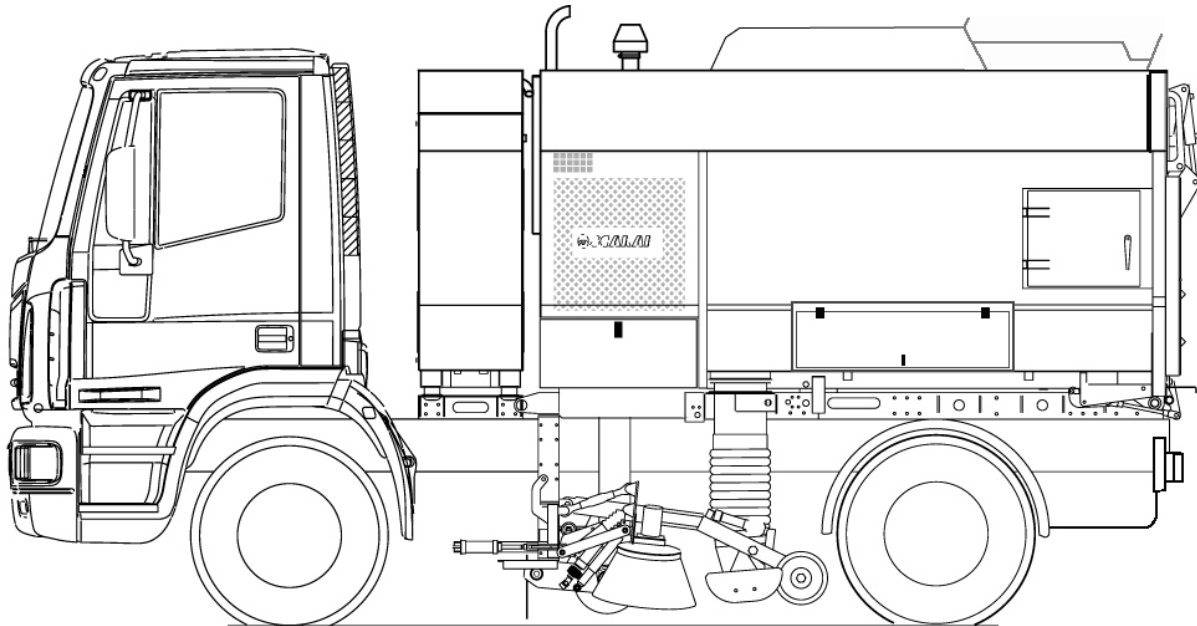


SCARAB MISTRAL



Providing users with the outstanding sweeping power that all Scarab operators have come to expect, the Mistral range has been developed specifically to satisfy a preference for the traditional form of truck-mounted sweeper. The use of a well-proven auxiliary power unit coupled to Scarab's tried and tested hydraulic drive system for ALL sweeping functions has resulted in a twin-engine sweeper for the future.

- **Superb performance with sweep widths of 2.95 m, 3.2 m or 3.4 m depending on model.**
- **Separate stainless steel water tank, ranging from 1050 litres to 2500 litres and mounted for superior weight distribution and stability; especially when discharging.**
- **Highly efficient, overhead-mounted suction fan providing air movement of 2.8 m³/sec nominal.**
- **CANbus 3 control system for flexibility of operation and servicing.**
- **Superior build-quality throughout with stainless steel hopper body.**
- **Super-efficient Cummins QSB turbocharged auxiliary power unit.**
- **Excellent access to all areas for servicing and maintenance activities with dedicated, weather-proof lockers for electrical, hydraulic and pneumatic services.**
- **Extremely low in-cab noise levels.**
- **Available for chassis ranging from 10-19 tonne GVW with a choice of three body sizes.**

AUXILIARY POWER UNIT: A Cummins QSB3.3 Stage IIIA with High-Pressure Common Rail (HPCR) diesel fuel system provides **74 kW @ 2200 rpm, 412 Nm @ 1400 rpm** coupled to Scarab's unique fluid drive system to power all sweeping functions eliminating the need for complex drive belts arrangements or gearboxes.

The auxiliary unit is supplied by a dedicated fuel tank of 115 litres minimum capacity.

SUCTION FAN: The dynamically balanced **900 mm diameter suction fan** is mounted in the hopper top and, as with all Scarab sweepers, is powered by a load-sensing pump to give the highest performance and efficiency while minimising noise level. The impellor is a highly efficient multi-blade centrifugal unit, giving a nominal airflow of 6000 ft³/min. (170 m³/min.). Mounting the fan on the hopper top creates a virtually straight airflow from the suction nozzles. This makes the Scarab Mistral extremely efficient and significantly reduces power requirements. Two operating modes are provided, **Standard Mode** for normal sweeping and **Boost Mode** which significantly increases suction power for more arduous conditions.

SUCTION NOZZLE: Of all-steel construction, the 740 mm wide suction nozzle is mounted in a trailed frame running on 250 mm diameter rubber tyred wheels. The suction nozzle is either 740 mm or 840 mm wide (dependent upon specification) and is fitted with replaceable and adjustable rubber flaps and a skid plate. A 250 mm diameter suction hose connects the nozzle to the hopper. Flap to ground clearance is between 25–30 mm resulting in a long flap life and less need for adjustment. Four manually adjustable water spray jets are fitted to the nozzle at 90° intervals to provide an internal dust suppression spray. Additional water injection nozzles are available when required. An optional 4-jet water boost bar can also be fitted in front of suction nozzle for use in extreme conditions. A tilting mechanism, controlled by a pneumatic ram, enables the suction nozzle to accommodate large objects or autumn leaf build-ups with ease.

SIDE BRUSH: 500 mm or 650 mm diameter steel-tined quick-change brush (dependent upon specification) with direct drive hydraulic motor, fitted in a trailed linkage with kick-back protection and pneumatic ram for in/out control. The assembly is fully adjustable for brush angle and provides variable brush speeds. Optional up/down brush pressure control is available if required. A work light is fitted to assist with low light operation.

WIDE SWEEP: Comprising 320 mm or 400 mm diameter (dependent upon specification) replaceable polypropylene segments and powered by a direct-drive hydraulic motor, the assembly is fully-floating, with shock absorbers to prevent bounce, and is fitted in a trailed linkage to ensure parallel, even brush wear. Variable brush speeds are provided. Optional up/down brush pressure control is available upon request.

WATER PUMP: A self-priming pump fitted with suction filter, driven by a direct-drive hydraulic motor. Solenoid valves operated from the main control panel direct water supply to the brushes and suction nozzles.

WANDER HOSE: A lightweight flexible 3 metre long suction hose of 150 mm diameter, complete with aluminium extension tube and adjustable handle for cleaning awkward areas or gullies. Quick release wander hose points are located at either side of the rear door. The wander hose can be used simultaneously with sweeping or on its own for more powerful suction. Optional rear-mounted overhead boom with aluminium or steel gully entry tube can be fitted if required.

HOPPER: Totally constructed from corrosion and abrasion resistant stainless steel, the hopper is fitted with large access doors on either side and a reinforced rear door with heavy-duty seals. The rear door incorporates an automatic closure system which clamps the door at 3 points, for a watertight seal, and body-drain fittings for removal of excess water.

All inlet tubes are fitted with automatic blanking flaps and an easy-to-clean swing-down filter screen is mounted in the top of the hopper immediately below the suction fan. A storage compartment is provided, located on right hand side of the body.

The hopper is tipped by means of a two-stage tipping ram facilitating rapid load-discharge.

the Mistral Hopper is available in various sizes to suit the required service profile and size of chassis as follows:

GROSS HOPPER VOLUME	NET HOPPER VOLUME	CHASSIS SUITABILITY
6.2 cubic metres	5.5 cubic metres	10 - 15 tonne
7.2 cubic metres	6.5 cubic metres	13 - 18 tonne
8.5 cubic metres	7.5 cubic metres	18+ tonne
Scarab hopper capacities are calculated in accordance with European Standard EN 15429		

ACCESS DOORS: Large doors fitted each side of the hopper for hand-loading bulky items.

HYDRAULIC SYSTEM: The hydraulic system comprises one axial piston pump, with automatic control of output and pressure, which drives the suction fan and two gear pumps to provide working pressure for all other hydraulic services. The system is piped in zinc plated steel tubing, where practical, and is protected by 10-micron filters to ensure long component-life. The system's oil is cooled via a heat exchanger with a hydraulically driven high-performance fan, ensuring optimum cooling under the most arduous working conditions and high ambient temperatures. The hydraulic control valves are located for easy servicing in a protected compartment. All hydraulic services, apart from rear door closure can be operated from the in-cab control panels. The hydraulic control valves and solenoids are located for easy servicing in a dedicated, weather-proof locker.

HYDRAULIC TANK: Located below the drive pumps, the tank has a capacity of minimum 53 litres and is equipped with a 10 micron return filter, air breather/filler cap, a suction strainer and a sight glass with automatic low-level shut off.

PNEUMATIC SYSTEM: The pneumatic system is connected to the vehicle auxiliary air supply, and is fitted with a pressure regulator, filter/water separator and pneumatic solenoid valves to control the side brush, wide sweep brush and suction nozzle. The pneumatic control valves and solenoids are located for easy servicing in a protected locker.

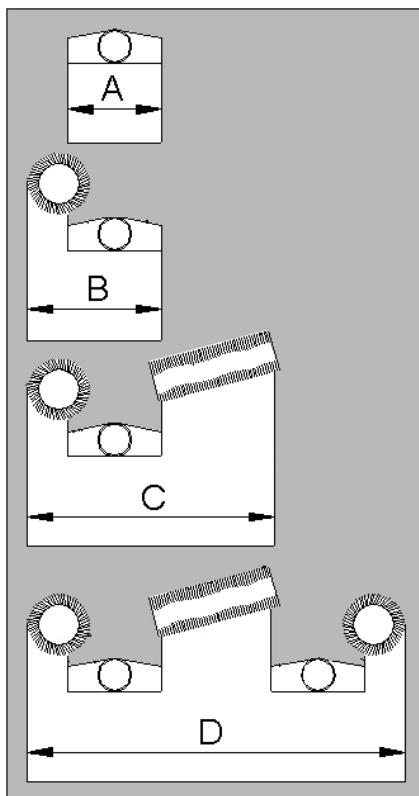
CANbus CONTROL: Scarab's tried and tested CANbus system, in service since 2003, has proved to be a successful and welcome innovation. CANbus has been developed to take advantage of the latest chassis technology, giving even greater control. A compact panel adjacent to the driver's seat contains all controls for operating the sweeper functions. An LCD monitor displays relevant operating data and provides system diagnostics and fault-finding checks on sweeping functions. An additional satellite control box for frequently used operations is mounted conveniently to hand.

The CANbus system's control nodes are located in a dedicated and weather-proof electrical equipment locker for ease of access during servicing and maintenance activities.

WATER TANK: Ranging from 1050 - 2500 litre capacity (dependent upon specification) and manufactured from corrosion resistant stainless steel. Filling is achieved by means of a hydrant connection with regulation air break, or alternatively by means of hose pipe and special adaptor. The tank is also fitted with a sight-glass / level indicator and suction strainers for the water pumps.

PAINTING: Two pack system single colour, optional multi colour and sign-writing.

SWEEPING WIDTHS:



SUCTION NOZZLE ONLY

SUCTION NOZZLE & SIDE BRUSH

SUCTION NOZZLE, SIDE BRUSH & WIDESWEEP

BOTH NOZZLES, BOTH SIDE BRUSHES & WIDESWEEP

Table 1: Sweep Widths in mm

MODEL	6.2	7.2	8.2
DIM A	740	740	840
DIM B	1060	1135	1235
DIM C	2000	2075	2275
DIM D	2950	3200	3400

On dual sweep machines the Scarab Mistral has the option of operating with both side brushes and nozzles simultaneously to give an unrivalled sweeping width.

The suction nozzle, side brush and wide sweep brush can be raised or lowered independently of each other. This provides various sweeping patterns to suit differing road conditions.

TYPICAL WEIGHT DATA:

Scarab equipment weights are:

- Single sweep configuration (including fixed widesweep) 2350 kg
- Dual Sweep configuration (including swivelling widesweep) 2650 kg

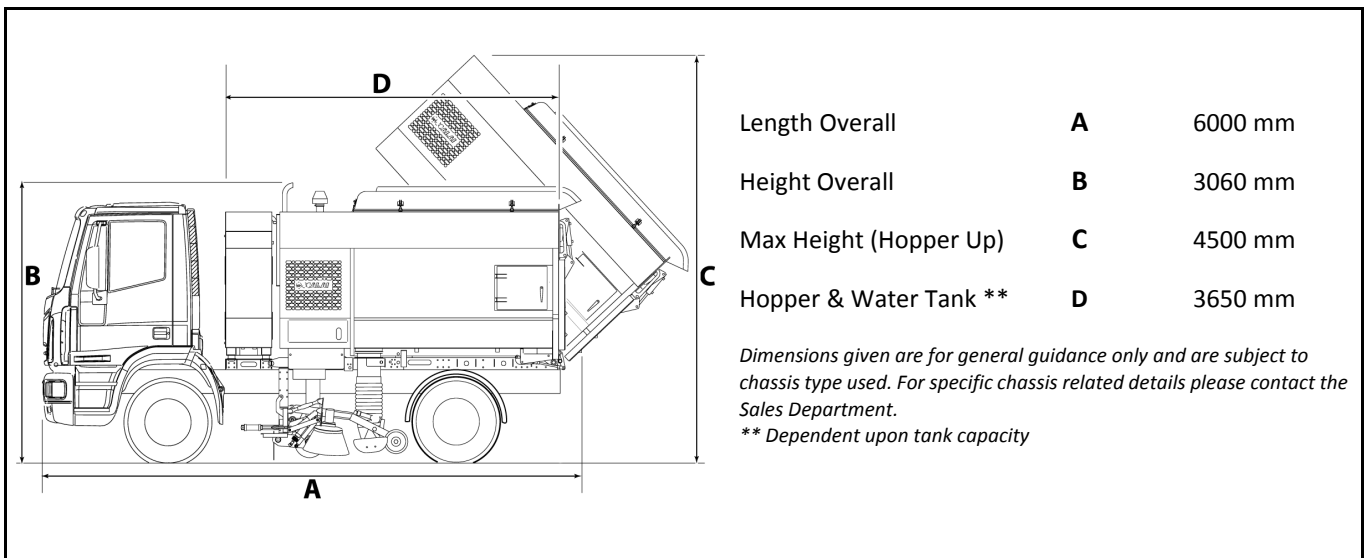
CHASSIS/MODEL PAYLOAD POTENTIAL	
10/12 tonne chassis with 6.2 cubic metre body	Up to 6220 kg
18+ tonne chassis with 8.2 cubic metre body	Up to 10,000 kg
For chassis/model specific payload information please contact the Scarab Sales Department	

CHASSIS SUITABILITY:

The Scarab Mistral can be mounted on a range of chassis.

For details of suitable chassis specifications please contact the Sales Department.

TYPICAL DIMENSIONAL DATA:



OPTIONS:

A comprehensive range of options is available, please contact the Scarab Sales Department for further information.

Scarab Sweepers are dedicated to continuous product development and as such we reserve the right to change this specification without prior notice. To ensure latest information contact Sales Department.



Pattenden Lane, Marden, Tonbridge, Kent. TN12 9QD
 Telephone: 01622 831006
 Fax: 01622 832417
 E-Mail: scarab@scarab-sales.com
 Web Site: www.scarab-sweepers.com

Publication Z036421 Issue - March 2012 / E & OE