169		1
Dietz Power Sango Slimline MWD SEGO			Dietz#5001169		1
Dietz Power Sango Slimline RWD SEGO			Dietz#5001169		1
Glide CentroGlide		#502237			1
Invacare AVIVA RX				Invacare #SP1653422	1
Invacare FDX					1
Invacare FX 40 Modulite		#501540			1
Invacare Storm4				#ATZ1450	1
Invacare Storm4 Xplore				#ATF1450	1
Invacare TDX SP2 (WB)				#SP1564843	1
Invacare TDX SP2 (NB)				#SP1564807	Х
Invacare TDX SP2 MBL Tilt-Lifter (WB)				#SP1564843	1
Invacare TDX SP2 MBL Tilt-Lifter (NB)				#SP1564807	Х
Karma Leon FWD Kameleon			Karma#191700000061		1
Karma Leon FWD Versus			Karma#191700000061		1
Karma EVO Altus / Lectus-LR		#503194			1

Adaptation kits for the wheelchair

POWER WHEELCHAIR - Make & Model	Possibility of fitting the docking lock plate is standard feature on wheelchair	Retrofittable adaptation kit available from Dahl Engineering	Retrofittable adaptation kit available from Wheelchair manufacturer	Adaptation kit <u>CANNOT</u> be retro fitted. Adaptation kit only available from wheelchair manufacturer if ordering option with wheelchair.	Compa- tible with VarioDock
Karma Leon RWD			Karma#151200000023		1
Karma Mid Lectus		#503339			1
Karma Morgan			Karma#4020169		1
Karma Morgan Sling		#503339			1
Karma Morgan M Versus		#503339			1
LEVO LCM 2		#502322			1
LEVO C3 Standup		#503030			1
Magic Mobility 360		#501798			1
Medema MC 1122	1				1
Medema MC 1124 Adult		#502378			1
Medema MC 1124 Child		#502378			1
Medema MC 1144 Adult		#503236			1
Medema MC 1144 Child		#503236			1
Meyra iChair MC2 1.611		#501909			1
Meyra iChair MC2 1.611 / Electrical backrest		#503453			1
Meyra iChair MC3 1.612			Meyra#1079816		1
Meyra iChair McFront 1.613		#501619			/
Meyra iChair McFront 1.613 / Electrical backrest		#501620			/
Meyra iChair Orbit 1.618		#503657			/
Meyra iChair Meylife 1.650		#503657			/
Neatech EVO 1		#503340			/
Neatech EVO 3		#502210			/
New Live Magix		113022210	NewLive MA.O.P.01. AC.Z.800003		/
New Live Magix II	√ *				/
NHD LS 300		#503341			/
NHD LS300/45		#503341			/
Otto Bock Juvo B4 RWD		#503184			/
Otto Bock Juvo B5/B6 FWD		#503261			1
Otto Bock Juvo B5/B6 MWD		#503261			/
Otto Bock Juvo B5/B6 RWD		#503261			/
Paravan Heavy Duty			Paravan#33187		1
Paravan PR 25		#502064			✓ /
Paravan PR 40		#502064			/
Paravan PR 50			Paravan#33187		1
Paravan Piccolino			Paravan#33187		/
Permobil F3 Corpus	√ *				1
Permobil F5 Corpus	√ *				/
Permobil F5 Corpus VS	✓*				1
Permobil M1	√*				/
Permobil M3 Corpus	·				1
Permobil M5 Corpus	√ *				/
Permobil M5 Corpus VS	√ *				/
Quantum Rehab (Pride Mobility), Q6 Edge 2.0*		#502378			/
Quantum Rehab (Pride Mobility), Q6 Edge 3.0*		#502378			/
Roltec Boa 2		#503342			/

POWER WHEELCHAIR - Make & Model	Possibility of fitting the docking lock plate is standard feature on wheelchair	Retrofittable adaptation kit available from Dahl Engineering	Retrofittable adaptation kit available from Wheelchair manufacturer	Adaptation kit <u>CANNOT</u> be retro fitted. Adaptation kit only available from wheelchair manufacturer if ordering option with wheelchair.	Compa- tible with VarioDock
Roltec Moveo		#501819			1
Roltec Viper			Roltec#70658		✓
Roltec CT4 RWD / Vision			Roltec#70658		✓
Scout Mobility X10 FWD		#503366			✓
Scout Mobility X10 MWD		#503366			✓
Scout Mobility X10 RWD		#503366			✓
SKS Swiss Viva Grand			SKS#22.0218		✓
SKS Swiss Viva Grand M		#503342			✓
Sunrise Medical Q100 R		#503259			✓
Sunrise Medical Q200 R		#503259			✓
Sunrise Medical Q300M Mini		#500094			Х
Sunrise Medical Q300 R		#503012			1
Sunrise Medical Q400 F		#503637			✓
Sunrise Medical Q400 M		#503439			1
Sunrise Medical Q400 R		#503637			✓
Sunrise Medical Q500 F		#503637			✓
Sunrise Medical Q500 H		# 501798			✓
Sunrise Medical Q500 M		#503439			✓
Sunrise Medical Q500 R		#503637			✓
Sunrise Medical Q700 F		#501889			✓
Sunrise Medical Q700 M		#503439			1
Sunrise Medical Q700 R		#503637			✓
Sunrise Medical Q700 UP F		#501889			✓
Sunrise Medical Q700 UP M		#503439			1
Sunrise Medical QUICKIE Salsa M2		#501798			Х
Sunrise Medical QUICKIE Salsa R2		#501756			✓
TA Service IQ RWD		#503054			✓
TA Service IQ FWD		#503054			1
TA Service IQ MWD		#503054			✓
TA Service Indoor Wave			TA #95255		1
Wolturnus A-Run				Wolturnus #20778	✓
Wolturnus Rex 350				Wolturnus #20779	✓

MANUAL WHEELCHAIR - Make & Model	Removable MADS System	Retrofittable adaptation kit available from Dahl Engineering	Retrofittable adaptation kit available from Wheelchair manufacturer	Adaptation kit <u>CANNOT</u> be retro fitted. Adaptation kit only available from wheelchair manufacturer if ordering option with wheelchair.	Compa- tible with VarioDock
Schmicking X-Design	✓	#502898			1
Sunrise Medical Exigo 30	✓	#502961			/
Talart JT-Sparkle	х		Talart #JT01154		/
Wolturnus W5	✓	#502018			/
Wolturnus W6	×			#20776 / #20777	/

All discontinued, but approved and tested wheelchairs, can be found on our homepage.

 $^{^\}star \quad \text{Please inquire with the Pride/Quantum sales organization in your country regarding availability}.$



Dahl VarioDock™

Dahl MADS™, short for **Multi Adjustable Docking System**, is our new patented docking adaptation system which makes it possible to dock and secure manual wheelchairs with fixed frames as well as folding frames into our docking station models MK II and the VarioDockTM.

The Dahl MADS™ consists of a light weight subframe which can be adjusted in height, inclination, and length. Thus, it can easily be adapted to different wheelchair widths and will function together with a multitude of wheelchair settings, which are needed to obtain the individual user ´s optimal seating position.

By means of brackets fastened to the wheelchair frame and a simple and effective locking system, the subframe can quickly be attached and removed without any tools and stowed away when not in use. This feature is a must when collapsing a folding chair, but it is also built into the design for most fixed frame models.

During the past years, we have received an increasing number of inquiries for using our docking stations to secure manual wheelchairs. Requests came from private vehicle owners, nursing homes, and schools as well as public and private transport providers looking to replace the time consuming and work intensive 4-point wheelchair securement systems commonly used.

The MADS[™] adaptation kits are tailor-made for the specific wheelchair make and model and are tested together according to ISO 7176-19:2022.

If your wheelchair model has not been approved for MADS TM , we will be happy to work together with the wheelchair manufacturers to develop a $_{\rm Lit}$

Manufacturers of approved wheelchairs present on the European market have CE-marked their chairs for use with the Dahl MADS™. Consequently, the CE-marking and warranty of the chair will remain intact when installing the Dahl MADS™ adaptation kit in compliance with the wheelchair manufacturer's instructions.

Our new Dahl VarioDock™ is not only the only power-height adjustable wheelchair Docking station, which facilitates securing wheelchairs with different ground clearances and vehicle passenger seats with integrated 3 point belt, but it is also the only system to meet standard ISO 10542-1, ISO 7176-19 and the strict M1 in-vehicle testing requirements for seats and seat belt anchorages according to ECE regulations 14 and 17.

Thanks to the Dahl VarioDock™ system, securing wheelchair users and other seated occupants can be carried out with an unprecedented ease, speed and safety. The Dahl VarioDock™ docking system offers more flexibility and versatility than any other seat anchoring system because the seat and wheelchair layout can be changed very quickly with a minimum of effort and time consumption. A docking system also improves the working environment considerably for drivers, who often struggle with crammed spaces and bad working positions when tying down wheelchairs with 4 point strap systems.

- Power height adjustment from 61 91 mm.
- Time consumption only ¼ of tying down wheelchair with 4 point strap system.
- Tested for wheelchairs with a weight of up to 200 kg plus user.
- Approved for anchoring Dahl COMFORT Seat
- 4 step power tightening system to eliminate unwanted play.
- Opening time for lock selectable in 5 or 8 seconds intervals.
- "Maintenance required" warning in display
- · Improves working environment for drivers.
- No tie down straps on vehicle floor to trip over.
- Crash tested and CE-marked with approximately 160+ wheelchair models



MULTI ADJUSTABLE • QUICK RELEASE









Dahl VarioDock™



Dahl VarioDock™ can be used to secure manual and powered wheelchairs with a weight of up to 200 kg plus user, as well as our Dahl COMFORT Seat with integrated 3 point safety belt.





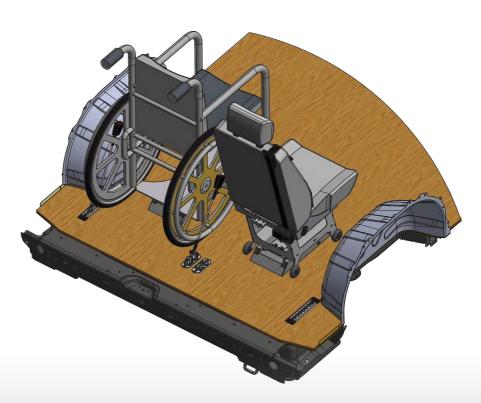
Anchorage of Dahl COMFORT Seat with integrated 3-point seat belt

Dahl VarioDock™ has also been tested and approved for anchoring Dahl COMFORT Seat with integrated 3-point seat belt, placed on seat row 2 or behind, in a number of vehicle models.

Using VarioDock™ for anchoring the Dahl COMFORT Seat with an integrated 3-point seat belt requires a particularly strong reinforcement kit for the vehicle floor which is designed, tested and approved for the specific vehicle and installation position.

In the event of a collision, the vehicle's floor will be subjected to a much higher torque / load when using a seat with integrated seat anchorage points, than when using a wheelchair, where all seat anchorage points are rooted in the vehicle body and floor.

Please see the current delivery programme of approved and vehicle-specific anchoring kits in our product catalogue, which can be downloaded from our website http://wtors.com





WARNING! Risk of death or serious injury

Do not use VarioDock™ to anchor Dahl COMFORT Seats or other seats with integrated seat belt anchor points, if the vehicle has not been fitted with an approved reinforcement kit for VarioDock™.

If a reinforcement kit that has been approved for this use has not been fitted, there is a risk that the user and other passengers in the vehicle may suffer serious or fatal injuries during a collision as a result of the vehicle floor being deformed severely or the anchoring points of the docking station being torn loose.

Therefore, ask your dealer if a VarioDock™ reinforcement kit approved for anchorage of Dahl COMFORT Seat has been fitted to the vehicle and mounting position prior to commissioning.

Here shown are approved design examples based on our COMFORT Seat and VarioDock™

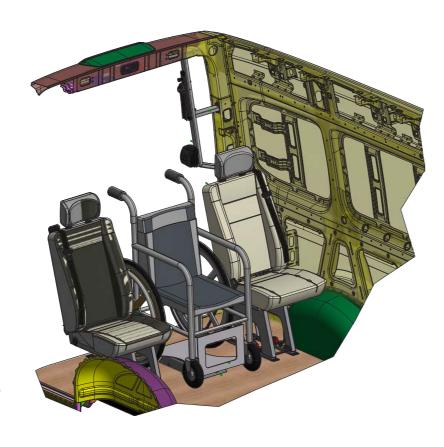
The Dahl VarioDock system provides more flexibility and versatility than any other fastening system on the market, as this is the only system approved for anchoring both seats and wheelchairs. In vehicles equipped with the VarioDock system, the layout and seat configuration can be changed faster than with any other fastening system and this requires less work and time consumption than any other system.

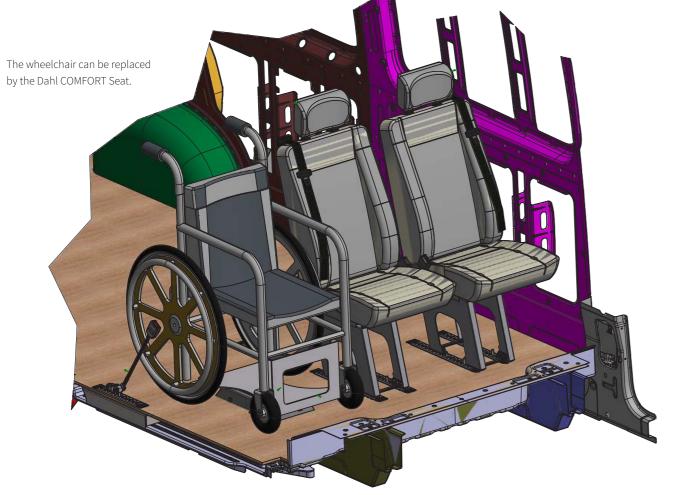
We have chosen to show one example per vehicle model, but there are countless options.

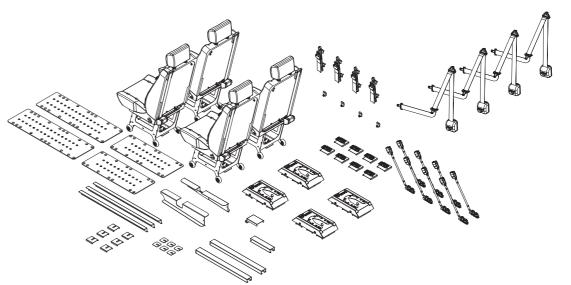
Please contact us in order to find the specific design you need.

BE CAREFUL

to check vehicle categorization (M1, M2 or M3), wheelbase, equipment variants, original and retrofitted equipment, such as a lift, which is decisive for whether a vehicle is suitable for a given layout, as this affects the vehicle's payload, requirements for distance between seats and wheelchairs, aisle width and access to emergency exits, etc.

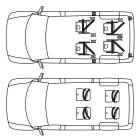






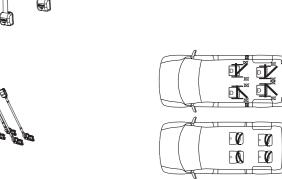
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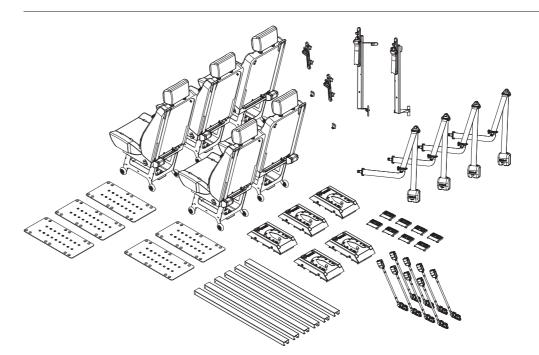
VW T5 & T6



Part no. 503662

Mercedes Vito & V-Class W447



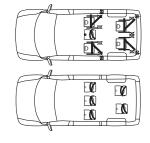


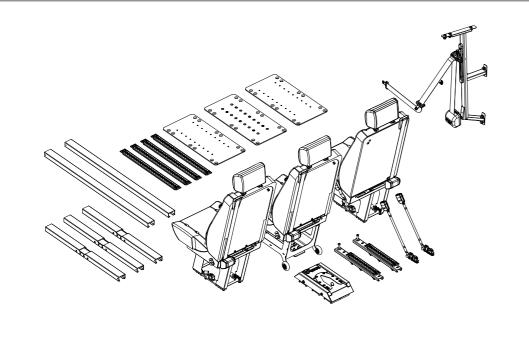
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Citroën Jumper Y

Fiat Ducato X250

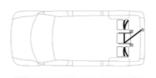
Peugeot Boxer Y

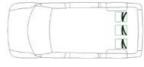


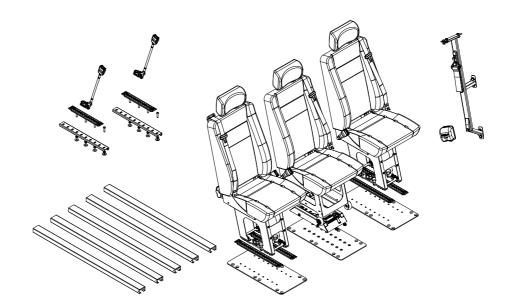


Part no. 503776 MB Sprinter 906, 907 & 910 VW Crafter -2017



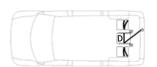


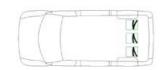




Part no. 501451

MAN TGE 2017-VW Crafter -2017



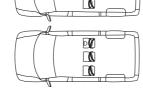


Part no. 503779

MB Sprinter 906, 907 & 910 VW Crafter -2017



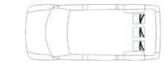






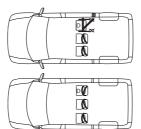




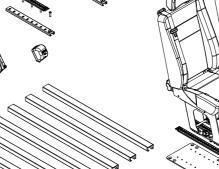


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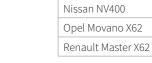
MB Sprinter 906, 907 & 910 VW Crafter -2017

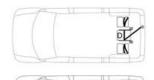


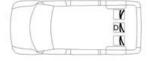






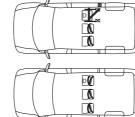










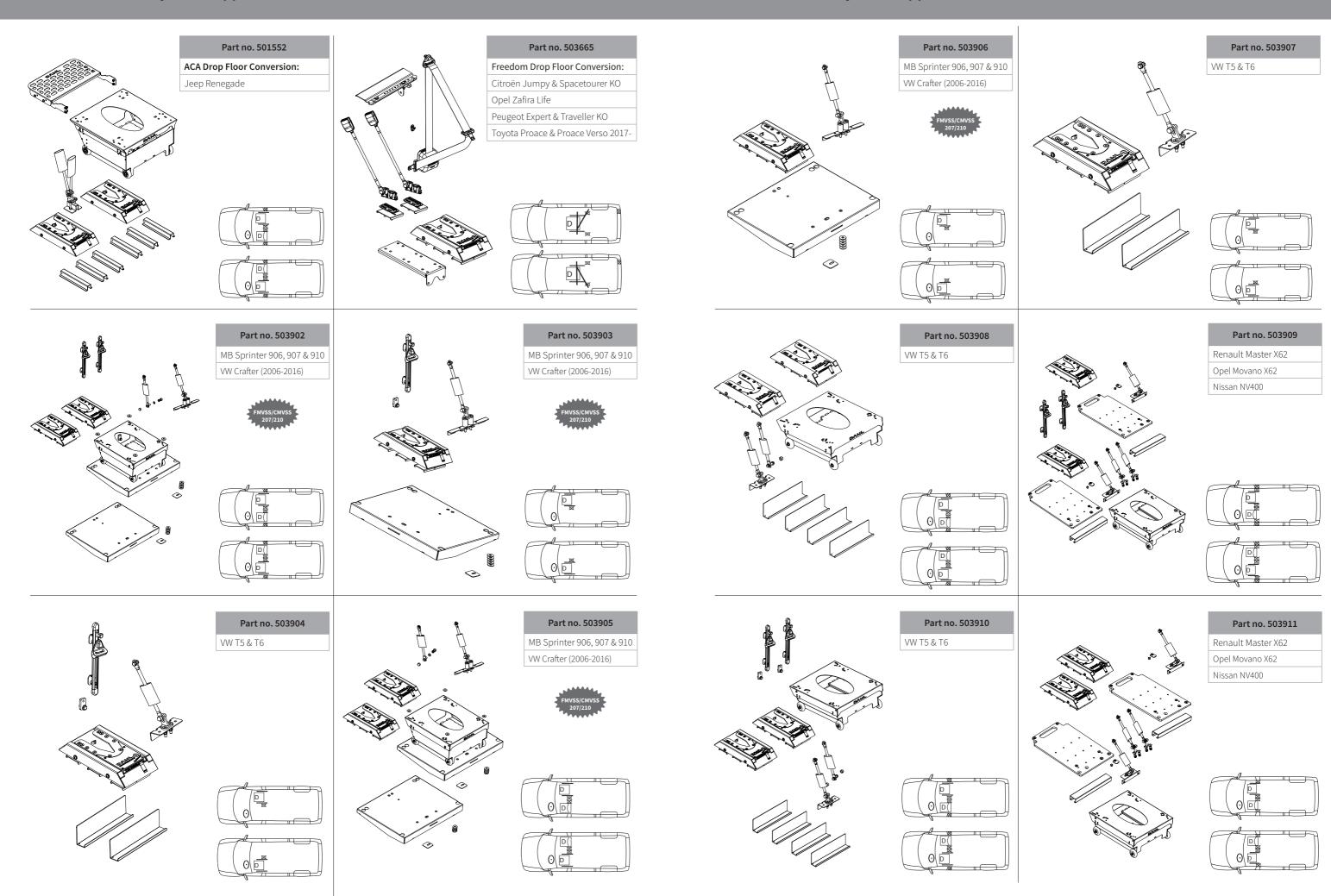


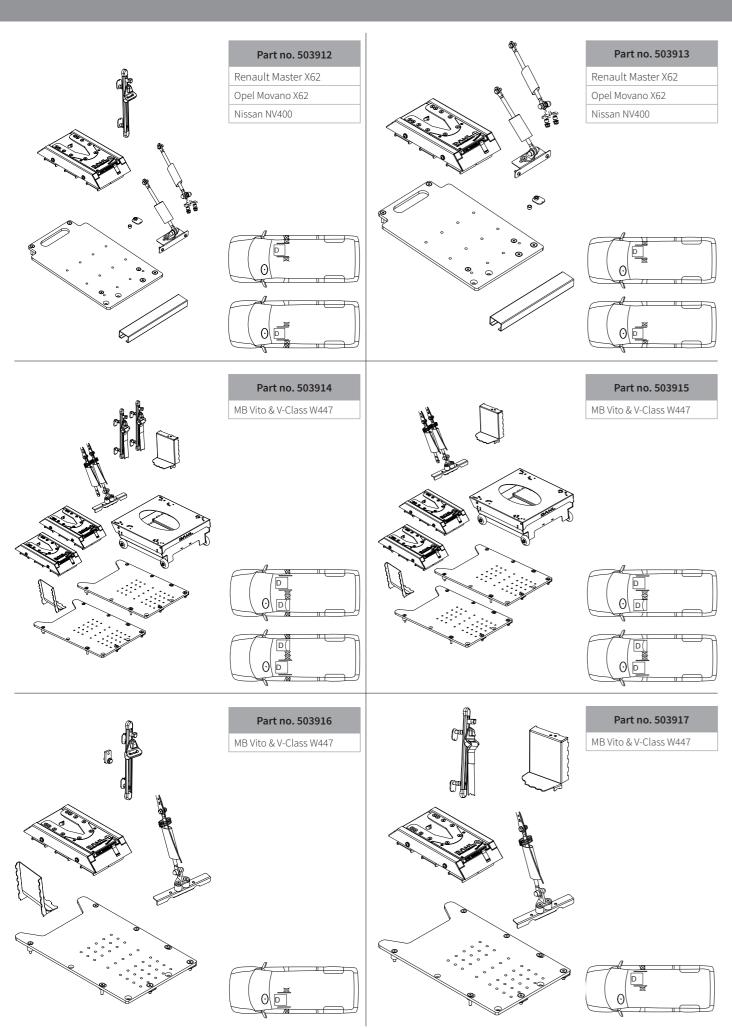


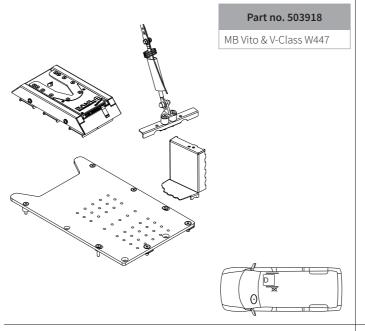
Dahl Docking Systems - MK II & VarioDock™ List of vehicles with approved installation kits

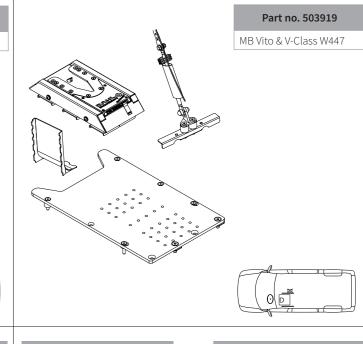
							First seat row		1	
Vehicle make	Vehicle model	Position of shoulder belt anchorage	Floor mount type	MK II	Vario	Amount docking stations	Seat base	Shoulder belt anchorage	FMVSS 207/ CMVSS 207	FMVSS 210/ CMVSS 210
Citroën	Berlingo, Tripod/allied dropfloor conversion	В	/	503461	503954	2	1	1		
	Jumper Y	С	surface	502171	503920					
		C	flush	502172	503921					
		W	surface flush	502179 502180	503928 503929					
	Jumpy X	C	surface	502171	503920					
		С	flush	502172	503921					
		RD RD	surface flush	502177 502178	503926 503927					
	Jumpy & Spacetourer KO	В	- rusii	503303	503950	1	0	1		
		В		503304	503951	1	0	1		
		<u>В</u> В		503305 503306	503952 503953	2 2	1	2		
		C	surface	503302	503949	_	_	_		
	5 1 5 51 6	C	flush	503301	503946					
	- Freedom Drop Floor Conversion	C (middle)	surface		503665					
Fiat	Doblo high roof SWB & LWB	D	surface	503121	503940					
		D	flush	503120	503939					
	Ducato X250	C C	surface flush	502171 502172	503920 503921					
		W	surface	502172	503921					
		W	flush	502180	503929					
	Scudo X270	С	surface	502171	503920					
		C RD	flush surface	502172 502177	503921 503926					
		RD	flush	502177	503927					
	Talento 2016-	С	surface	502171	503920					
		С	flush	502172	503921					
		D D	surface flush	502171 502172	503920 503921					
Ford	Transit Custom V362	C	surface	502171	503920					
		С	flush	502172	503921					
		RD RD	surface flush	502177 502178	503926 503927					
	Transit V363	C	surface	502178	503927					
	Transit Custom V710	W	flush	500221	500222				√	√
		D	flush	500253	500255				√	√
		RD	flush	500254	500256				√	√
Jeep	Renegade, ACA Drop floor conversion	В		501551	501552	2	1	0		
MAN	TGE 2017-	C C	surface flush	503142 503143	503941 503942					
		W	surface	503145	503944					
		W	flush	503144	503943					
		D D	surface flush	502171 502172	503920 503921					
Mercedes	Vito & V-Class W447	В	itusii	502172	503914	2	1	2		
		В		502164	503915	2	1	0		
		В		502165	503916	1	0	1		
		B B		502166	503917	1	0	0		
		В		502168	503919	1	0	0		
		С	surface	502171	503920					
		C RD	flush surface	502172 502177	503921 503926					
		RD	flush	502178	503927					
		W	surface	503008	503007					
		W	flush	503006	503005					
	Sprinter 906 & 907 & 910	В		501970	503902	2	1	2 1	√ √	√ ./
		<u>В</u> В		501971 502034	503903 503905	2	0 1	0	√ √	√ √
		В		502035	503906	1	0	0	V	V
		W	surface	502175	503924					√ /
		W D	flush surface	502176 502171	503925 503920					√
		D	flush	502172	503921					
Mitsubishi	Express (Australien & New Zealand)	С	surface	502171	503920					
		C D	flush surface	502172 502171	503921 503920					
		D	flush	502171	503920					
Nissan	NV 200	W	surface	503197	503945					
	NV 300	С	surface	502171	503920					
		C D	flush surface	502172 502171	503921 503920					
		D	flush	502172	503921					
	NV 400	В		502039	503909	2	1	2		
		<u>В</u> В		502041 502042	503911 503912	2	0	0 1		
		В		502042	503912	1	0	0		
		С	surface	502181	503930					
	Primarka	С	flush	502182	503931					
	Primastar	C C	surface flush	502171 502172	503920 503921					
		D	surface	502172	503921					
		D	flush	502172	503921					
Opel	Combo High roof SWB & LWB	D	surface	503121	503940					
	I .	D	flush	503120	503939	I.			I	ı

		Desition				0	First seat row	Charolden		
Vehicle make	Vehicle model	Position of shoulder belt anchorage	Floor mount type	MKII	Vario	Amount docking stations	Seat base	Shoulder belt anchorage	FMVSS 207/ CMVSS 207	FMVSS 210/ CMVSS 210
	Movano X 62	В		502039	503909	2	1	2		
		В		502041	503911	2	1	0		
		B B		502042 502043	503912 503913	1	0	0		
		С	surface	502181	503930	1		J		
		С	flush	502182	503931					
	Vivaro X 82 & X 83	С	surface	502171	503920					
		C D	flush surface	502172 502171	503921 503920					
		D	flush	502172	503921					
	Zafira Life	С	surface	503302	503949					
		C B	flush	503301 503303	503946 503950	1	0	0		
		В		503304	503951	1	0	1		
		В		503305	503952	2	1	0		
D	Damas V	В		503306	503953	2	1	2		
Peugeot	Boxer Y	C	surface flush	502171 502172	503920 503921					
		W	surface	502179	503928					
		W	flush	502180	503929					
	Expert X	С	surface	502171	503920					
		C W	flush surface	502172 502177	503921 503926					
		W	flush	502177	503926					
	Expert & Traveller KO	С	surface	503302	503949					
		С	flush	503301	503946	1				
		B B		503303 503304	503950 503951	1	0	0		
		В		503305	503952	2	1	0		
		В		503306	503953	2	1	2		
	Partner, Tripod/Allied drop floor	В		503461	503954	2	1	2		
Renault	conversion Master X62	В		502039	503909	2	1	2		
Reliautt	Master AUZ	В		502039	503903	2	1	0		
		В		502042	503912	1	0	1		
		В		502043	503913	1	0	0		
		C	surface flush	502181 502182	503930 503931					
	Trafic X 82 & X 83	C	surface	502171	503920					
		С	flush	502172	503921					
		D	surface	502171	503920					
Toyota	Proace	D C	flush surface	502172 502171	503921 503920					
Toyota	Trodec	Č	flush	502172	503921					
		RD	surface	502177	503926					
	Dan and 0 Dan and Marian 2017	RD	flush	502178	503927					
	Proace & Proace Verso 2017-	C	surface flush	503302 503301	503949 503946					
		В	Itasii	503303	503950	1	0	0		
		В		503304	503951	1	0	1		
		В		503305	503952	2	1	0		
VW	Caddy, ITEK drop floor conversion	B B		503306 503255	503953 503947	2 2	1	2 2		
•••	caday, mentarop noor conversion			503310	503948	2	1	0		
	Crafter (2006-2016)	В		501970	503902	2	1	2	√	√
		В		501971	503903	1	0	1	√ /	√ /
		B B		502034 502035	503905 503906	2	0	0	√ √	√ √
		W	surface	502175	503924	_		0	V	√ √
		W	flush	502176	503925					√
		D	surface	502171	503920					
	Crafter 2017 -	D C	flush surface	502172 503142	503921 503941					
	Clutter 2011	C	flush	503143	503942					
		W	surface	503145	503944					
		W	flush	503144	503943					
		D D	surface flush	502171 502172	503920 503921					
	VW T5 & T6	В	Itusii	501973	503921	1	0	1		
		В		502036	503907	1	0	0		
		В		502037	503908	2	1	0		
		B C	surface	502040 502171	503910 503920	2	1	2		
		C	flush	502171	503920					
		W	surface	502173	503922					
		W	flush	502174	503923					
		RD RD	surface flush	502177 502178	503926 503927					
	New Transporter/Caravelle 2025-	W	flush	502178	503927				√	√
	Hamporter/ Caravette 2023*	D	flush	500253	500255				V √	√ √
		RD	flush	500254	500256				√ √	√ √
	T6, Zawatzky Centervan,					2		2		,
	Drop floor conversion	В		502368	503937	2	1	2		
	TE 0 TC Colo. 1 CMC.	В		502369	503938	2	1	0		
	T5 & T6 Colorado, GM Coachwork, Drop floor conversion	В		502285	503933	2	1	2		
	Drop Roof Conversion	В		502286	503934	1	0	1		
										1
		B B		502287 502288	503935 503936	1	0	0		

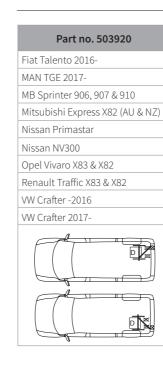


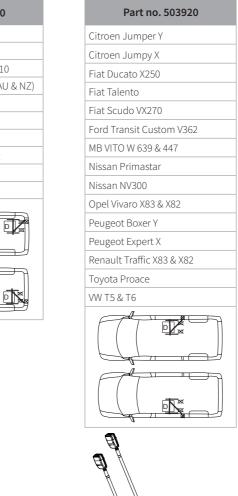


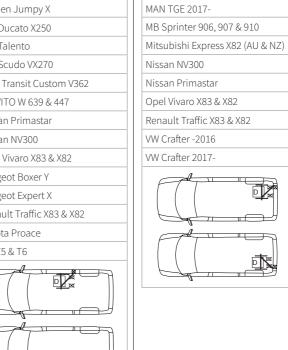




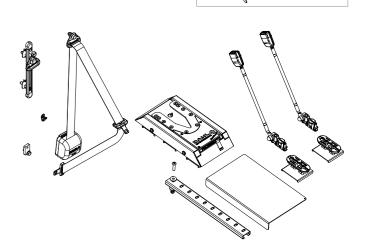
Fiat Talento 2016-

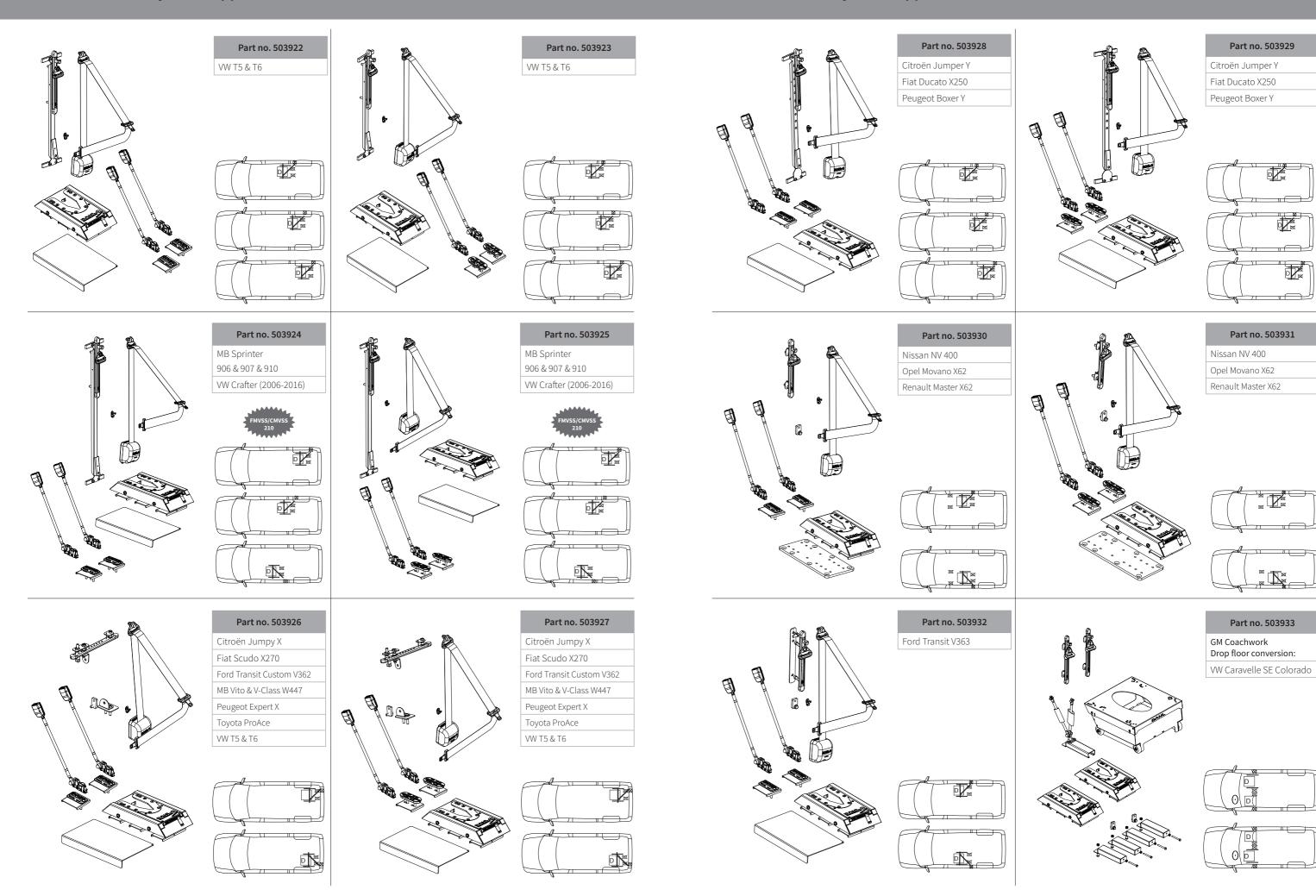












Part no. 503943

Part no. 503945

27

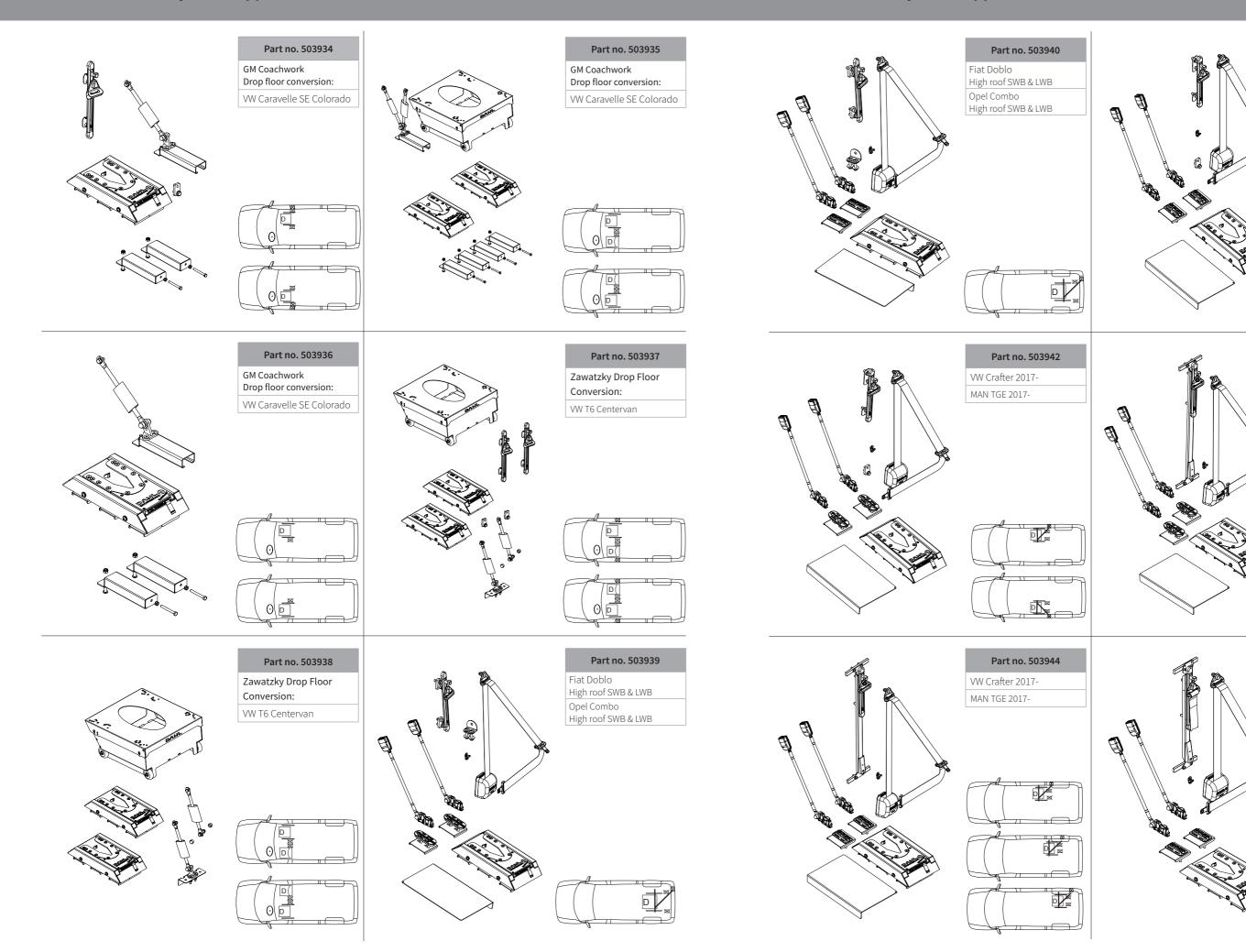
Nissan NV 200

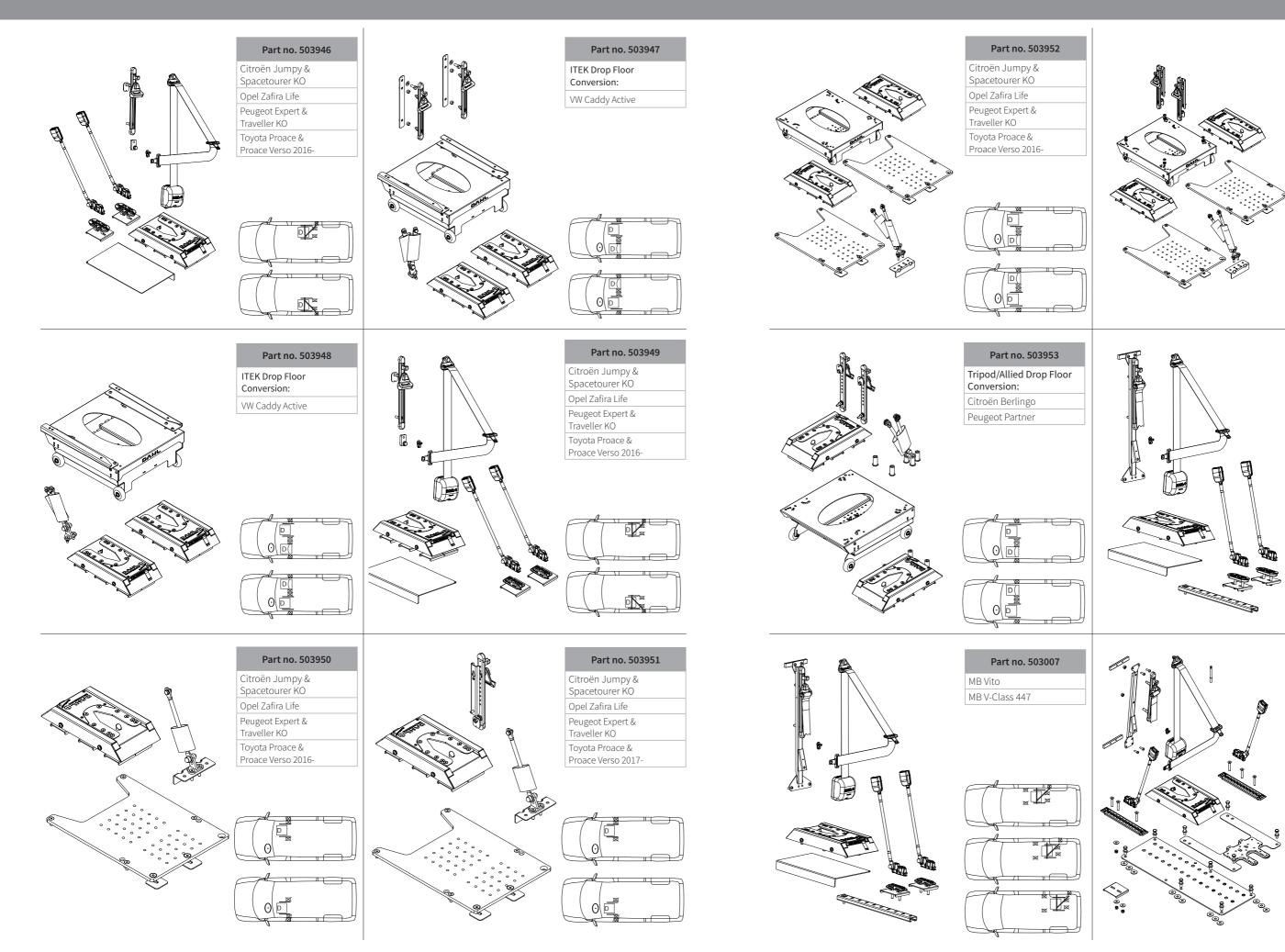
VW Crafter 2017-

MAN TGE 2017-

VW Crafter 2017-

MAN TGE 2017-





Citroën Jumpy &

Spacetourer KO

Peugeot Expert &

Toyota Proace &

Proace Verso 2016-

Part no. 503005

Part no. 500222

Ford Transit Custum V710

VW New Transporter /

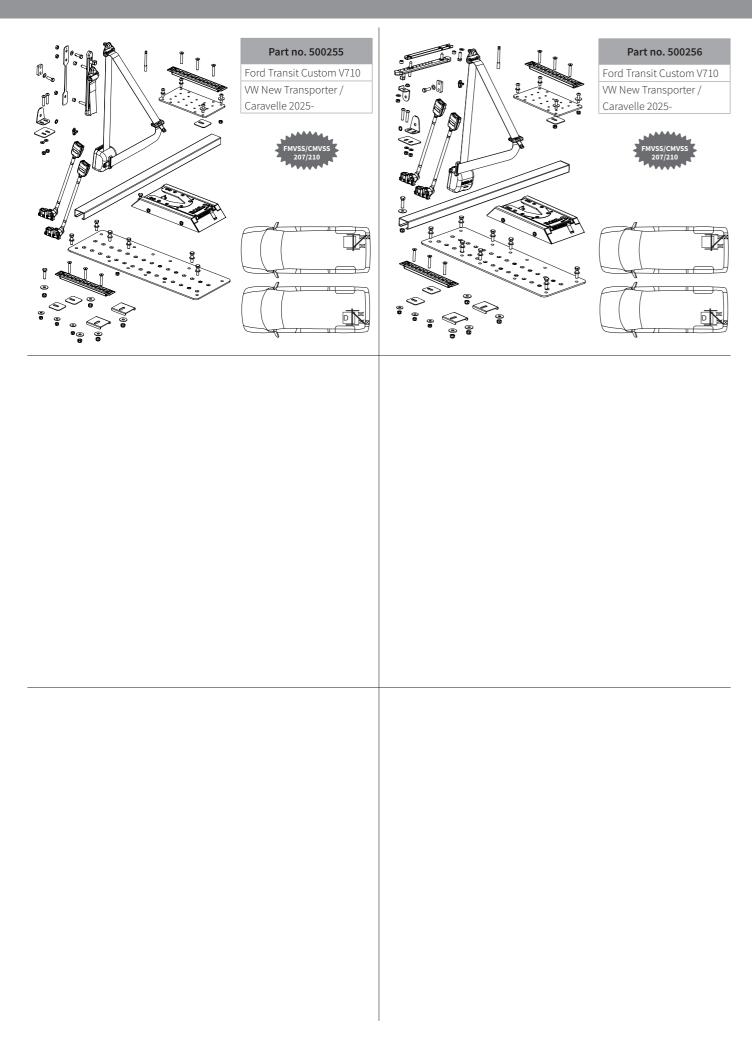
Caravelle 2025-

MB Vito

MB V-Class 447

Opel Zafira Life

Traveller KO



Notes

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Dahl Docking Station MK II - Easy to operate



users. The Docking System is the first system on the market to be tested and TÜV certified in accordance with EU safety requirements for cars (M1).

In testing, the docking station has proved to be so strong that it can withstand a load corresponding to a wheelchair weight of more than 200 kg + passenger provided that the safety belt is installed in the traditional manner in the floor of the vehicle.

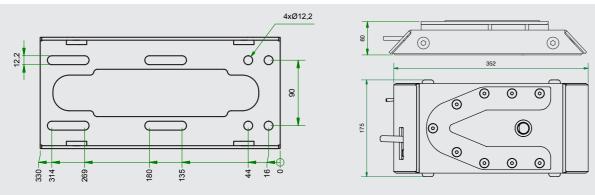


Part no. 501750 Contents of a standard set for MK II.









You can find more information about maintenance and installation of the Dahl Docking Station MK II on our website.



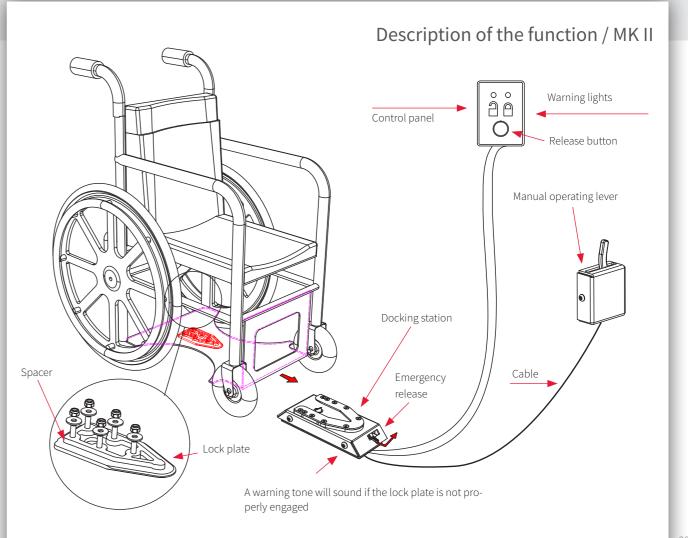




A lock plate and a spacer must be fitted under the wheelchair. When the wheelchair is maneuvered towards the docking station, it is guided into place by means of the lock plate and is secured automatically.

> The wheelchair is released by pressing the red button on the control panel.





Accessories for Dahl Docking System MK II and VarioDock™

Accessories for Dahl Docking System MK II

passenger to switch seats.

Seat base for anchoring original driver's seats with Dahl Docking Station MKII and VarioDock™

In addition to being approved for securing wheelchair tie-down, the Dahl Docking Station MKII and VarioDock™ have also been tested and approved for anchoring several original car manufacturers' seats.

These seat bases with pre-drilled holes can be anchored in the Dahl Docking Station MK II and VarioDock™ and placed on the vehicles' 1st seat row, allowing the driver and

Our seat base is tested according to ECE regulation 14 and 17.

Please ask which seat base is best suited for the specific car model.



Part no. 501448 Height 135-202 mm (wide base)

Part no. 500650 Height 174-241 mm

Part no. 502270 Height 231-297 mm

Part no. 502214 Height 231-297 mm (wide base)







Footrest for seat base in drop floor converted vehicles. Fits: 502270, 502214, and 500650.

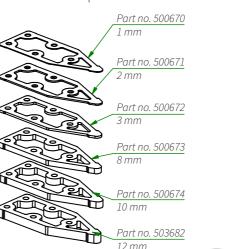
Acquire Dahl drawing no. 501396 to cross-check dimensions for vehicle in question.



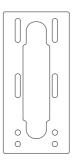
The seat base frame can be assembled in 36 different positions for optimum flexibility and comfort, thus allowing the seat height and angle to be adjusted.



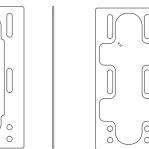
Spacers for height adjustment of the lock plate



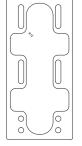
Spacers for height adjustment of the Docking Station



Part no. 500589 3 mm



Part no. 500590



Part no. 502044 10 mm

Part no. 503125 Lock plate with bolts and 8 mm spacer

1 mm

Servicekits

Art.no. 502010 - Servicekit - MK II, (until 05/2017) Art.no. 502493 - Servicekit - MK II, (from 06/2017-) Art.no. 503636 - Servicekit - VarioDock™

Manual operating lever and cable

Part no. 500680



Emergency release tool

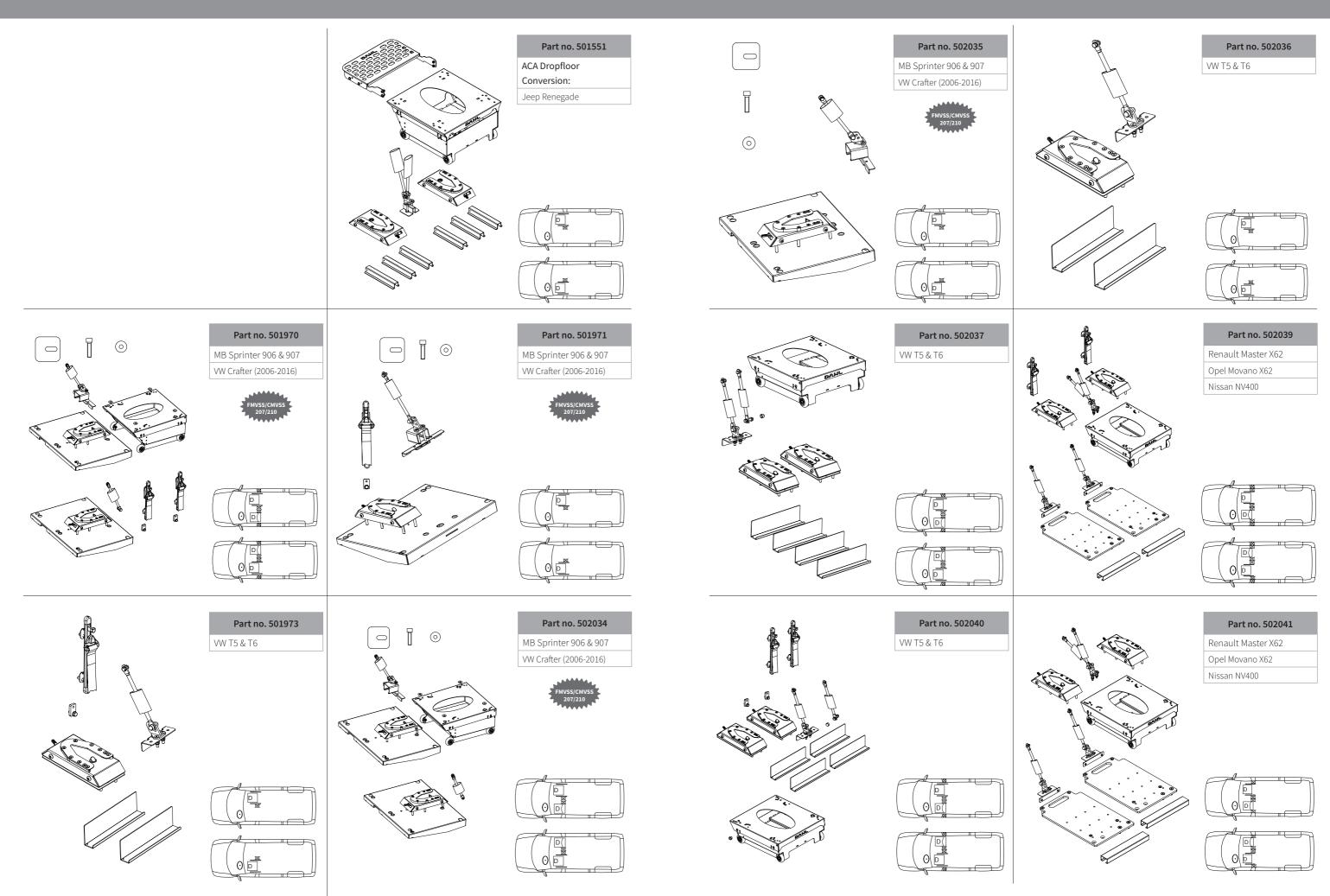


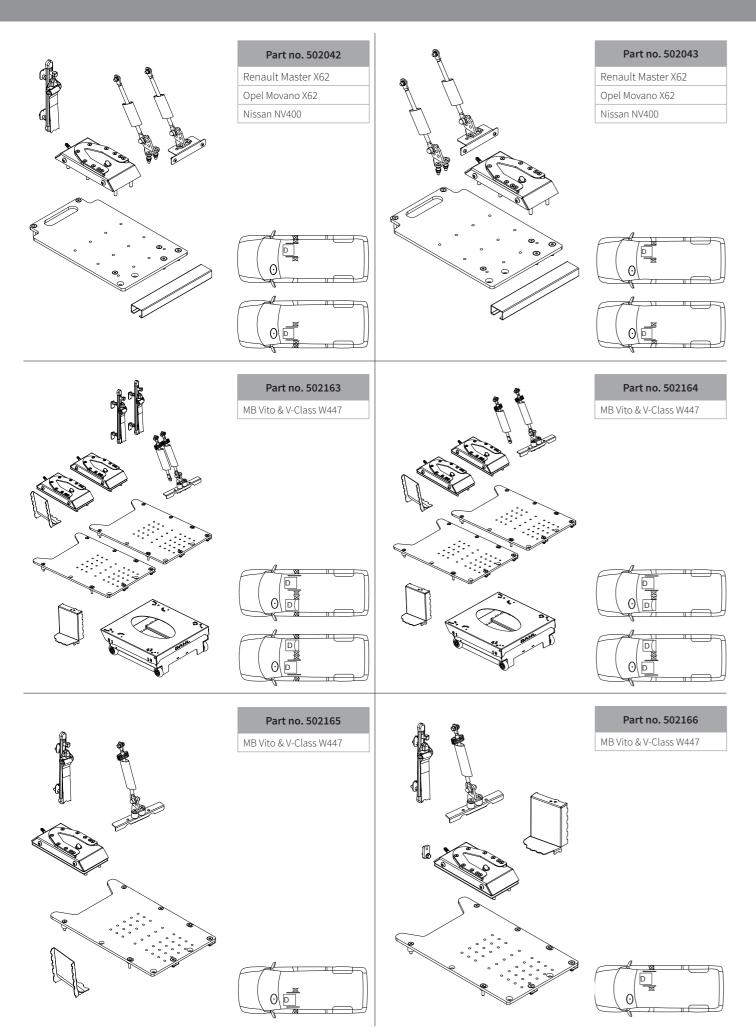
Subframes for Docking Station Mk II

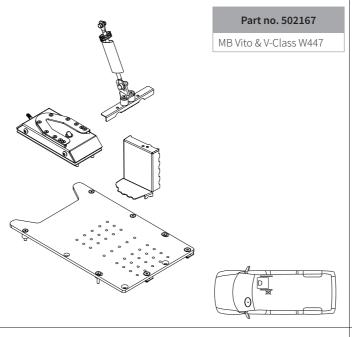


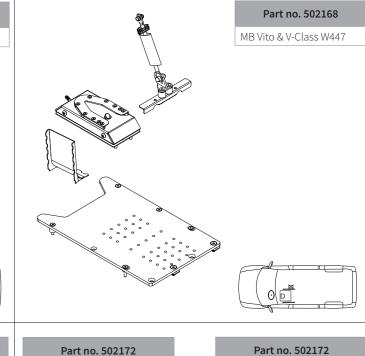












Part no. 502171
Fiat Talento 2016-
Man TGE 2017-
MB Sprinter 906 & 907 & 910
Mitsubishi Express (AU+NZ)
Nissan NV300
Nissan Primastar
Opel Vivaro X83 & X82
Renault Traffic X83 & X82
VW Crafter -2016
VW Crafter 2017-





Fiat Talento 2016-

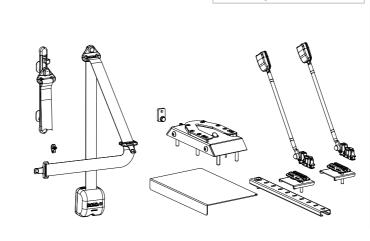
MB Sprinter 906 & 907 & 910

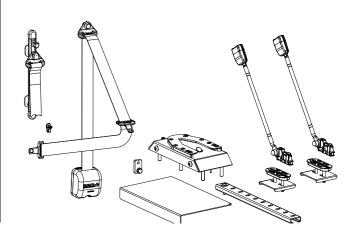
Mitsubishi Express (AU+NZ)

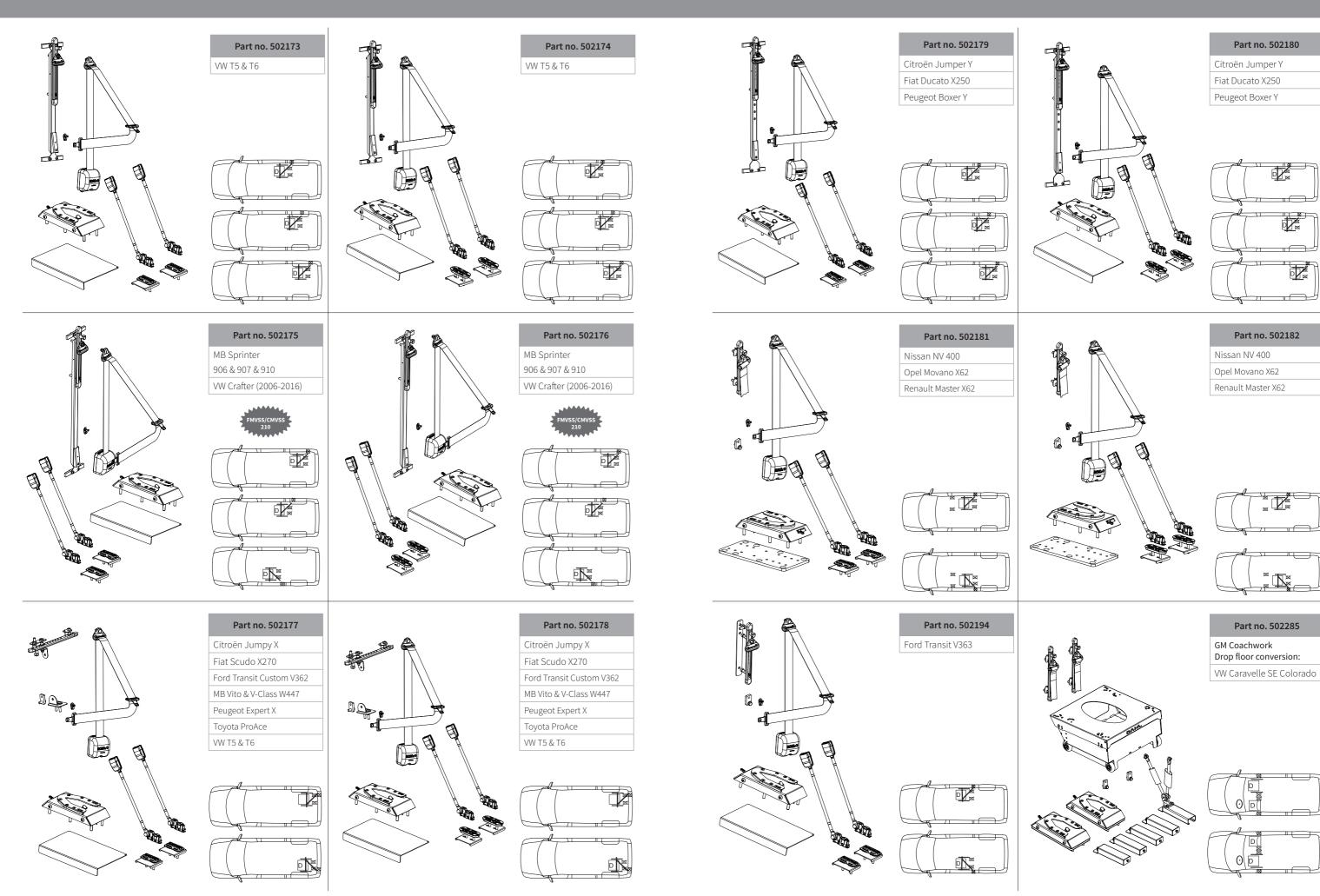
Man TGE 2017-

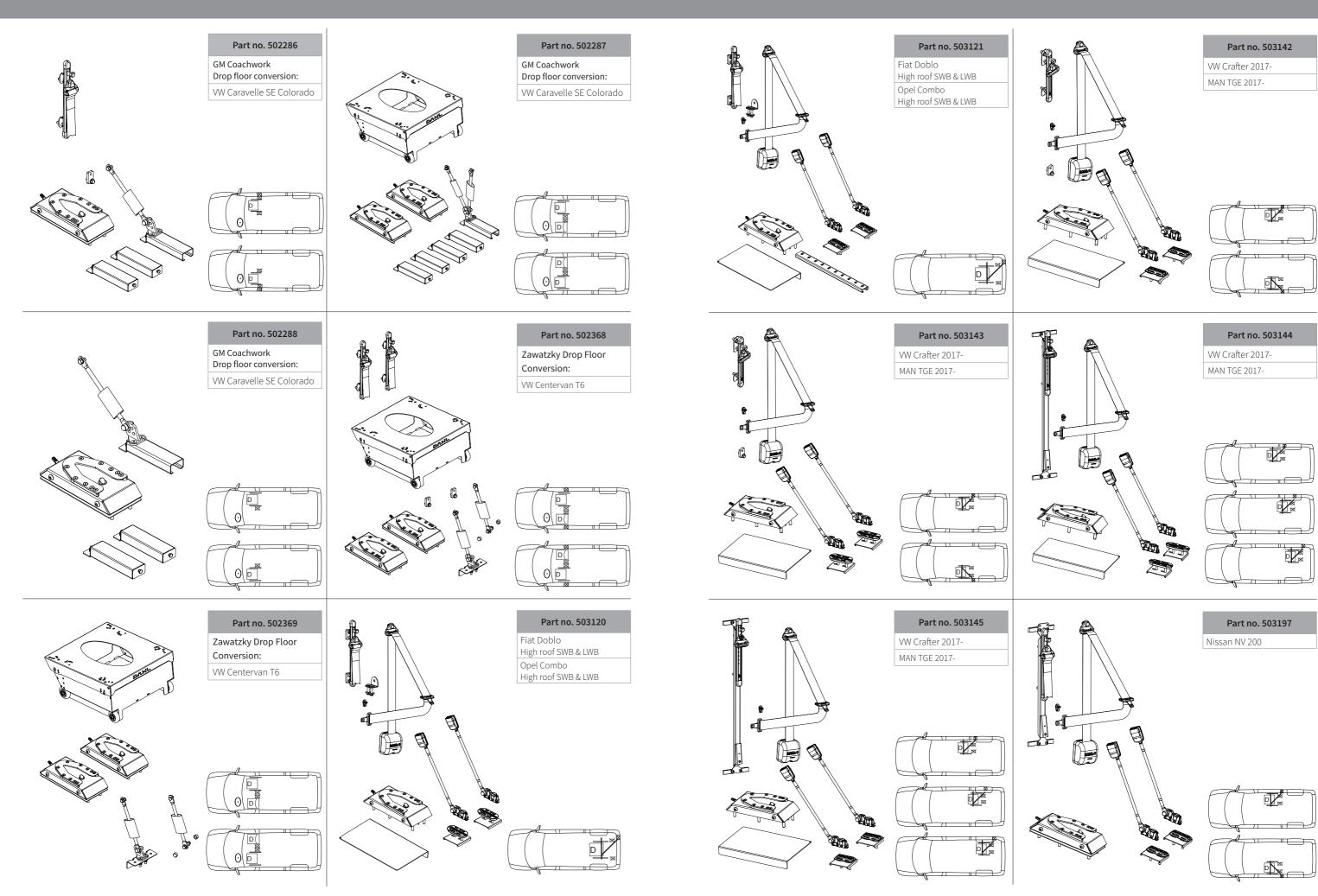
Nissan NV300

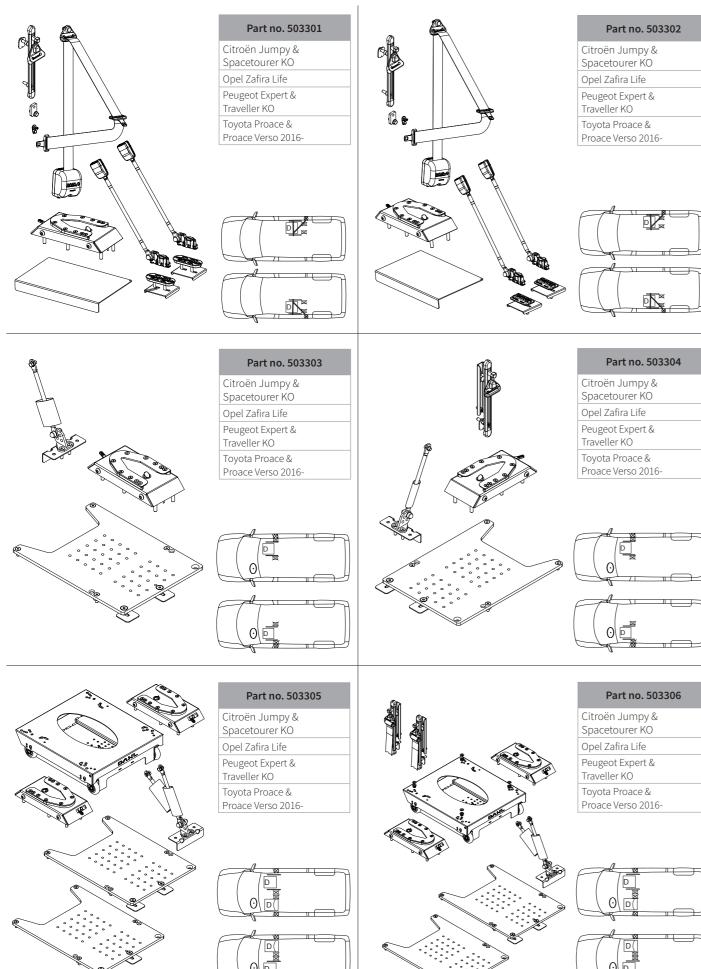
Citroën Jumper Y Citroën Jumpy X Fiat Ducato X250 Fiat Scudo X270 Fiat Talento Ford Transit Custom V362 MB Vito W639 & W447 Mitsubishi Express (AU+NZ) Nissan NV300 Nissan Primastar Opel Vivaro X83 & X82 Peugeot Boxer Y Peugeot Expert X Renault Trafic X83 & X82 Toyota Proace VW T5 & T6

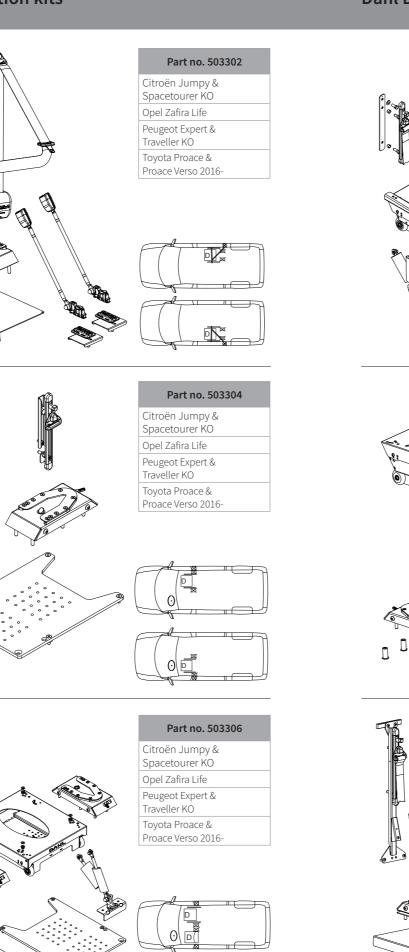


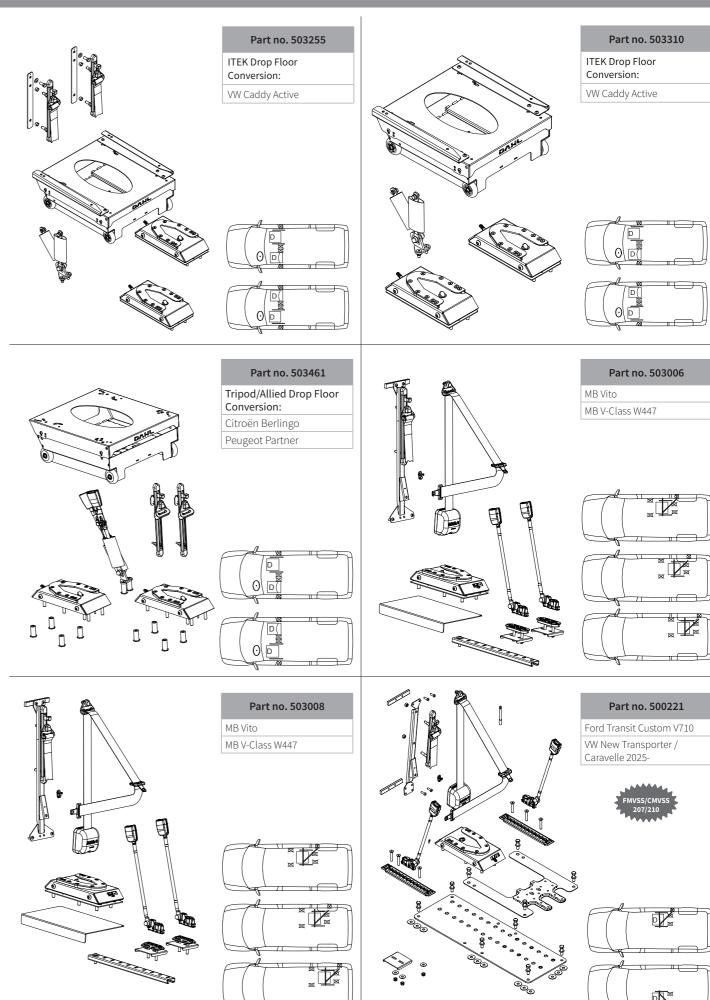


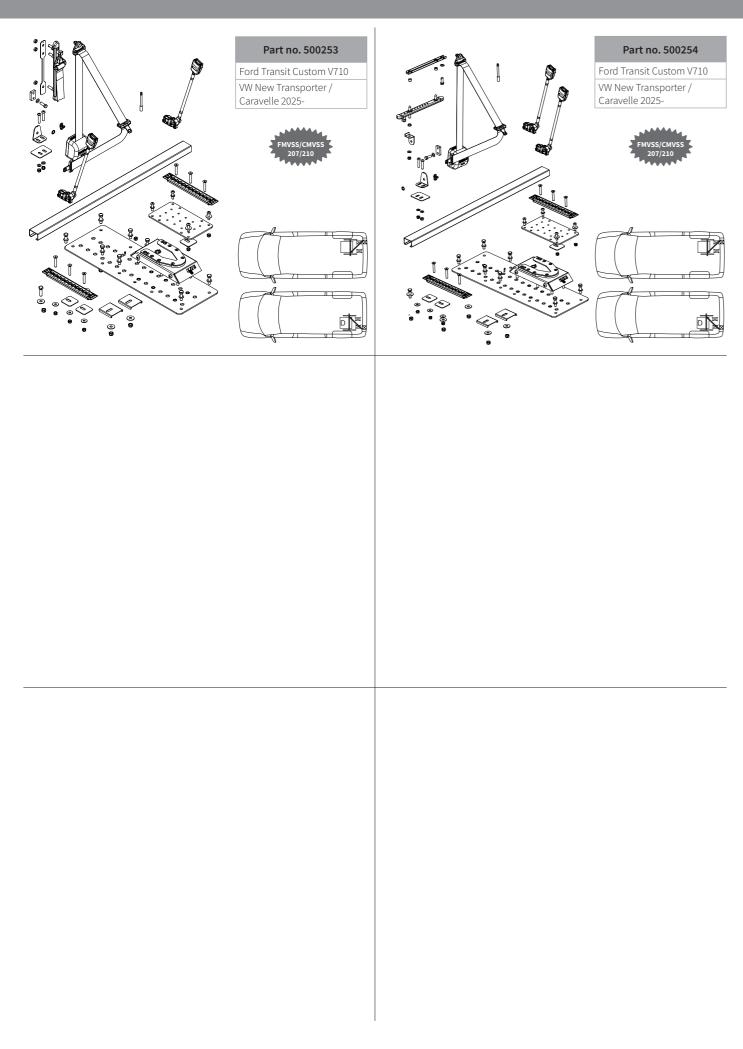












Notes

Dahl Docking Systems

Car seats



Tool for installing seat belt anchorage kits

When installing a special seat, or adapting a vehicle to accommodate a wheelchair user, it is often very difficult or impossible to mount the seat belts to tested and approved anchorage points, when the vehicle's original seat has been removed.

The reason is that original seats of today are often equipped with integrated seat belts, and once the original seats have been taken out of the vehicle, one or all of the tested seat belt anchorage points have disappeared with the removed seats.

Therefore we have developed and tested retrofittable seat belt anchorage kits consisting of a height adjuster for the shoulder belt and vehicle specific reinforcing brackets that can be placed inside the vehicles side and under the floor.

These kits can for example be used to anchor the buckle for the vehicles original safety belt or in conjunction with one of our certified 3 point occupant restraints for wheelchair users.





Part no. 503511

Special tool for installation, with 7/16" UNF thread

Special tool for installation, M8 thread

Examples of tested vehicle models with our Dahl Docking Systems



Mercedes Sprinter, VW Crafter



Ford Transit Custom



Mercedes Vito/Viano





VW Caddy





Peugeot Partner / Citroën Berlingo



Fiat Ducato / Peugeot Boxer / Citroën Jumper



Citroën Jumpy / Peugeot Expert / Fiat Scudo



Before being put into production, development work has resulted in the performance of more than 130 tests on the product in our own test laboratory in Thisted and at laboratories abroad.

In addition to the ECE 44/04 standards, the seat also satisfies the ECE's strict M1 requirements for passenger cars and M2 for minibuses in accordance with ECE 14, 16



Our HYBRID and COMFORT Seats are testet according to ECE 14 in the following vehicle models:

Citroën Jumpy Y Fiat Ducato X250 Ford Transit Custom V362 MAN TGE

Mercedes Sprinter 906,907&910 Mercedes Vito 447 Nissan NV400

Opel Movano X62

Peugeot Boxer Y Renault Master X62 VW Crafter 2006-2016 VW Crafter 2017-VW T5 & T6

We have also testet our HYBRID and COMFORT Seats according to FMVSS 207/210, and CMVSS 207/210 in Mercedes Sprinter 907 and 910.









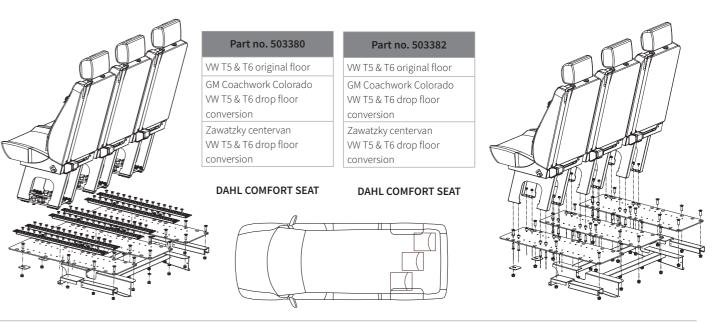
Dahl COMFORT Seat - Approved installation kits

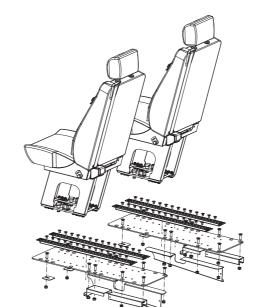


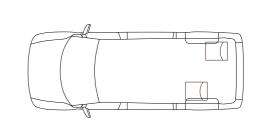
COMFORT SEAT™ is the only seat on the market for minibuses with a built-in 3-point seatbelt and designed with extra lateral support and upholstery springs in both the seat cushion and back.

COMFORT SEATTM thus has the same level of comfort as passenger car seats. Normally the seat and back in minibuses are upholstered on metal or plywood sheets.

COMFORT SEAT™ can be supplied with adjustable armrests and slide rails.







Part no. 503381

VW T5 & T6 original floor

GM Coachwork Colorado VW T5 & T6 drop floor conversion

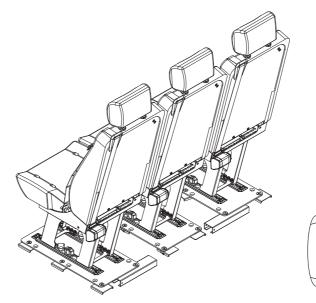
Zawatzky centervan VW T5 & T6 drop floor conversion

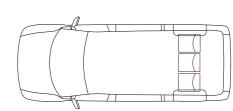
DAHL COMFORT SEAT



MB Vito V-Class 639-2

MB Vito W447





Accessories for HYBRID SEAT and COMFORT SEAT



Patented multifunctional seat with integrated child safety seat – 4 in one

The HYBRID SEAT™ can replace loose child safety seats in minibuses, addressing three practical issues: safety, space, and time consumption. In just 3 seconds, the HYBRID SEAT™ can be transformed from a child safety seat into an adult seat and vice versa.

Dahl HYBRID SEAT saves time and saves lives

With the DAHL HYBRID SEAT™ installed in a minibus, the owner can offer safe and flexible transport for schools, kindergartens, nursing homes, and institutions in any order, without spending time retrieving and installing child safety seats.

Dahl Engineering is the first and only company on the market with ECE 44/04-approved seats that are both removable and adjustable, featuring integrated child safety seats for all seating positions in a minibus. The seat fits a newly developed, robust rail system that can be installed in the minibus, al-lowing the seat to be moved around or completely removed to make space for a wheelchair, for example.

* ECE 44/04 group classification of children: Group 1: 9-18 kg / Group 2: 15-25 kg / Group 3: 22-36 kg

Example of using a 5-point harness



Children in Groups 1 and 2 are secured with the built-in 5-point harness.

Legs for fixed installation of Dahl Seats

Part no.	Height
501560	270 mm
501561	300 mm
501562	325 mm
501563	350 mm



Legs for rail installation of Dahl Seats

Part no.	Height
501564	270 mm
501565	300 mm
501566	325 mm
501567	350 mm



Please enquire, which leg heights are approved for the specific vehicle model.

Be careful:

Due to rail installation, the overall height is 10mm higher.

Part.no. 502162 Dahl HEAVY DUTY floor rail, flush mount, 3230 mm



Part no. 500780
End cap for Dahl
HEAVY DUTY floor rail
part no. 500777

Part no. 500777



Dahl HEAVY DUTY floor rail, 3230 mm

 Part no. 500093
 620 mm

 Part no. 500083
 747 mm

 Part no. 500089
 935 mm

 Part no. 500090
 1497 mm

 Part no. 500110
 1995 mm

 Part no. 500092
 2495 mm

 Part no. 500109
 2995 mm

Seat anchorage plates

End cap for Dahl HEAVY DUTY floor rail (flush mount) part no. 502162

Part no. 502228





Part no. 502138
Reinforcement profile, 2487 mm



Part no. 501325

Dahl Lockable rail fitting for

Dahl heavy duty floor rail



Part no. 500602 Cover for COMFORT Seat, ask for available models



Part no. 500076 Adjustable armrest - right

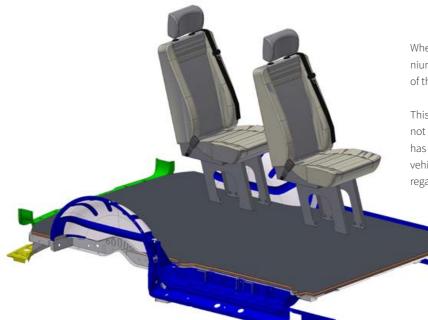


Part no. 500077 Adjustable armrest - left



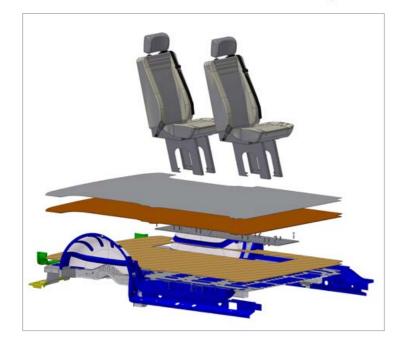


Dahl Low Floor System



When seats are installed in the traditional manner, with an aluminium floor, on top of the floor of the vehicle, approximately 4 cm of the vehicle's internal clearance height will be lost.

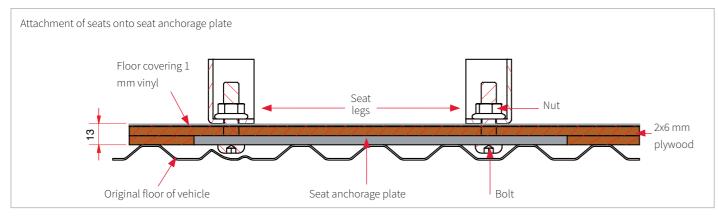
This means that passengers – in particular wheelchair users – may not have sufficient headroom in some vehicles. Dahl Engineering has therefore developed a new system for anchoring seats in vehicles in which the ceiling height, in particular, is important with regard to the practicality of the vehicle.



The Low Floor System is illustrated with a VW Transporter/Caravelle T5 and T6 vehicle floor, but the system is also available for vehicles. Kits for more vehicles are under development/testing.

The extremely simple installation principle is based on the seats being bolted to seat anchorage plates made from high tensile steel, which are in turn secured to the vehicle by means of specially adapted reinforcement components under the vehicle floor.

The seat anchorage plates are countersunk in a thin plywood sheet in a pre-cut hole. Another plywood sheet is placed on top with the floor covering and pre-drilled holes for the bolts onto which the seats are eventually secured.



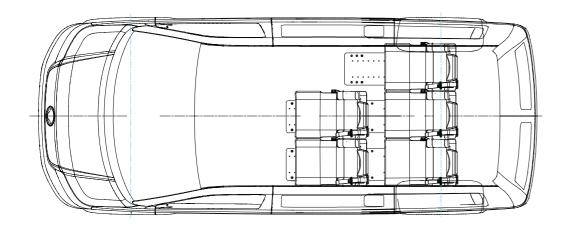
The Dahl Low Floor System can increase headroom by as much as 25-30 mm in relation to traditional aluminium floors that are installed on top of the original floor of the vehicle.



The reinforcement components are adapted to the installation point in question – including installation carried out around the final tank

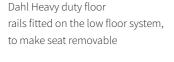
When installing DAHL Low Floor seat anchorage plates, it is possible to work with a drilling template with fixed positions for the holes in the floor of the vehicle. At the same time, it is also possible to choose between different positions for the seats, even though the holes are already drilled in the floor of the vehicle. The installation work thus becomes much more straightforward due to the fact that the amount of time consumed and the risk of mistakes are significantly reduced, for example in connection with the welding of incorrectly drilled holes.

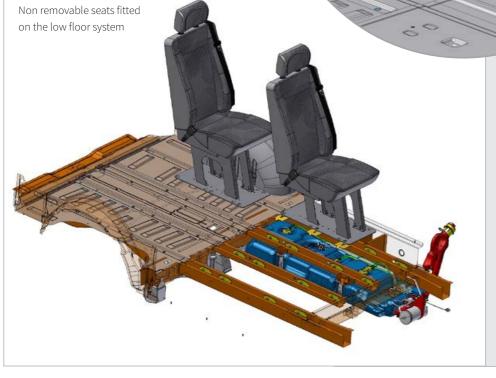
4-point wheelchair and occupant restraint systems



Example of seat configuration in VW Transporter/Caravelle T5 and T6

- wheelbase 3000 mm





TÜV approved fitting kits are currently available for the following vehicles:
Citroën Jumper Y, Fiat Ducato X250, Fiat TALENTO, Ford Transit Custom V362,
Mercedes Sprinter 906/907/910, Nissan NV300, Nissan NV 400, Opel Movano X62, Opel Vivaro X83/X82, Peugeot Boxer Y, Renault Master X62, Renault Trafic X83/X82, Mercedes Vito W639 & W447, VW Crafter (2006-2016), VW Crafter 2017-VW T5 og T6.

Please enquire for the updated list of tested vehicles, as we continuously test new models.

4-point retractable restraint system with automatic 3 point occupant restraint

Our automatic 3 point occupant restraint system makes it much easier and quicker to buckle up the wheelchair user, than when using traditional 3 point occupant restraints.



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occupant restraint can be fitted quickly with

a minimum of effort.

4-point wheelchair and occupant restraint systems

EVOLUTION Line - up to 85 kg

EVOLUTION Line is a further development with focus on modern design, durability and light weight without compromising quality or robustness. By using new and better materials, we succeeded in reducing the weight with 27 % in comparison to an equivalent Classic Line retractor, whilst matching or surpassing the Classic Line's quality parameters. This can be especially useful in vehicles, where weight is a very crucial factor.

- The retractor housing is molded in an unbreakable plastic with nice matte finish
- Breaking strength has been tested in temperatures down to -21°C
- Robust handwheel in metal on the side to tighten the straps
- Low weight
- Push-button release



CLASSIC Line - up to 85 kg

CLASSIC Line is our first generation of tie-down retractors, which is characterized by beautiful design and high quality.

- The retractor housing is molded in metal
- Nice silver metallic surface
- Handwheel on both sides to tighten the straps
- Push-button release

HEAVY DUTY Line

- for wheelchairs up to 200 kg plus user

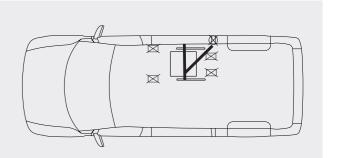
As electrical wheelchairs mostly weigh much more than the 85 kg, that the present regulations for tie-down equipment prescribe, Dahl Engineering has as the first in the world developed a TÜV approved Heavy Duty tiedown system with vehicle specific installation kits, that live up to and surpass EU regulation 2018/858. These patented kits can be used for wheelchairs with a weight of 200 kg plus user.



Our tie-down retractors come in different versions. Please see a list of tested vehicles for our 4 point WTORS kits on the following pages.

Systems that can withstand a wheelchair weight of more than our standard sets (85 kg) are marked with the wheelchairs max. weight.

For each kit we inform about tested and approved vehicle models, and a sketch showing the approved mounting positions.



/ehicle nake	Vehicle model	Shoulder belt anchorage position	Floor mount type	Up to 85 kg - CLASSIC Line	Up to 85 kg - EVOLUTION Line	Up to 200 kg - HEAVY DUTY Line
	Berlingo Tripod/Allied Floor Conversion	RD		1	503463	503464
	Jumper Y	C	surface	502057	503170	503135
	Sumper	C	flush	502058	503171	503488
		W	surface	501945	503483	
		W	flush	501944	502111	
	right side	RD	surface		503736	503604
	right side	RD	flush		503738	503624
	left side	RD	surface		503739	503625
	left side	RD	flush	F020F7	503737	503605
Citroën	Jumpy X	C C	surface flush	502057 502058	503170 503171	
Citroen		W	surface	501949	501057	
		W	flush	501948	501057	
		RD	surface	501771	503293	
		RD	flush	501799	503294	
	Space Tourer/Jumpy KO 2017-	С	surface		503296	503472
		С	flush		503295	503474
		RD	surface	501771	503293	503299
		RD	flush	501799	503294	503300
	Space Tourer/Jumpy KO 2017- Freedom Drop Floor Conversion	C (roof)	surface			
	Doblo High roof SWB&LWB	D	rail	502311	503312	
		D	rail	502317	501869	
		D	surface		502373	503560
	D 1 V050	D	flush		502372	503562
	Ducato X250	C	surface	502057	503170	503135
		C	flush	502058	503171	503488
		W	surface	501945	503483	
	right side	W RD	flush surface	501944	502111	503604
	right side	RD RD	flush		503736 503738	503624
	left side	RD	surface		503739	503625
Fiat	left side	RD	flush		503737	503605
	Scudo X270	C	surface	502057	503170	303003
		C	flush	502058	503171	
		W	surface	501949	501057	
		W	flush	501948	501055	
		RD	surface	501771	503293	
		RD	flush	501799	503294	
	Talento	С	surface	502057	503170	503135
		С	flush	502058	503171	503488
		D	surface	502057	503170	503135
	- 1.0	D	flush	502058	503171	503488
	Transit Custom V362	C	surface	502057	503170	
		C W	flush	502058	503171	F0212F
		W	surface flush	501947 501946	503486 503487	503135 503488
		D	surface	502057	503170	503135
		D	flush	502058	503170	503133
		RD	surface	501771	503293	303100
Ford		RD	flush	501799	503294	
	Transit V363	C	surface	502056	501054	
		С	flush	502055	501053	
		W	surface	502060	501051	
		W	flush	502059	501050	
		D	surface	502057	503170	
		D	flush	502058	503171	
	Transit Custom V710	W	surface		500248	
		W	flush		500247	
		D	surface		500251	
		D	flush		500252	
		RD	surface		500223	
		RD	flush		500224	
	TGE 2017-	C	surface	503162	500224	503496
	TOE 2011-	С	flush	503162	503133	503496
		W	surface	503164	503132	503494
MAN		W	flush	503163	503130	503495
		D	surface	502057	503170	503135
		D	flush	502058	503171	503488
		RD	surface		500114	500118
		RD	flush		500115	500119
	Carintar 00C 0 007 0 010	С	surface	502057	503170	503135
	Sprinter 906 & 907 & 910	С	flush	502058	503171	503488
	Sprinter 906 & 907 & 910	L L				
	Sprinter 906 & 907 & 910	W	surface	501679	503482	500826
Aoreadas	Sprinter 906 & 907 & 910			501679 501932	503482 503484	500826 500827
1ercedes	Sprinter 900 & 907 & 910	W	surface			
Mercedes	Sprinter 900 & 907 & 910	W W	surface flush	501932	503484	500827

/ehicle make	Vehicle model	Shoulder belt anchorage position	Floor mount type	Up to 85 kg - CLASSIC Line	Up to 85 kg - EVOLUTION Line	Up to 200 kg - HEAVY DUTY Lin
	Sprinter 906 & 907 High roof, wheel base					
	3250-3665-4325	W	surface	502063	500726	
	5250 5000 1525	W	flush	502062	500729	
	Vito & V-Class W447	W	surface	502241	503485	
		W	flush	502239	503524	
		RD RD	surface flush	501771 501799	503293 503294	
Mercedes	Vito 639 & V-Class W447	C	surface	502057	503234	503135
	Vito dob di Vidido IVIII	С	flush	502058	503171	503488
		W	surface	501821	501789	
		RD	surface	501771	503293	503299
		RD	flush	501799	503294	503300
		RD RD	surface flush		503358 503357	
	Nissan NV 200	W	surface	501947	503486	
		W	flush	501946	503487	
		RD	surface		503187	
	Nissan NV 300	C	surface	502057	503170	503135
		C D	flush	502058	503171	503488
		D	surface flush	502057 502058	503170 503171	503135 503488
	Nissan NV400	C	surface	502057	503171	503135
Nissan		С	flush	502058	503171	503488
		W	surface	501942	501885	
		W	flush	501943	501886	500405
		D D	surface flush	502057 502058	503170 503171	503135 503488
	Nissan Primastar	C	surface	502057	503170	303466
	THOSAIT THINGSCA	C	flush	502058	503171	
		D	surface	502057	503170	
		D	flush	502058	503171	
	Combo High roof SWB&LWB	D	surface		502373	503560
		D D	flush rail	502311	502372 503312	503562
		D	rail	502317	501869	
	Movano X62	W	surface	501942	501885	
		W	flush	501943	501886	
		C	surface	502057	503170	503135
		C D	flush surface	502058 502057	503171 503170	503488 503135
		D	flush	502058	503170	503488
	Vivaro X82	C	surface	502057	503170	503135
Opel		С	flush	502058	503171	503488
		D	surface	502057	503170	503135
	V. Voo	D	flush	502058	503171	503488
	Vivaro X83	C C	surface flush	502057 502058	503170 503171	503135 503488
		D	surface	502057	503171	503135
		D	flush	502058	503171	503488
	Zafira Life	С	surface		503296	503472
		С	flush	F01771	503295	503474
		RD RD	surface flush	501771 501799	503293 503294	503299 503300
	Zafira Life - Freedom drop floor conversion	C (roof)	surface	301133	303234	303300
	Boxer Y	C (1001)	surface	502057	503170	503135
		С	flush	502058	503171	503488
		W	surface	501945	503483	
	right side	W RD	flush surface	501944	502111 503736	503604
	right side right side	RD	flush		503738	503624
	left side	RD	surface		503739	503625
	left side	RD	flush		503737	503605
Peugeot	Expert X	С	surface	502057	503170	
		C	flush	502058	503171	
		W W	surface flush	501949 501948	501057 501055	
		RD	surface	501948	503293	
		RD	flush	501779	503294	
	Partner Tripod/Allied floor conversion	D	surface		503463	503464
	Traveller/Expert KO 2017-	С	surface		503296	503472
		C	flush	E01771	503295	503474
		RD RD	surface flush	501771 501799	503293 503294	503299 503300
						303300

Vehicle make	Vehicle model	Shoulder belt anchorage position	Floor mount type	Up to 85 kg - CLASSIC Line	Up to 85 kg - EVOLUTION Line	Up to 200 kg - HEAVY DUTY Line
	Master X62	С	surface	502057	503170	503135
	Habtel 7/02	C	flush	502058	503171	503488
		W	surface	501942	501885	
		W	flush	501943	501886	
		D	surface	502057	503170	503135
		D	flush	502058	503171	503488
Renault	Trafic X82	С	surface	502057	503170	503135
Reliautt		C	flush	502058	503171	503488
		D	surface	502057	503170	503135
	Trafic X83	D	flush surface	502058	503171	503488
	Traffic X83	C	flush	502057 502058	503170 503171	503135 503488
		D	surface	502057	503170	503135
		D	flush	502058	503171	503488
	Proace	C	surface	502057	503171	303400
		C	flush	502058	503171	
		W	surface	501949	501057	
		W	flush	501948	501055	
		RD	surface	501771	503293	
Tarrata		RD	flush	501799	503294	
Toyota	ProAce/Verso 2017-	С	surface		503296	503472
		С	flush		503295	503474
		RD	surface	501771	503293	503299
		RD	flush	501799	503294	503300
	ProAce/Verso 2017- Freedom Drop Floor Conversion	C (roof)	surface			
	Caddy, ITEK drop floor conversion	RD	surface		503239	
	Crafter (2006-2016)	W	surface	501679	503482	500826
		W	flush	501932	500814	500827
		D	surface	502057	503170	
		D	flush	502058	503171	F00110
		RD RD	surface flush		500114 500115	500118 500119
	Crafter (2006-2016) High Roof, Wheel base 3250-3665-4325	W	surface	502063	500726	300119
	3230-3003-4323	W	flush	502062	500729	
	Crafter 2017-	C	surface	503162	503133	503496
	oranter 2021	C	flush	503163	503131	503493
		W	surface	503164	503132	503494
vw		W	flush	503165	503130	503495
		D	surface	502057	503170	503135
		D	flush	502058	503171	503488
		RD	surface		500114	500118
		RD	flush		500115	500119
	New Transporter / Caravelle 2025-	W	surface		500248	
		W	flush		500247	
		D	surface		500251	
		D	flush		500252	
		RD	surface		500223	
		RD	flush		500224	
	T5 & T6			502057	503170	503135
	13 & 10	C	surface flush	502058	503170	503488
		W	surface	501774	501772	303400
		W	flush	501786	501773	
		D	surface	232.00	503170	503135
		D	flush		503171	503488
		RD	surface	501771	503293	503299
		RD	flush	501799	503294	503300
		RD	surface		503352	
		RD	flush		503353	
	T5 & T6 Multivan, original floor rails	RD	surface		503122	503498
	T5 & T6 Colorado, GM Coachwork drop floor conversion	С	surface	502289	503476	503479
		С	flush	502290	503477	

Explanation of symbols for kits with 4-point WTORS

Floor pocket or rail for surface installation

Floor pocket or rail for flush installation



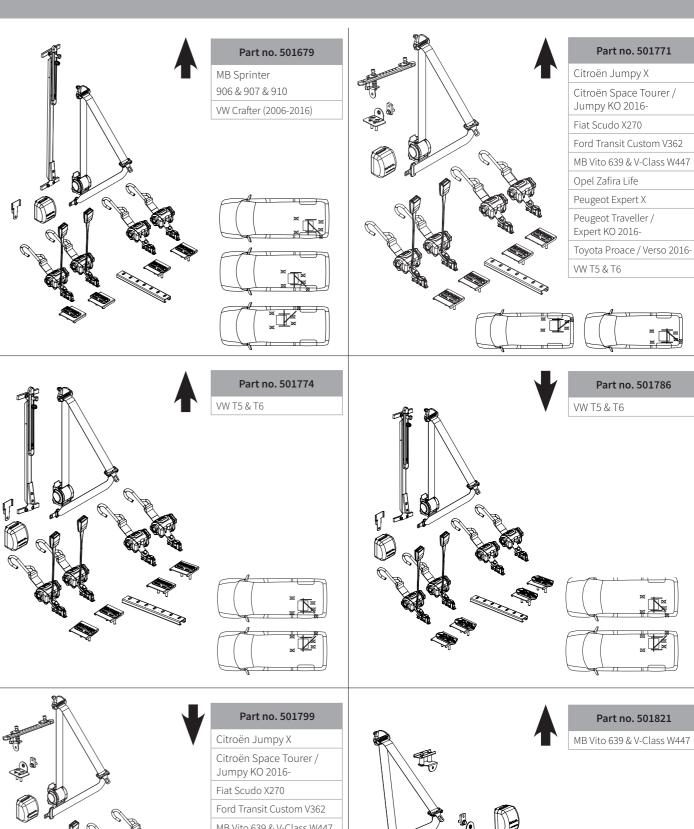


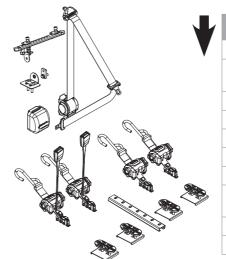










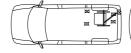


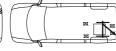
MB Vito 639 & V-Class W447

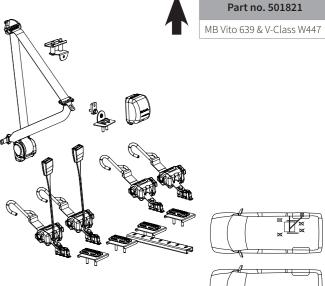
Opel Zafira Life

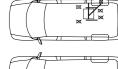
Peugeot Expert X Peugeot Traveller / Expert KO 2016-

Toyota Proace / Verso 2016-VW T5 & T6

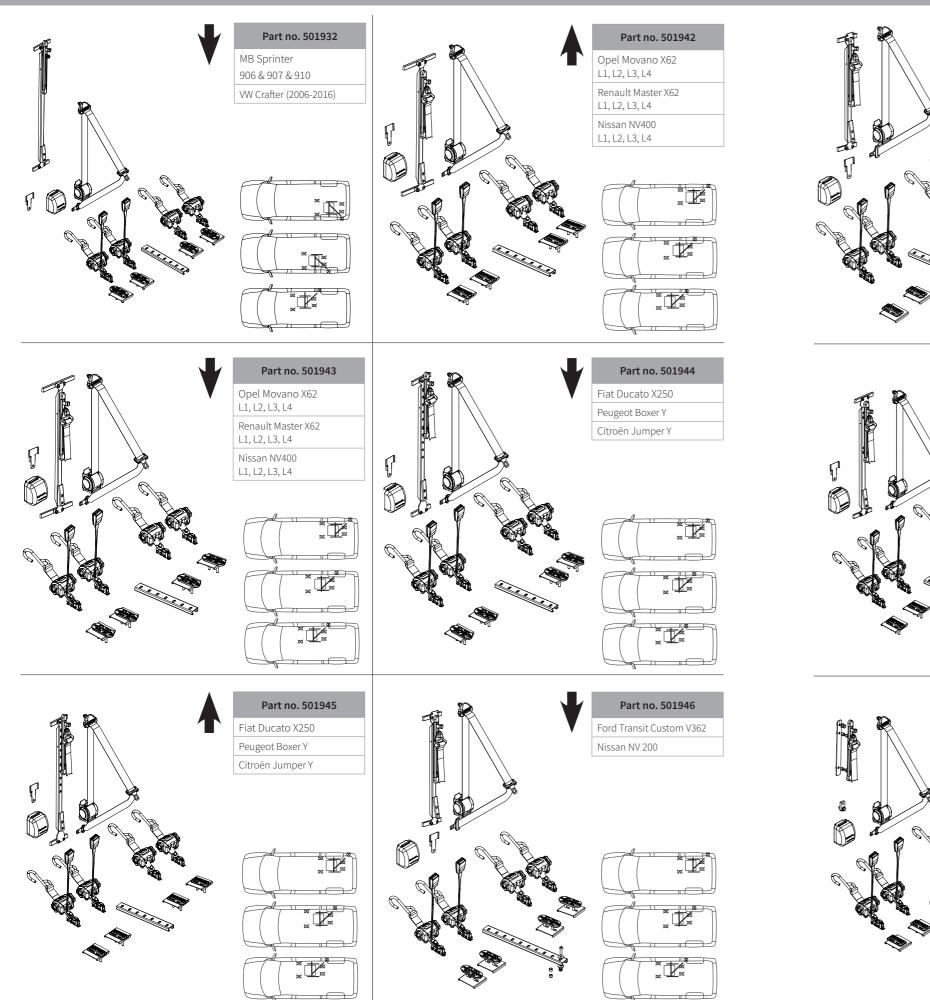


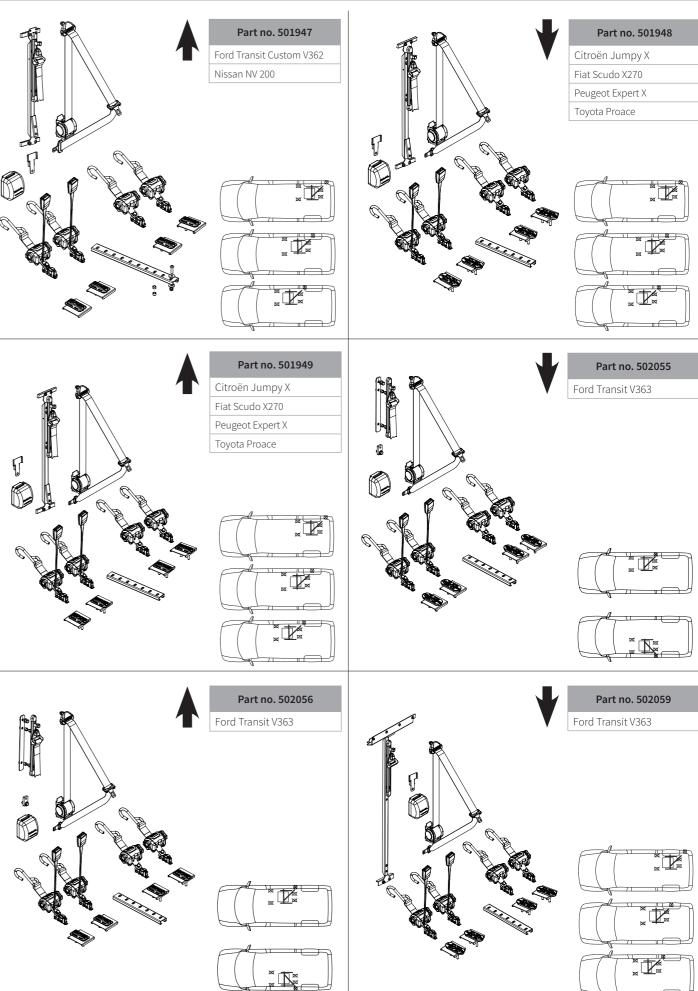


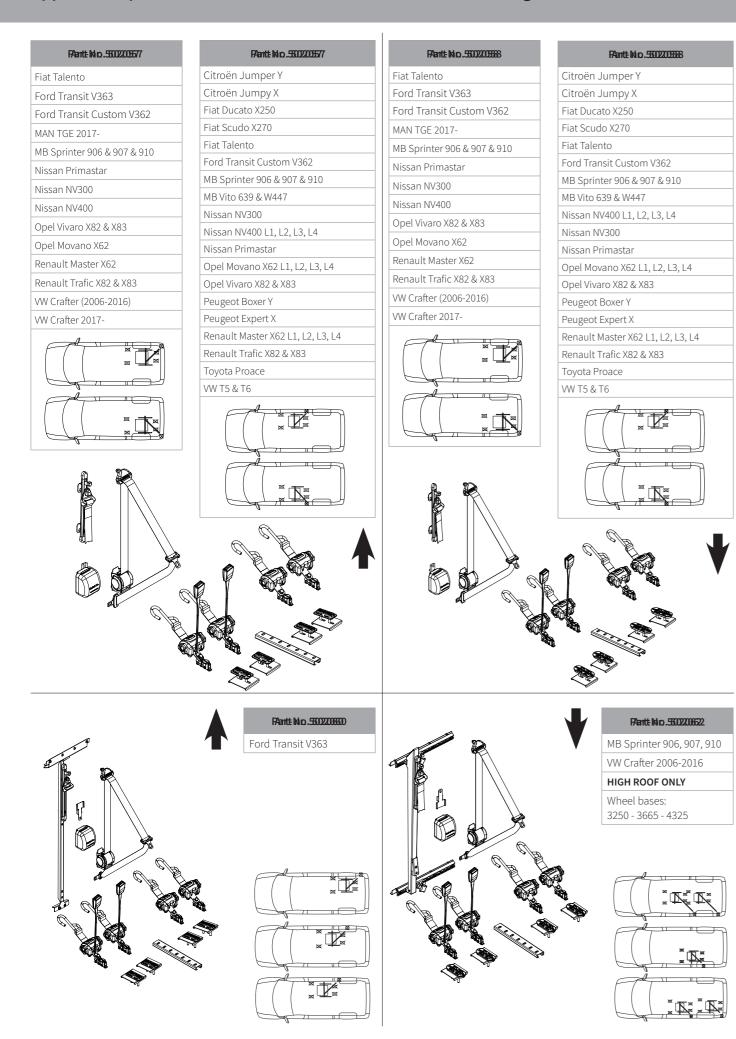


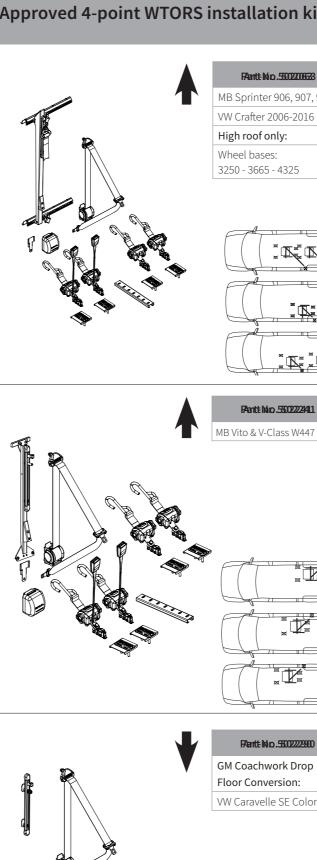


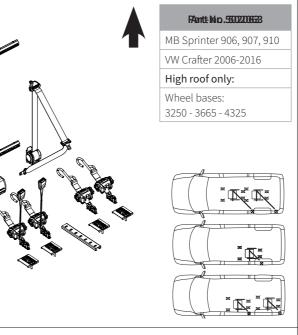


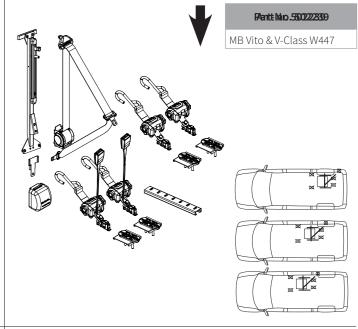


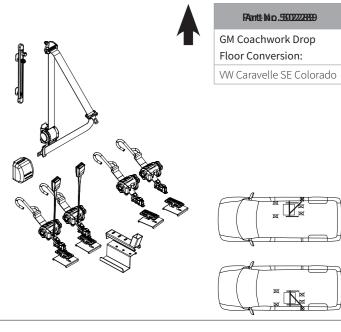


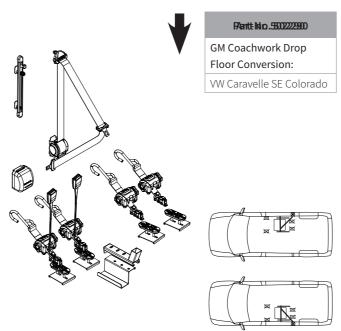


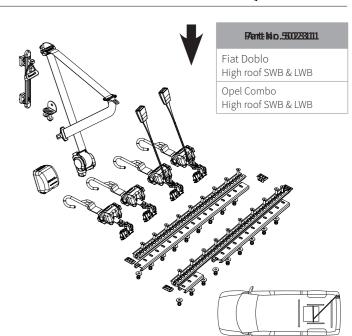


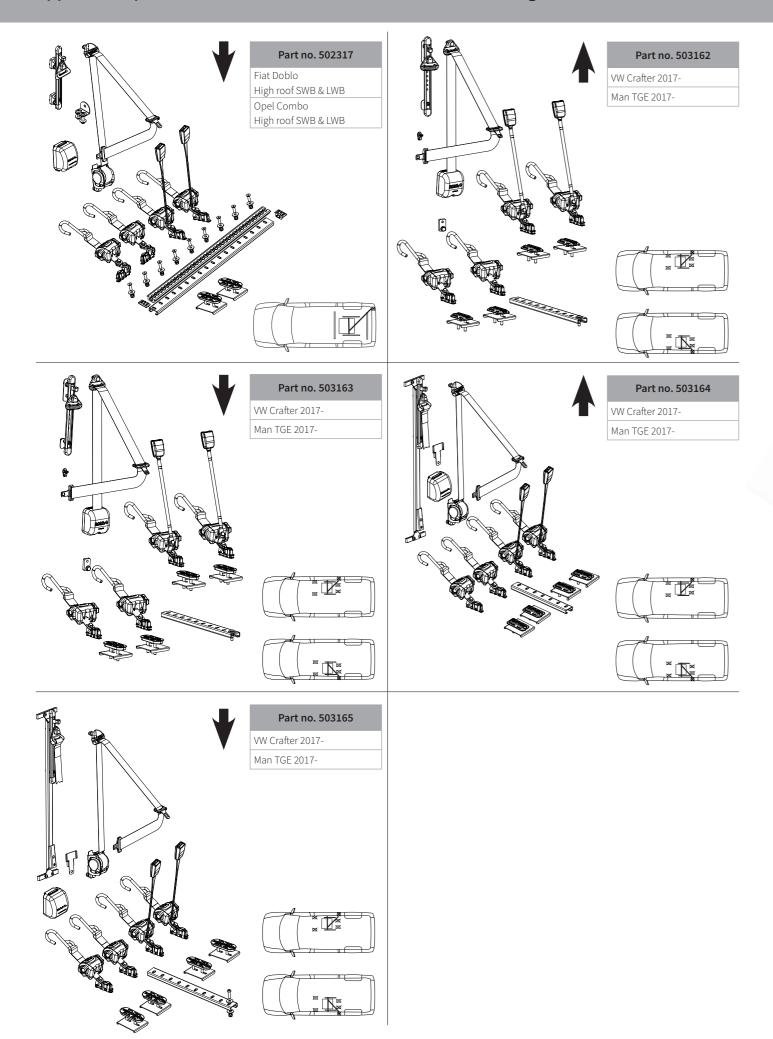












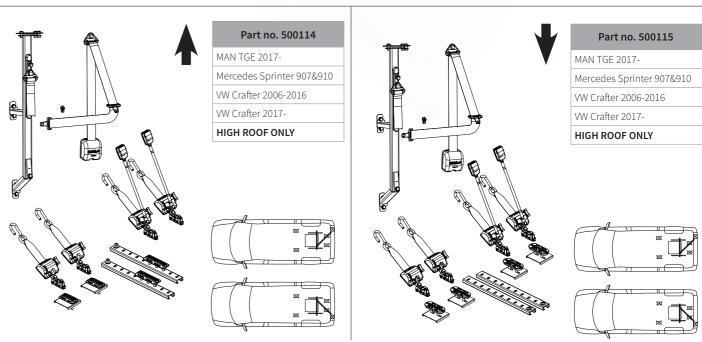
Upgrade of 4-point EVOLUTION kits from 85 to 200 kg wheelchair rating, currently using 4 x 501906

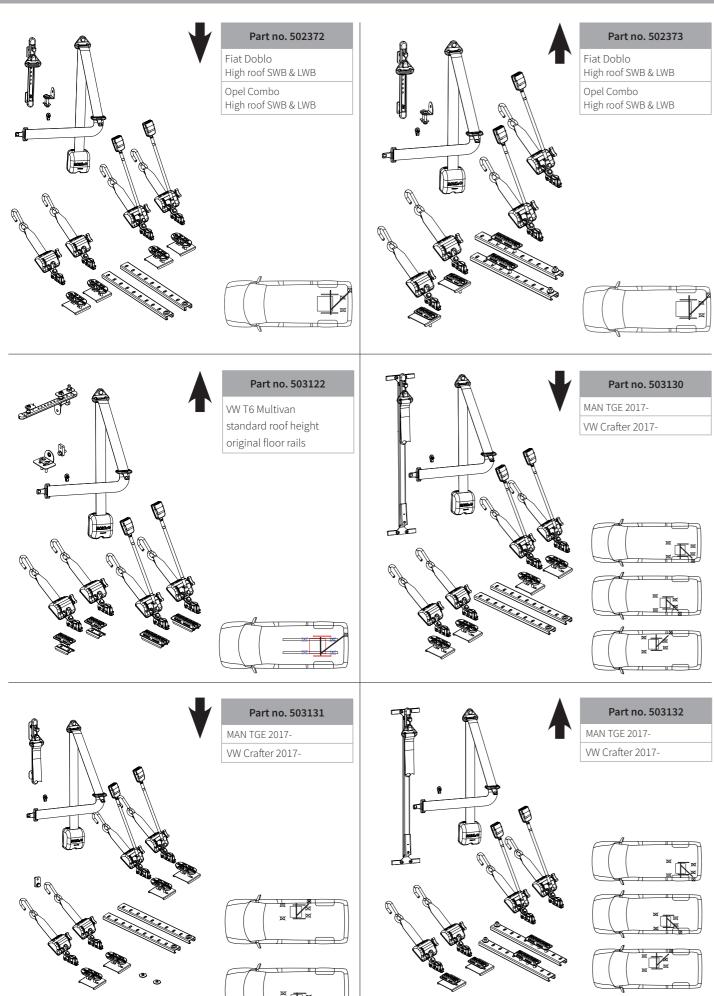
Due to increasing requirements in tenders for public transportation and others, prescribing that 4-point Wheelchair Tiedown and Occupant restraint Systems (WTORS) must be rated at the actual weight of the wheelchairs transported, we have decided to upgrade all our 85kg EVOLUTION surface mounted 4-point kits, except for transverse fitting rails. This way, those 85kg WTORS kits are compatible with our HEAVY DUTY WTORS rated at 200 kg + user.

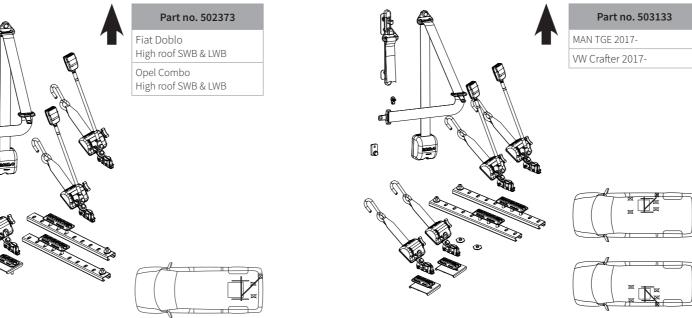
Therefore, customers who will have one those 85 kg WTORS installed in the vehicle and wish to upgrade them with our HEAVY DUTY WTORS, which are rated for wheelchair masses of 200 kg plus user, do not have to go back to the workshop to have the stronger 6-stud HEAVY DUTY floor pockets fitted in the rear, saving time and extra work.

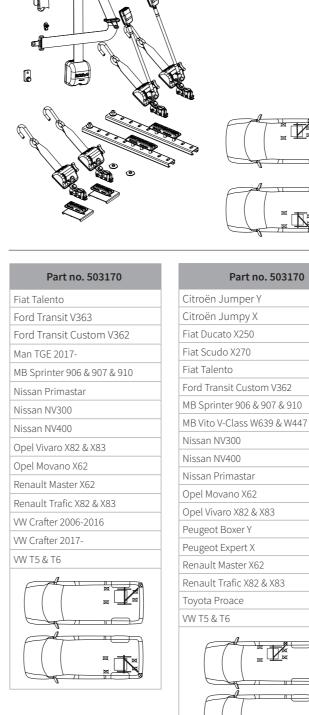
The new floor pocket fitting (2 x art nr. 503251) for the rear tie-down straps or retractors, replacing 2 x art.nr. 501906, can be seen here:

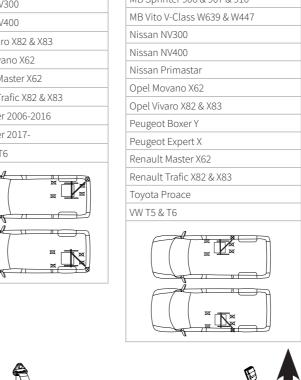


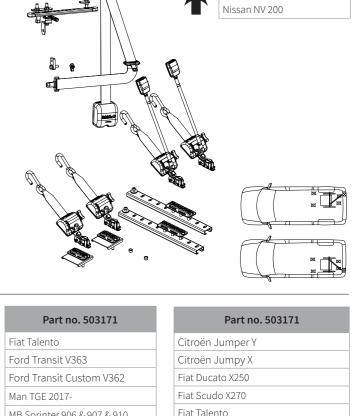


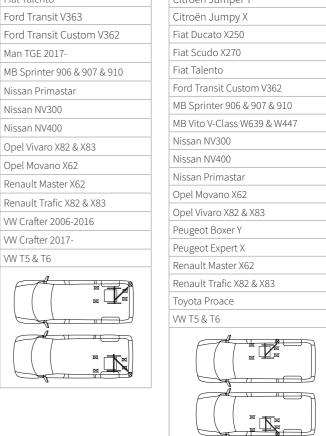


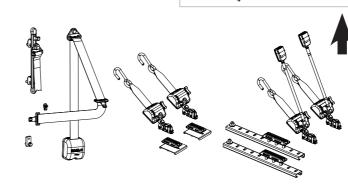


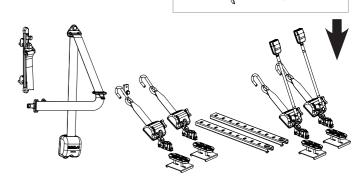


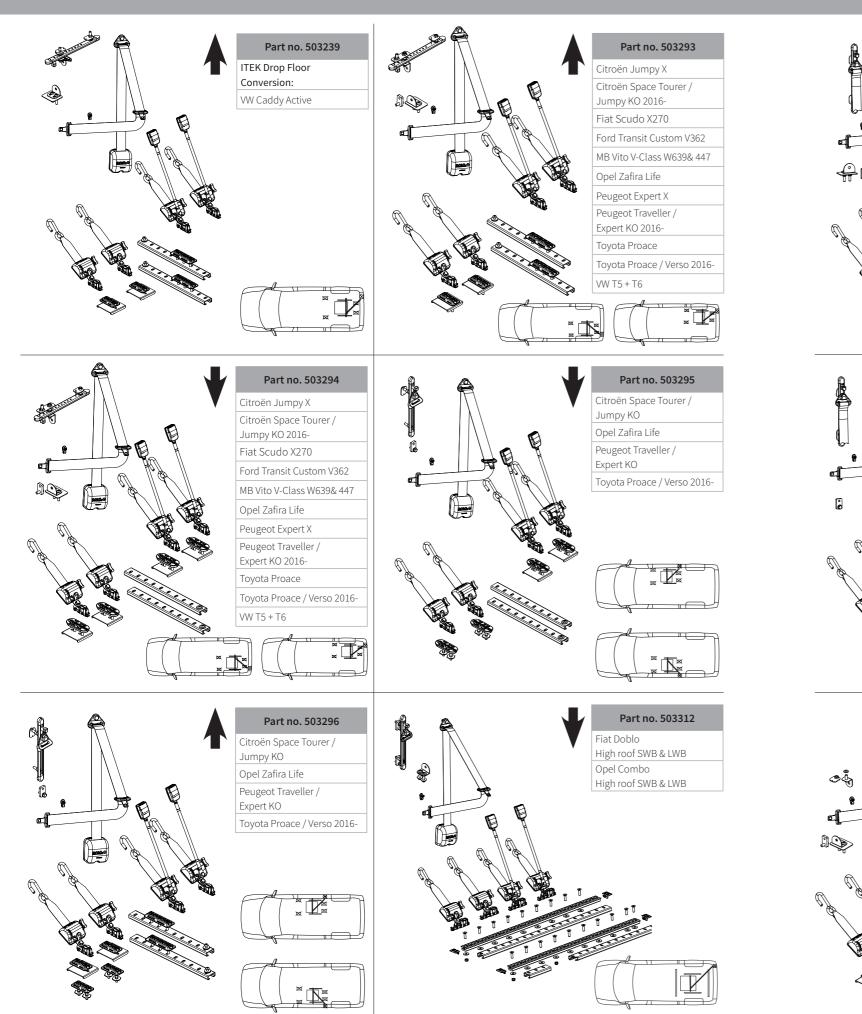


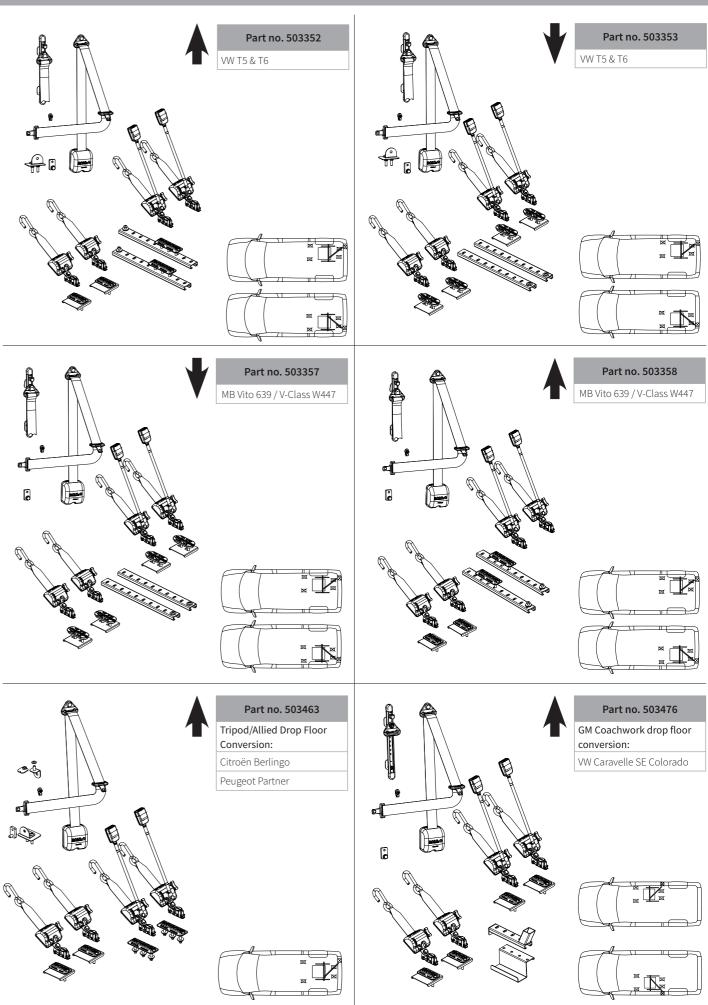




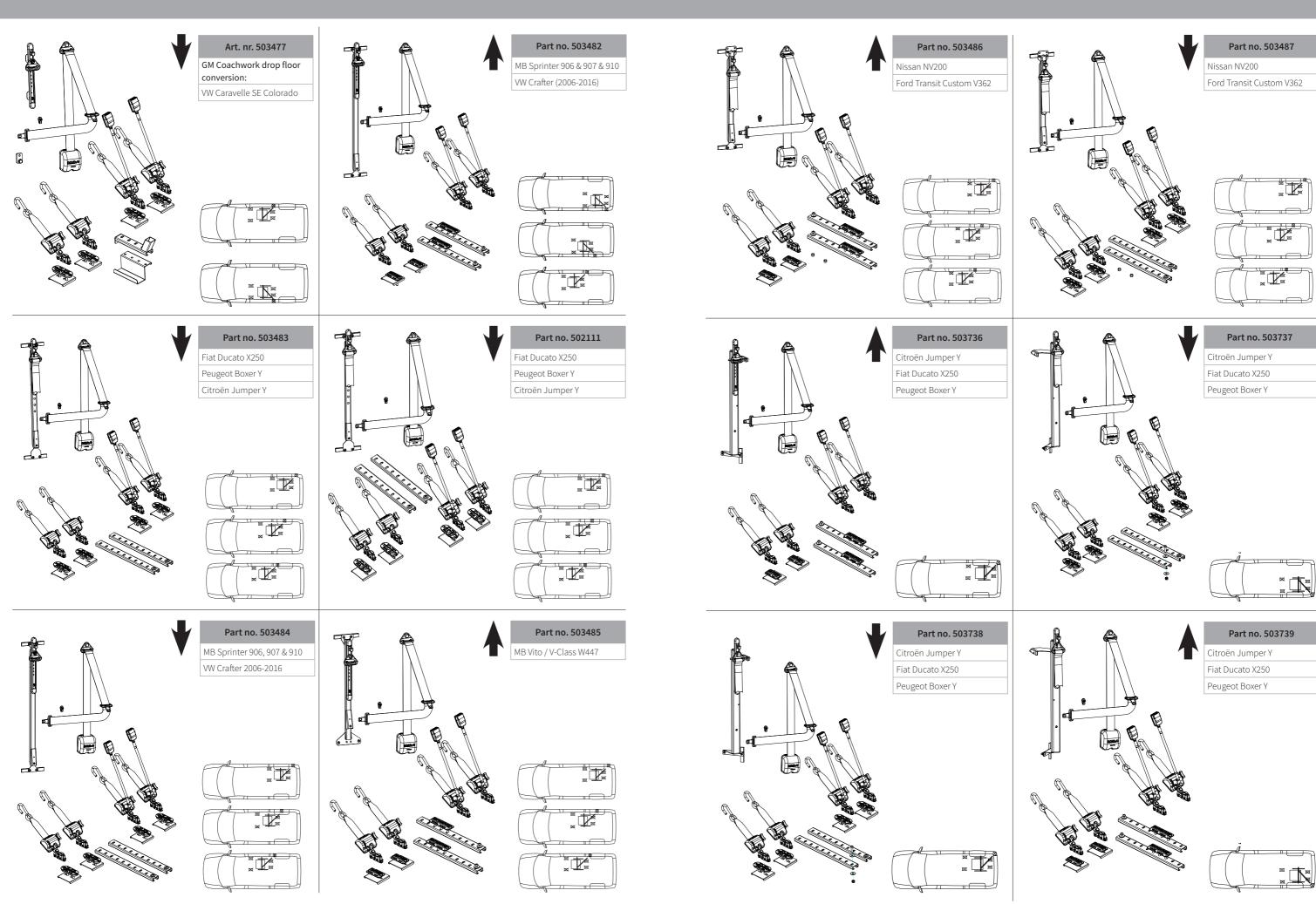


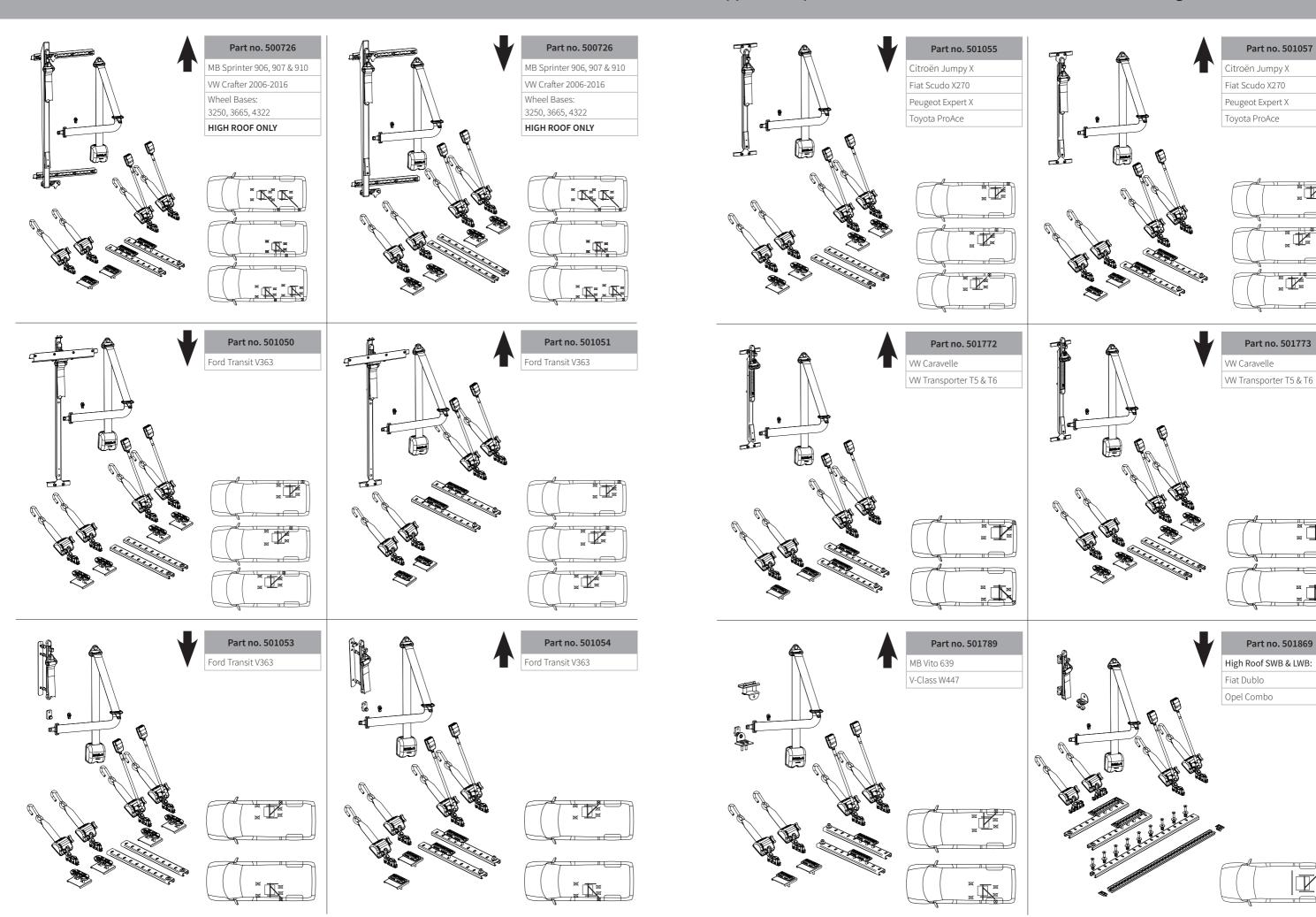


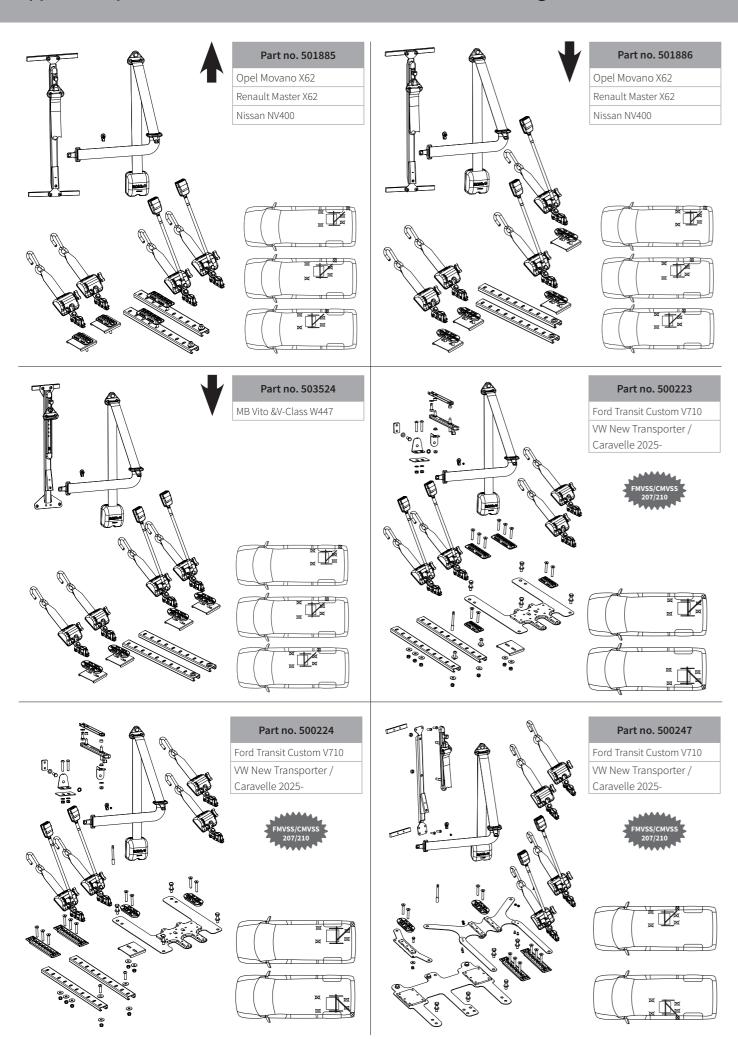


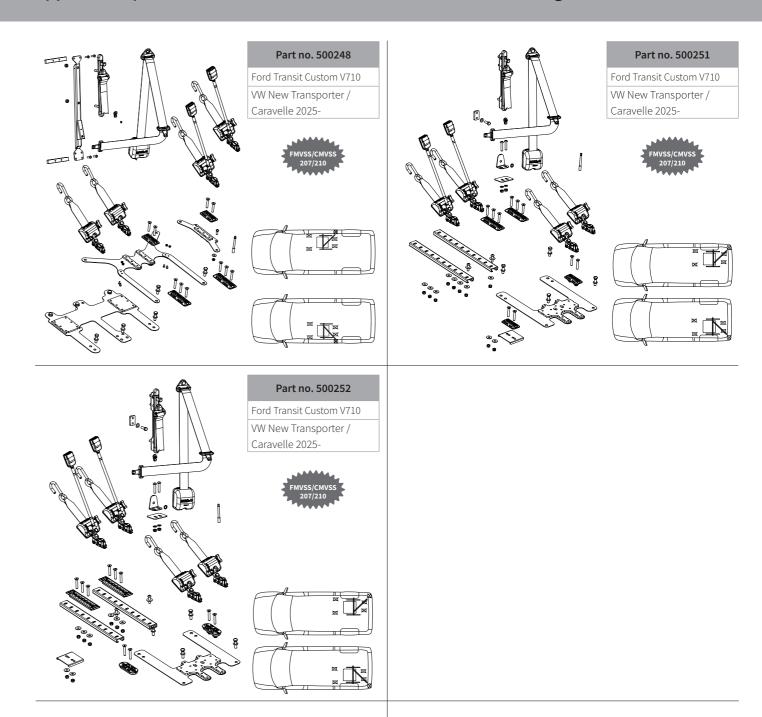


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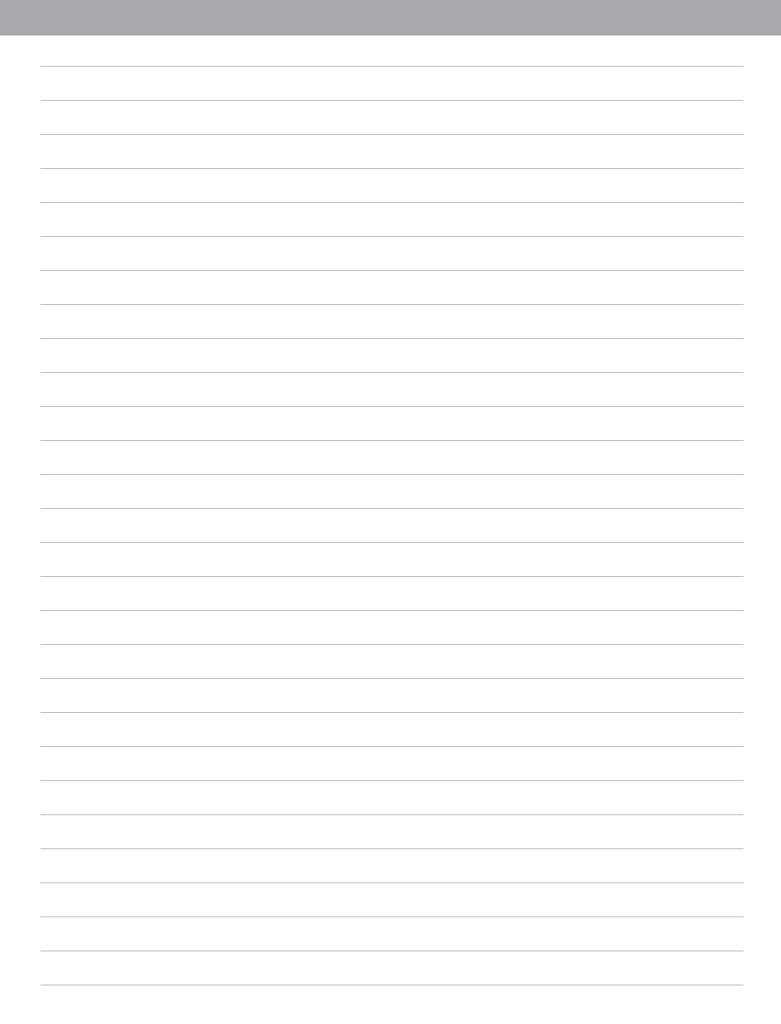


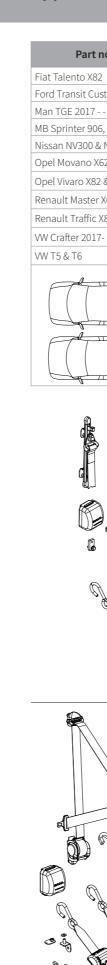


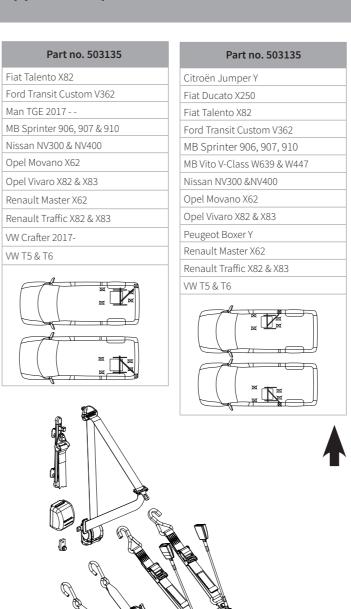


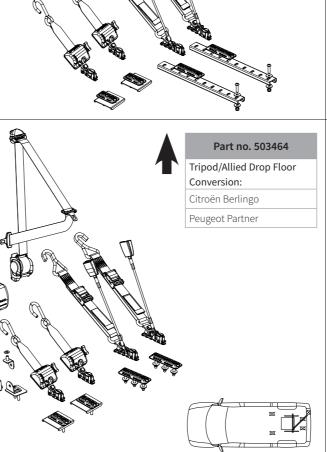


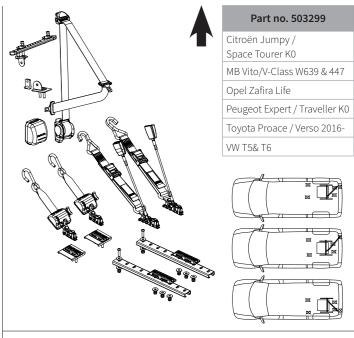
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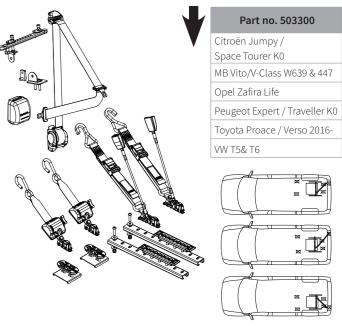


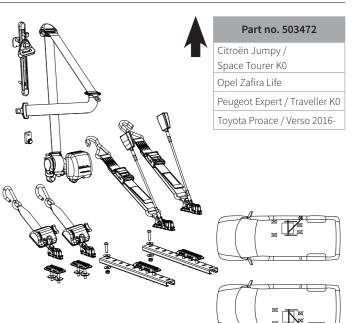


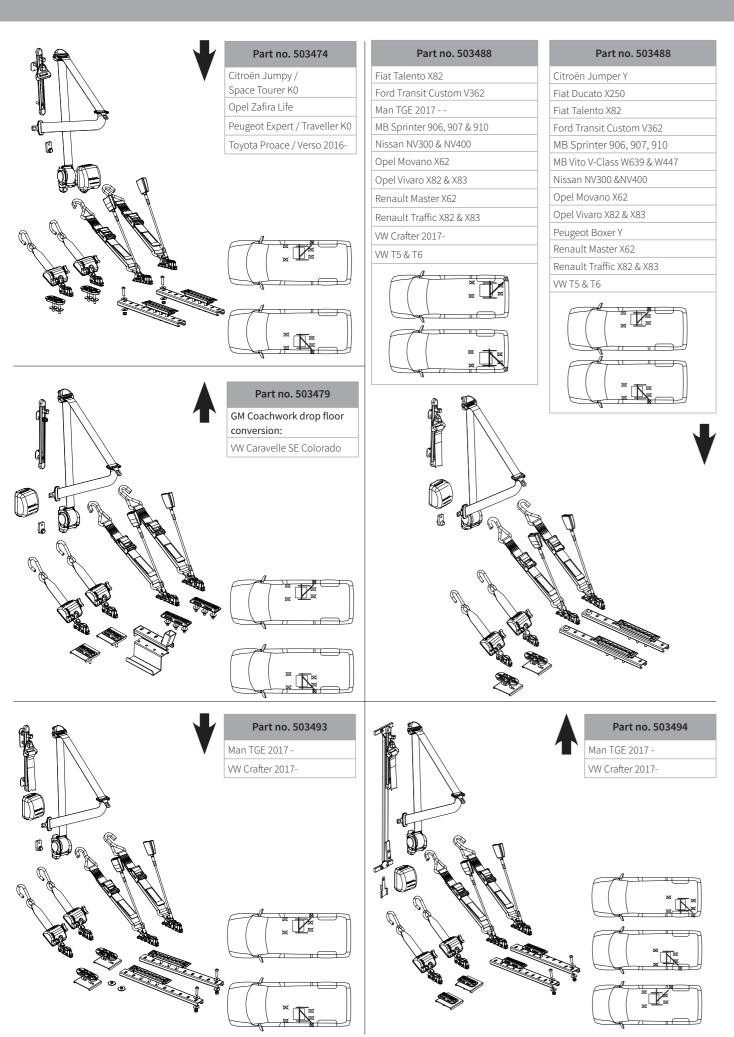


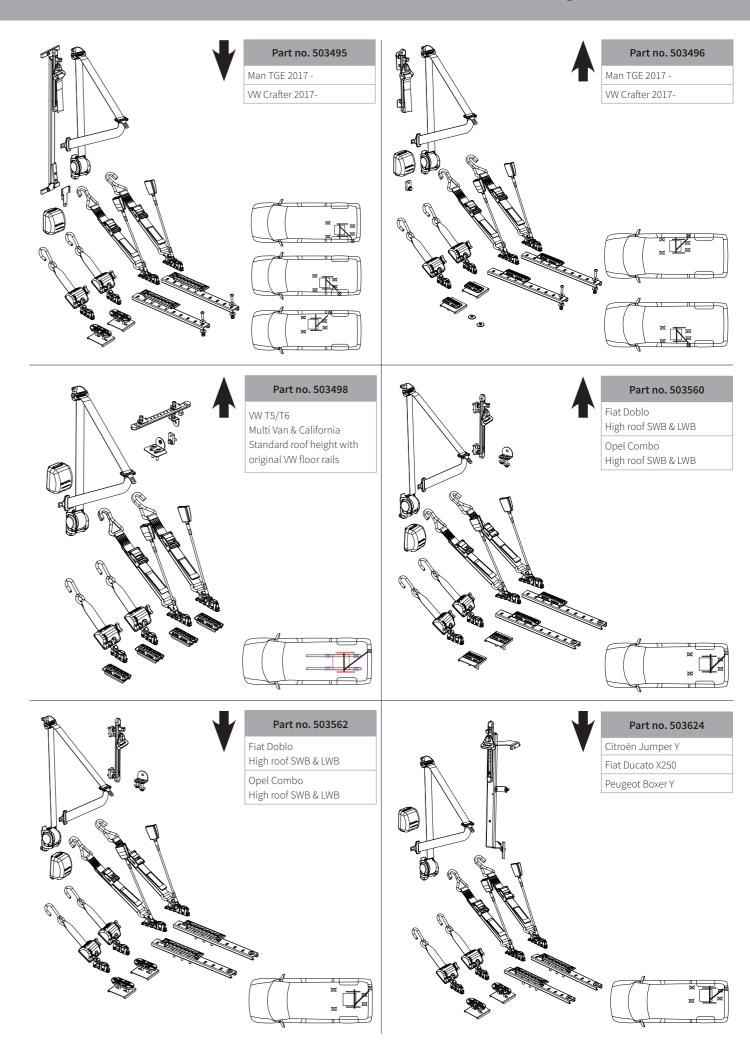


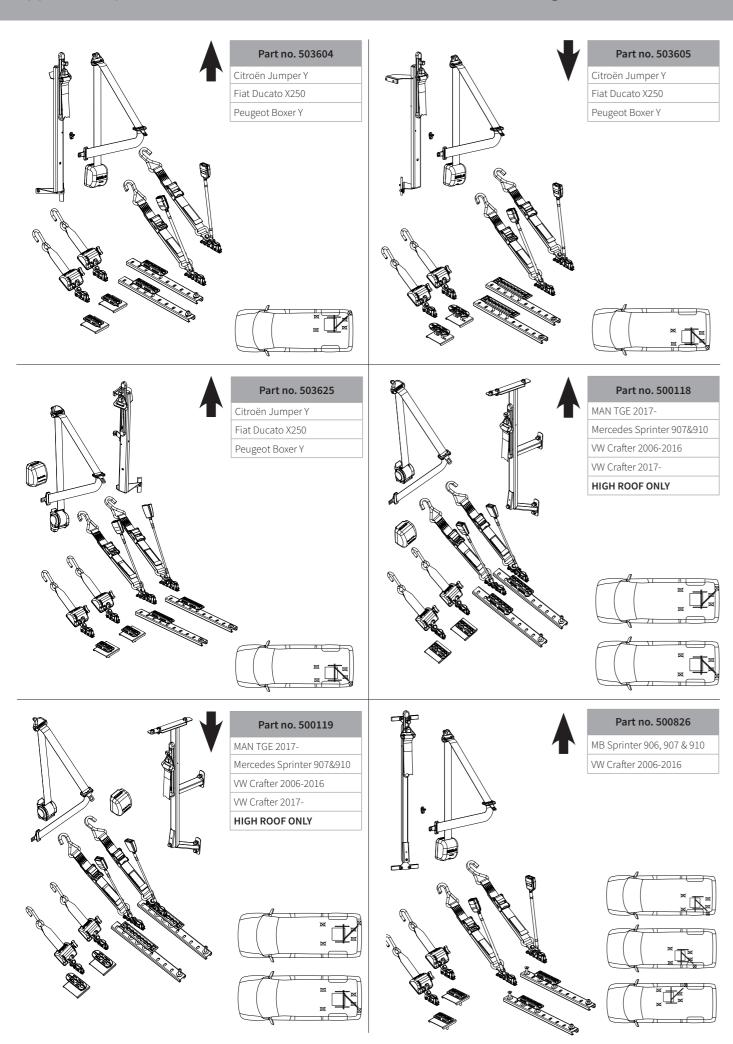


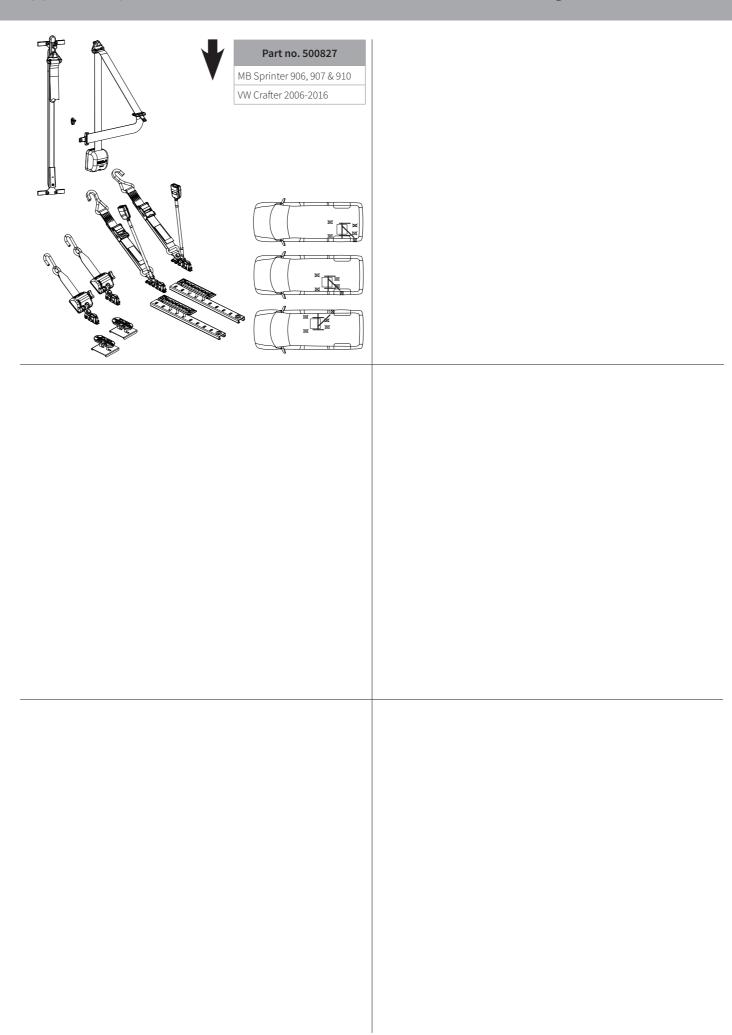








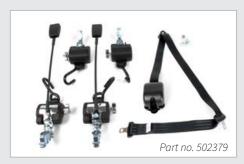




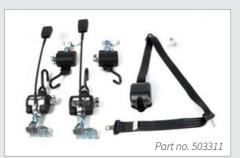
4

Spare parts: safety equipment for wheelchair users

Spare parts: safety equipment for wheelchair users



EVOLUTION Line: 2x #503158, 2x #503157, 1x #PN500984



EVOLUTION Line: 2 x #503411, 2 x #503412, 1 x #PN500984



CLASSIC Line: 2x #501536, 2x #501534, 1x #PN500984







EVOLUTION Line: Front tie down retractor.



HEAVY DUTY Line 200kg. 2x #503157, 1x #502360,

1 x "502361, 1x #PN500984

Part no. 503172

EVOLUTION Line: Front tie down retractor for rail mounted transverse



EVOLUTION Line: Rear tie down retractor for rail mounted transverse



EVOLUTION Line: Rear tie down retractor with bracket for lap belt with snap hook



CLASSIC Line: Front tie down retractor



CLASSIC Line: Rear tie down retractor



CLASSIC LINE: Front tie down retractor for HEAVY DUTY rail across



HEAVY DUTY Line: Rear left tie down strap for 200 kg



HEAVY DUTY Line: Rear right tie down strap



HEAVY DUTY Line: Left rear tie down strap for 200 kg, without seat belt buckle



HEAVY DUTY Line: Right rear tie down strap for 200 kg, without seat belt buckle



3-point seat belt



90 mm [1]



193 mm [1]



300 mm [1]



450 mm [1]



450 mm [1]



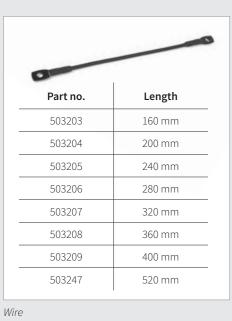
6-stud rail fitting, HEAVY DUTY



CLASSIC Line: Rear tie down retractor for HEAVY DUTY rail across

Spare parts: safety equipment for wheelchair users

Cover for safety belt buckle





Flexible wire

Part no. PN500095



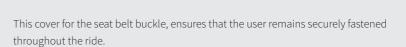


Rail fitting with 7/16" UNF thread



Rail fitting with 7/16" UNF thread

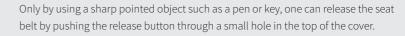




Do you recognize the problem of kids or other persons with special cognitive needs, pushing the release button of the seat belt just as quick as you can buckle them up?



The device prevents a person from being able to use a finger to push the release button.



The cover fits the majority of original and approved safety belts buckles, and does not affect the safety belt's efficiency in case of a collision.



Stainless steel floor pocket with air-line hole pattern. For mounting on standard vehicle floor

Part no. 503251



Stainless steel floor pocket with air-line hole pattern. For countersinking in vehicle floor



Heavy Duty flush mounted floor rail with installation kit



New! Belt cutter for emergency situation is now included.



WARNING!

This product is only intended for securing a person with disability. Please inquire with the local authorities for approval procedures in your country.

Do not use this product without the authority's approval to use it in your country.



Special seat bases for original passenger seats

Cargo Tie-Down Equipment



Seat base for original passenger seat, which provides approx. 10 cm more room for the feet when turning away from the driver's seat with a swivel seat base fitted.



Within the seat base there is space for the original battery or other electrical components.

Please enquire with regard to the current range.



- The original passenger seat with seat slides fits the holes in the seat base.
- The seat base is certified with the safety belt buckle fitted on the original passenger seat.
- We supply a complete bolted solution which means that it is not necessary to cut, weld or drill in the floor of the vehicle in order to install the seat base.









Part no.: 500950 – CargoBuckle



Part no. 500990
Seat base for VW Transporter/ Caravelle T5 / T6



Part no. 502110
Seat base for Mercedes Vito/V-Class W447





Adapters and accessories for cargo tie-down

Bolt-on adapters offer added flexibility and mobility for CargoBuckle where permanent permanent installation is not desired



Attach to the floor of a truck bed, or the floor or wall of a trailer or van to provide a fixed position tie-down. 30° angle bracket accommodates almost all tie-down applications.



S-hook Adapter

Vinyl coated S-hook with built-in keeper provides a secure attachment to tie-down points in vans, trucks, trailers and more.



Rail fittings

With rail fittings, the CargoBuckle can be moved to another position or removed entirely. The rail fitting fits floor rails with air-line hole pattern and Dahl's floor fittings. The CargoBuckle mounted with a rail fitting is designed so that it can rotate to the right and left, thereby turning in the direction of the hook's installation point.



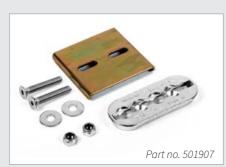




	Part no.	Description
А	500957	S-Hook Adapter
В	501980	Angle Bracket - 30°
С	501845	Rail fitting



Stainless steel floor pocket with air-line hole pattern. For mounting on standard vehicle floor



Stainless steel floor pocket with air-line hole pattern. For countersinking in vehicle floor



Dahl HEAVY DUTY floor rail

Terms of sale and delivery

TERMS OF SALE AND DELIVERY for Dahl Engineering ApS & Maskinfabrik Dahl Engineering v/Claus Dahl Pedersen

1.0 Contractual basis

1.1 Any agreements and deliveries are subject to these General Terms of Sale and Delivery.

2.0 Quotes and Conclusion of contract

- 2.1 The acceptance deadline for one of Dahl's submitted quotes is 15 calendar days.
- 2.2 The final agreement on sale or another service is only concluded upon Dahl issuing a written order confirmation.
- 2.3 The agreement is deemed as concluded on the terms specified in the order confirmation unless the buyer has complained in writing within 5 days of receipt.
- 2.4 Sales literature, descriptions, instructions, price lists, etc., are only indicative and of a non-binding nature.

3.0 Price

- 3.1 If the quoted prices are based on foreign currency, the price is adjusted with (i) currency rate fluctuations, (ii) price increases from suppliers and (iii) changes in shipping rates, all in the period between submission of quotes and issuing the invoice.
- 3.2 For orders under EUR 107,- goods value, a handling charge of EUR 17,- will be added.

4.0 Delivery and delays

- 4.1 Delivery is Ex Works Dahl Thisted and shipping is at the Buyer's risk and expense.
- 4.2 Time of delivery is stated in Dahl's order confirmation.
- 4.3 In the event of a delay, Dahl's liability is limited to the Buyer's documented direct loss, and thus exclusive of lost profits and other indirect losses and also limited to 25% of the purchase price of the delayed delivery.

5.0 Payment

- 5.1 The first payment from new Buyers must be made in advance. To the extent that Dahl can obtain credit insurance for the Buyers account, on normal terms, the payment is then due 20 days from the invoice date.
 1.5% interest per month started will be added to payments after the due date.
- 5.2 Invoices, account statements etc. will solely be sent in digital format to the e-mail address stated by buyer on the Dahl Engineering registration form for new customers.

6.0 Right of ownership

6.1 Dahl retains ownership of the goods sold until the full purchase price is paid.

7.0 Complaints and deficiencies

- 7.1 The Buyer shall, immediately upon receipt of the goods at the Buyer's location, make the necessary examination of the delivery.
- 7.2 If the Buyer wants to exercise their right to complain of defects or deficiencies with the delivery, the Buyer shall immediately upon discovery of the defect or when they should have been discovered, provide Dahl with written notification thereof and the report must include an itemised statement of the nature of the defects. If the Buyer fails to complain as specified, the Buyer cannot later validate the complaint.
- 7.3 In any event, the complaint shall be made in writing to Dahl no later than 6 months after delivery, and the Buyer cannot make the deficiencies apply in the event of a later complaint.

8.0 Limitation of liability

8.1 In the event that there might be actionable defects or deficiencies with Dahl's delivered products, Dahl's liability is limited to remedy the deficiencies as long as the deficiencies can be remedied hereby and/or replacement or compensation is maximised to the invoiced amount, according to Dahl's choice. 8.2 Dahl is not, to a greater extent than indicated above, obligated to compensate any form of additional direct or indirect loss, including consequential loss and loss of profit.

01.01.2022

8.3 Dahl does not incur any liability if the installation instructions and other manuals and instructions are not complied with, or if the products are installed in vehicles that are not approved for installation by Dahl at the time of installation.

9.0 Product liability

- 9.1 Dahl's liability for personal injury can never exceed the at any time applicable levels of compensation under Danish law.
- 9.2 Dahl's product liability for property damage amounts to a maximum of DKK 1,000,000 per claim. A claim is defined as any damage caused by the same fault or negligence. The monetary limit does not apply in cases of gross negligence disclaimed by Dahl.
- 9.3 Dahl is not liable for operation losses and loss of profit or other indirect loss.
- 9.4 Dahl does not incur product liability if the installation instructions and other manuals and instructions are not complied with, or if the products are installed in vehicles that are not approved for installation by Dahl at the time of installation.
- 9.5 To the extent Dahl incurs liability to third parties; the Buyer is obliged to keep Dahl indemnified to the same extent as Dahl's liability is limited by these terms of sale and delivery.
- 9.6 If a third party raises a claim relating to product liability against either Dahl or the Buyer, the parties are mutually obligated to inform each other about this, and the parties are mutually obligated to have a suit filed at the court where a case is brought against either party involving alleged product liability regarding the Dahl products sold, just as the interrelation between the parties can be settled by the named court.

10.0 Intellectual property rights

10.1 Dahl is unable to make the Buyer liable for infringement of third party rights. In case of violation, Dahl is entitled to (i) change, replacement without impairment of the good's purpose and performance, (ii) repurchase the goods at the invoice price, with a deduction for impairment, or (iii) to secure the right of the Buyer to continue use. The Buyer must notify Dahl of all such claims, and to the extent that the claim has implications for Dahl, Dahl is entitled to make a case on their own and the Buyer's behalf.

11.0 Returns

- 11.1 Deliveries can only be returned in exceptional cases and only after agreement. Goods that may be specially produced or purchased for the Buyer may in no case be returned.
- 11.2 Approved returns will be credited less 20% of the sales price excl. VAT on paid delivery, and undamaged, to Dahl's stock or another place specified by Dahl.

12.0 Force majeure

12.1 Dahl is not liable for an otherwise actionable lack of contractual fulfilment of the agreement if it is justified by a labor dispute, fire, war, military conscription, confiscation, currency restrictions, lack of means of transportation or other similar circumstances that was not reasonably foreseeable to Dahl at the time of the conclusion of the agreement, including that the mentioned or similar circumstances effect subcontractors used by Dahl.

13.0 Applicable law and jurisdiction

- 13.1 All disputes between Dahl and the Buyer shall be settled by the Western High Court in Holstebro, and in accordance with Danish law.
- 13.2 However, Dahl is entitled to choose that disputes are instead settled by arbitration at the Danish Institute of Arbitration under the rules applicable to the process of arbitration.

 12 9.

WHERE SAFETY STARTS



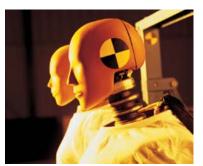






















ilde Grafis



Development and crash-test centre Where safety starts