



# **SPEEDLINE SLM**

SIDE-LOADING REFUSE COLLECTOR



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ROS ROCA introduced the side-loading waste collection system in Spain in the mid-nineties. We have evolved together ever since.

The TERBERG ROS ROCA group has provided extensive lift technology, a tried and tested Speedline range in Germany and two large body assembly factories.

Now is the time to **bring technology, knowledge and experience together to create a new side-loading concept.** 



# 7 reasons to choose the SPEEDLINE SLM



#### RELIABILITY

The Terberg lift combines the experience of HS Speedline refuse collectors, forklifts and the most advanced rear-loading lifts on the market. The unit also features tried and tested Olympus bodywork.

#### **INTERACTION**

Extensive knowledge of the side-loading waste collection system. The machine and container become one for intuitive and safe operation (anti-tip bolt).









#### ERGONOMICS

A front digital screen and a high-precision multifunctional joystick, adapted to the operator's needs and the circumstances of each operation.



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#### CONNECTIVITY

A new and revolutionary telematics system that ensures optimal performance from the unit and facilitates diagnostics, as well as offering better overall vision and analysis, thus reducing downtime and the total cost of ownership.

#### SAFETY

Safety is very important for TRRG, which is why we have installed innovative technology on the SLM that reduces the risk of injury and occupational accidents.









#### **SUSTAINABILITY**

A sustainability approach that goes beyond our operations and refuse collectors, focusing directly on society. We want to reduce our environmental footprint without sacrificing performance.

#### **KNOWLEDGE**

As manufacturers, we know that our units are reliable, allowing us to offer a unique service at no additional cost and with full guarantees.







# When reliability is crucial

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6 SPEEDLINE SLM

#### **DEVELOPMENT BASED ON THE OLYMPUS BODY** More than 21,000 units on the market.

#### **UNIQUE DESIGN**

Standardised for all models, whether they have a gas, diesel, hybrid or electric chassis.

#### **WIDE RANGE**

Three body versions and two tailgate versions that allow multiple combinations.

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#### **CUSTOMISATION**

Full customisation of the unit according to the customer's requirements.

#### **HEAVY-DUTY MATERIALS**

Top-quality steel with the body sides and rear door in one piece.

#### **HIGH CORROSION RESISTANCE**

Roof design that facilitates the drainage of water and liquids, preventing corrosion.

#### **GREATER LEACHATE COLLECTION CAPACITY**

Two leachate compartments, one in the body and the other at the rear door.

#### **EASY MAINTENANCE**

Large, easy-to-access inspection door.



# Seeking perfect interaction

#### UNIQUE NEW SIDEWAYS MOVEMENT

With this function that is one-of-a-kind on the market, the container remains in its original place.

The containers can be manually repositioned in any direction without having to move the truck.

Containers can be handled, retrieved and collected when there are objects right next to them.

The container positioning manoeuvre is quicker, safer and requires less precision from the driver.

#### **BUILT-IN PROXIMITY SENSORS**

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that ensure high-precision container coupling and positioning, without any dragging, even if the refuse collector truck is not perfectly aligned.

#### **ACTIVE CONTROL SYSTEM**

The lift calculates the container's position and returns it to exactly the same position.

#### **ULTRASONIC SENSOR**

For automatic detection of the coupling distance and monitoring of the height of the lift from the ground, preventing any collisions with the ground.

#### LIFTING MOVEMENT ADJUSTMENT

to clear high-positioned obstacles.

#### CUSTOMISABLE HIGH, LOW AND MEDIUM GRABBER

to ensure a smooth container pick-up, according to the height of the pavement.

#### **CONTAINER TYPE CUSTOMISATION**

Allows you to leave only the models that are currently in use active (preventing possible mistakes).

#### **CONTAINER CONFIGURATION PARAMETERS**

All common container brands and types can be selected, with the option of easily adding future models and brands.

#### PERFECT UNLOADING KINEMATICS

Optimal use of the free space between the container, the container lid and the compaction system. Minimises the risk of breaking the container lids. Minimises leaks. Shorter waiting times and improved cycle time.

#### **OUTWARD GUIDE MOVEMENT**

to increase the tilt angle and improve container unloading.

#### **FULL SPEED CONTROL DURING THE CYCLE**

It allows the operator to control the speed using the joystick, according to the difficulty of the container coupling and its condition.

#### STANDARD WEIGHING SYSTEM

Indicative weight information vie the chassis suspension. Preinstallation for the on-board weighing and identification system, certified and calibrated by Torberg on the lifting unit.

### TERBERG ROSROCA

# Ergonomics and work in perfect harmony

#### **DIGITAL WIDESCREEN (HMI)**

Touchscreen. Quick response to selections. Easy identification of containers to choose from. Simultaneous view of 3 cameras.

#### **FRONT POSITION**

Prevents non-ergonomic and unnecessary body and neck movements. Overall view of the hazard area.

#### SAME SET OF ELECTRICAL COMPONENTS AND SOFTWARE FOR THE ENTIRE PRODUCT RANGE

User-friendly navigation menus. Single user interface for the entire range of units. Single user interface for telematics systems, via CAN or modem.

#### DRIVER SUPPORT SYSTEM Integrated driver profiles.

#### **OCCUPIES MINIMAL SPACE IN THE CAB**

for more comfortable driving. Option of a third seat.

#### **USB PORT**

to access the unit's information. Full control of files and software from a USB device.

#### A PROPORTIONAL JOYSTICK WITH CAPACITIVE SENSING TECHNOLOGY

The driver has full control of all movements at any speed. Real-time detection of the operator's hand around the joystick, minimising the risk of accidental movement of the unit. The driver can scroll through the menus with their thumb.

### BUILT-IN CONTROL CONSOLE with armrest.

System OK

## HYDRAULIC, PNEUMATIC AND ELECTRICAL COMPONENTS

Placed in a single enclosed and illuminated cabinet, easily accessible from the ground, ready for easy maintenance or inspections.



## Always connected

### **TERBERG CONNECT**

A platform for collecting data remotely, performing diagnostics, adjusting, monitoring and updating.

#### UNIQUE CUSTOMISED TELEMATICS PACKAGE AS STANDARD

Developed specifically for waste collection applications, connecting the chassis, body and lift.

#### **INTEGRATED**

into the Speedline SLM during its manufacturing process, allowing it to connect seamlessly with components such as the engine, hydraulic and electrical systems for a more holistic approach to vehicle diagnostics.

#### **REMOTE DIAGNOSTICS**

Improves repair rates and minimises vehicle downtime.

#### **REAL-TIME ALERTS**

Via email or text message, including engine overheating, low oil levels and other key protective measures.

#### SMART PREVENTIVE MAINTENANCE PROGRAMMES

that are able to identify recurring fault patterns.

#### **WASTE OPERATOR**

Analyses data to optimise vehicle operation and driver performance. Incorporates satellite views, Raster map and Google Street View.

#### **FUEL SAVER**

Provides tangible savings in consumption by increasing fuel efficiency.

#### **OPTION TO UPDATE SOFTWARE REMOTELY**







# Full control, optimal safety

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5 CAMERAS AS STANDARD with 3 simultaneous cameras displayed with no change interval.

**DEFINITION OF USER LEVELS** via password.

SERVICE AND DIAGNOSTICS MESSAGES

Record of data obtained. All records can be reviewed on the cab screen. Alarm messages and problems detected.

#### LIFT SYSTEM RAISE LIMITER

AUTOMATED CHECK of the condition of the lift chain.

#### LIFT LOCKING DEVICE

In transport position with no need for an auxiliary actuator.

#### LIFT UNIT RESCUE SYSTEM

Returns the lift to the initial transport position.

#### MULTIFUNCTIONAL, CAPACITIVE AND PROPORTIONAL JOYSTICK

Multifunctional, as it lets you scroll through the menu and switch between functions and screens; capacitive as it detects the driver's hand, and proportional because it transmits the applied force.

#### **UNIT WEIGHT INDICATOR IN THE CAB\***

#### **REAR UNDERRUN PROTECTION**

approved according to Regulation 58.03/00

#### **OIL LEVEL AND TEMPERATURE CHECK**

from the cab with automatic PTO shutdown.

#### **AUTO NEUTRAL\***

#### PACK ON THE MOVE\*

\*Options subject to chassis layout.





# Our commitment to sustainability

ENGINE RPMs ARE ADJUSTED AUTOMATICALLY RPM demand is proportional and depends on the required power and torque (according to the chassis).

LOW FUEL CONSUMPTION

HYDRAULICS WITH PROPORTIONAL CONTROL of all functions.

LOWER ENGINE TORQUE required for power take off during "pack on the mov

THE QUIETEST UNIT on the market.

**EFFICIENT ENERGY USE** 

THREE OPERATING MODES Sport, Comfort and Eco.

**HYBRID VERSION** A comprehensive range that looks to the future.

**DESIGNED FOR SUSTAINABLE CHASSIS** powered by CNG/LNG, or electric in the future.

#### DURABLE MATERIALS

97% RECYCLABILITY of the unit.

**ECO-DESIGN** Environmental criteria were considered in the design and development phase of the product.

- Compliant with European standards EN 1501-2, EN 1501-4 and EN 1501-5
- Compliant with Directive 2006/42/EC on machinery safety.

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- Compliant with European Directive 2000/14/EC on noise emissions.
- Certificate of hydraulic fluid cleanliness, in accordance with ISO 4406.



# And our responsibility as a company

#### **CARBON FOOTPRINT REGISTRATION**

Of Ros Roca in the Ministry for Ecological Transition and the Demographic Challenge. (UNE-EN ISO 14061-1:2012).

#### **ENERGY EFFICIENCY AUDIT**

Identifying, assessing and logging the systems and all energy consumption. Zero-emissions improvement plan for the next 5 years.

#### WASTE GENERATION ANALYSIS

Ensuring proper sorting and disposal of all waste generated in our operations and establishing an improvement plan.

### MANAGEMENT SYSTEMS CERTIFICATIONS AT ROS ROCA

ISO 9001:2015 since 2000 ISO 14001:2015 since 2009 EMAS III since 2015 ISO 45001 since 2021 ISO 50001:2011 since 2018 ISO 14006:2011 since 2019 ISO 14064-1:2006 since 2019





#### **TERBERG ROS ROCA VALUES**





### TERBERG ROSROCA

# Our knowledge at your disposal

Ros Roca guarantees an excellent after-sales service for its units for all of its customers via its Technical Services, which are spread across the country, allowing them to provide a quick and efficient service. Its team of professionals has extensive experience in repairs and technical support. More than 60 years in rear-loading units and 25 in side-loading units.

#### **DIAGNOSTICS SYSTEM**

via the telematics tool, including: machine diagnostics; preventive maintenance; real-time alerts; remote machine customisation, remote software updates and automatically generated service reports.

#### ONE SET OF ELECTRICAL COMPONENTS AND SOFTWARE FOR THE ENTIRE PRODUCT RANGE

· Single set of tools and spare parts for repairing any machine

• Single user interface for maintenance services for the entire range of units

#### WIDE NETWORK OF AFTER-SALES SERVICES

With years of experience in side-loading units.

#### **ORIGINAL SPARE PARTS SERVICE**

#### **MOBILE SERVICE**

#### **TECHNICAL ASSISTANCE BY TELEPHONE**

#### SCHEDULED MAINTENANCE

**TECHNICAL TRAINING** For more efficient use.













www.terbergrosroca.com



## Models

MODEL	SLM 15	SLM 17	SLM 23	SLM 25	SLM 26	SLM 28
GVW chassis (t)	18	18	26	26	26	32
Body volume (m <sup>3</sup> )	15.3	17.2	22.3	24.2	25.3	27.2
Compaction chamber + Hopper Capacity (m <sup>3</sup> )			6 (1.7	7+4.3)		
Body and Lifter weight (approx. kg)	7875	8075	8400	8600	8600	8800

### **SLM 15**





### **SLM 17**



### **SLM 23**





### **SLM 25**





### **SLM 26**





### **SLM 28**



We reserve the right to make technical modifications. Specifications may be changed without prior notice. The illustrations may not necessarily depict the standard versions of the units.



# Lifter movements

Operating system	Hydraulic / Pneumatic / Electrical
Operating cycle	Automatic / Manual
Max. lifting capacity in standard mode (kg)	1200
Max. lifting capacity in heavy duty mode (kg)	1500
Height difference offset - container pin (mm)	Container height (ground level -200, +300)
Coupling offset (mm)	100 to the left and 100 to the right
Oblique offset of the container (mm)	294
Minimum/maximum coupling (mm)	820 / 2700
Tipping angle of container in hopper	60°
Tilting angle in relation to the ground	7°
Centring error (mm)	230
Cycle time of unit at min./max. speed. (s)	Sport mode: 29/32 Comfort mode: 34/37 Eco mode: 43/46















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# Technical specifications

#### **INSPECTION DOOR**

Large, can be opened without needing to move the lift unit.

NOISE LEVEL 97 dB(A) certified "according to Directive 2000/14/EC".

#### HYDRAULIC TANK

200 I capacity, high-performance and ultrasonic level sensor (optional).

Height difference offset - container bolt (mm).

#### SOUNDPROOFED CABINET

On the opposite side to the lift unit, where all hydraulic, pneumatic and electrical circuits are installed.

#### MAIN HYDRAULIC BLOCK

Top-of-the-range proportional valve that reduces pressure drops (high efficiency/lower energy consumption).

#### **COMPACTION LEVEL**

Adapted to the waste selection.



#### **UNLOADING SYSTEM**

Through an ejector plate with a double-acting telescopic cylinder located in the centre of the body.

#### MANUFACTURING OF BODY SIDES AND REAR DOOR

High-performance single sheet.

#### **UNDERRUN BAR**

Approved according to Regulation ECE 58-03.

#### **TWO LEACHATE TANKS**

One at the rear door and one on the body, amounting to a total of 327 I / 257 I, according to the model/capacity.

#### **CLEANING SYSTEM** Body with double hatch.

#### **BODY-CHASSIS INTERFACE**

With a single platform for all chassis versions: diesel, CNG, hybrids.



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# Technical specifications

Compaction ratio	≈7:1
Absortion speed (m <sup>3</sup> /min.)	7.85 <sup>1</sup>
Compaction cycle time (s)	13 <sup>1</sup>
Maximum compaction force (kg)	36,200
Body unloading system	Mobile ejector plate
Unloading cycle time (s)	80²
Waste unloading (s)	24 <sup>2</sup>
Door opening (s)	15
Leachate tank on the body (I)	167
Leachate tank on the rear door (I)	large 160 / small 90²
Height of gasket seal (mm)	1035

<sup>1</sup> The specified values are for a machine operating in Comfort mode.

<sup>2</sup> The values will depend on the chosen body capacity.

## Materials





	DESCRIPTION	MATERIALS	THICKNESS mm	YIELD STRENGTH (MPa)	BRINELL HARDNESS (HB)	
1	Side slide	Hardox 450	6 mm	1250	425-475	
2	Top slide	Hardox 450	8 mm	1250	425-475	
3	Bottom slide	Hardox 450	12 mm	1250	425-475	
4	Front metal sheet	Hardox 450	6 mm	1250	425-475	
5	Side metal sheet	S355 EN10025	4 mm	355	146-178	0
6	Top metal sheet	S355 EN10025	6 mm	355	146-178	Compaction unit
7	Floor metal sheet	Hardox 450	8 mm	1250	425-475	unit
8	Side metal sheet	Hardox 450	6 mm	1250	425-475	
9	Bottom slide	Hardox 500	12 mm	1400	470-530	
10	Top slide	Hardox 500	12 mm	1400	470-530	
11	Side slide	Hardox 500	6 mm	1400	470-530	
12	Ejector plate front metal sheet	S355 EN10025	3 mm	355	146-178	
13	Hopper ramp metal sheet	S355 EN10025	3 mm	355	146-178	





	DESCRIPTION	MATERIALS	THICKNESS mm	YIELD STRENGTH (MPa)	BRINELL HARDNESS (HB)		
1	Body platform	Hardox 450	6 mm	1250	425-475	Body	
2	Body side floor	Hardox 450	4 mm	1250	425-475		
3	Body side metal sheet	STRENX 700	4 mm	700	260		
4	Body ejector guides	STRENX 700	4 mm	700	260		
5	Body roof	S355 EN10025	3 mm	355	146-178		
6	Body rear frame	S355 EN10025	6 mm	355	146-178		
7	Rear door main metal sheet	STRENX 700	4 mm	700	260	Rear door	
8	Rear door side metal sheet	STRENX 700	4 mm	700	260		
9	Rear door frame	S355 EN10025	4 mm	355	146-178	uoor	

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# Optional features



#### ADAPTATION OF CONTAINERS 700-1100 L according to standard EN 840

#### PACK ON THE MOVE

Pack on the move takes advantage of combustion engine rotation when in motion by managing the excess flow generated by the engine, allowing the hopper to be emptied continuously.





#### **PUSHING MECHANISM IN HOPPER**

Mechanical and hydraulic pushing mechanism with great coverage and maximum impact in the area where cavities are formed, especially when collecting paper and cardboard.

**CENTRALISED GREASING** 



#### WEIGHING SYSTEM ON THE LIFT AND ON THE CHASSIS

Option of installing cells on the lift's pick up arms and on the chassis, following the Olympus design for full monitoring during each collection.

#### 360° SYSTEM

Multi-camera system that offers a perfect view of the vehicle's surroundings during driving.





#### E-PTO

Electric power take off (E-PTO) powered by an electric motor which receives power from a Lithium-Ion battery pack capable of powering all lift-related functions, without even needing the chassis to be running.

#### **ADDITIONAL LEACHATE TANK**

The single body section provides ample space between the chassis stringers to install 140 I and 250 I leachate tanks, depending on the body's capacity.

#### **CONTAINER DISINFECTION SYSTEM**

Disinfectant vaporiser system on the user lid when tipping the container that protects the user against micro-organisms that are harmful to health.

#### **HOPPER COVER/TOP LID OF THE HOPPER**

Pneumatically-powered telescopic sliding roof system that prevents waste from being dispersed due to the vehicle's movement, as well as reducing noise emissions during compaction.

#### VIDEO RECORDER

UNDERGROUND CONTAINER COLLECTION SYSTEM



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