

PRODUCT INFORMATION GUIDE



OLYMPUS

REAR-LOADING WASTE COLLECTION BODY

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TERBERG ROSROCA GROUP LIMITED

Terberg RosRoca Group was formed by the merger of Royal Terberg Group's and Ros Roca Group's respective environmental equipment subsidiaries Terberg Environmental BV and Ros Roca SA in February 2016. This created a leading international group providing innovative solutions such as truck chassis, waste collection vehicle bodies and waste loading systems for the recycling and waste disposal industry.

Olympus is a rear-loading waste collection body with a design that has proven itself around the world in the most demanding environments. Its versatility and adaptability mean Olympus is used for a wide range of recycling and waste collections.

Olympus has a strong heritage and its current design has over 20,000 bodies sold worldwide since 2001, proving itself as a world class product.

This product guide is produced to give information on the Olympus rear loading compaction body:

- The configurations possible
- Body and tailgate construction
- How Olympus operates
- Its unique features and their benefits

Along with other TRRG products, Olympus and is designed and manufactured to meet European Standard EN1501-1, General and safety requirements for rear loading refuse vehicles. These standards currently apply to the EU and UK. Other countries are looking at adopting EN1501-1 standards as one way to improve the efficiency of their waste collection systems.

For countries that do not require Olympus to meet EN1501-1 specification, please see the **Olympus ART** brochure.

The Olympus ART has the same robust structure and mechanical components as Olympus but the hydraulic and electric systems specified to suit these markets.



Terberg RosRoca Group (TRRG) is part of the Royal Terberg Group BV, a family owned company that celebrated its 150 year anniversary in 2019. Royal Terberg Group is known for its ability to create innovative and exceptionally reliable products. Its Terminal Tractors, heavy truck innovations, and environmental products have proved themselves around the world in some of the most demanding environments.

TRRG can trace its history back over 110 years of environmental equipment design and manufacture. The brands of Dennis Eagle, Ros Roca and Terberg Machines are known worldwide for their performance and quality.

The Dennis Eagle name has been associated with manufacturing waste collection bodies for over 110 years and introduced the first low entry cab and chassis, the Elite, in 1992. The factory in Warwick UK is the only factory in the world that manufactures a complete waste collection vehicle.

Ros Roca in Tarrega, Spain has been manufacturing waste collection bodies and waste collection systems for over 60 years.

Terberg Machines based in IJsselstein, Netherlands has been manufacturing bin lift systems since the introduction of the EN840 type containers back in the 1980s.

HS Fahrzeugbau in Emstek, Germany is a specialist manufacturer of front loading and side loading waste collection systems. These high-performance systems are designed for single person operations and have a number of unique features like the CWS swap-body containers that make these operations some of the most efficient one-person collection systems available.

Royal Terberg Group Corporate Structure:



TRRG is able to provide an extensive range of waste and recycling collection products. All are designed and manufactured in Europe to the highest standards incorporating the latest technology and exported worldwide.

The extensive range of TRRG products is sourced from the following manufacturing facilities:

Dennis Eagle Ltd, Warwick, UK:

- Elite 6 Low Entry Cab and Chassis.
 - Dennis Eagle pioneered the low entry cab and chassis in 1992
 - It is designed for the waste collection industry.
 - Elite 6 is available in 4x2, 6x2, 6x4 and 8x4 axle layouts.
 - In left hand drive EU markets the Elite chassis generally marketed by Renault as the 'D Access'.
- Olympus rear loading waste compaction body, 10m³ - 27m³ capacity.
 - Available in Narrow, Wide, Plus ('+') & TwinPack configurations.
- eCollect full electric RCV



Ros Roca SA, Tarrega, Spain:

- Olympus rear loading waste compaction body, 10m³ - 27m³ capacity.
 - Available in Narrow, Wide, '+' and Crane Chute configurations.
- Olympus Mini rear loading compaction body, 6m³ - 8m³ capacity.
- Manual bin lifts for Olympus and Olympus Mini.
- Water Tankers for municipal surface cleaning.
- Bin Washers both cold and hot water.
- 2200 and 3200 litre side loader containers



Terberg Machines BV, IJsselstein, Netherlands

- Extensive range of automatic and manual bin lifts to suit any application.
- KTZ waste container collection system, underground and overground.



HS Fahrzeugbau, Emstek, Germany

- Speedline side loading systems.
 - High performance side loading waste collection systems with swap body options.
- Millenium front loading systems.
 - High performance front loading waste collection system with swap body options.



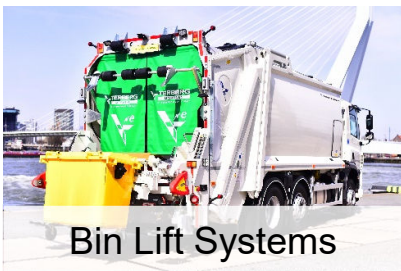
Terberg Matec, Worksop UK

- Kerbside recycling bodies to suit any chassis.
- Chassis mounted recycling pods for dry and wet waste streams to match with Olympus.
- Biological and animal by product waste collection systems.
- Plastic utility recycling bodies.



Manufacturing centres and the products the produce

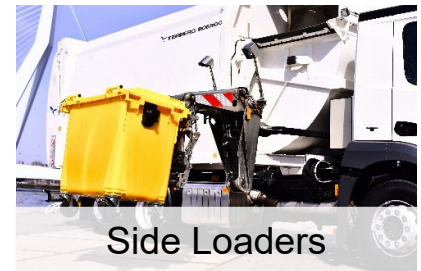
	Warwick, UK	Tarrega, Spain	IJsselstein, Netherlands	Emstek, Germany	Worksop, UK
Elite 6 Cab and Chassis	✓				
eCollect Electric RCV	✓				
Olympus Narrow	✓	✓			
Olympus Wide	✓	✓			
Olympus +	✓	✓			
Olympus Twinpack	✓				
Olympus Mini		✓			
Speedline Side Loader				✓	
Millenium Front Loader				✓	
Side & Top Discharge Recycling Pod					✓
Kerbside Recycling Bodies					✓
Bin Lifts		✓	✓	✓	✓
Water Tanker		✓			
Bin Washer		✓			



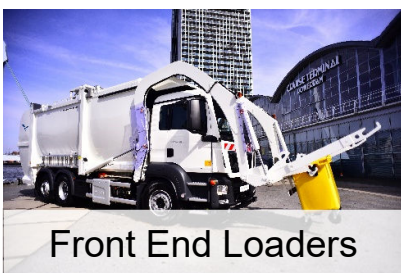
Bin Lift Systems



Rear Loading RCV



Side Loaders



Front End Loaders



Low Entry Chassis



Washing & Cleaning



Recycling Bodies



Weighing & RFID



Electric Vehicles

Olympus single compartment is used for handling single waste streams but its versatility makes it ideal for collecting more than one type of waste on rotation, including domestic refuse, different types of recycling and garden waste.

With a smooth-sided one piece construction, keel shaped body floor, high strength tailgate and efficient hydraulic system, maximum payload is achieved every time, whatever type of waste stream being collected. The Olympus body can also accept a wide range of bin lifts, making it possible to empty virtually any type of waste container used in domestic and trade waste collections worldwide.

The Olympus single compartment body is available in the following configurations:

Olympus Wide – our standard body, 2530mm wide and 2490mm high.

Olympus Narrow – 2230mm wide and 2490mm high

Olympus + - 2700mm high and 2530mm wide

Olympus Mini – 2000mm high and 2000mm wide

With volumes from 6m³ to 27m³ together with the different widths available there is a wide choice of models to match all waste collection systems.

The Olympus is also available with two compartments, the TwinPack, so two waste streams can be collected separately on the same collection cycle.

Olympus N (Narrow)

Especially designed for narrow wheel track chassis like Dennis Eagle Elite 6 and Renault D Access. It is available in 5 capacities ranging from 10 to 19 m³. With an overall width of 2230mm it is ideal for:

- Use in built up urban areas, narrow access roads or country lanes.
- Gives improved payloads due to reduced unladen weight
- Gives improved compaction as it uses the same hydraulic compaction system as the 2530mm wide Olympus body.
- Improved safety for the crew when working around the vehicle in a confined space.



Olympus W (Wide)

Our range of domestic waste collectors especially designed for urban and rural environments with 10 capacities ranging from 13 to 27 m³.



Olympus +

We also offer the Olympus W+ version with the same characteristics as those of the Olympus W but with greater capacity due to a slight increase in body height. This modification has enabled a 10% increase in capacity for the 3-axle chassis.



Olympus TwinPack

A twin chamber body for collecting two waste streams. Each side is 100% independent of the other with separate compaction systems, tailgates and ejector plates. There is no risk of cross contamination.

TwinPack is available in narrow & wide versions. The TwinPack wide can be specified with the centre wall set to give either a 35/65 or 50/50 split.

The TwinPack narrow can be specified with the centre wall set to give either a 40/60 or 50/50 split.



Olympus Duo

An Olympus body mounted in combination with a Terberg Matec recycling pod to collect two (2) or more waste streams. The pod is mounted between the cab and the Olympus body. The pod can be specified as a top discharge unit to collect one wet waste stream like food or garden waste, or as a side discharge unit which can collect up to 3 dry waste streams like plastic, glass, cans or cardboard.



Olympus One Pass

An Olympus TwinPack body mounted in combination with a Terberg Matec recycling pod to collect three (3) or more waste streams. The pod is mounted between the cab and the Olympus body. The pod can be specified as a top discharge unit to collect one wet waste stream like food or garden waste, or as a side discharge unit which can collect up to 3 dry waste streams like plastic, glass, cans or cardboard.



Olympus Mini

Designed for 7500kg to 16000kg GVW chassis. This is a compact version of the Olympus and is ideally suited to collections in narrow areas and for satellite operations.

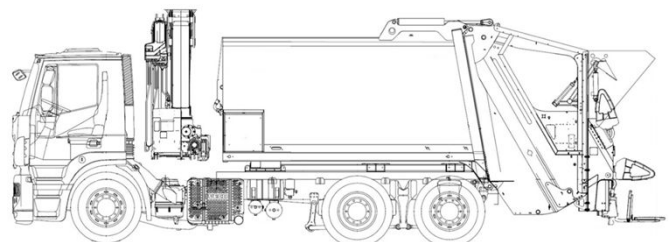
It has an overall width of 2000mm and is available in capacities of 6, 7 or 8m³.

In our non-CE markets, a 10m³ version is also available.

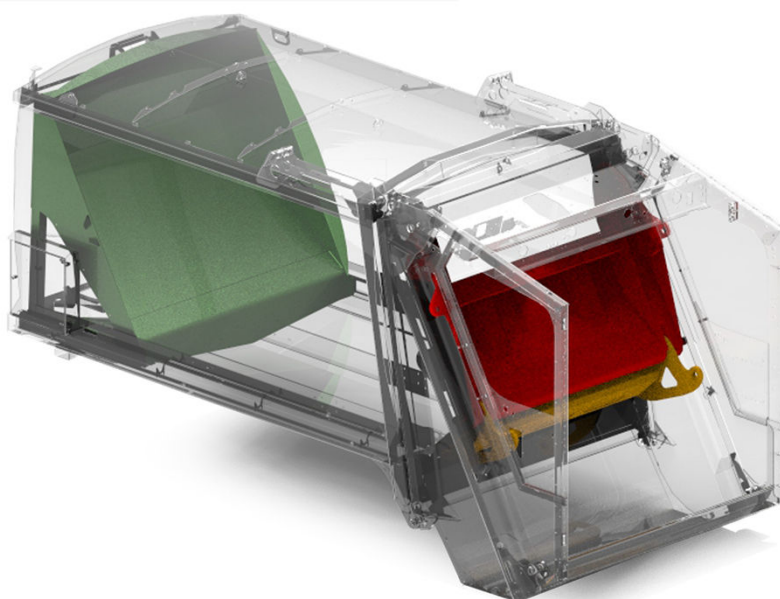


Olympus with Crane

The addition of a rear chute enables the Olympus to empty underground containers with a crane. The crane mounting can be on the chassis or on the roof of the body.



Olympus models



	Capacity (m ³)	Width (mm)	Overall Length (mm)	Height (mm)	Hopper volume (m ³)	GW (t)	Wheelbase, Axles 1 & 2 (mm)
				From top of the chassis	To top of binlift hopper plate		
Olympus N							
OL10N	10.30	2230	4725	2490	2.2	16	3100-3200
OL11N	11.30		4975			16	3400-3500
OL12N	12.50		5275			16	3700-3800
OL14N	13.60		5525			18-19	3800-3900
OL16N	16.00		6175			18-19	4500-4600
OL19N	18.60		6775			26	3800-4000

Olympus W							
OL13W	13.00	2530	4975	2490	2.6	16	3400-3500
OL14W	13.70		5125			16	3600-3700
OL16W	15.60		5525			18-19	3800-3900
OL17W	16.60		5725			18-19	4100-4200
OL19W	18.60		6175			26	3300-3400
OL20W	20.00		6475			26	3500-3600
OL21W	21.40		6775			26	3800-4000
OL23W	23.20		7175			26	4100-4200
OL25W	25.60		7675			26	4500-4600
OL27W	26.50		7875			32	(**)

Olympus +							
OL19+	20.30	2350	6175	2700	2.6	26	3300-3400
OL20+	21.80		6475			26	3500-3600
OL21+	23.40		6775			26	3800-4000
OL23+	25.40		7175			26	4100-4200
OL25+	28.00		7675			26	4500-4600
OL27+	29.00		7875			32	(**)

When High Capacity Tailgate is specified, add 300mm to overall length

(*) Height from the chassis platform.

(**) Must be 4-axle chassis configuration (8X4), please consult your Terberg RosRoca team.

The Olympus body is constructed from curved side sheets, braced by structures at the front and rear (hoops) and a 'keel' type floor.

These curved side sheets give increased strength when compared to bodies with flat sides and reinforcing ribs. The front and rear 'hoops' are where the most strength is needed to support the ejector plate ram and the tailgate. This gives more waste carrying capacity.

Curved side sheets have been shown to have less stress within the overall structure compared to reinforced flat sided bodies. Metal fatigue is reduced and service life is extended. The 'keel' type floor adds strength and provides excellent drainage of leachates from the waste.

Decades of research, development, testing and experience have lead to the current Olympus design. All this history has produced a body which uses different types of steel in its construction to deliver the best possible product. As an example, the specification of the Hardox plate used in the Olympus tailgate is custom produced to meet TRRG's requirements. It is not available for anyone else.

These different steels are selected for the following reasons:

- They give the best match for continual demands of a compaction body's operation.
- They give a longer service life in that operational area of the body than standard structural steels.
- The overall combination delivers a solid, reliable, high performance body for a realistic price in the market.
- Has a longer service life compared to those using higher proportions of standard structural steels.
- To have a body with a proven low cost of ownership over its working life.
- The design is self jigging, using tabs and slots, so this makes for more accurate assembly especially with the large amount of welding involved
- If needed, different steel types can be specified for collecting specific waste streams, for example the floor could be changed from S355 to Hardox 400.



The types of steel used are:

S355 used for the sides, roof and floor. The thickness varies depending on the area of the body. S355 is a popular structural steel which is used in many applications including buildings, infrastructure, tools, ships, automobiles, machines, appliances and weapons.

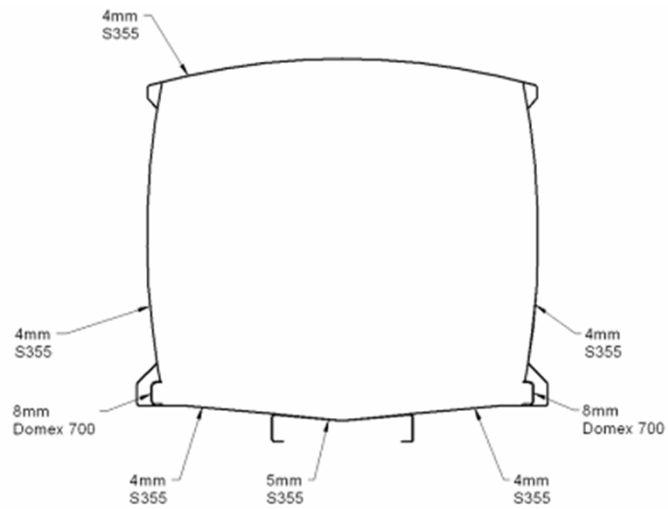
Domex 700 is used for the high stress areas of the body like ejector plate rails, ejector ram pillar and rear lower body crossmember. Domex is a high strength, high tensile steel that has a lighter weight compared to other steels. It is commonly used for truck chassis, cranes and earthmoving machines.

Hardox 400 is used for areas that have the most contact with moving waste. It is used in the bottom of the ejector plate, tailgate sides and floor, the packer and sweeper. Hardox is used in many applications where greater resistance wear is needed. Wear plates on construction machines, tipping bodies on dump trucks, shredders, hammer mills, are common uses.

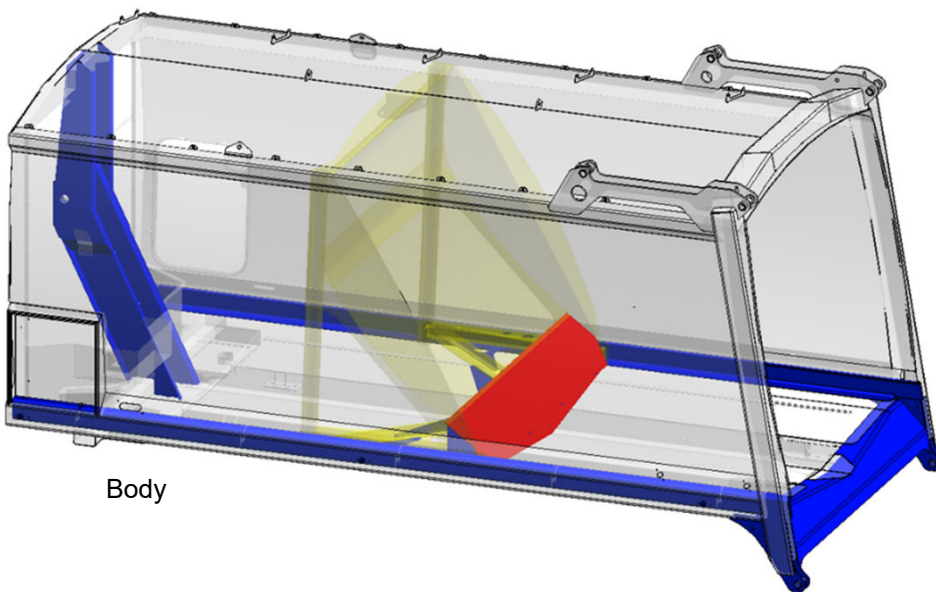
Strenx 700 is used for the ejector plate, packer and sweeper arms, rave plate on the tailgate, and tailgate hinges. Strenx is a structural steel that gives the high wear resistance properties of Hardox, but is able to be worked with in similar ways as S355.

Body Construction

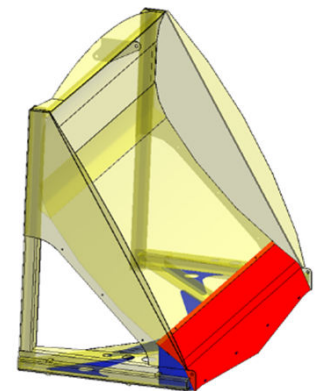
Material thicknesses of the body floor, walls and roof:



Types of steel used on the body and tailgate:

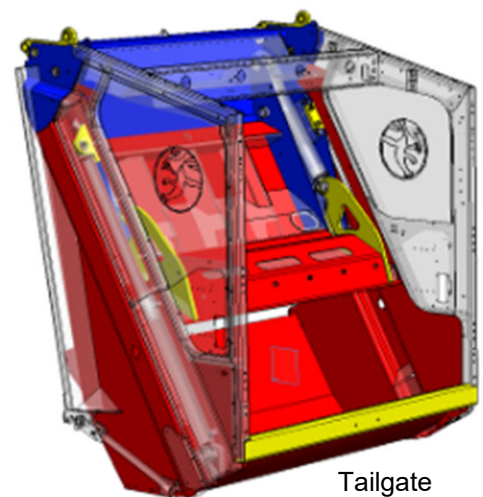


Body



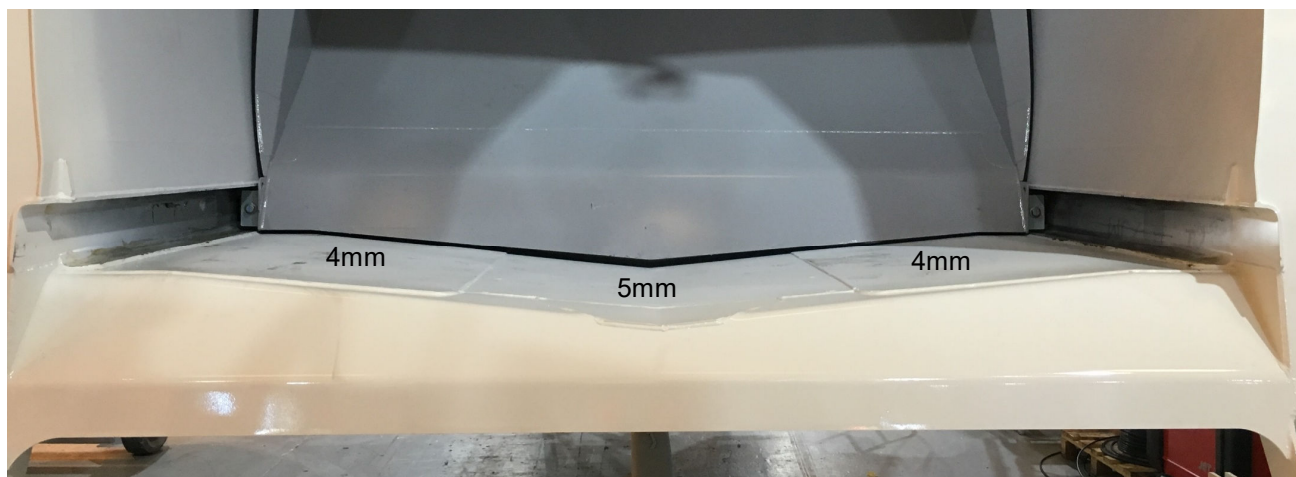
Ejector Plate

Blue = DOMEX 700 (700 Nm Yield Stress)
Red = HARDOX 400 (1000 Nm Yield Stress)
Yellow = STRENX 700(700 Nm Yield Stress)
Grey = S355 (355 Nm Yield Stress)



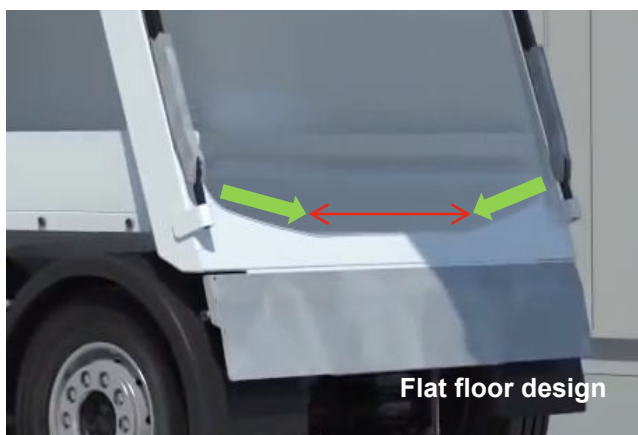
Tailgate

The keeled floor is manufactured in three sections from 5mm (inner section) and 4mm (outer sections) thick S355 structural steel.



The benefits of the keel floor are:

- Increased body strength using the “V” shape profile and thicker material in the centre where it is needed.
- Increased wear resistance where needed with thicker material in the middle.
- The natural draining of leachate (waste liquids) to the centre away from the ejector plate guides.
- Promotes drainage of leachate to the sump built into the front of the body structure and the tailgate.
- When compared to a flat floor, there is little chance for leachate to pool on the floor reducing corrosion.
- The body is easier to clean out.
- Available in Hardox as an option



Front Leachate Sump

At the front of the body is a 45 litre sump which collects leachate. This sump can be specified with an outlet at either right or left hand side



Front sump outlets (left and right)



The front sump outlets can be specified with a number of options:

- Drain hose which folds into a bracket sealing it off
 - option # 57020

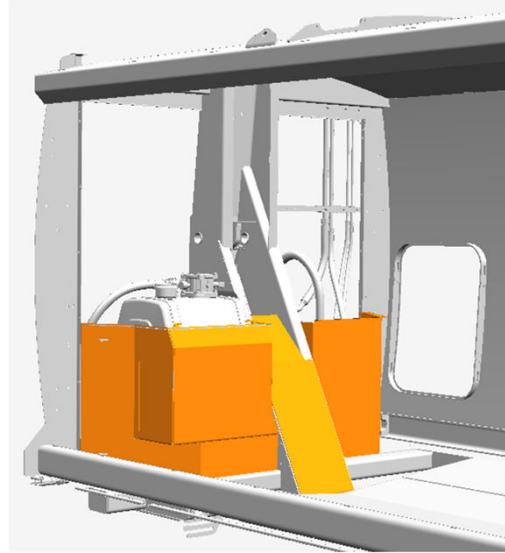
- Drain hose with 50mm (2") ball valve
 - in base specification for FBM. Option for FBU, option # 057060

- Leachate tank mounted on the chassis under to body. 110 litre capacity
 - 110 litre aluminium, option # 056043.
 - 240 litre plastic option # 1012225 (TBC)



Front Leachate Weir Plate

At the front of the body is an 800mm weir plate. This reduces the chance of any waste or leachate which may be in front of the barrier spilling over the front. This reduces the chance of waste falling off the vehicle or falling into the engine bay where it may be a potential fire risk.



The area in front of the ejector plate is where the hydraulic oil tank and hydraulic control block are mounted. They are easily accessible for servicing and away from any potential damage during operations.

Having the hydraulic oil tank at the front keeps weight towards the front of the chassis to keep payload as high a possible.

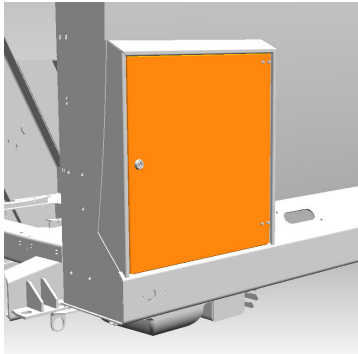


For added safety and security an option of either a net, option 170020, or security bars, option 062020, can be added at the front of the body



Electrical Control Compartment

The electrical control systems for the Olympus are housed in a watertight cabinet on the left hand side of the body. This control panel contains the PLC that centralises all the electronic connections, fuses and relays. Its location allows easy access for maintenance tasks. More information about the control system in section 3.6.



Body Access Door

The inspection door is on the right side of the body. This door provides safe access inside the body through a 60 x 80 cm opening for maintenance and cleaning.

The door has two safety interlocks that automatically stop all body operations when the door is open to protect workers.

An access ladder with handle may be added as an option.

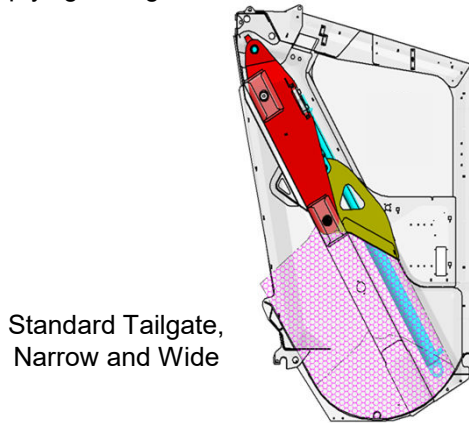
- option code: 071020

Access door as seen from the inside showing interlock sensor

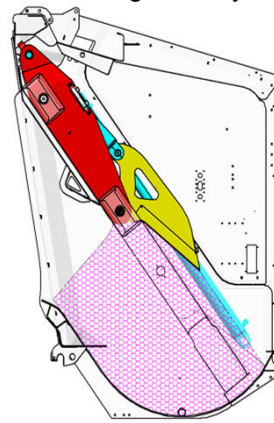


Olympus tailgate

The tailgate is available in two widths to match Olympus Narrow and Wide bodies. There is also a High Capacity Tailgate (HCT) available for Olympus Wide which gives a larger hopper volume. This is better suited to the emptying of large volume containers in excess of 2m³, skips, and underground systems with cranes.



Standard Tailgate,
Narrow and Wide



High Capacity Tailgate

Tailgate Dimensions:

	Tailgate width (mm)	Tailgate length (mm)	Tailgate capacity (m ³)	Cycle time (s)	Absorption capacity (m ³ /min)
Narrow	2,230	1,515	2.22	16 -18	5.70
Wide	2,530	1,515	2.58	16 -18	6.40
HCT	2,530	1,815	2.92	16 -18	6.60

(*) Calculated to EN1501 with 1400mm rave height

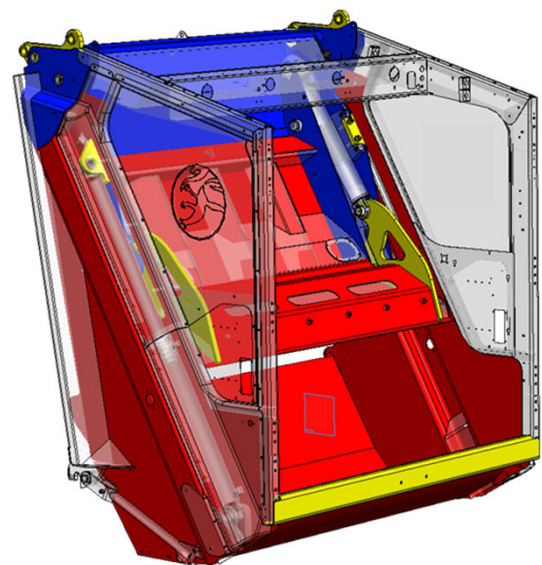
Tailgate Construction:

Like the body, the tailgate is constructed using a number of different types of high strength hard wearing steel. The right steel is chosen to a specific task. The sides of the tailgate and the hopper floor are made from 7.0mm thick material.

In addition to this a number of options are available to provide extra hard wearing protection when collecting abrasive materials like glass

Options include:

- Tailgate sides and sweeper strengthening for paper, options 009030 & 009030
- Hopper floor thickness increased to 10mm HARDOX 400, option 050030
- Hopper floor is 6mm EURODUR with sacrificial Manganese steel plate, option 050040. This is recommended for high levels of glass collections or similar abrasive materials.
- Hopper floor increased to 8mm Hardox 500, option 050060.



BLUE = DOMEX 700
 RED = HARDOX 400
 YELLOW = STREX 700
 GREY = S355

Olympus tailgate

The carriage and packer plates are mounted in the tailgate. The details of their function are covered in the Compaction section of this guide.

Tailgate Hydraulic Cylinders

The tailgate is opened and closed by two hydraulic cylinders mounted on the roof top.



The reason these are mounted on the roof are:

- They are out of the way when ejecting the waste. The cylinders are well clear of any waste as it is pushed out of the body.
- The tailgate and body can make maximum use of the allowable width. No hopper or body width is sacrificed to allow room for tailgate lifting cylinders.
- When closing the tailgate, the final movements of the bell crank cylinder hinge arrangement are used to positively engage the tailgate into the locked position, securely locking the tailgate.
- The geometry of the design avoids damaging the tailgate seal rubber when opening and closing.

The tailgate needs hydraulic power to close. The lifting cylinders are protected by over-center pilot valves which require power to open. These prevent the tailgate from falling if a hose breaks or there is an oil leak. The design is strong enough that if one cylinder fails completely, the remaining cylinder can safely lower the tailgate. If the tailgate is up when this occurs, it can be manually lowered using the adjustment bolts.

The tailgate is sealed by a rubber seal on the sides and lower edge to reduce leachate leaks. Given the pressures involved, a 100% seal is not possible. If wet waste is regularly collected, an optional leachate tank, option 055020, can be added to collect any fluids that escape past the seal. The tailgate seal can be easily replaced should it be necessary.



Tailgate Locks



Tailgate Rubber Seal

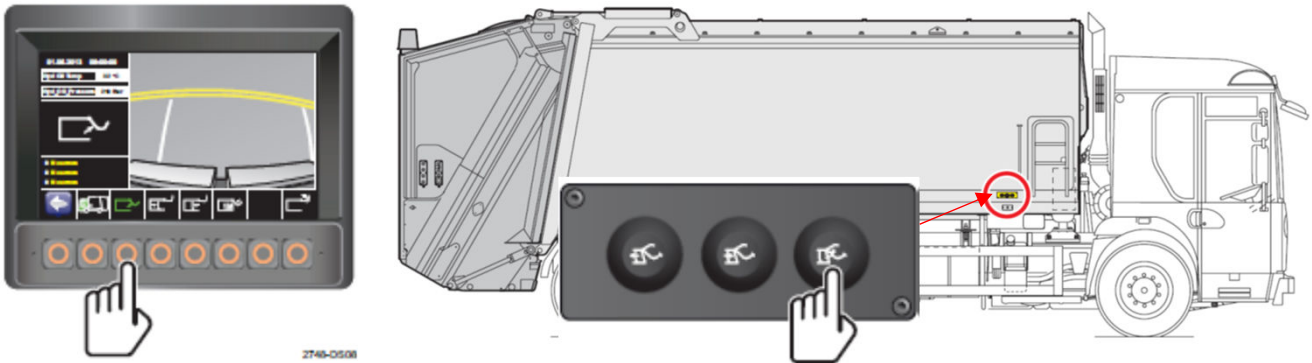


Optional Leachate Tank

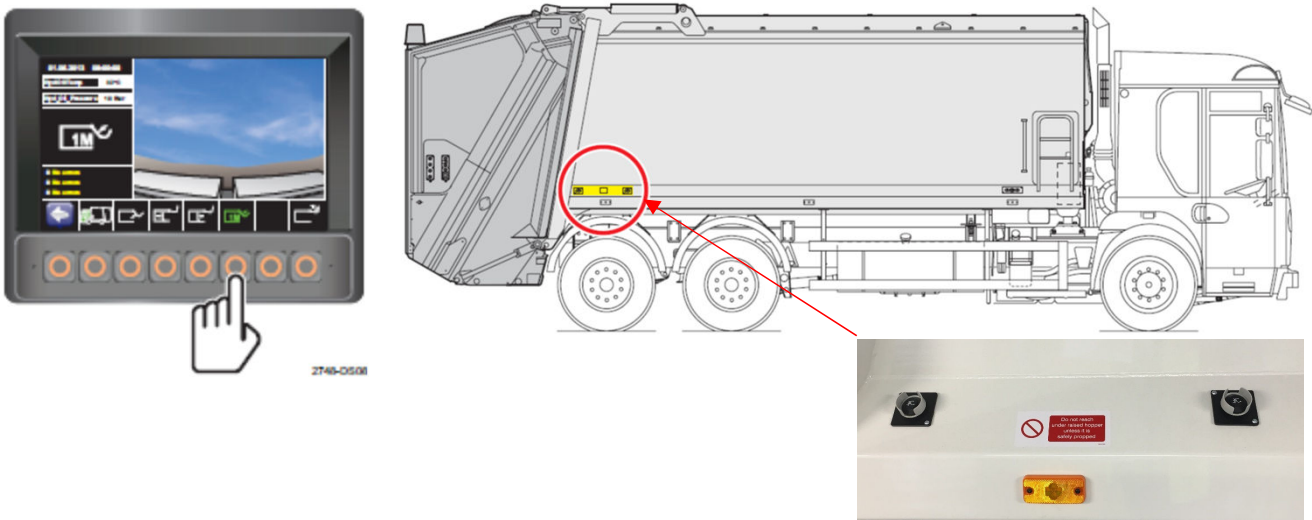
Olympus tailgate

The tailgate can be opened and closed using either the control panel in the cab or the tailgate raise control button on the panel mounted on the outside of the body.

The control panel is used to select the control method. When opening the tailgate, either the control panel or external buttons can be used.



When using the control panel to lower the tailgate, the tailgate will stop 1 metre from the closed position. The remainder of the closing must be completed with the external buttons at the rear. This is a safety measure to reduce the chance of any person being trapped. The external buttons can also be used to lower the tailgate from fully raised. It will still stop at 1 metre and will require the buttons to be released and pushed again for the tailgate to lower and lock.



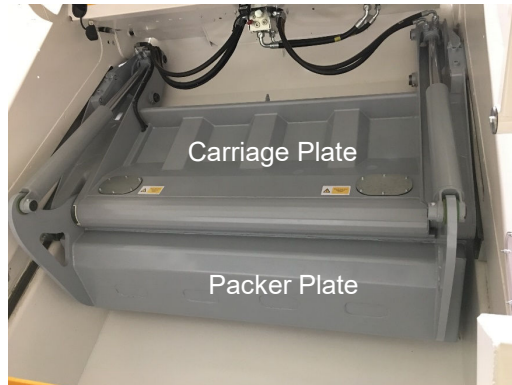
The external lowering controls are designed so that both hands are required to operate the controls for safety reasons.

The safety prop fitted to the tailgate allows the tailgate to be safely held open for maintenance and cleaning.



Compaction Mechanism

The compaction of waste in Olympus is done by the carriage and packer plates in the tailgate working together with the ejector plate in the body. The compaction ratio possible is up to 6:1. Compaction ratio is adjustable to match the waste being collected using the control panel in the cab.



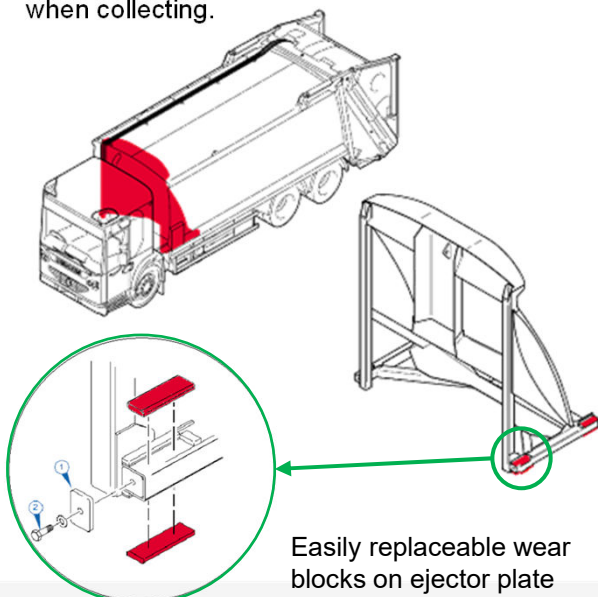
Ejector Plate

The ejector plate is the moving front wall of the body and has two functions:

1. As a moving front wall, it keeps the waste compressed at the required level at all times during the collection round moving forward as the body fills up.
2. To empty the body at the transfer station or landfill site.

It fits closely inside the body so no waste can pass in front of it. It is powered by a multistage hydraulic cylinder which pushes against the ejector column at the front of the body. It is mounted on 4 sets of wear blocks inside Domex 700 steel channels at the bottom of the body. These wear blocks are designed for easy replacement without having to remove the ejector plate.

There is also an optional "Non-Compactable Waste Switch" option 104020, which is useful when collecting very wet waste or non-compactable recyclables like paper. With these types of waste having the ejector plate pressing against the payload is of little or no benefit. The ejector plate is kept at the front of the body when collecting.



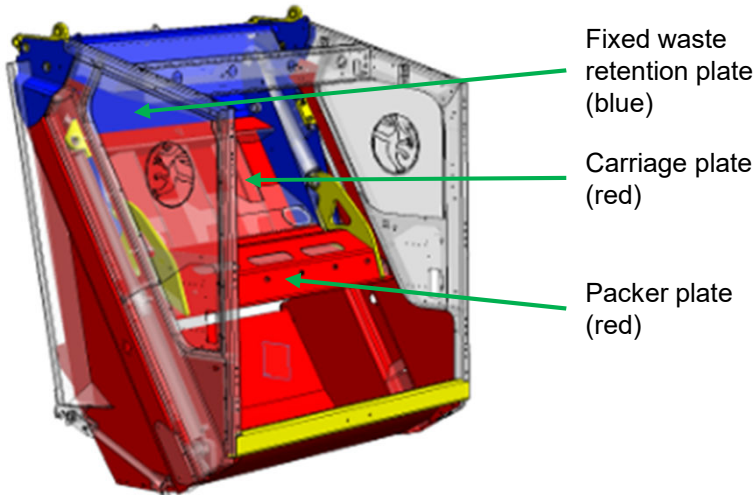
Ejector plate before fitting



Ejector plate fitted showing hydraulic cylinder extended

Carriage Plate and Packer Plate

The packer plate and carriage plate move the waste from the hopper up into the body where it is compressed between the ejector plate and the fixed waste retention plate which is part of the tailgate. When the carriage plate is lowered to gather more waste, the waste retention plate keeps the compressed waste in the body.



Carriage slide block with wear pads



The carriage plate travels in channels within the sidewalls of the tailgate and is operated by two hydraulic cylinders. The plate travels on long life wear pads which are easily replaceable. The cylinders located outside the tailgate have the rods at the top so they have no contact with waste when functioning, deliver more power when moving waste up into the body, keeping them clean and free from damage.

The packer plate is hinged on the carriage plate and is operated by two hydraulic cylinders. The hydraulic cylinders are positioned to keep them away from waste as much as possible and also have the rods at the top to deliver maximum power when gathering waste. This also reduces contact and possible damage.

There are only two grease point on Olympus and these are at the carriage and packer plate hinge point. It is important to make sure that greasing is done regularly given the constant heavy loads put on this hinge point. Along with regular cleaning that should be done, these are the only regular service points.

Carriage plate channel (right side)



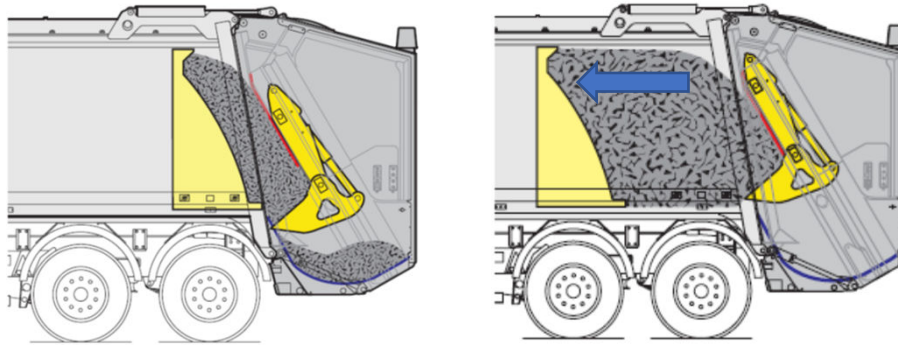
Grease point access plate

Packer plate hydraulic cylinders



Waste compaction

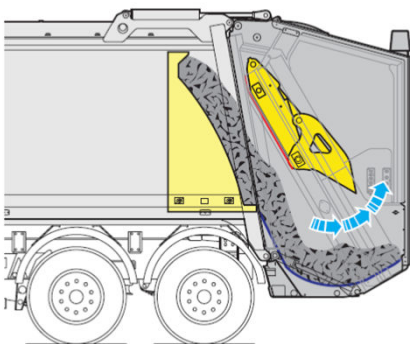
The waste compaction process uses the combination of ejector plate and carriage and packer plates to compress the rubbish. The level of compaction pressure is set by the operator from the control panel in the cab. Higher pressures are used for dry waste streams like domestic and plastic. Lower pressures are used for dense or wet waste like garden waste or glass.



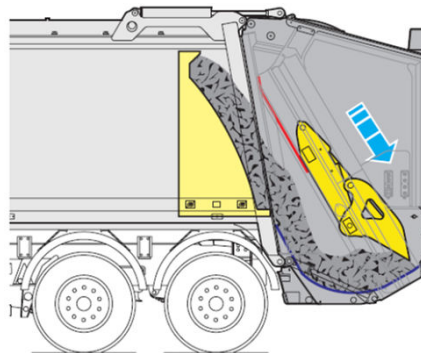
Waste compaction operating cycle

The compaction mechanism operating cycle is divided into four parts:

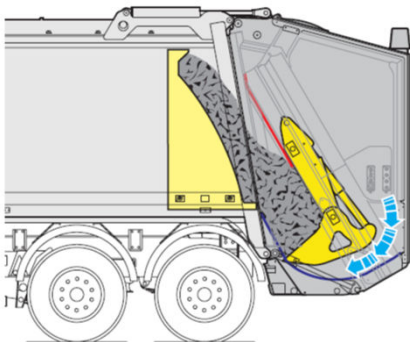
1. The packer plate opens



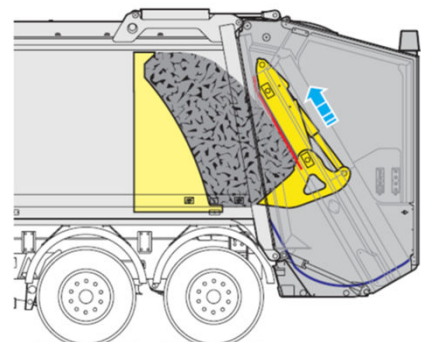
2. The carriage plate moves down into the hopper.



3. The packer plate closes.



4. The carriage plate moves up.

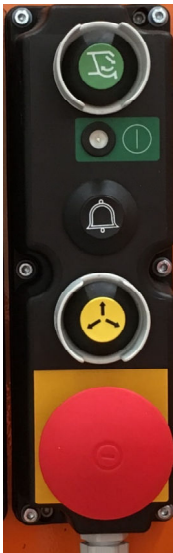


The packer plate encloses the refuse and sweeps it.

The packer plate and carriage plate compress the refuse in the body between the ejector plate in the body and the refuse retaining plate in the tailgate. As more refuse is packed into the body, the ejector plate moves towards the front of the body.

Control of the waste compaction operating cycle.

The operation of the compaction cycle is done by the standard control panel mounted on the side of the tailgate. These control can sometimes be integrated into the bin lift controls.



- Start pack cycle push-button – carriage and packer will complete the number of cycles selected on the Olympus control monitor.
- Control panel active warning lamp (Green) – when lit it shows the control panel is active.
- Signal push-button – sounds a buzzer in the vehicle cab.
- Reverse rescue push-button (Yellow) - Cause the compaction mechanism packer plate to open and carriage plate to move upwards simultaneously and is used to reverse the mechanism away from the tailgate floor to enable jams to be cleared or in case of emergency.
- Emergency stop push-button (Red) – stops all body operations immediately. Must be reset by driver in the cab.

The number of compaction cycles that happen when start button is pressed can be set on the Olympus control monitor. 11 different compaction cycles can be selected:

- Single (Default).
- Multi-cycle 2, 3, 4, 5, 6, 7, 8, 9 or 10 cycles.
- Continuous cycling (not on open back models)

When a bin lift is fitted to the body, the compaction mechanism can be set to start either when the compaction mechanism control panel push-button is operated or automatically after the lifting device has completed between 1 and 5 cycles. This is set up from the Olympus control monitor

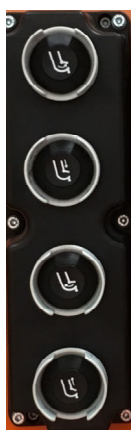
There are 10 different compaction rates which can be selected:

Compaction rate	Type of refuse
Rest with organic (default)	Household refuse with organic
Rest without organic	Household refuse without organic
Organic – garden	Garden waste
Organic – restaurant	Food waste
Paper	Paper
Paperboard	Cardboard
Plastic	
Plastic – dsd	
Glass	
Not selected	

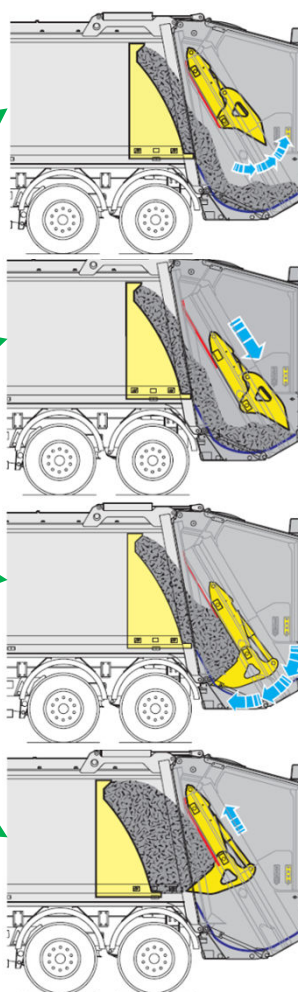
Control of the waste compaction operating cycle (cont).

The compaction cycle can also be controlled in individual stages if required. This is done by adding the packing sequence control panel option from the pricelist, option 107030 or 107040. This panel allows individual control of each part of the cycle. This is useful if there are large items of waste to manage like furniture or bulky packaging materials.

The functions are as follows:



- Open packer plate
- Carriage plate down
- Close packer plate
- Carriage plate up

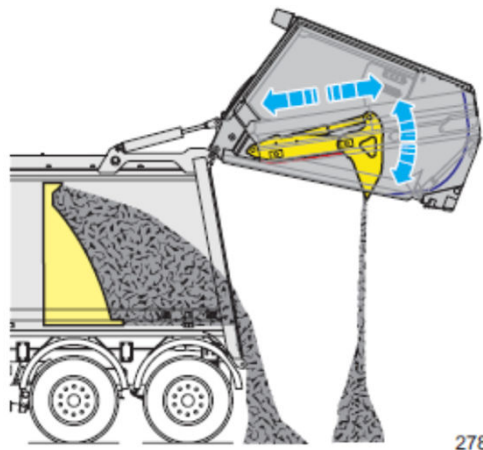


Emptying Olympus

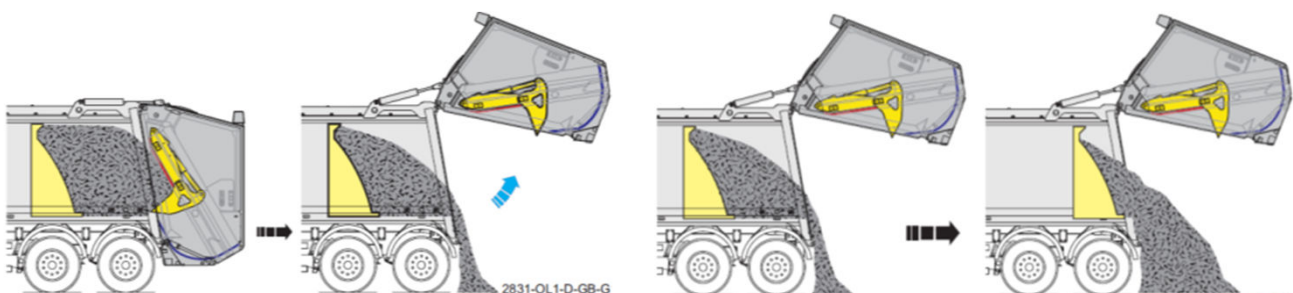
The emptying of the body is controlled either by the driver from the control monitor in the cab or the external control buttons at the front of the body.



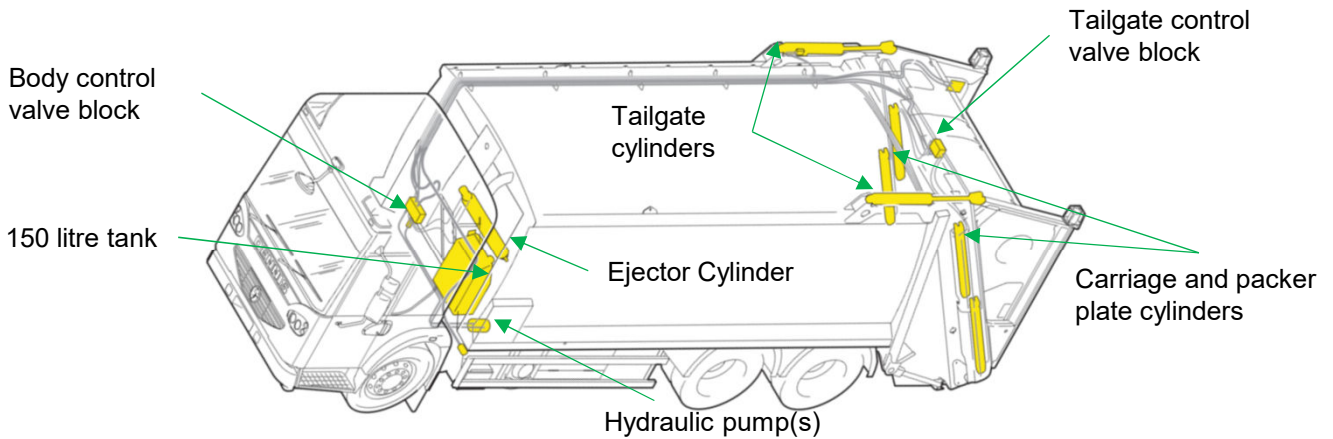
When the tailgate is raised, the carriage and packer plates can be set to perform none, one or more cycles to clear the tailgate of any waste.



The ejector plate then pushes out all of the compacted waste. The bottom edge of the ejector plate will travel to the end of the body floor making sure that all waste is removed.



The hydraulic system is designed to deliver maximum power and efficiency while keeping operating temperature, noise and fuel consumption as low as possible. To achieve this extensive design and testing has been done to improve the efficiency of the hydraulic valves, cylinders, pipework and pumps.



Hydraulic Tank

The 150 litre oil tank is mounted at the front of the body. It has a two 10 micron filters, one on the pressure line for the compactor and one on the return line for the whole system to ensure the oil is always clean. It is fitted with a level indicator, a blocked oil filter indicator, and an oil temperature sensor. For easier filling and emptying, there is a push-fit coupling located on the left hand side which is connected to the return filter to maintain clean oil. For easier servicing, the pressure test ports are located on the side of the body where they can be easily accessed.

There are options of a drain tap (option 026040) and connectors for a remote power supply (option 028020) to aid servicing and repairs.

The hydraulic oil tank is made by a specialist tank manufacturer so it has the strength to cope with the tough operating conditions found worldwide.

There is a low oil level switch which will shut off hydraulics if the oil is low or oil temperature is too high.



Hydraulic Oil

Olympus is supplied with Grade E46 hydraulic oil as standard. This is suitable for most operating climates.

There are other oil grades available:

- Hydraulic oil E32, option 029010. Recommended for colder climates, pour point -24°
- Hydraulic oil BIO HM-46S , option 029040. If biodegradable oil is required.
- Hydraulic oil BIO PE-B 30 , option 029050. If biodegradable oil for a cooler climate is required. Pour point -24°
- Hydraulic oil ARCTIC 32 , option 029060. Recommended for cold climates like Russia, Nordic and Baltic regions. Pour point -60°.



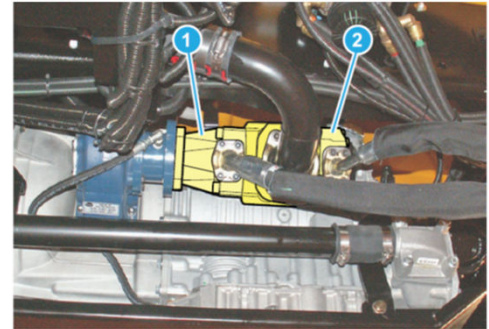
Push fit coupling for the remote filler

Hydraulic Pumps

The hydraulic pumps are powered by the chassis Power Take Off (PTO). Usually a double pump is fitted, one for powering the body hydraulics and the other for powering the bin lift. If no bin lift is asked for then only one pump will be required. Pumps are mounted directly to the PTO on the transmission or engine. The specification and layout of the chassis PTO sometime decides which option is possible.

The hydraulic pump(s) deliver hydraulic power for:

1. Ejector plate forward and back, tailgate raise lower and lock, carriage and packer cycle.
2. Bin lift functions if one is fitted.



The hydraulic pumps are fixed displacement as standard and typically operate at between 900-1,000 engine rpm. The flows and pressures of a typical body and binlift arrangement are:

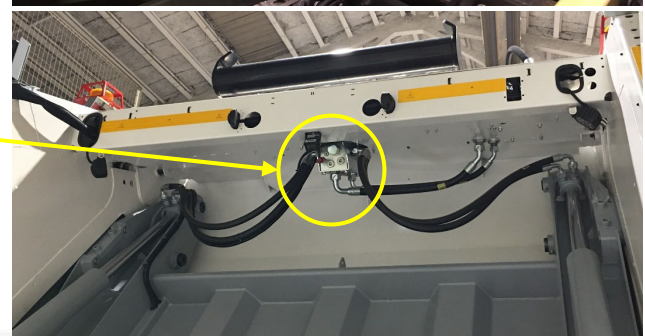
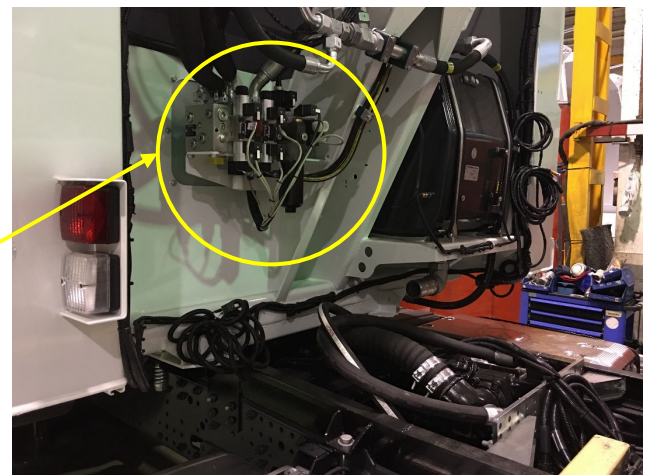
Pump body	Flow (l/min)	Maximum Pressure, (Bar)	Powers:
Pump 1	67	230	Ejector, Tailgate, Carriage and Sweeper Plates
Pump 2	40	160	Bin Lift

Hydraulic Control Blocks

On Olympus there are two hydraulic control blocks. One mounted at the front of the body, the other mounted in the roof of the tailgate. Control is with electrically controlled valves and monitored by pressure transducers, oil temperature sensor and relief valves.

The first hydraulic block is located in the front of the body next to the oil tank and is easily accessed from the ground for easier maintenance. This block controls the ejector plate, and tailgate raise and lower functions.

The second block is located in the roof of the tailgate. Locating this control block here reduces the distance from the control valves to the carriage and packer plate cylinders. The benefits of this are speeding up response times, reducing oil temperature and giving faster hydraulic performance as oil does not have to travel so far. These benefits contribute to delivering a 16 - 18 second compaction cycle time every time. Locating the second hydraulic block in the roof of the tailgate also prevents damage when unloading or compacting waste. This line has a 10 micron pressure filter.



The electrical system is designed to withstand the hard working conditions that the Olympus will deal with during its working life. To meet the strict requirements of EN 1501, the well proven CANBUS electrical system is used. This provides a very reliable, and versatile system which is proven in many demanding environments and industries.

CANBUS was originally designed for the automotive industry and its reliability and stability in extreme conditions has seen it widely used across many industries. Using CANBUS means that there is no need for individual wires for each function. A single set of wiring can power, control and monitor hydraulic valves, lights and sensors at the same time. CANBUS is ideal for use with EN 1501 due to the high levels of safety required and the ease of controlling safety interlocks across a number of functions.

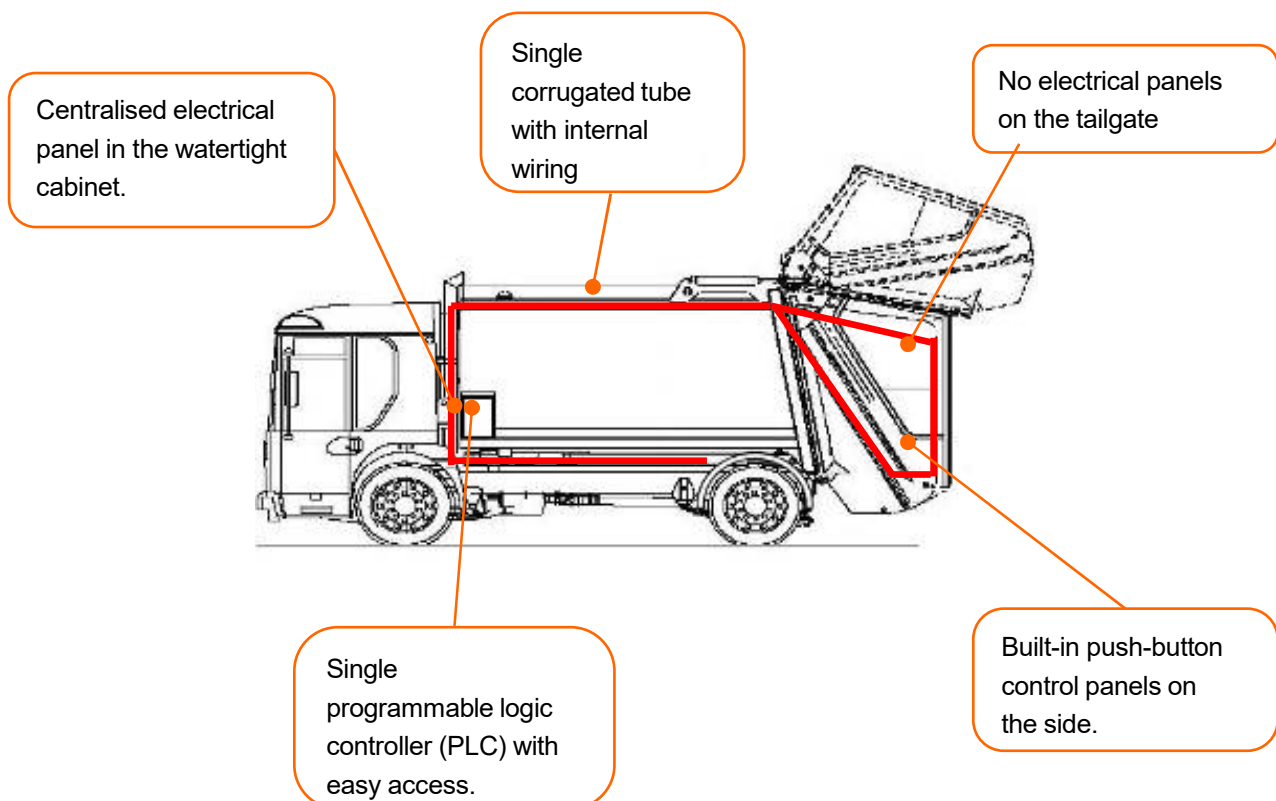
The system needs only one (1) electrical cabinet which is located at the front left hand side of the body. From here wiring travels to:

- The cab to the control panel
- The lower left hand side of the body for control buttons, side marker lights and work lamps.
- Across and to the lower right hand side for the main hydraulic block control, control buttons, side marker lights and work lights.
- A single tube take the wiring up and along the roof to the rear of the body for compaction control, tailgate control, control panels for the body, position sensors, work lights, road lights, flashing beacons, electrical connection and interface for the bin lift, bin lift controls and all bin lift sensors.

If extra electrical components are required, they can be plugged into the wiring harness and will function immediately. The bin lift is easily connected to the system with a single 16 pin plug.

The electrical cabinet houses the Programmable Logic Controller (PLC) unit which is the main controller for the Olympus body.

The internal connections have water tightness rating of IP67 and the external connectors are all IP69 rated.

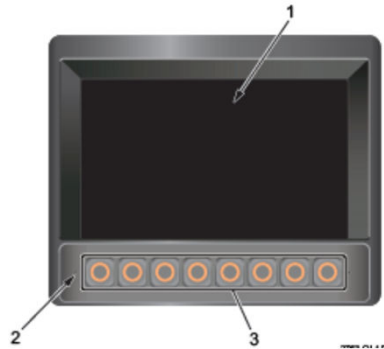


Control panel

Control of Olympus is from the control panel in the cab. The cab control panel comprises a full colour screen. The screen can operate as the monitor for the rear view camera and, at the same time, a control panel for the body system functions.

It comprises the following components:

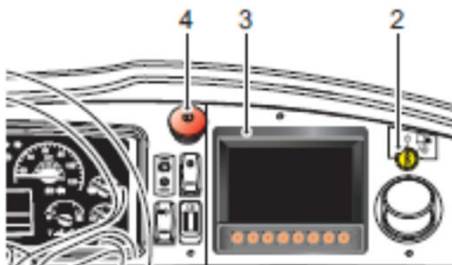
1. Screen.
2. Status lamp.
3. Operating buttons.



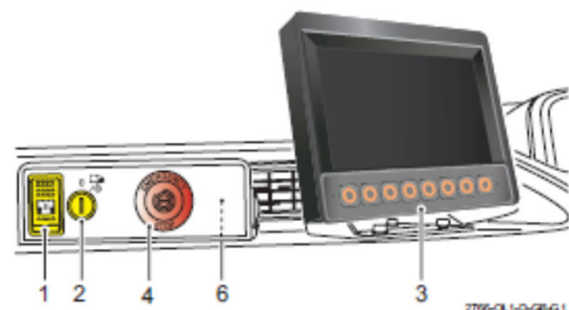
From this panel the body functions can be controlled. Any settings required like compaction pressure and packing cycles are done from here. The panel will also control work lights on the body. Some work and flashing lights can be set to switch on or off at certain speeds so the driver can focus on driving the RCV. The operator can also set some components to be active at certain times of the day. For example, reversing buzzers may be set to be off late at night to keep noise levels down in residential areas.

The control panel is mounted in two ways.

1. Into the dashboard when the Dennis Elite 6 or Renault D Access chassis is used.
2. On an arm mount when any other brand of chassis is used.



Dennis Elite 6 or Renault D Access



Other brands of chassis

The control panel (3) is also used by service engineers for regular maintenance and to check Olympus is operating correctly. They can use the control panel to test components and view logged operating data.

Included with the in cab controls are the warning beacon switch (1), Master Key On/Off (2) and Emergency Stop (4)

A fleet manager can also make settings for the Olympus which are password protected and so can not be changed by the crew.

Warning lights

Warning Lights

There is a wide choice of warning lights and flashing beacons available to ensure the RCV is visible to the public. They range from halogen rotating beacons to multi LED units so there is a solution to meet all requirements. All warning beacon mounting positions meet EN 1501 regulations.

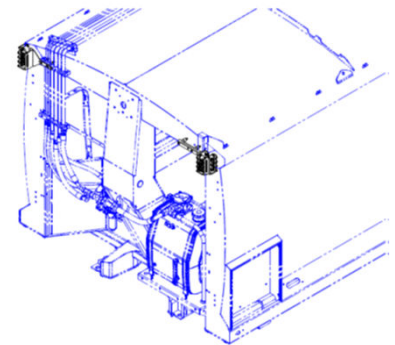
Common warning light options are:



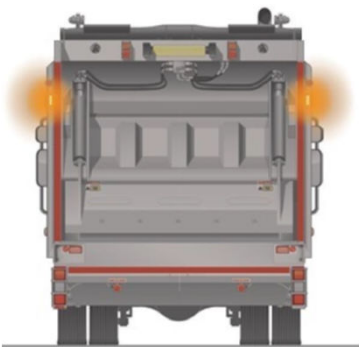
One or two rotating beacons at the front of the body



One or two rotating beacons on the tailgate



LED beacons on the front corners



LED beacons Rear – 2 side + 2 rear



LED beacons at the rear – 2 side

Work lights

There are many options for work lights and they can be fitted to many different places. If your customer has any specific requirements, please consult with your sales manager to see what is possible.

Common worklight positions are:



Ejector plate maintenance light shines to the rear of the barrier to aid with cleaning



Maintenance light shines the front of body and engine bay to aid with maintenance



Lower body working lights shine down the side of the vehicle to help with visibility towards the side and rear of the vehicle.



Reverse assist lights shine around the rear sides of the vehicle for a better view when reversing



Control station lights shine in the working area to help crews when working in dark conditions



Rear work lights to help crews when working in dark conditions

Making sure the chassis and body are correctly matched is important. A good initial guide is found in the Olympus pricelist and in the specification sheet on page 8 in this guide.

TRRG have a legal obligation to supply RCVs that are safe to operate on the public highway. To this end we ask that the chassis be the right specification and that a Body weight Calculation (BWC) is completed before quoting a customer.

Chassis Specification

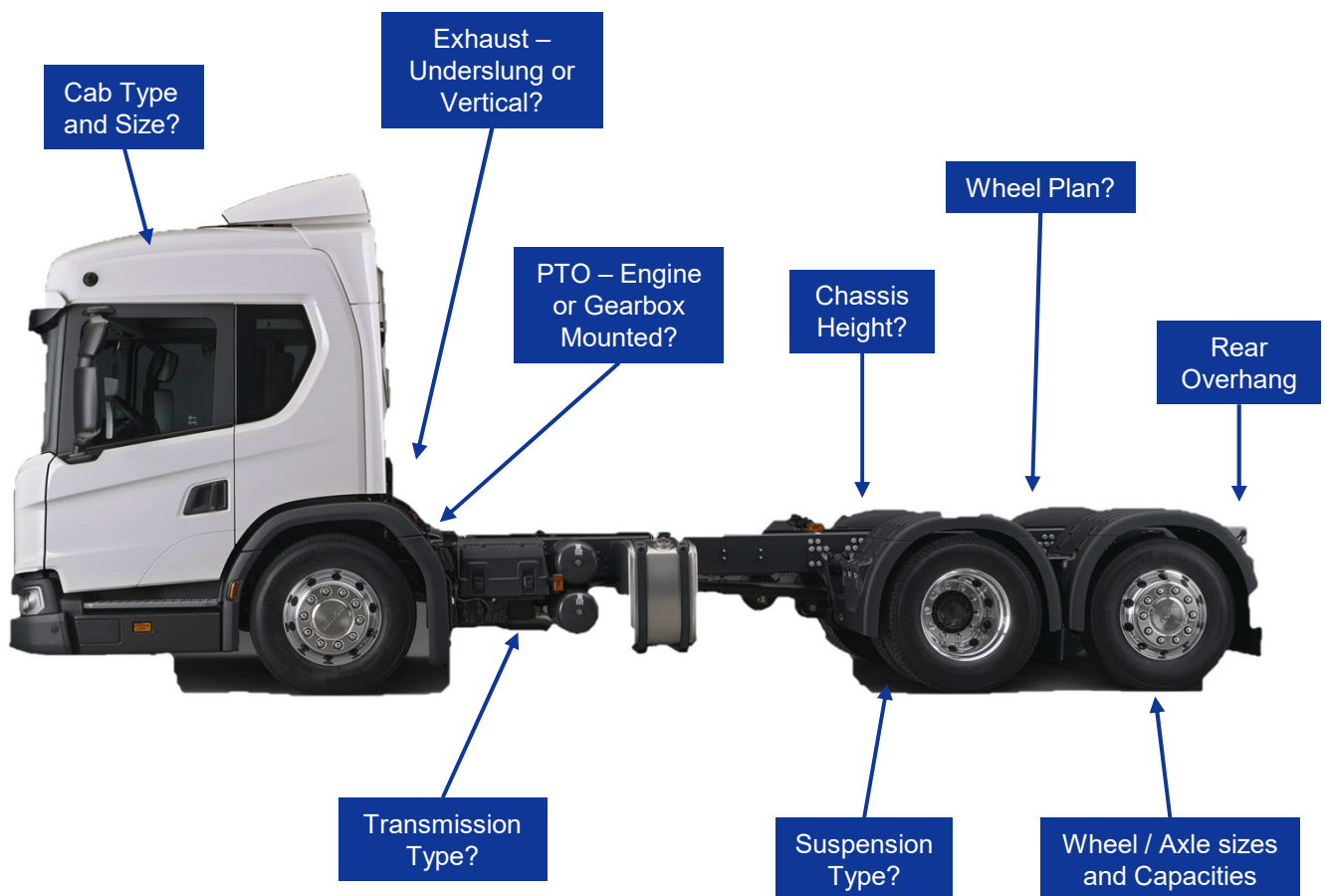
As there are many different brands and specifications available, care needs to be taken to make sure that the chassis is suited to the role of an RCV. Most manufacturers are able to advise on the correct specification for the chassis.

To help with this there is a document which details the chassis specification requirements to enable correct mounting of a body and binlift. Items this documents covers include:

- Vertical exhaust height (if this fitted)
- Rear overhang maximum distance
- Maximum chassis height for specific bin lifts
- PTO requirements
- Electrical requirements

For markets requiring EN1501 standards to be met, CANBUS connectivity is required on the chassis as well. Contact your sales manager to get a copy of this document.

Items to consider when preparing a chassis for use as an RCV



Body weight calculation

Once a body and binlift specification is agreed, a check needs to be done to confirm the chassis and body are matched and will be safe to use. This is done with a Body Weight Calculation.

Details of the chassis, body and binlift specification are sent to the factory, Tarrega or Warwick, where they will be put together within a specialist program to see they match. As well as dimensions, this programme will show axle weights when the RCV is empty and full of waste.

The results will show:

- If the body and chassis are matched for length and there is not any illegal overhang.
- The gap between the cab and body is acceptable.
- Overall height is within legal limits.
- The maximum payload possible when the legal or design limits for the axles are reached.
- The front axle has enough weight on it at all times to be able to brake and steer safely.
- If there are axle overloads, or limitations they will be shown in this document

The impact of different specifications like cab size, vertical or horizontal exhaust, wheelbase, suspension and local Gross Vehicle Weight can all have a bearing on the results. The density of the waste will also affect payload. Wetter waste will have the RCV at its legal maximum with less volume than drier waste. These documents are produced with an accuracy of 3-5%.

There are two types of programme used within TRRG. They will give the same information:

Vehicle SCANIA P 280 84x2NA E6
Wheelbase 4.170
Type of cab Medium
Rear suspension Pneumatic
Exhaust Downwards
Minimum cut chassis 730
Height chassis 996

Body OLYMPUS-WIDE 16
Hopper 8mm
Sub-frame height 115
Footboards Yes

Lifter Terberg OmniMax
DIN frame Interface between tailgate and lifter

	Front axle	Rear axle	Total	Center of gravity
Chassis	4.760	1.760	6.520	3.795
Body	523	5.283	5.806	6.588
Lifter	-397	1.082	685	
Extra weight Unloaded	4.885	8.126	13.011	
Driver	225	0	225	3.114
Payload	1.653	4.874	19.763	
Total	6.763	13.000	20.000	
GVW	8.000	13.000	20.000	

% Weight distribution: (with ejector plate at front)

	Front axle	Rear axle	Total
Empty	38,6%	61,4%	13.236
Loaded	34,2%	65,8%	19.763

Body outrigger % with respect to wheelbase: 68%

Remarks:
 Average payload is expected to be between 7007kg and 8564kg with a waste density of 450-550 kg/m³. Legal payload is 6527kg.

Elite 6 - 4x2 Chassis with Olympus 13W + OmniDEL Lifter

Chassis: Track Euro6 3500 + DENNIS Olympus OL 13W (13.01 cu m) + OmniDEL Lifter

	mm	3500
mm	1685	
x CoG	Fa	Ra
85 kg	-800	4820
	3204	423
	1770	20
	8678	-112
vel Split automatic binlift	6025	-129
	5250	-20
	2000	26
	2400	38
	3500	82
	-1465	702
	5271	8059
	2548	1259
	6530	11470
	7100	11500

Total
 6520
 255
 5005
 40
 180
 595
 60
 60
 120
 40
 495
 4630
 18000

Load: RPAI Unladen = 5271 Kgs (39%)
 RPAI Laden = 6530 Kgs (36%)

State: Warwick

Page 1 Calculation Modified Date: 19/01/2017, CE

Counterweights

If the initial BWC shows that front axle weights are too low to enable safe operation of the public highway, then extra weight can be added to the front of the body to rectify this.

For 2 axle trucks, the front axle must have a minimum of 25% of the vehicle's gross weight on it as all times. For a 3 axle truck this is 20%. This is an EN-1501 requirement.

The BWC below says that 280kg of counterweights are required for the RCV to operate safely. Adding the counterweights shows on the graph that the front axle load is shown to be just above the minimum 25% so it is safe to operate. TRRG will always insist on a BWC before accepting an order be sure the chassis and body combination is safe to use.

BODY WEIGHT CALCULATION
Date: 18/12/2018 Calculated: TLP Approved: MMM Reference: 5527-A-00-EN Rev: 00 Lang: EN

The final design (aspect) of the mounted unit could not correspond with the drawing.

Vehicle	IVECO ML190EL25P EVL_C	Body	OLYMPUS-WIDE 14
Wheelbase	3.690	Hopper	10mm
Type of cab	Short	Sub-frame height	115
Rear suspension	Pneumatic	Footboards	Yes
Exhaust	Downwards	Lifter	Terberg EuroTrade
Minimum cut chassis	720	DIN frame	Interface between tailgate and lifter
Height chassis	938		

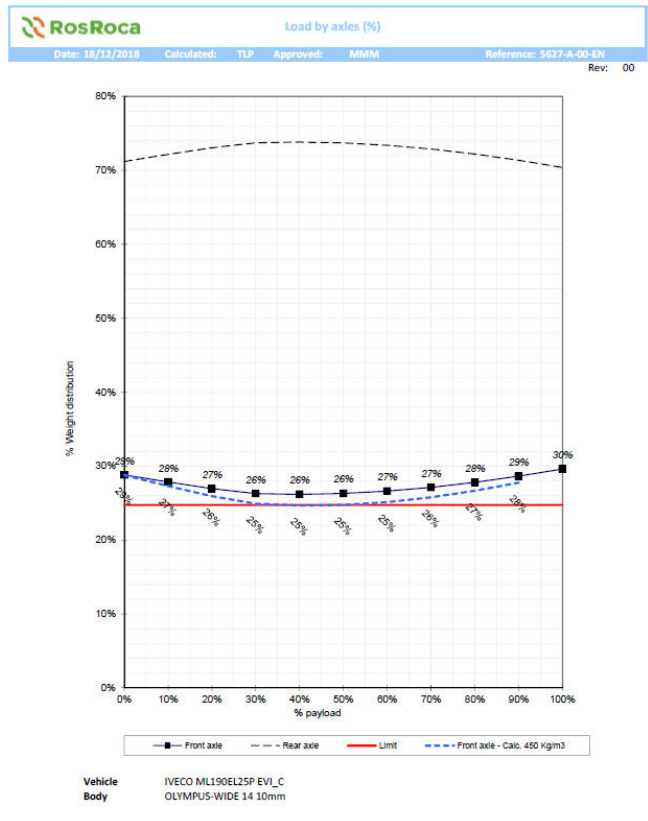
	Front axle	Rear axle	Total	Center of gravity
Chassis	3.510	2.040	5.550	
Body	380	5.360	5.740	3.446
Lifter	-437	1.122	685	6.046
Extra weight	197	83	280	1.090
Unloaded	3.650	8.605	12.255	
Driver	225	0	225	
Payload	964	2.895	3.859	2.768
Total	4.839	11.500	16.339	
GVW	7.100	11.500	18.000	

% Weight distribution: (with ejector plate at front)

	Front axle	Rear axle	Total	Volume(m ³)
Empty	31,1%	68,9%	12.480	13,71
Loaded	29,6%	70,4%	16.339	Payload's density kg/m ³ : 282

Body outrigger % with respect to wheelbase: 78%

Remark:
Average payload is expected to be between 6170kg and 7541kg with a waste density of 450-550 kg/m³. Legal payload is 3859kg.
Extra weight includes 280kg of counterweights in front of the body.



ROS ROCA, S.A. www.rosroca.com
DISCLAIMER: This document and the information or advice given to the customer is merely for guidance and does not constitute any contractual obligation. Nor can any obligation, guarantee or responsibility be taken from it on the part of the company. The weights showed could be affected by a ± 3% deviation.

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DISCLAIMER: This document and the information or advice given to the customer is merely for guidance and does not constitute any contractual obligation. Nor can any obligation, guarantee or responsibility be taken from it on the part of the company. The weights showed could be affected by a ± 3% deviation.



Counterweights are mounted at the bottom of the ejector column. They are 70kg each, option number 016030, and a maximum of 6 can be fitted = 420kg. A further 2 x 40kg weights, option number 016060, can be added to give a maximum possible of 500kg. If a variable flow pump is fitted the maximum is reduced to 470kg.

On the Dennis Elite 6 and Renault D Access Chassis the front bumper is designed for counterweights to be fitted which enables less weight to be used to restore correct front axle loads. The bumper can carry up to 495kg. There is also the option of two belly pan weights at 130kg each giving a total of 755kg. Other chassis manufacturers would have to be consulted to see if they offer the same option.

Each chassis manufacturer has a different design and specification for their chassis. Most chassis manufacturers require a subframe for high load carrying bodies like tippers, waste compaction, cement mixers and cranes. The chassis manufacturer wants to keep its chassis weight as low as possible so it can be used for a wide variety of roles with the maximum possible payload.

Every manufacturer has different specifications for their chassis, for example:

- Chassis rail thickness, commonly varies from 6.0mm to 8.0mm
- Chassis flex, some chassis are designed to twist more than others.
- Body mounting points and attachment methods are different for each manufacturer.
- Location of fuel tanks and exhaust systems.
- PTO locations can be on the engine; on the rear, sides or top of the transmission; or both.

Each chassis manufacturer will have their own rules regarding the mounting of a body onto their chassis. Body builders world wide will use subframes help to:

- Take the structural load of a body and its payload and spread it out along the length of the chassis.
- Allow a chassis designed to flex to continue to do so with a body that is rigid.
- For example a Mercedes Actros, Antos and Econic trucks are designed for different applications and so have different chassis layouts and specifications.

To make mounting process more practical, a subframe is used. The top of the subframe is matched to the Olympus floor and the bottom is adapted to match the chassis requirements. Olympus has four (4) subframe options:

- 115mm high, included with bodies mounted in the factory. The standard height, it is used most.
- 187mm high, option 015101. Used if extra distance is required between the body and chassis. For example, the body needs raising to clear the rear wheels so it can move forward on the chassis.
- 400mm high, option 015150. Used for Iveco CNG chassis where the gas tanks are mounted on top of the chassis.
- 100mm continuous subframe, option 015050. Used for reducing total height if necessary or with RCV's with cranes for emptying underground containers.



A typical subframe arrangement on a Scania chassis ready to mount the body



Front subframe section with spring mounting to allow the chassis to flex



High subframe used here on an Iveco chassis. The customer requested a specific body and chassis combination so the body needed raising to clear the rear axle and reduce the gap between cab and body.



Not every chassis needs a subframe. Dennis Elite 6 chassis low entry chassis and Olympus are designed to match and so a subframe is not required. The chassis rails and cross members of Elite 6 are made from 10.0mm thick steel so they are strong enough to cope with demands of working as an RCV, improving payload stability and handling. Chassis rail thickness is different in other brands and can vary between 6.0mm to 8.0mm.

This means that the mounting of Olympus is direct onto the chassis giving a lower overall height and lower centre of gravity.



Subframe construction on a Mercedes Econic chassis



Mounting brackets on an Elite 6 / D Access chassis

Renault D Access

In EU markets the Elite 6 is marketed through our distribution partners Renault trucks as the Renault D Access. TRRG Distributors can work with their local Renault truck dealer to source these chassis should the customer request a purpose built low entry cab and chassis.

For distributors outside the EU, contact your TRRG sales contacts to discuss Dennis Elite 6 chassis options.

The design of the Elite 6 / D Access cab and chassis gives:

- A chassis purpose built for the demands of an RCV.
- A cab that offers superior vision for the driver when working in an urban environment. Pedestrians and other road users are much easier to see from the lower seating position.
- Safer and easier access for the crew, as they work.
- Stainless steel cab structure for a longer corrosion free life.
- The heavy duty chassis as standard, designed for refuse collection operations and so can take the stresses and strains of the rigid Olympus structure.

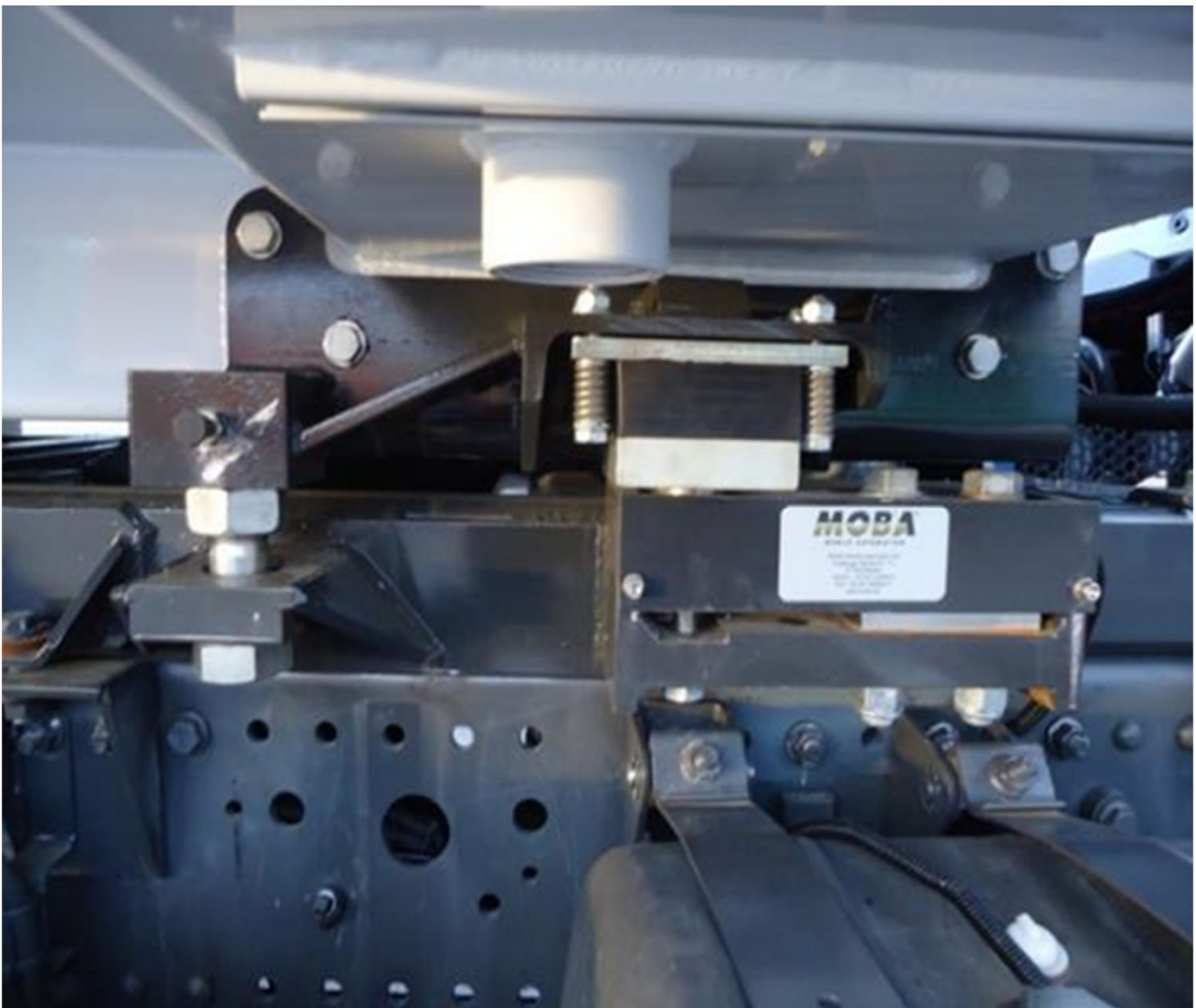


The use of underbody weighing to record the weight of waste or recycling collected is increasing. There are many manufacturers who supply a wide range of systems to meet the many different requirements of our customers.

Our factories have plenty experience of mounting Olympus onto pre-prepared subframes fitted with loadcells. As there are many designs for different systems, the easiest way to ensure correct mounting and commissioning is for the chassis to be first delivered to the weighing company's premises first where they will manufacture and install the weighing subframe and weigh cells. The weighing company will contact TRRG to get the correct information on Olympus so the subframe is correct. The chassis will then be delivered to TRRG's factory to have the body and bin lift mounted. Once this is complete, the weighing system will need commissioning by the manufacturer.

TRRG can also fit basic overload systems which read from the air suspension system. Kimax and Truckweigh are two examples.

Please see the Olympus pricelist for mounting and installation prices for some of the more common systems we fit. Your TRRG Sales Manager can help with information on other systems



Some options have been mentioned already in the guide. Below are some of the other popular options. For a complete list please see the Olympus Pricelist along with the Olympus Option Guide.

Leachate Management

Chassis mounted underbody tank, option 056043.
Aluminium tank with 100 litre capacity



Brush and Shovel Holder

Options 074020 to 074080
Can be mounted under the body, at the front or on the tailgate.
Sometimes limited by the other options or binlift chosen.

Toolbox

Options 078020 and 078030, underbody tool box of 90 or 100 litres. On shorter wheelbases and smaller bodies, these options could be limited due to available space.



Cyclist Protections

Options 084020, 084030, 084050.
These are compulsory within the EU and many other countries have similar regulations.
One of the 3 types must be chosen for EU orders.

Central Greasing

Options 082020 to 083030. Manual and automatic versions available. Can be specified to grease only the packer bearings or can grease the entire RCV and supply the binlift. Only option 82060 will supply fittings to grease the UPC binlift. For all other binlifts, for example OmniMAX, central greasing must be ordered on the binlift as a separate item.



Footboards

Options 088021 to 088130.
All meet EN1501 so reversing and speeds over 30kph when occupied are not possible.
Specification varies according to the binlift ordered or if Olympus is open back.
Note: Footboards are illegal in the UK.

Reflective Tape

Options 142021 to 142101.
These are compulsory within the EU and other countries have similar regulations.
One of the 4 types must be chosen for EU orders.



Bin lift options

TRRG has the widest range of binlifts of any manufacturer worldwide. Our range of over 25 individual models means most containers in use today around the world are able to be handled. The range of binlifts gives the following choices:

- Manual, semi automatic or automatic operation
- Low level or high level hopper plate
- Split chair or single bar
- Hydraulic or electric power supply
- Different lifting arms: DIN, Pocket, Oschner and Bammens
- Ability to empty EN840-1 to EN840-3, 2 and 4 wheel, containers
- Ability to empty EN12574-1 (DIN30737), EN12574-1 (DIN30738), DIN30720
- Use with Olympus fitted with a crane hopper for emptying underground containers
- Winch lock and shake system for skips
- Arms for skips



Bin lift options

This table gives a summary of the TRRG binlift current offering:

Binlift Model	Hopper Plate Height Level	Type of Chair	Hopper Plate Height Raised/Lowered	Type of Operation	Mounting Method	Hand Loading	2 wheel	4-wheel Flat Lid	4-wheel Dome Lid	Ring Bucket	Double Trunnion	Pocket Arms	Skip Winch Lock and Shake	Skip Chains	Use with Underground Container Hopper
OmniDEL	Low	Split		Automatic	DIN Frame	✓	EN840-1	✓	EN840-3	○	-	-	-	-	-
OmniDEL é	Low	Split		Automatic	DIN Frame	✓	✓	✓	○	○	-	-	-	-	-
OmniDEKA	High	Split	-	Automatic	DIN Frame	-	✓	✓	○	○	-	-	-	-	-
OmniDEKA é	High	Split	-	Automatic	DIN Frame	-	✓	✓	○	○	-	-	-	-	-
OmniMAX 2.5	Low	Split		Automatic	Integrated	✓	✓	✓	○	-	-	-	-	-	✓
OmniMAX é 2.5	Low	Split		Automatic	Integrated	✓	✓	✓	○	-	-	-	-	-	-
EuroTRADE Frame	Low	Bar		Manual	Terberg Frame	✓	✓	✓	○	-	-	-	-	-	-
EuroTRADE	Low	Bar		Manual	Integrated	✓	✓	✓	○	-	-	-	-	-	✓
EuroTRADE WLS	Low	Bar		Manual	Integrated	✓	✓	✓	-	-	-	-	✓	-	-
EuroMAX 2.5	Low	Bar		Manual	Integrated	✓	✓	✓	○	-	✓	-	-	-	-
OmniTRADE 2.5	Low	Bar		Manual	Terberg Frame	✓	✓	✓	○	-	-	-	-	-	-
OmniTRADE 2.2	Low	Bar		Manual	Terberg Frame	✓	✓	✓	○	-	-	-	-	-	-
OmniTRADE é 2.5	Low	Bar		Manual	Terberg Frame	✓	✓	✓	○	-	-	-	-	-	-
UPC 500 (RRT030060)	High	Bar	1600/1350mm	Manual	Integrated	✓	✓	✓	✓	?	-	-	-	-	✓
UPC 800 (RRT030050)	High	Bar	1600/1350mm	Manual	Integrated	✓	✓	✓	✓	?	-	-	-	-	✓
Industrial (RRT030040)	Low	Bar	1400/1150mm	Manual	Integrated	✓	✓	✓	✓	-	-	-	-	✓	-
TCH-DH	High	Split	-	Manual	DIN Frame	-	✓	✓	○	○	-	-	-	-	-
TCH-D	High	Bar	-	Manual	DIN Frame	-	✓	✓	○	○	-	-	-	-	-
TCH-OL	High	Bar		Manual	Integrated										
TCV	High	Bar		Manual	Integrated	-	○	○	○	-	-	✓	-	-	-
OmniGV	High	Bar	-	Manual	Integrated	✓	✓	✓	✓	-	✓	✓	-	✓	-
OmniDEL Triple	Low	Split		Automatic	Integrated	✓	✓	✓	○	○	-	-	-	-	-
OmniDEL Triple é	Low	Split		Automatic	Integrated	✓	✓	✓	○	○	-	-	-	-	-
Viking	Low	Hybrid		Automatic	Integrated	✓	✓	✓	-	-	-	-	-	-	-
Europa MOC 500 *	Low	Bar	1327	Manual	Integrated	✓	✓	✓	✓	-	-	-	-	✓	-
Europa MOC 800 *	Low	Bar	1327	Manual	Integrated	✓	✓	✓	✓	-	-	-	-	✓	-

Skips and underground

To satisfy the need to collect waste from centralised waste collection systems TRRG have two options:

- Olympus with EuroTRADE Winch Lock and Shake binlift for emptying recycling skips.
- Olympus with crane hopper and binlift for emptying underground containers and 2 and 4 wheel containers.

Olympus with EuroTRADE Winch Lock and Shake (WLS) binlift

The body is fitted with a winch at the front for attaching to the rear of the skip. Skips up to 18m³ can be emptied. The EuroTRADE WLS binlift will empty EN840-1, EN840-2 and EN840-3 (2 and 4 wheel) containers.

This binlift can also be specified with bale clamp arms so pre compressed bales of paper and card can be loaded into the RCV.



Bale Clamp Arms



Olympus with Crane Chute

The body is fitted with an extra chute on the tailgate to allow for the emptying of underground waste containers. The crane can be mounted on the Olympus roof or if a longer reach is required, a chassis mounted crane can be fitted.



There are two types of chute available. The one shown above is fitted to the high capacity tailgate and has the option of no binlift, or mounting the UPC manual binlift to give the option of emptying 2 and 4 wheel containers.

The one shown below is a folding type which can be fitted to a standard or high capacity tailgate. The folding type chute allows the option of fitting the OmniMAX automatic or EuroTRADE manual binlifts. It is important to establish what size underground container is being emptied as some containers will require the high capacity tailgate to allow enough emptying space in the hopper.



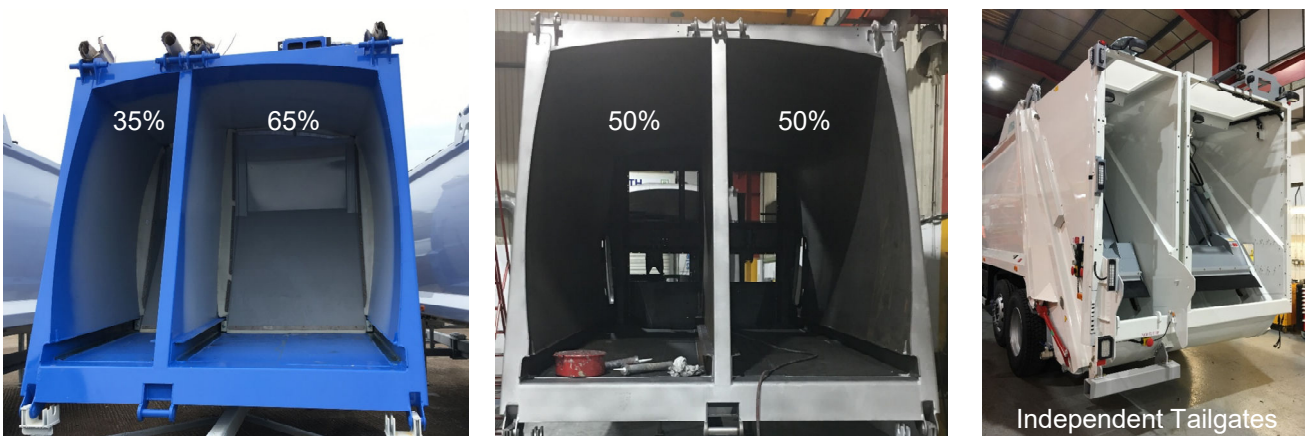
Olympus TwinPack

For customers who wish to collect more than one waste stream and keep them separate, Olympus twinpack is the solution.

This body has a dividing wall down the middle of the body and this creates two separate compartments. Each compartment has its own election plate, tailgate, carriage plate and packer plate. The hydraulics for each side are also independent. Each side can be used completely independent of each other so there is no cross contamination of waste. The tailgates are completely independent of each other so one side can be discharged without affecting the other.

The control and settings for each side are also independent and are set up from the Olympus control panel. There are two options for compartment sizes can be 35% left and 65% right or 50/50 left and right.

The electrical system controls both sides. The driver uses a selector switch in the cab to choose which side to control or set up. Once set up and ready for work, the two sides will alongside each other loading waste.



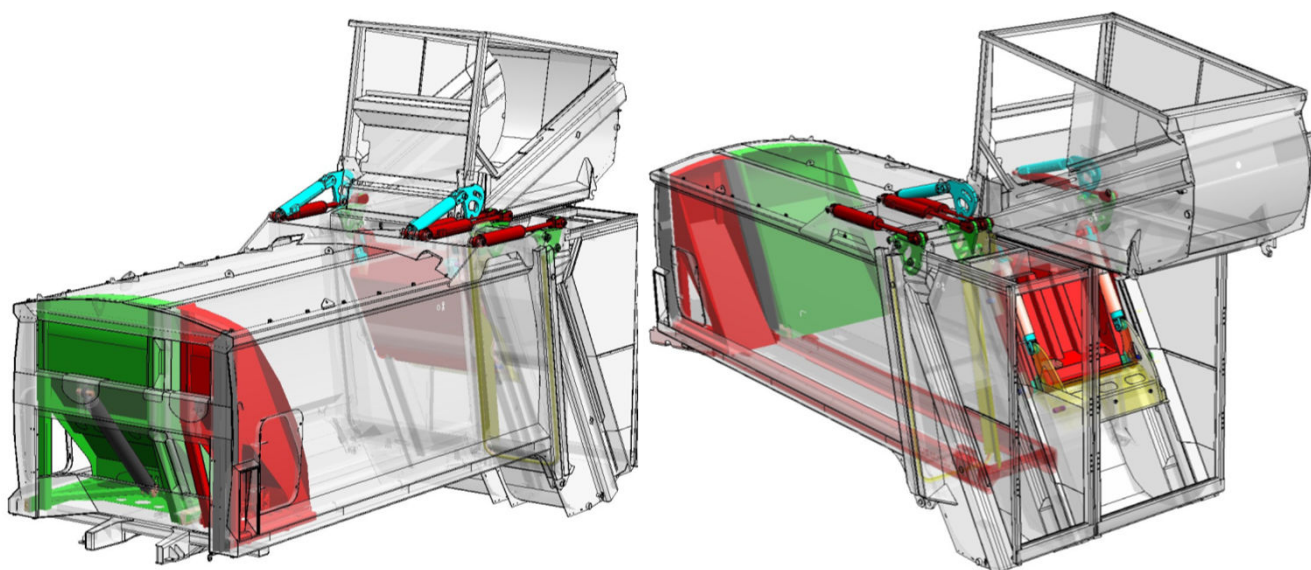
The twinpack can also be specified with the 35/65 split reversed if this suits their needs.



Bin lift options for Olympus twinpack are:

- For the 35/65 split, the OmniDEL triple automatic.
- For the 50/50 split, the OmniDEL 50/50 is used.
- For the 65/35 split, the Viking triple binlift is used. This binlift can be a manual or automatic version.

Olympus TwinPack models



	Capacity Total (m³)	Body Split	Width (mm)	Overall Length (mm)	Height (mm)	Hopper volume, L/R (m³)	GW (t)	Wheelbase, Axles 1 & 2 (mm)
					From top of the chassis			
Olympus Twinpack Narrow								
OLTP13N	12.80	40/60	2230	5799	2523	0.62/0.93	18	3100-3200
OLTP17N	16.75			6799			26	3800-4000
Olympus Twinpack Wide								
OLTP16	16.26			5749			26	3100-3200
OLTP19	18.83	35/65 &	2530	6299	2710	0.62/1.24 &	26	3400-3500
OLTP22	21.60	50/50		6799		0.93/0.93	26	3700-3800
OLTP27	26.84			7899			32	3800-4000
Olympus Twinpack Low Wide (Viking)								
OLTP15	15.16			5799			26	3100-3200
OLTP17	17.20	65/35	2530	6299	2520	1.24/0.62	26	3100-3200
OLTP19	19.28			6799			26	3800-4000

While every effort has been made to ensure the accuracy in this guide at the time of writing, TRRG reserves the right to carry out technical modifications and modification of specifications without prior notice. Illustrations may not necessarily depict current equipment versions when used for illustrative purposes. In some cases guards may have been removed for clarity.



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