



SCARAB
FAYAT GROUP

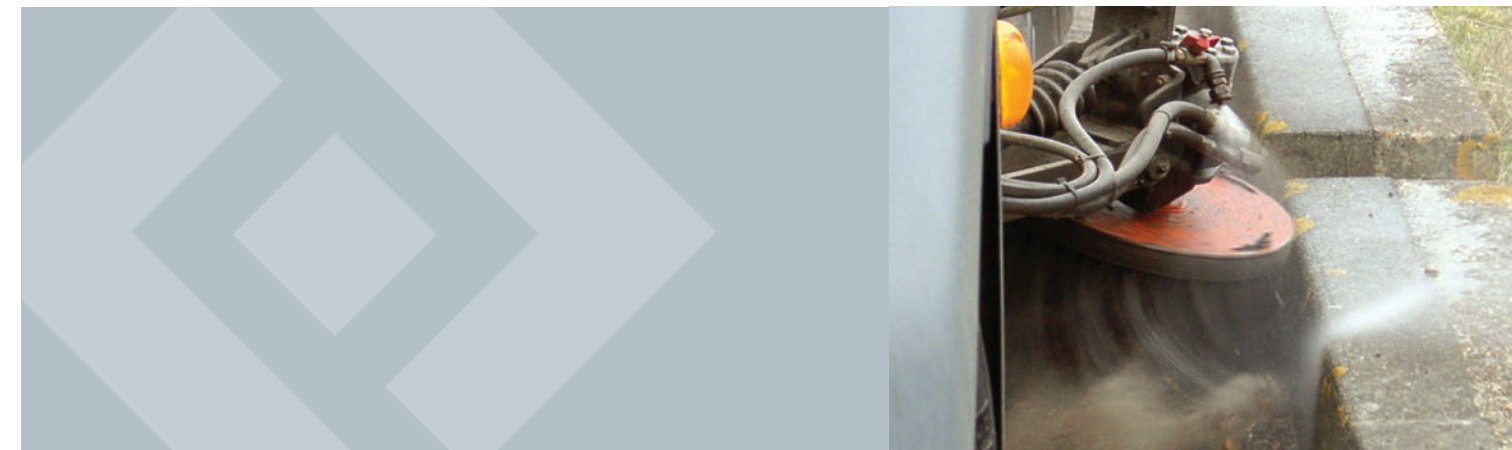
MERLIN



HYDROSTATIC

UNIDRIVE

ROBUST AND RELIABLE THE SCARAB MERLIN



Versatility

The Merlin is equally at home in municipal, urban or contracting activities, having been designed for mounting on truck chassis in the 10 - 15 tonne GVW range.

The choice of Hydrostatic or Unidrive allows selection of the transmission and power-delivery system that best suits a user's chassis and operational needs.

The ability to combine different chassis, drive systems and water tanks ensures that the Merlin is an agile machine with exceptional on-task endurance.

Trailed widesweep brush is adjustment-free and designed to ensure parallel usage.

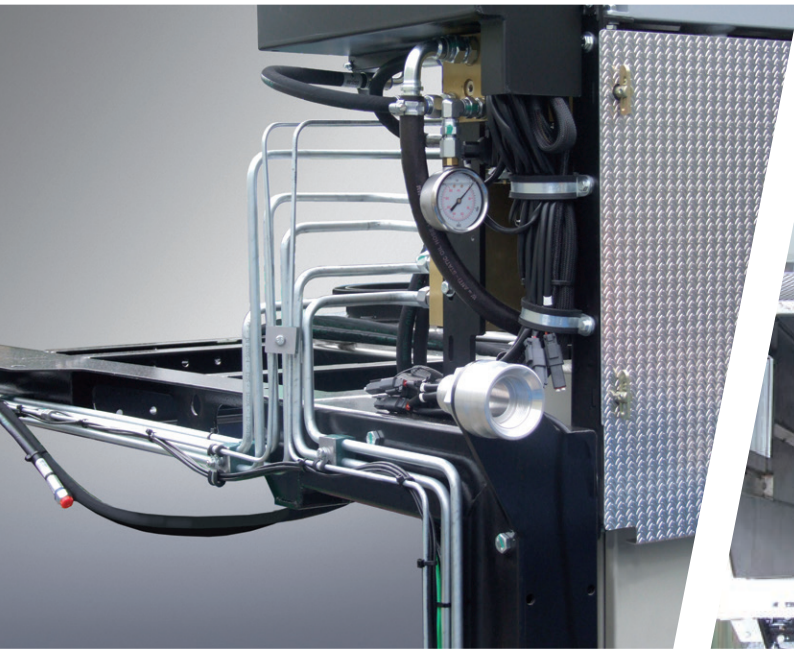
Trailed, robust, steel suction nozzle for durability. Adjustable dust-suppression jets.

Short suction hoses are an easy and low-cost replacement and are simple to clean.

Trailed channel brush mechanism with adjustable brush-pressure control option.

Simultaneous Dual Sweep and High-pressure Street Wash option.

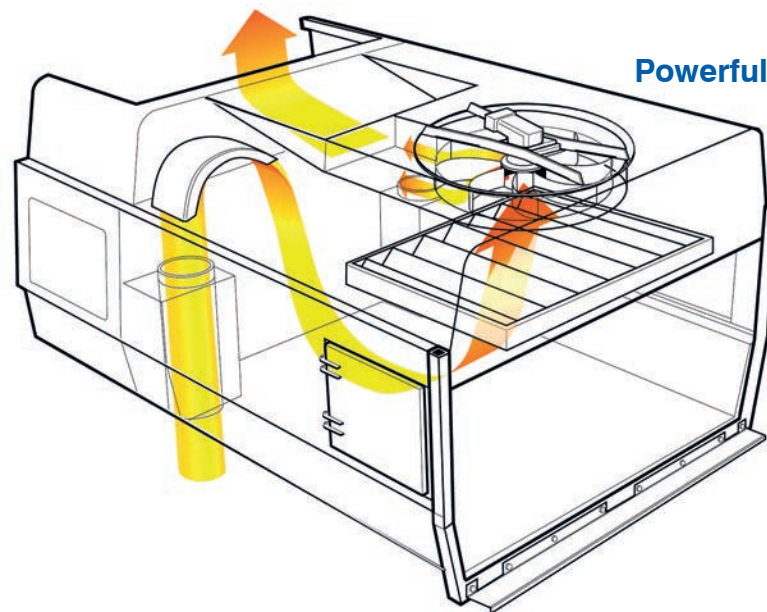
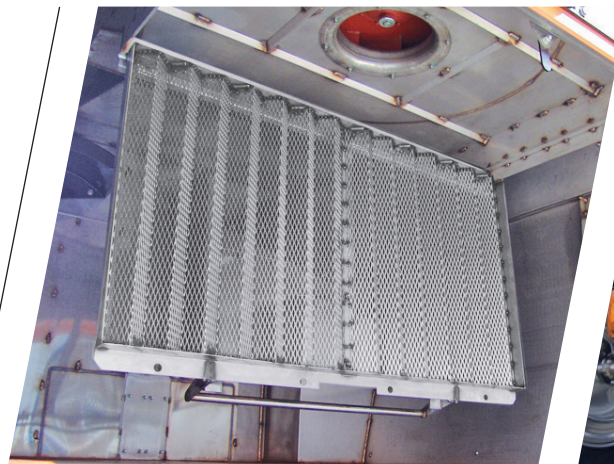
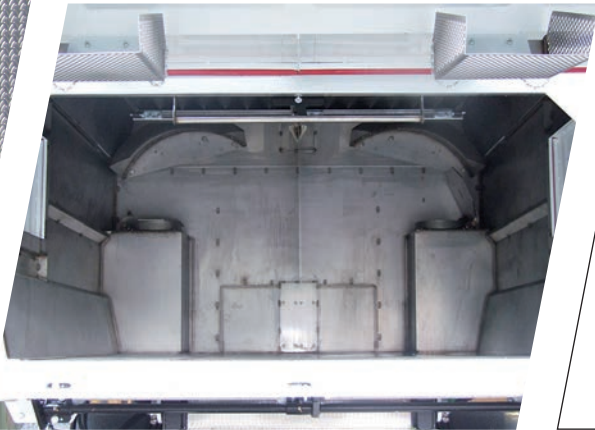




The hydraulic system extensively incorporates steel piping to minimise use of flexible hoses.

The hopper is completely manufactured from abrasion resisting stainless steel.

Three-point rear door clamping system, to ensure effective sealing, and discharge chute.



Powerful & Reliable Suction Performance

A centrifugal impellor positioned to produce an efficient airflow path for high suction performance and reduced power consumption. Fan chamber is easily accessed for cleaning.

Particulate screening via a hinged, mesh filter, pleated to give maximum surface area and reduce blocking - swings down for ease of cleaning.

POWER & CONTROL SIMPLE & RELIABLE

Single-engine Transmissions

Scarab can justifiably claim to be the champion behind the modern-day success of the truck-mounted sweeper powered from a Single Engine

Operating the whole machine from the engine of the truck chassis provides many advantages, for example:

- **Less fuel consumption**
- **Greater payload and weight distribution**
- **Reduced noise and engine emissions**
- **Less maintenance and downtime**

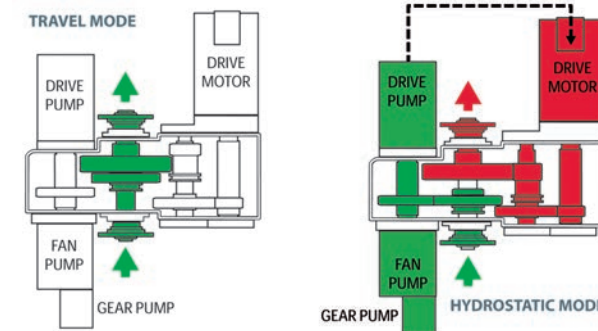
Scarab offers two solutions with these benefits

Hydrostatic

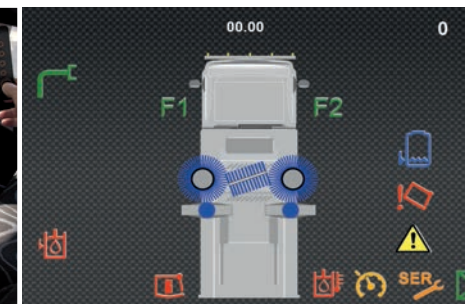
A Scarab designed hydrostatic gearbox is installed in the chassis driveline to exactly suit any customers' chassis and application. Hydrostatic drive, plus a simple joystick control for Forward and Reverse, allows single-pedal control reducing fatigue and enabling the driver to fully concentrate on sweeping.

Unidrive

The sweeping equipment is powered from a Power Take Off (PTO) fitted to the truck engine. The Merlin control system manages engine speed to ensure optimum sweeping performance. The sweeper is usually operated in a low gear for slow speed.



Command & Control



Scarab's CANbus control system has revolutionised the way sweepers are operated and maintained. Intuitive controls and a conveniently positioned colour monitor provide comprehensive levels of feedback to both operating and service

personnel. A graphical display indicates the sweeping configuration and conditions of the vehicle systems including warnings and regular service reminders. Real-time monitoring and data-logging provides valuable assistance

in resolving problems and achieving optimum machine performance. Scarab CANbus includes universal connectors for fitment of Global positioning System (GPS) and the option of real-time data via telematic up-link.

The STANDARD MERLIN FEATURES

Customer-focused Support

We believe that first class product support is vital and our reputation for excellence in this field is no accident. Our commitment to the customer shines through at every level:

- International Distributor Network
- Fast-track Spare Parts Service
- Long-term Supply Guarantee
- Technical Training Courses
- Product Support Packages
- On-line Support Manuals
- Full Operator Instruction



WEIGHTS & DIMENSIONS

The Merlin can be fitted to chassis ranging from 10 to 15 tonne including those from DAF, Iveco, MAN, Mercedes, Volvo, Renault, Hino and UD. For details of these and other suitable chassis specifications, please contact our sales department

TYPICAL PAYLOAD POTENTIAL

STANDARD SPECIFICATION 10 Tonne - 4000 kg / 15 tonne - 8250 kg

TYPICAL DIMENSIONAL DATA ▲

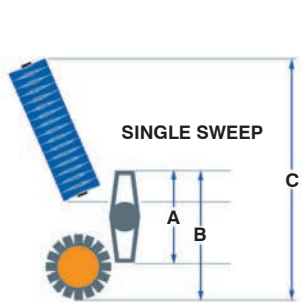
LENGTH OVERALL5640 - 6000 mm
WHEELBASE3300 mm
WIDTH OVERALL.....2220 mm
OVERALL HEIGHT - HOPPER LOWERED/HOPPER RAISED2970/4500 mm

CAPACITIES

HOPPER VOLUME ♦ Gross 6.2 m³ - Nett (Payload) 5.5 m³
WATER TANK ▲ 900 or 1250 litres

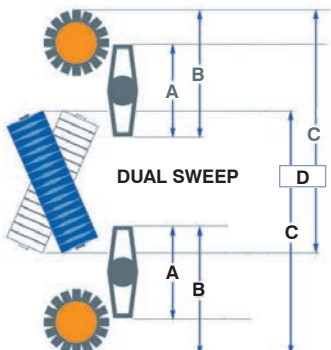
- ♦ Hopper capacities are calculated in accordance with European Standard EN15429.
- ▲ Subject to chassis selected.

SWEEPING WIDTHS Based on a typical 15 tonne GVW chassis



- A Suction Nozzle Only 740 mm
- B Nozzle & Side Brush 1135 mm
- C Nozzle, Side Brush & Widesweep 2075 mm
- D Simultaneous Dual Sweep 3200 mm

Slight variations to the foregoing dimensions can occur according to individual chassis specifications



The ENHANCEMENTS UPGRADE YOUR SPECIFICATION

OPTIONS

WATER

- High-pressure / High Volume Pump with hand lance and self-retracting hose reel.
- Overhead mounted High-pressure water boom.
- Additional Dust Suppression for Suction Nozzles (A 4-jet water-boost bar in front of the nozzle).
- Additional Dust Suppression for Suction Tubes (Four additional jets at the top of the suction tube).
- Larger Water Tanks. ▲
- Detergent Injection Kit for use with the Hand Lance on difficult cleaning operations.
- Hydrant Standpipe, Key and 3 metres of 50 mm lay-flat hose for on-task replenishment of water.
- Simultaneous Wash & Sweep Facility

BRUSHES

- Dual Sweep (A second Channel Brush on opposite side of the sweeper + Swivelling Widesweep)
- Simultaneous Dual Sweep (Both channel brushes and widesweep operate together)
- Auxiliary Channel Brush fitted ahead of standard brush on an extending/swing-out mount
- Adjustable Pressure Control for Channel Brushes and Widesweep

SUCTION SYSTEM

- Rear-mounted swing-out Wander Boom
- Overhead-mounted Wander Boom

MISCELLANEOUS

- Reduction Gearbox in driveline for Unidrive variants
- CCTV Camera to offside brush and/or rear of vehicle
- Centralised Lubrication System (either manual or automatic)
- Alternative or additional beacons (e.g. Xenon)
- Fire Extinguisher

OTHER OPTIONS & OPERATOR SPECIFIC REQUIREMENTS ARE AVAILABLE UPON REQUEST



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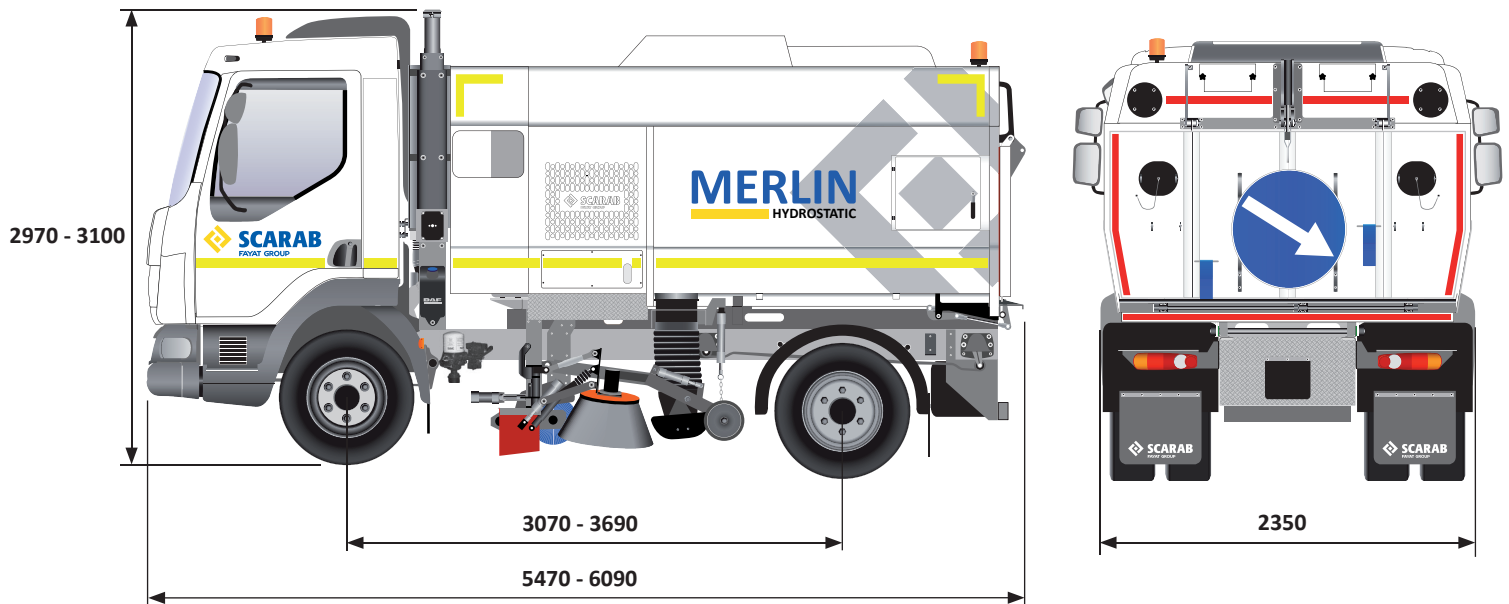
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Technical Specification

Merlin Hydrostatic

All Dimensions in mm



Dimensions representative and may vary according to chassis type selected

General Data

Chassis Requirement	10-15 Ton GVW
Wheelbase	3070mm-3690mm
Overall Length*	5640mm
Overall Height*	2970mm
Max Height Hopper Up*	4580mm
Discharge Height*	950mm
Discharge Angle	45 degrees
Door Opening Angle	90 degrees
Filter Mesh Type	Perforated Steel
Low Pressure Pump Output	22.7 lpm / 4.8 Bar
Hydraulic Suction Filtration	125 Micron
Hydraulic Return Filtration	20 micron
Fan Pump Displacement	45cc / rev
Gear Pump(s) Displacement	23cc / rev
Suction Fan Capacity	6000 ft ³ /min / 170m ³ /min
Suction Fan Diameter	905.5mm
Sweeping Speed	0-20mph / 0-32 kph

Sweeping Equipment

Side Brush Diameter	500mm
Widesweep Brush Diameter	320mm
Side Brush Speed	0-125rpm Fully Variable
Widesweep Brush Speed	0-125rpm Fully Variable
Side Brush Life Expectancy	80 Working Hours
Widesweep Life Expectancy	150 Working Hours
Suction Tube Diameter	250mm
Nozzle Width	740mm

Capacities

Hopper Voided Volume**	6.2m ³
Hopper Payload Volume**	5.5m ³
Actual Payload Capacity*	5000 - 6000kg
Fuel Tank*	150 litres
Water Tank	1250 litres
Hydraulic Tank	25 litres
Hydrostatic Gearbox	5 litres

* Dependent on chassis selected

** All Scarab Hopper Capacities are measured in accordance with European Standard EN15429

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Technical Specification

Merlin Hydrostatic

Hydrostatic System

Infinitely variable speed control to optimise sweeping
Engine needs only to be running at approx. 1200 RPM ensuring long life
Selection of hydrostatic forward and reverse by single lever
Vehicle speed from zero up to 15 - 20 mph (20 - 32 kph)
20% gradeability fully laden
Uses single (vehicle) engine to ensure low fuel consumption and emissions

Suction Fan

905.5mm diameter
2000rpm Standard, low noise. 2200rpm Boost, hi-power
Capacity 6000 ft³/min (170m³/min)
Stainless Steel standard

Suction Nozzle

Robust all-steel construction
740mm mouth width
250mm diameter suction tube
Adjustable wear-resistant flaps
Low-Pressure water jets
Heavy Duty rubber-tyred wheels

Brushes

500mm diameter steel-tined side brushes
320mm diameter polypropylene-segmented widesweep
Fully proportional variable speed to all brushes from 0-125rpm from in the cab

Hopper

6.2m³ Gross Hopper Volume, constructed entirely of corrosion-resistant stainless steel
Hydraulically-operated rear door with safety check valve
Twin side loading doors
Automatic self-deploying hopper prop
Twin body drains at different levels
Auto-blanking flaps to suction tubes
Stainless Steel swing-down mesh suction filter screen
Access for suction fan cleaning

Hydraulic System

In plated steel piping where possible
10 micron filters to ensure maximum protection
Hydraulic valve block in easily-accessible location
25 litre steel oil tank with 10 micron return filter
Low oil automatic shut-off
Sight glass

Water System

Self-priming low pressure water pump for dust suppression
Solenoid-controlled valving from the CAN Bus system

Water Tank

1250 litre GRP water tank with large access lid for cleaning
Sight glass with level indicator
Hydrant connector with regulation air break

Pneumatic System

Fitted with a pressure regulator, filter/water separator
Pneumatic solenoid valves to control the side brush, wide sweep brush, suction nozzle and gear change
Located for easy servicing in a protected compartment

CAN Bus Control

The Scarab proven CANbus system, in service since 2003
Compact panel adjacent to the driver's seat contains all controls for operating the main sweeper functions
LCD screen displays relevant operating data and provides system diagnostics and a fault-finding facility
Satellite control panel for frequently used operations mounted conveniently to hand, and incorporates the forward/reverse selector

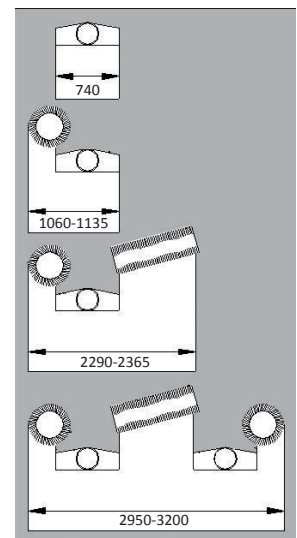
Sweeping Widths

Suction Nozzle only

Suction Nozzle and Side Brush

Suction Nozzle, Side Brush and Widesweep

Both Nozzles, Both Side Brushes and Widesweep



Options

A comprehensive Options List is available for the Merlin, including Hi-Volume Pumps, Water Tanks and many others. Please contact the Scarab Sales Department for more information