Municipal vehicles from Dennis

THE CASE FOR DENNIS

Contents

DENNIS

Dennis Brothers Limited, Guildford, Surrey, England.
Telephone: Guildford 71271 Telex: 85211

Dennis municipal vehicle policy

Design
Nobody knows more about what you want from a municipal vehicle than yourself. But when was the last time you were consulted about the design of one? Probably never—unless you've bought a Dennis. Because every Dennis municipal vehicle you buy is designed and built to requirements specified by cleansing authorities to do the job you want it to do, and to do it for years longer than other makes.

The design of Dennis municipal vehicles is different in many other respects. Their chassis, for instance, are Dennis through and through, not 'bought in' from another manufacturer. And their cabs are glassfibre.

Consequently they remain rust free and look better longer.

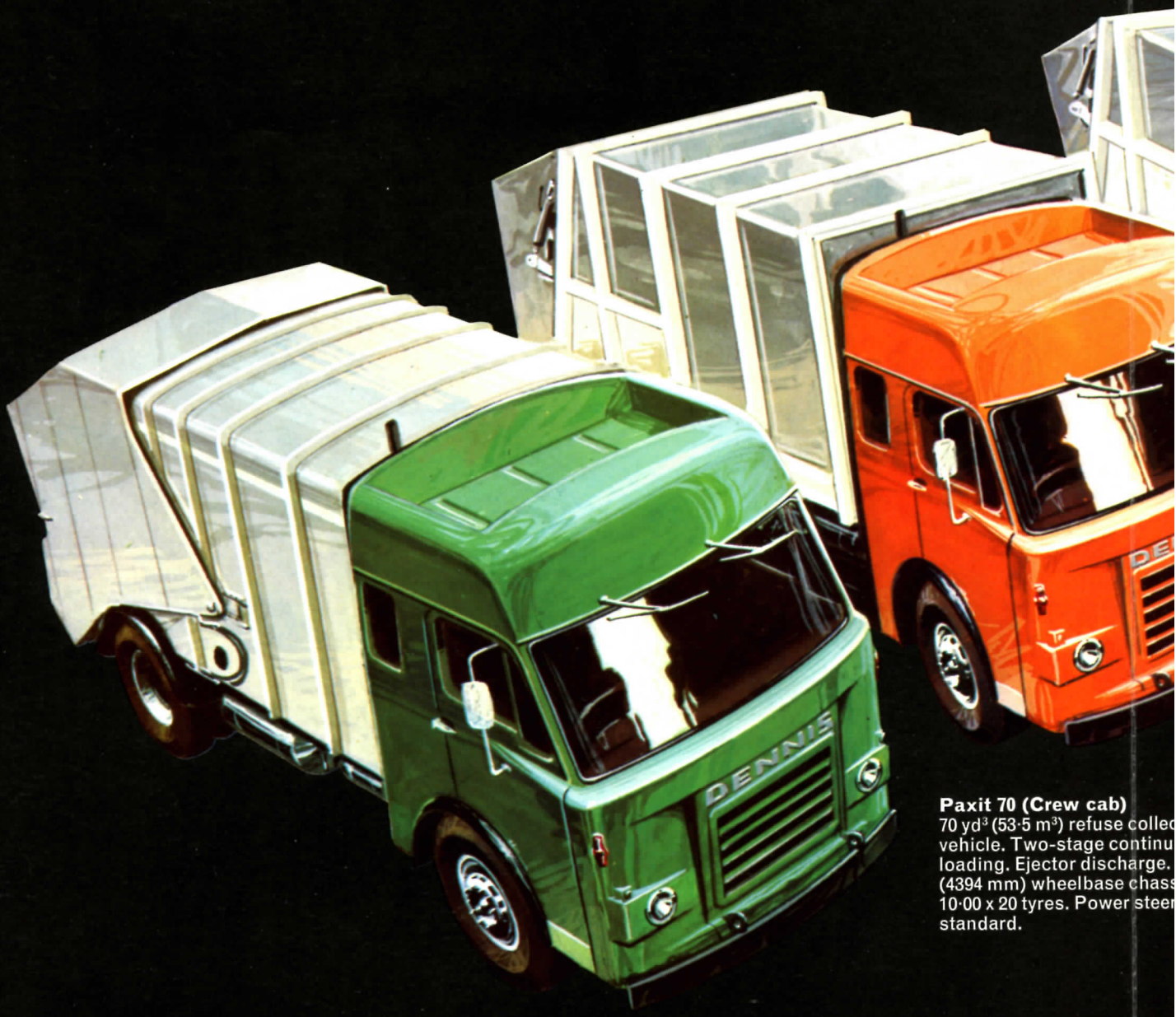
Experience and manufacturing ability
Dennis were established as specialist vehicle manufacturers as far back as 1895. And every vehicle Dennis made has this 75 years' manufacturing experience built-in by craftsmen employing craftsmen's methods. But that's not to say Dennis aren't automated or aware of the latest technologies. In fact their research and development team is one of the liveliest in the business.

Service and spares
Dennis have service depots covering the country. Each one fully equipped to give you a 24-hour turnround maintenance service from the moment the order's given. And, where it's an emergency, on-the-spot repairs are carried out by one of 11 specially equipped service vans.

But it's not only maintenance and repairs that are super-fast with Dennis. Their entire stock control has been computerised to make obtaining spares easier, quicker—more of a reality and less of a nightmare. If you have an engineer whom you feel would benefit from a thorough course on municipal vehicle maintenance—then Dennis will give him training free!

This is just a small part of the new deal from Dennis.

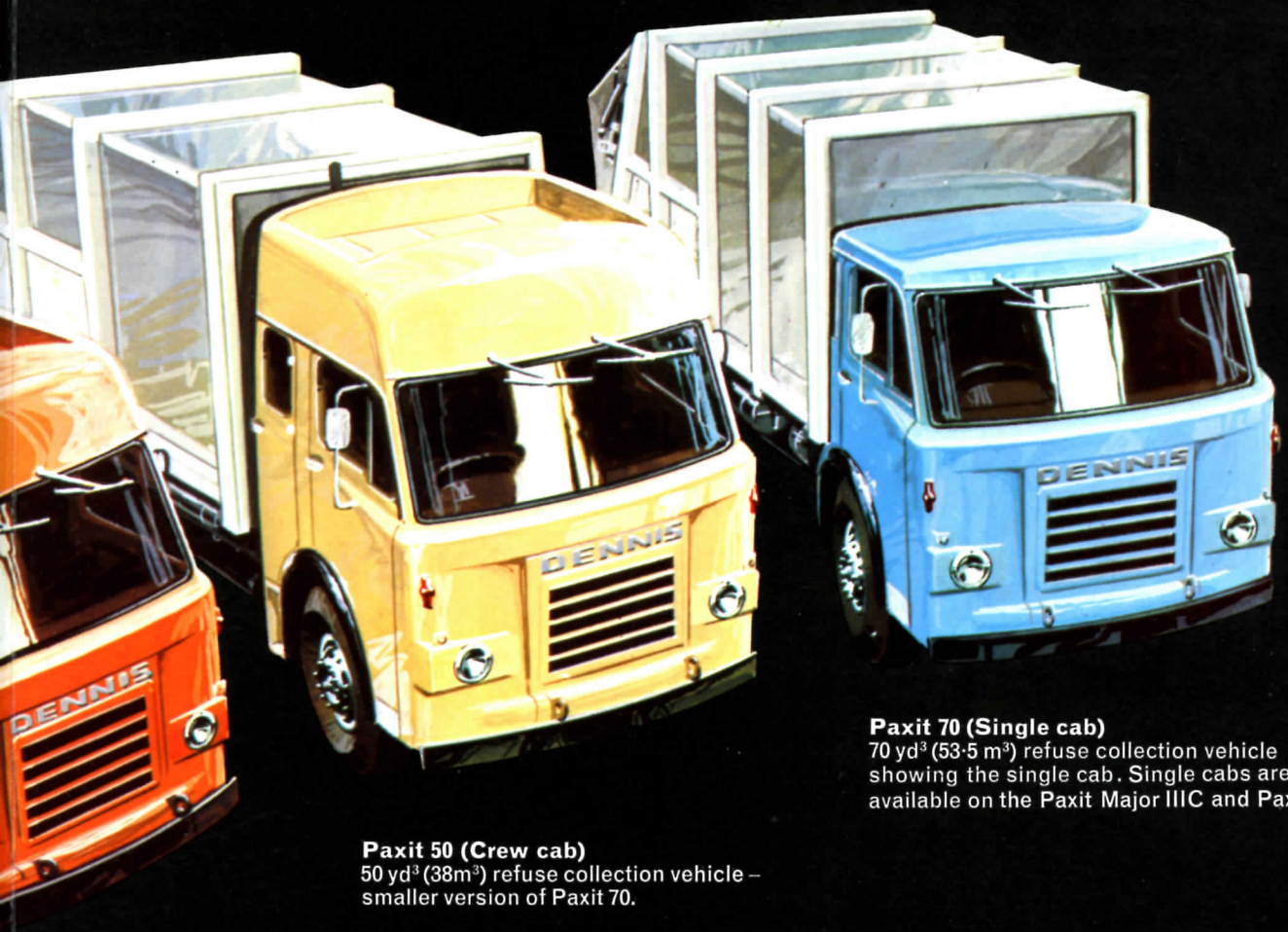
The remainder of this brochure is devoted to the seven vehicles and equipment . . . carefully developed by Dennis Brothers for making the lives of public cleansing staff a little sweeter—and a great deal more efficient.



Paxit 70 (Crew cab)
70 yd³ (53·5 m³) refuse collec
vehicle. Two-stage continu
loading. Ejector discharge.
(4394 mm) wheelbase chass
10·00 x 20 tyres. Power steer
standard.

Paxit Major IIIC (Crew cab)
35/50 yd³ (38 m³) version of Paxit IIIC.
On 14 ft 5 in (4394 mm) wheelbase
chassis with 900 x 20 tyres.

The Dennis publ



Paxit 70 (Single cab)
70 yd³ (53·5 m³) refuse collection vehicle showing the single cab. Single cabs are available on the Paxit Major IIIC and Paxit 70.

Paxit 50 (Crew cab)
50 yd³ (38m³) refuse collection vehicle – smaller version of Paxit 70.

)
collection
ntinuous
arge. On 14 ft 5 in
chassis with
steering

The Dennis municipal chassis
Built by Dennis to take a variety of Dennis municipal vehicle bodies. Its main feature is its great strength, uncompromising in quality standards.

Printed in England

ic cleansing fleet

Dennis street washer and waterer
The gully emptier can be equipped (as an optional extra) with watering and washing heads supplied with water under pressure from a turbine pump driven from the power take-off on the gearbox.

Dennis/Johnston suction road sweeper
A well-engineered, large-capacity suction road sweeper known for its trouble-free operation.

Bulkmaster (Crew Cab)
50 yds. ($38m^3$) and 70 yds. ($53.5m^3$) refuse collection vehicles with two-stage non-continuous automatic hydraulic compression loading and ejector discharge. Power steering.

Dennis street washer
Available with two or four washer heads.

Dennis cesspool emptier
Available in 800 (3636·77 litre) 1000 (4545·96 litre) or 1500-gallon (6818·94-litre) capacity.

Dennis ejector discharge refuse collectors

Paxit 50 and 70

The Paxit 70 and Paxit 50 are two of the most advanced and well-engineered refuse-collection vehicles available today. As refuse is expected to reduce in density in the coming years, these two refuse collectors are ideal for replacing tipper vehicles as they carry a much greater bulk of refuse within the same overall dimensions as tippers.

Loading and compacting are achieved with two separate mechanisms synchronised with each other. They use ejector discharge which means clean, speedier emptying and much more stability on the tip. Add Dennis guaranteed reliability and durability. And the really efficient Dennis 24-hour service.

It all makes for fast and safe working with great efficiency. Consider the economies a fleet of these vehicles would make in your operational budget!

Ask us to arrange a full demonstration of the Paxit 70 or the Paxit 50 (all the advanced features of the 70 but a smaller load capacity) on a collection round in your area.

Body specification

All-welded framework fabricated from steel sections, floor panels of corrosion-and-abrasion-resistant steel; panelling in heat-treated aluminium alloy.

Loading hopper

All-welded framework fabricated from steel sections, floor and side panels to match bodywork. Unit attached to body by substantial pivot pins. Hopper raised hydraulically for load discharge by ejection plate operated by hydraulic ram.

The two-stage continuous-loading mechanism is actuated by double-acting hydraulic rams synchronised by a spool valve. This system is protected by an over-riding relief valve. Emergency stop/start control at tailboard is provided.

Dimensions and Weights

Item	Paxit 50		Paxit 70	
Wheelbase	12′ 4″	3759 mm	14′ 5″	4394 mm
Overall length	23′ 5″	7138 mm	25′ 6″	7772 mm
Overall width	7′ 10½″	2400 mm	7′ 10½″	2400 mm
Overall height	11′ 1″	3378 mm	11′ 1″	3378 mm
Turning circle (approx.)	48′	14·6 m	58′	17·6 m
Rear overhang (closed)	6′ 7″	2006 mm	6′ 7″	2006 mm
Rear overhang (open)	11′ 6″	3505 mm	11′ 6″	3505 mm
Overall height (open)	15′ 6″	4724 mm	15′ 6″	4724 mm
Tyre size (standard)	10·00 x 20 (16 ply)		10·00 x 20 (16 ply)	
Unladen registration weight	7 tons 19 cwt	5569 kg	8 tons 2 cwt	8235 kg
Front axle *Plating weight*	5½ tons	5588 kg	5½ tons	5588 kg
Rear axle *Plating weight*	10 tons	10160 kg	10 tons	10160 kg
Gross *Plating weight*	15½ tons	15749 kg	15½ tons	15749 kg

Salvage space

When bulk bin hoist or dustless shutter equipment is not fitted, additional space for salvage is available in the upper roof of hopper.

Hydraulics

Power for all hydraulic operations is supplied by a gear-type hydraulic pump. A 35-gallon (159·1-litre) supply tank is mounted in the body, and is fitted with a filter and sight gauge. Controls for all operations are located in the cab within easy reach of the driver.

Extras

Bulk bin hoist equipment. Dustless shutters for use with hinged-lid dustbins.

Loading and compacting are synchronised with each other

1 Loading.

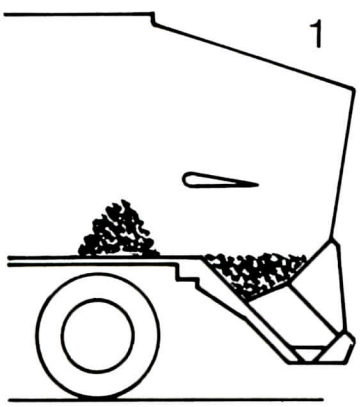
2 Drawer moves refuse forward.

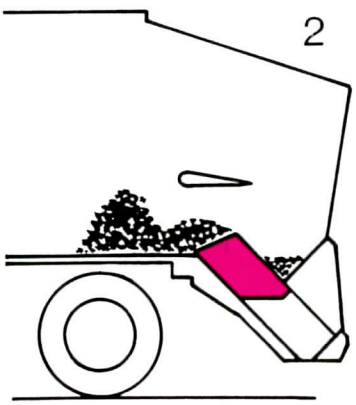
3 Compression plate compacts refuse in body.

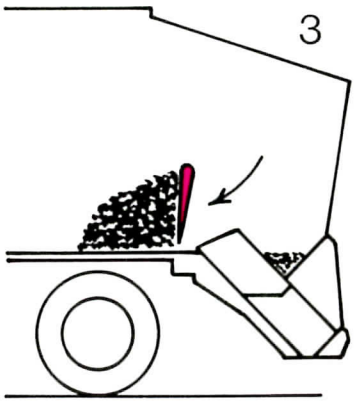
4 Compression plate returns.

5 Drawer returns—cycle complete.

6 Load discharge.





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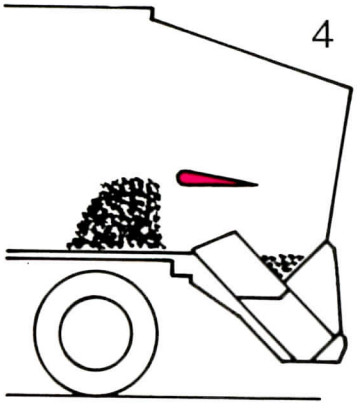
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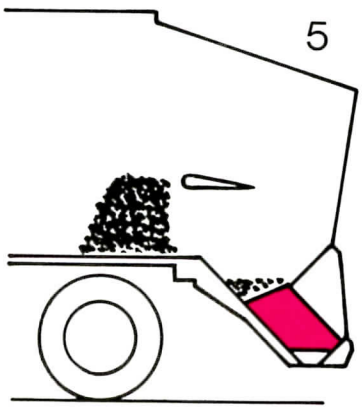
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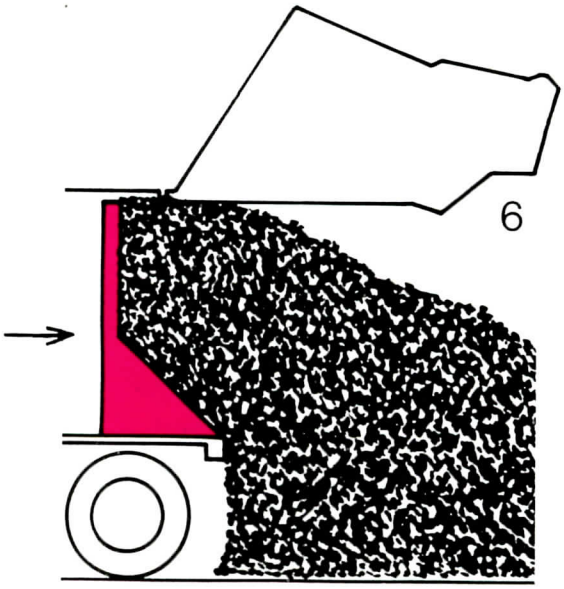
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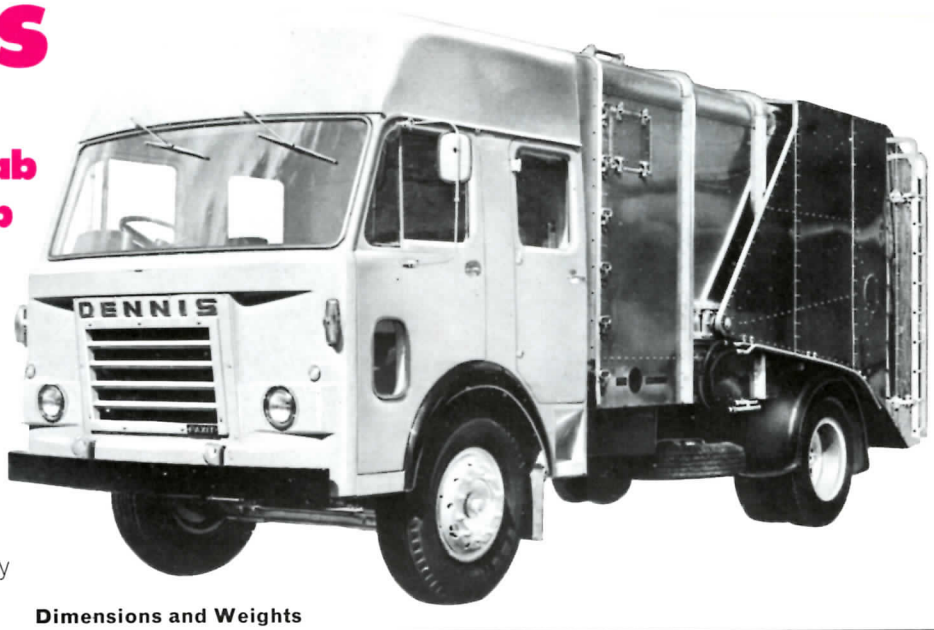
Dennis tipper refuse collectors

Paxit IIIc crew cab
Paxit Major IIIc single cab
Paxit Major IIIc crew cab

UNLADEN WEIGHT FOR REGISTRATION should read:–

Paxit IIIC	Paxit Major IIIC	Paxit Major IIIC
Crew	Crew	Single
6t. 18 cwt. (7010 kg)	7t. 2 cwt. (7213 kg.)	6t. 19 cwt. (7061 kg)



The three types of Dennis tipper refuse collector (the 40 yd³ Paxit IIIC with crew cab and the 50 yd³ Paxit Major IIIC's with crew or single cab) successfully achieve fitness-for-purpose with maximum safety, durability and comfort.

In these Paxit models, loading and compaction are carried out continuously with the engine idling, with minimum noise and minimum wear and tear on the mechanism.

No interruption to the work—refuse is fed forward into the body as fast as it can be loaded, whether by hand or by power-operated equipment. And Dennis, in consultation with cleansing officers, have engineered many features which provide efficiency and reliability. Low loading height, but generous ground clearance: 5 ft (152·4 cm) when fully tipped. Twin tipping rams give maximum stability while discharging. Minimum maintenance cabs—glassfibre reinforced plastic which cannot corrode and will never need painting.

Method of continuous compacting

There are two moving parts: Swivel compression plate A, secured at pivot B and actuated by a double-acting hydraulic ram. Reciprocating inverted drawer E actuated by double-acting hydraulic ram F.

1 Refuse emptied from bins over rave rail G falls to hopper floor.

2 Reciprocating inverted drawer E pushes refuse forward in hopper.

3 Swivel compression plate A removes refuse from curved face of drawer.

4 Continuing forward movement compresses refuse into body.

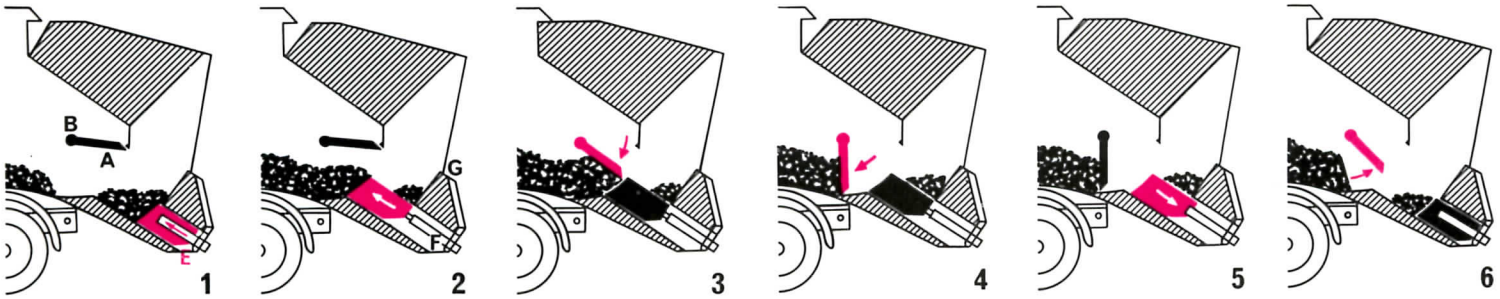
5 Drawer E then retracts and refuse, which, in the meantime was emptied onto the top of the drawer, falls in front of the curved face.

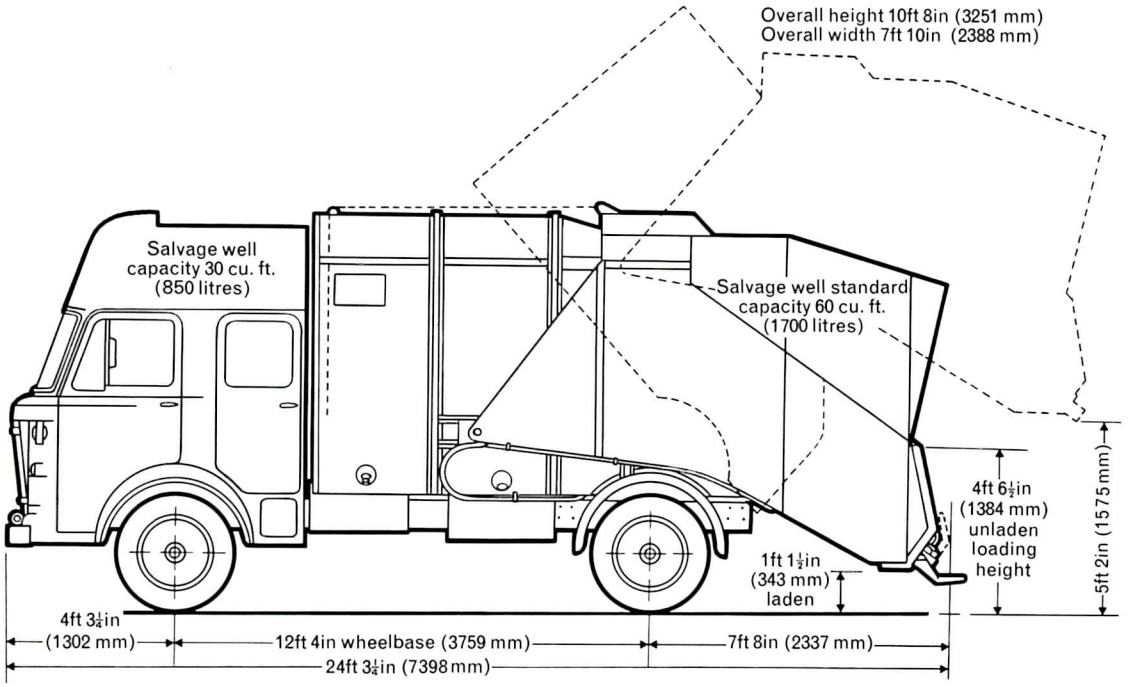
6 The swivel compression plate also then retracts and another cycle is started as in diagram 1.

This sequence is maintained continuously throughout the loading period at four strokes per minute with the engine at idling speed. The slow movement of parts and steady engine speed ensure minimum noise during the loading operations, and minimum wear and tear. Refuse may be put into the rear hopper at any stage during the sequence. Should some incompressible object be so large or so positioned that the compression plate cannot complete its movement, a trip operates, the reciprocating drawer retracts and the pivot plate swings back to begin another cycle of operations. This has the effect of repositioning the object in the hopper and of 'chewing up' the bulky items. No matter how quickly refuse is put into the hopper—whether by power-operated dustless loading equipment or by hand, there is no interruption in the work.

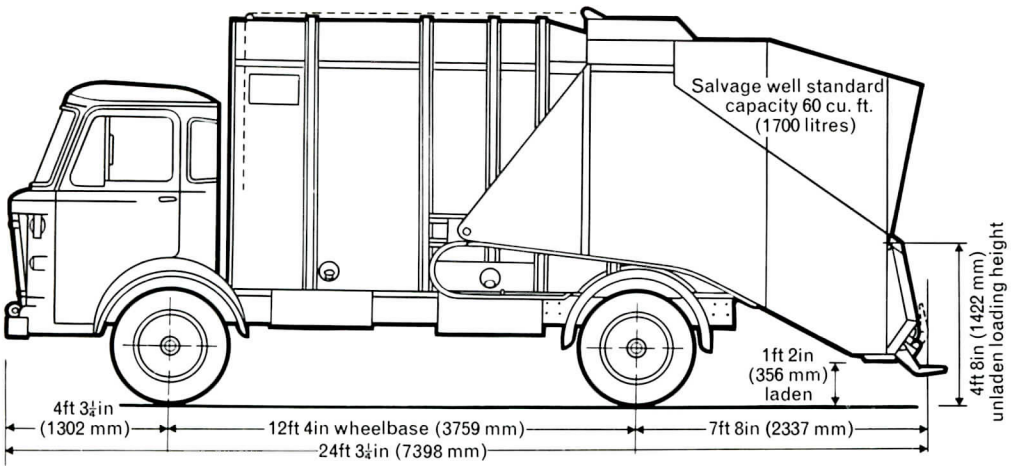
Dimensions and Weights

Item	Paxit IIIC	Paxit Major IIIC	Paxit Major IIIC
Cab	Crew	Crew	Single
Wheelbase	12′4″ (3759 mm)	14′5″ (4394 mm)	12′4″ (3759 mm)
Overall length (ex bin hoist)	24′3¼″ (7398 mm)	26′4¼″ (8033 mm)	24′3¼″ (7398 mm)
Overall width	7′10″ (2388 mm)	7′10″ (2388 mm)	7′10″ (2388 mm)
Overall height (unladen)	10′8″ (3251 mm)	10′9″ (3276 mm)	10′9″ (3276 mm)
Height of loading rail (unladen)	4′6½″ (1384 mm)	4′8″ (1422 mm)	4′8″ (1422 mm)
Ground clearance under hopper (laden)	1′2½″ (368 mm)	1′4″ (406 mm)	1′4″ (406 mm)
Clearance under hopper when tipped	5′3″ (1600 mm)	5′5″ (1650 mm)	5′5″ (1650 mm)
Minimum turning circle diameter	48′ (14·6 m)	58′ (17·6 m)	58′ (17·6 m)
Minimum swept circle diameter	54′ (16·4 m)	62′ (18·8 m)	62′ (18·8 m)
Minimum ground clearance	9½″ (241 mm)	9½″ (241 mm)	9½″ (241 mm)
Approach angle	22°	22°	22°
Departure angle	10°	10°	10°
Effective capacity	25/40 yd³ (19/30 m³)	35/50 yd³ (27/38 m³)	35/50 yd³ (27/38 m³)
Loader ram thrust	28 tons (28000 kg)	31 tons (31000 kg)	31 tons (31000 kg)
Angle of tip	49°	49°	49°
Unladen weight for registration	61 tons 18 cwt (70100 kg)	71 tons 2 cwt (72100 kg)	61 tons 19 cwt (70600 kg)
Air space—body	14·6 yd³ (11·2 m³)	17·5 yd³ (13·4 m³)	17·5 yd³ (13·4 m³)
Tyre size	900 x 20 (14 ply)	900 x 20 (14 ply)	900 x 20 (14 ply)
Front axle *Plating weight*	5½ tons (5588 kg)	5½ tons (5588 kg)	5½ tons (5588 kg)
Rear axle *Plating weight*	10 tons (10160 kg)	10 tons (10160 kg)	10 tons (10160 kg)
Gross *Plating weight*	15½ tons (15749 kg)	15½ tons (15749 kg)	15½ tons (15749 kg)

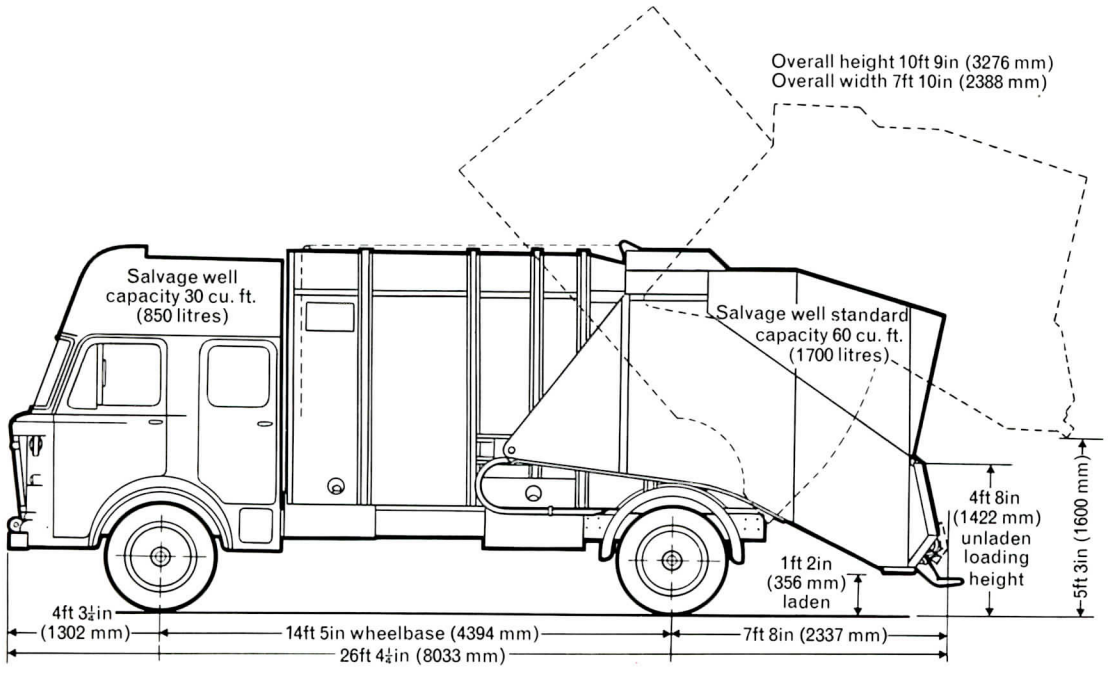




Paxit IIIC (crew cab)
Continuous loading
Refuse collection vehicle



Paxit Major IIIC (single cab)
Continuous loading
Refuse collection vehicle



Paxit Major IIIC (crew cab)
Continuous loading
Refuse collection vehicle

Dennis non-continuous automatic compression

Bulkmaster

For situations where the volume of low-density refuse is particularly high, the Bulkmaster 70 cu. yd. and 50 cu. yd. ejector discharge refuse collectors offer highly significant advantages in operation.

The two-stage automatic hydraulic compression loader has a dual crushing action, which not only handles bulky refuse at speed but also gives uniform density of load throughout the body. With this system an excellent compression ratio is achieved, so limiting the number of journeys to the disposal site and the direct costs of operation.

The Bulkmaster loading and compression cycle is non-continuous, initiated by the operator only when the capacious 1.4m³ hopper has been filled, and lasts only 12 seconds. This also contributes to reduction in running costs, gives less wear for moving parts, reduces maintenance and, in addition, gives a more readily acceptable noise level for early and late collections in residential areas.

Unloading is effected in a single operation by means of the hydraulically operated ejection plate – a rapid, clean and safe procedure.

Undoubtedly the Bulkmaster is the most advanced refuse collector to be developed specifically for today's high-volume low density urban residential or commercial rounds. A demonstration in your own area can be arranged on request.

Body Specification

All-welded framework fabricated from steel sections; floor panels of corrosion and abrasion-resistant steel; panelling in heat-treated aluminium alloy.

Loading, Compression & Discharge

The loading hopper has an all-welded framework fabricated from steel sections, with floor and side panels to match body work, and is attached to the body by substantial pivot pins. The complete tailgate assembly is raised for discharge by a pair of hydraulic rams; push-button control from cab.

Dimensions and Weights

Item	Bulkmaster 50 cu. yd.		Bulkmaster 70 cu. yd.	
Wheelbase	12′ 5¾″	(3804mm)	14′ 6¾″	(4439mm)
Overall length	23′ 5″	(7137mm)	25′ 3½″	(7709mm)
Overall width	7′ 11½″	(2426mm)	7′ 11½″	(2426mm)
Overall height	11′ 6″	(3505mm)	11′ 6″	(3505mm)
Turning circle (approx)	48′ 0″	(14.6m)	60′ 0″	(18.3m)
Rear overhang (closed)	6′ 6″	(1981mm)	6′ 6″	(1981mm)
Rear overhang (open)	10′ 5¼″	(3181mm)	10′ 5¼″	(3181mm)
Overall height (closed)	10′ 6″	(3200mm)	10′ 6″	(3200mm)
Overall height (open)	15′ 6″	(4724mm)	15′ 6″	(4724mm)
Tyre size (standard)	10R x 22.5 14 Ply		10R x 22.5 14 Ply	
Unladen Registration Weight	8 tons 6 cwt	(8433 kg)	8 tons 8 cwt	(8535kg)
Front axle *Plating weight*	5 tons 5 cwt	(5334kg)	5 tons 5 cwt	(5334kg)
Rear axle *Plating weight*	10 tons	(10160kg)	10 tons	(10160kg)
Gross Plating weight	15 tons 5 cwt	(15495kg)	15 tons 5 cwt	(15495kg)

The two-stage non-continuous loading cycle illustrated below, is actuated by two pairs of double-acting hydraulic rams; push button control at rear of vehicle.

Operation of the hydraulic ejector ram during discharge is by push-button control from the cab.

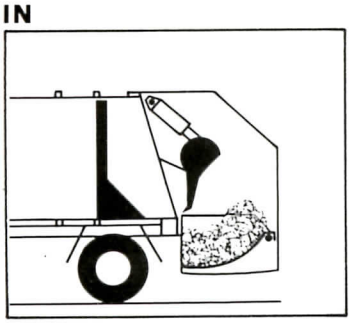
Cab

Fibreglass cab accommodates full crew of six operatives.

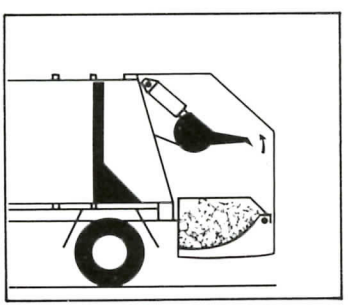
Hydraulics

Power for all hydraulic operations is supplied by a gear-type hydraulic pump. A 35 gallon (159.1 litre) supply tank is mounted in the body and is fitted with a filter and sight gauge. All hydraulics are fitted with over-riding relief valves.

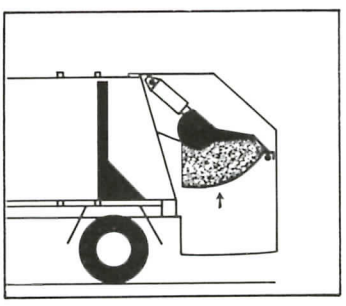
IN



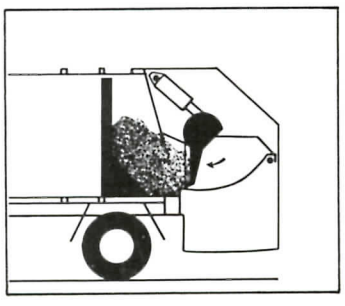
1. Refuse is loaded into hopper – low rave rail simplifies manual loading.



2. As loading cycle begins, packer plate is raised hydraulically.



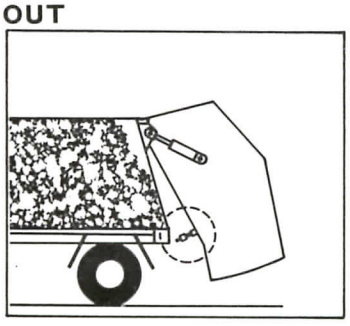
3. Hopper is then automatically raised hydraulically; packer plate compresses contents.



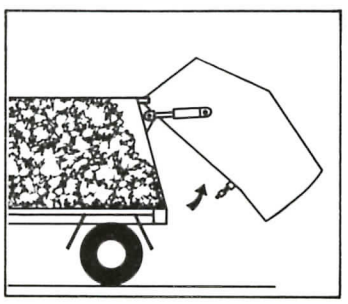
4. Refuse is carried into body, further compressed and retained by packer plate as hopper is lowered.

refuse collectors with ejector discharge

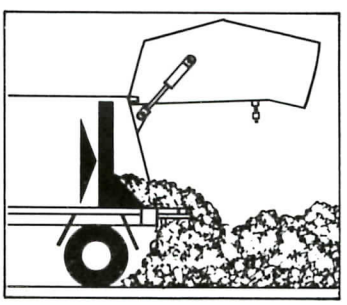
OUT



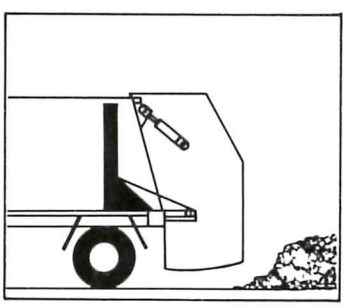
1. With vehicle in position at disposal site, hopper locks are released.



2. Complete tailgate assembly is then raised hydraulically.



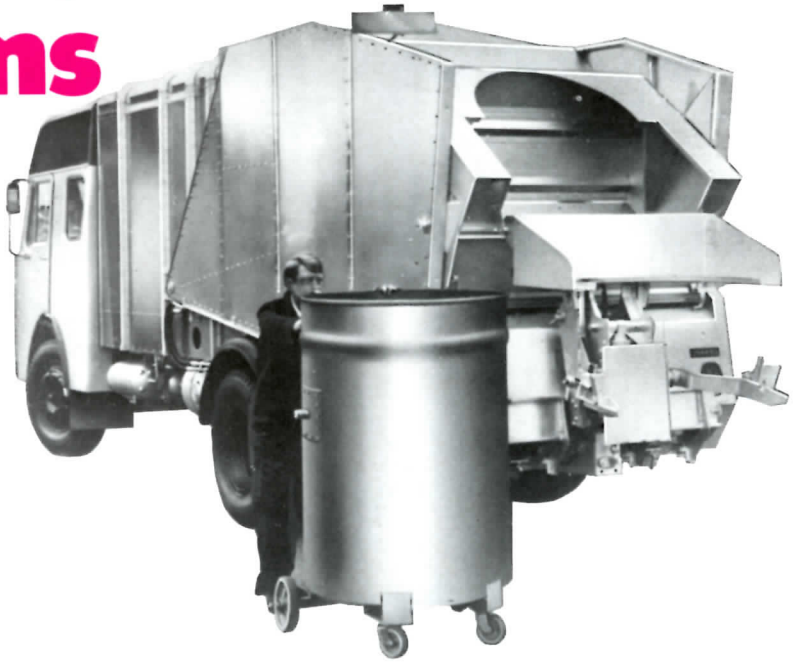
3. Ejection ram displaces ejection plate to rear, completely discharging contents of body.



4. Tailgate assembly is lowered and hopper locks re-fastened.

Dennis bin hoist power systems

for Paxit IIIC and Paxit Major IIIC



Two essential requirements of bulk loading equipment are safety and speed of operation. Dennis Brothers have developed their patented system to meet these requirements, using bins fitted with trunnions. Hoist systems are available to handle 20 ft³ and/or 30 ft³ bins.

The two-stage compacting mechanism used on continuous loading Paxits rapidly clears the hopper and can deal with light bulky refuse. This makes it ideal for bin hoist work.

Dual-purpose role

It is appreciated that in many authorities' areas a dual-purpose machine is essential, and with the canopy raised as in picture (3), manual loading can take place each side of the bin hoist assembly.

Interchangeability for stand-by machines

The bin hoist assembly can be rapidly removed by disconnecting two flexible hydraulic pipes, fitting blank caps, pulling out one pin and lifting clear. It can then be just as rapidly fitted to any standby machine which is a vehicle fitted with the necessary hydraulic circuit with brackets on the tailboard.

This interchangeability is a great asset in a small fleet with insufficient spare capacity.

Dennis bulk containers are of all-welded steel construction fully galvanised inside and outside after manufacture. They are available in static form but the majority of local authorities now standardise on 30 ft³ bins on wheels and castors. Where static bins are used a hydraulic jacking trolley is required and this can be supplied complete with a carrier on the vehicle.

Plastic bins

The Dennis plastic bin fully meets the requirements for an efficient dustless refuse-collection system. Very tough and resilient, it is injection-moulded in polypropylene with a section which puts the strength and thickness where they are needed. It is easily cleaned, quiet to handle and the tapered body enables it to be completely discharged without banging. The lid cannot be lost or left off, so the refuse is always dry.

Apart from these useful features the Dennis bin weighs only 12 lb (5·44 kg) for a capacity of 3·2 ft³ (0·09 m³): that's 14 lb lighter than a conventional bin. So with dustless loading there's an enormous saving in effort as well.

1 Trunnion type container with hydraulic jack.

2 The Dennis trunnion hydraulic Bin hoist.

3 Dual purpose roles: Emptying domestic bin with bin dust hoist in stowed position.

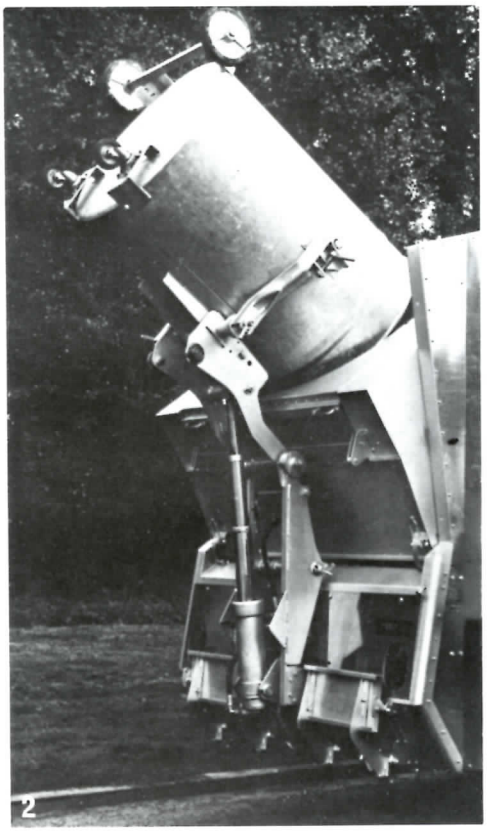
4 Containers are easily accepted by bin hoist.

5 Girdle bin hoist, ready to accept non standard container.

6 Bar pick up design for standard bulk container.

7 Non standard containers are easily accepted.

1



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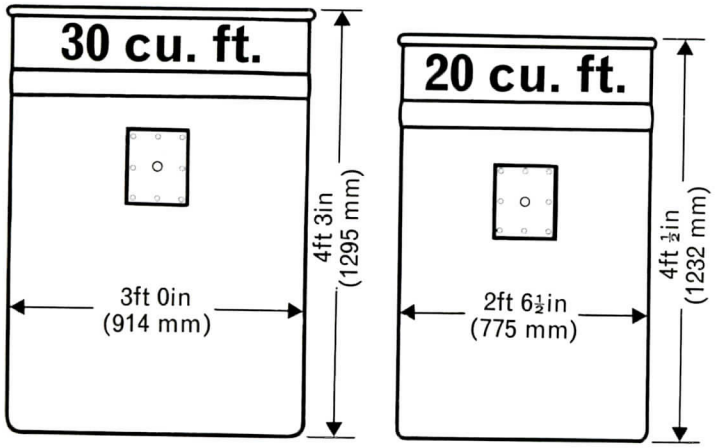
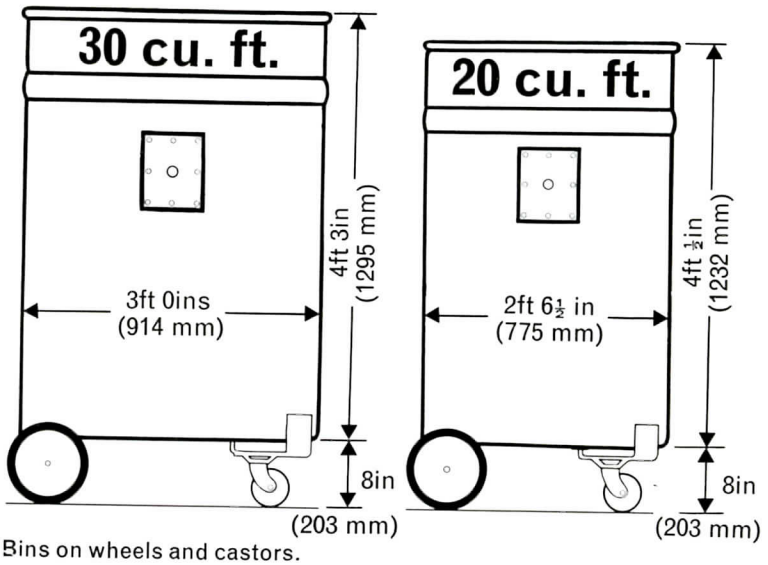


Static bins.



Bins on wheels and castors.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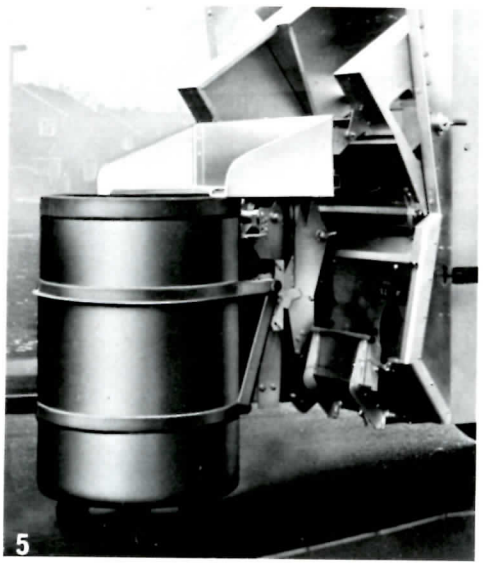
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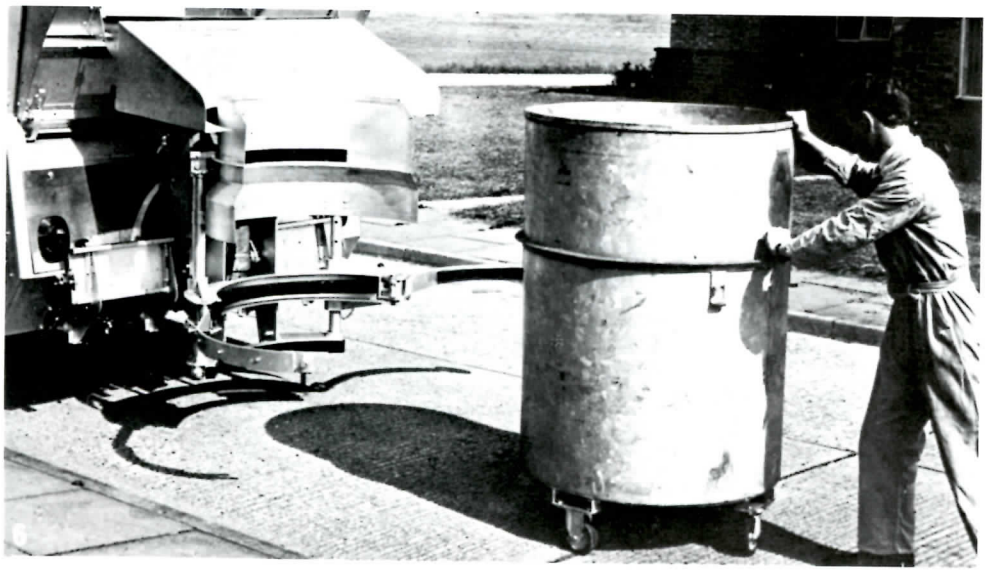


Dennis cesspool emptiers

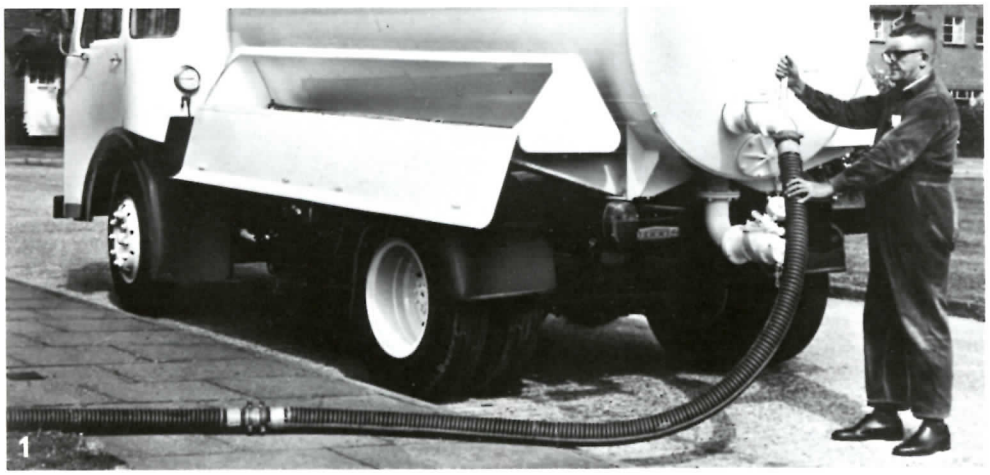
Dennis cesspool emptiers are made in three sizes and are designed to carry out their duties fast and efficiently. Tanks are welded steel which can be galvanised after fabrication at extra cost. The air pump is equipped with a Dennis patent two-way valve which enables it to function as a vacuum device or to create pressure to clean the hoses or to discharge the tank to a higher level.

Safety features fitted as standard include an automatic cut-out valve to protect the air pump and a pressure relief valve to protect tank against over-pressurising. Gate valves and suction hoses are ruggedly designed to provide for a long, trouble-free life.

1 Operator opening inlet valve to fill tank.
2 Quick discharge valve for emptying into sewer via the leather hose for sewer flushing.
3 Fully opening door to facilitate cleaning.
4 Night-soil equipment on standard cesspool emptier.
5 Night-soil equipment on machine fitted with fully opening rear door.

Dimensions and Weights

Item						
Working capacity	800 gallons	3637 litres	1000 gallons	4546 litres	1500 gallons	6819 litres
Wheelbase	10′ 4″	3149·6 mm	10′ 4″	3149·6 mm	12′ 0″	3657·6 mm
Overall length	20′	6096 mm	20′	6096 mm	21′ 10½″	6673·8 mm
Overall width	7′ 9″	2362 mm	7′ 9″	2362 mm	7′ 10″	2388 mm
Overall height (unladen)	8′ 10″	2692·4 mm	9′	2743·2 mm	10′	3048 mm
Unladen weight (approx.)	90 cwt	4572·2 kg	95 cwt	4826·2 kg	108 cwt	5486·6 kg
Turning circle	43′	13·1 m	43′	13·1 m	46′	14 m
Tyre equipment	8·25 x 20 (13 ply)		8·25 x 20 (14 ply)		9·00 x 20 (14 ply)	
Front axle *Plating weight*	4½ tons	4572 kg	4½ tons	4572 kg	5 tons	5080 kg
Rear axle *Plating weight*	8½ tons	8636 kg	8½ tons	8636 kg	10 tons	10160 kg
Gross *Plating weight*	13 tons	13209 kg	13 tons	13209 kg	15 tons	15240 kg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Dennis gully emptiers

Dennis gully emptiers provide the ideal answer to the problem of clearing sludge from the bottom of gullies—quickly, cleanly and efficiently—by vacuum.

They're made in two capacities—800 (3637 litres) and 1000 gallons (4546 litres)—and are equipped with the patented Dennis floating siphon. This enables the water drawn up with the sludge to be siphoned off at intervals, which means that the vehicle can be operated for long periods between emptyings.

And another practical feature is the quick-action changeover valve which enables a rapid change from suction to pressure: water can be blown back to agitate the sludge in the gully and speed up cleaning.

These vehicles are highly versatile. Ask for details of the range of options—street watering and washing attachments, cesspool emptying equipment, continuous pumping attachments, hose attachments.

Dimensions and Weights

Item				
Working capacity	800 gallons	3637 litres	1000 gallons	4546 litres
Wheelbase	10′ 4″	3150 mm	10′ 4″	3150 mm
Overall length	19′ 7⅜″	5979 mm	19′ 7⅜″	5979 mm
Overall width	7′ 9″	2362 mm	7′ 9″	2362 mm
Overall height	11′ 6″	3505 mm	11′ 10″	3607 mm
Unladen weight (approx.)	5 tons 3 cwt	5233 kg	5 tons 5 cwt	5338 kg
Turning circle	43′ 0″	13·1 m	43′ 0″	13·1 m
Tyre equipment	8·25 x 20 (14 ply)	—	8·25 x 20 (14 ply)	—
Front axle *Plating weight*	4½ tons	4572 kg	4½ tons	4572 kg
Rear axle *Plating weight*	8½ tons	8636 kg	8½ tons	8636 kg
Gross *Plating weight*	13 tons	13209 kg	13 tons	13209 kg

The Dennis/Johnston suction road sweeper

In the suction road sweeper, Dennis Brothers and Johnston Brothers have applied their many years of experience in the design and manufacture of a highly efficient, large-capacity suction vehicle which will give many years of trouble-free service.

Built on a standard Dennis 10 ft 4 in (314·96 cm) wheelbase chassis, equipped with advanced suction, water supply and brush equipment, this road sweeper is the most advanced equipment of its type currently available.

Chassis Specification

Engine
Perkins 6·354 diesel engine. Swept volume 354 in³ (5·8 litres) develops 120 bhp at 2800 rpm. Maximum torque 260 lb/ft (36 kg/m) at 1250 rpm.

Clutch
14 in (35·6 cm) single dry plate. Lining area 182·5 in² (1,177 cm²).

Gearbox
Five-speed constant mesh. Ratios 1:1, 1·393:1, 2·037:1, 3·041:1, 6·00:1. Reverse 5·929:1.

Front axle
5 tons (5080 kg) 'I' section alloy steel beam.

Rear axle
10 tons (10160 kg) single-speed spiral bevel drive. Ration 7·17:1.

Brakes
Full air operation using diaphragm type brake chambers coupled to cam-operated brakes. Front brakes 15½ in x 5 in (38·1 cm x 12·7 cm). Rear brakes 15½ in x 7 in (38·1 cm x 17·8 cm). Total brake lining area 725 in² (4677·5 cm²).

Service brake
Footbrake system with diaphragm actuators operating simultaneously on all axles.

Secondary
Lever operated, providing air-assisted braking on rear axle.

Parking brake
By lock actuators through cam levers on rear axle.

Wheels and tyres
Steel disc wheels with 10-stud fixing. Single front, twin rear and spare. Tyre size 8·25 x 20 (14 ply).

Electrical
12-volt a.c./negative earth return system. Standard equipment includes flashing direction indicators, heater/demister and single head lamps. Battery capacity 110 amp/hr at 10-hour rate.

Dimensions and Weights

Item		
Wheelbase	10′ 4″	3150 mm
Overall length	19′ 6″	5944 mm
Overall width	7′ 9″	2362 mm
Overall height	10′ 8″	3251 mm
Unladen weight (approx.)	6 tons	6096·2 kg
Turning circle	L.45′ R.43′	L.13716 mm R.13106mm
Tyres	8·25 x 20—(14 ply)	
Body capacity	7¼ yd³	5·5 m³
Water capacity	200 gallons	909 litres
Front axle *Plating weight*	4½ tons	4572 kg
Rear axle *Plating weight*	8½ tons	8636 kg
Gross *Plating weight*	13 tons	13209 kg

Steering
Right or left-hand control 20 in (51 cm) diameter three-spoke wheel on recirculatory ball type steering box.

Frame
Channel section 9 in x 2½ in x ¼ in (22·9 cm x 6·3 cm x 0·635 cm) with bolted sidemembers.

Cab
Constructed of glassfibre reinforced plastic. Curved one-piece toughened glass windscreen 6 ft 8in wide x 2 ft 1in deep (203 cm x 63 cm).

Optional extras
Automatic chassis lubrication. Flashing amber beacon.

Exhaust and drive
The exhauster is a high-efficiency fan of multi-vane type, driven from a full torque top power take-off on the Dennis gearbox via upper and lower level boxes with a standard propeller shaft in between.

Engine speed 1200 rpm—Fan speed 2520 rpm. Over-run device fitted.

Reduction box
A special high-torque reduction box in the transmission provides the following working speeds at 1200 engine rpm:—

Gears	1st	2nd	3rd	4th	Top
MPH	¾	1½	2¼	3½	5
KPH	1·2	2·4	3·6	5·6	8

Body
All-welded construction from heavy-gauge steel plate. Capacity 7¼ yd³ (5·5 m³). Hydraulic tipping gear gives a maximum angle of 47°. The rear door is opened hydraulically and is self-locking.

Water supply
A water tank with a capacity of 200 gallons (909 litres) and 4 in (101 mm) diameter filler cap supplies water to a belt-driven gear pump. The system pressure is 40 psi (2812 kg/cm²). Sprays are fitted to control dust at front bumper, channel brush and suction nozzle. A wash-down hose is fitted.

Hydraulic pump
Standard pump fitted to vehicle gearbox. The tank capacity is 12 gallons (52 litres). Power body tipping, rear door, channel brush and raising and lowering channel brush and suction nozzle.

Channel nozzle
Aluminium alloy casting fully lined with Linatex rubber of trailing type fitted with adjustable solid-tyred wheels. The nozzle mouth is adjustable and fitted with renewable wearing edge.

Channel brush
Steel-lined wood stock powered by variable-speed hydraulic motor.

Wandering hose
Spring loaded for easy handling with working radius of 11 ft (3·35 m).

Optional extras
Wide-sweep equipment. Dual drive/dual sweep. Extension to wandering hose.

Dennis municipal purpose-built chassis–cab specification

Applying (with exceptions stated) to Paxit 70, Paxit 50, Paxit IIIC, Paxit Major IIIC, Dennis gully emptier, and Dennis cesspool emptier.

Engine
Perkins 6·354 diesel engine with distributor type fuel injection pump and hydraulic governor. Bore $3\frac{7}{8}$ in (98·4 mm). Stroke 5 in (127 mm). Swept volume 354 in^3 (5·8 litres). Maximum bhp 120 at 2800 rpm. Maximum torque 260 lb/ft at 1250 rpm.

Gearbox
Five-speed constant-mesh gearbox. Ratios 1:1, 1·502:1, 2·321:1, 4·083:1, 8·056:1 and reverse 7·961:1. Maximum allowable input torque 270 lb/ft (37·3 kg/m).

Transmission—clutch
14 in (35·6 cm) single dry plate, total lining area 182·5 in^2 (1·177 cm^2).

Propeller shaft
Two-piece needle roller bearing universal joints, flexibly mounted centre bearing.

Brakes
Full air operation using diaphragm-type brake chambers coupled to cam-operated brakes. Front brakes $15\frac{1}{2}$ in x 5 in (38·1 cm x 12·7 cm). Rear brakes $15\frac{1}{2}$ in x 7 in (38·1cm) x 17·8 cm). Total brake lining area 725 in^2 (4677·5 cm^2).

Service brake
Footbrake system with diaphragm actuators operating simultaneously on all axles.

Secondary
Lever operated, providing air-assisted braking on rear axle.

Parking brake
By lock actuators through cam levers on rear axle.

Frame
Channel section pressed-steel sidemembers $\frac{1}{4}$ in x $2\frac{1}{2}$ in x 9 in (0·634 cm x 6·3 cm x 22·9 cm). Crossmembers generally of channel section bolted onto the sidemembers. Reinforced top and bottom flanges.

Suspension
Front: Semi-elliptic leaf springs 52 in (132.08 cm) long, 3 in (7.62 cm) wide, 3.656 in (9.29 cm) thick, 9 leaves, telescopic dampers.
Rear: 10 ft 4 in (315 cm) wheelbase. Semi-elliptic leaf springs 54 in (137.2 cm) long, 3 in (7.62 cm) wide, 6.57 in (16.7 cm) thick, 15 leaves. 12 ft (365.8 cm) wheelbase. All models except 1500 gallon cesspool emptier. Rear semi-elliptic leaf springs 60 in (152.4 cm) long, 3 in (7.62 cm) wide, 6.807 in (17.27 cm) thick, 12 leaves, used on 1500 gallon (6818.9 litres) cesspool emptier only. 14 ft 5 in (439.4 cm) wheelbase on the Paxit 70 and Paxit Major IIIC. And 12 ft 4 in (376 cm) wheelbase on the Paxit 50 and Paxit IIIC.

Front axle
5·5 tons (11,760 lb, 5588 kg). 'I' section alloy steel beam.

Rear axle
10 tons (22,400 lb, 10160 kg). Single-speed spiral bevel drive with robust differential gear ratio 6·14:1.

Wheels and tyres
Steel disc wheels, rim size 3B 700 x 20, offset 6 in (15·24 cm) ten-stud fixing $\frac{7}{8}$ in (2·2 cm) diameter studs. Single front, twin rear with spare. Standard tyre size given in table but oversize tyres can be fitted.

Steering
Right or left-hand control, 20 in (51 cm) diameter three-spoke wheel on recirculatory ball-type steering box. Ratio (in centre position) 26·8:1. Lock-to-lock, $6\frac{1}{2}$ turns approximately.
Paxit 70. Power steering standard. Lock-to-lock, $4\frac{1}{2}$ turns approximately.

Fuel tank
30 gallons (136 litres) 18 in (45·72 cm) diameter cylindrical.

Cab
Constructed of glassfibre fire-retardant reinforced plastic. Curved one-piece toughened glass windscreen 6 ft 8 in wide x 2 ft 1 in deep (203 cm x 63 cm). Twin windscreen wipers, 17 in (43·2 cm) blades. Winding drop windows in doors, remote-control inner door handles, push button exterior handles and anti-burst locks; $7\frac{1}{2}$ kW heater and demister and electrical screen washers standard. Crew cab with seating for 5 or 6 men plus driver is standard on Paxit IIIC, Paxit Major IIIC, Paxit 50 and Paxit 70.

Electrical
12-volt a.c. negative earth return system. Panel on facia fitted with the following as standard: speedometer, two air gauges, 'no charge' warning light, oil pressure warning light, key-operated starter switch which covers heat start as well.
On steering column: switches for head, side and tail lamps, head lamp dip switch, horn switch button and direction indicator switch.
Two head lamps mounted on front dash, flashing direction indicators. Battery capacity 110 amp/hr at 10 hr rate.

Standard equipment
Front shock absorbers, front bumper with two loops, heater and demister, screen washers, radiator muff, tool kit.

Optional extras
Power-assisted steering, automatic lubrication, fog lamp, rear shock absorbers, twin sun visors, rear towing loops.

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