



Powell Duffryn

Ranger



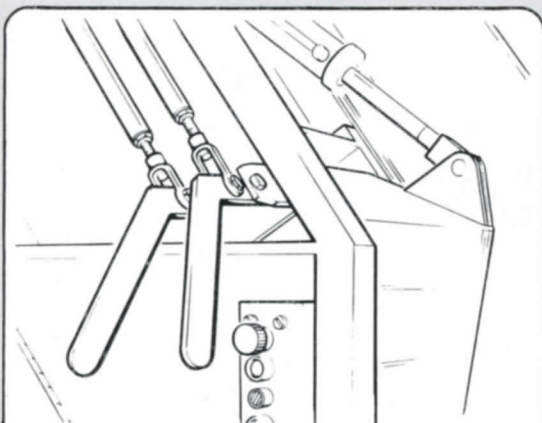
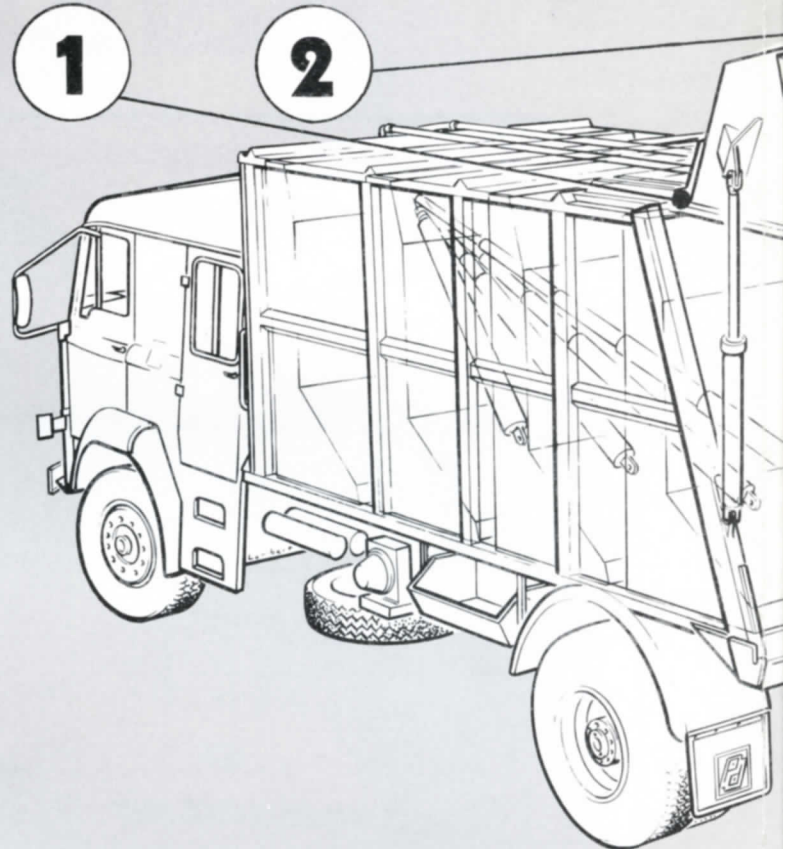
P.D. Ranger

Powell Duffryn Engineering are acknowledged leaders in waste disposal equipment with considerable experience in Transfer Stations, Static Packers and Bulk Refuse Container Systems. We now extend our commitment to Public Cleansing by introducing to the British Market the internationally known and proven series of Ranger Rear Loading Refuse Collection Vehicles.



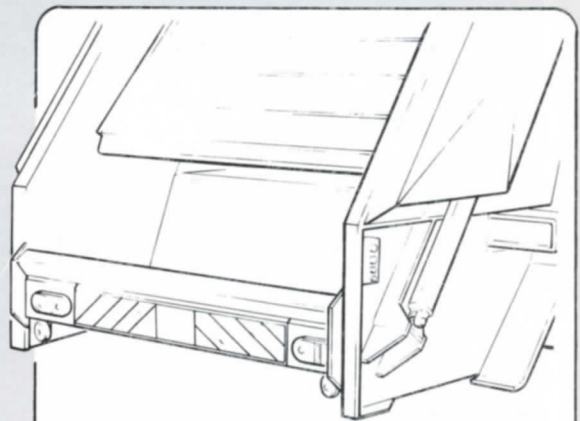
1 AUTOMATIC TAILGATE

Tailgate fitted with automatic locking and unlocking facility is standard equipment. Controls can be either side mounted, or cab mounted.



2 SAFETY CONTROLS

Two operation levers mounted at rear nearside of loading hopper giving split cycle operation with reversing mechanism giving full protection to operators.

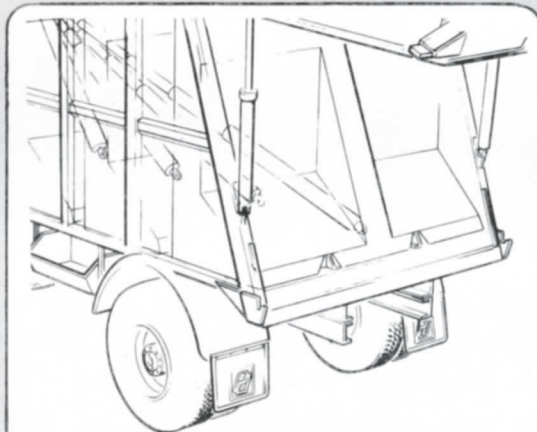
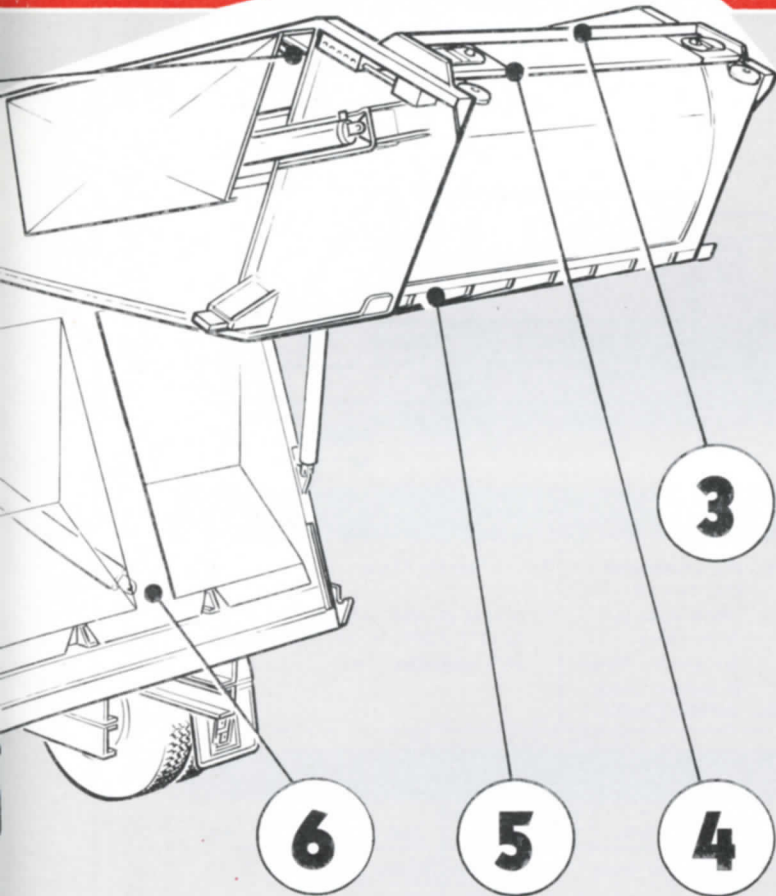


3 EASY LOADING

Full width low raved rail for efficient unimpeded loading, offering less operator fatigue together with a faster and cleaner operation.

The British made Ranger is available in four body sizes from 10 to 20 cubic yards air space. A powerful full width compaction mechanism clears the refuse from the spacious loading hopper in a mere 12-15 seconds. The efficient overall performance ensures a densely packed load to maximise vehicle utilisation.

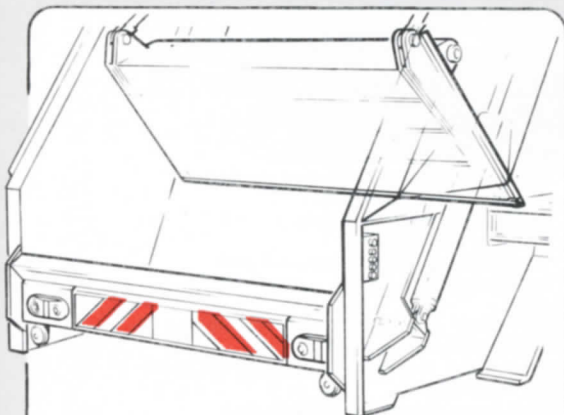
Today's operators require the highest standards of safety. The Ranger's unique split-cycle action provides a vital safeguard not found in continuous and other intermittent loaders. A wide emergency stop bar operated by hand or knee, together with sequenced controls, are among other safety features built into the Ranger.



DUAL PURPOSE EJECTION PLATE

Steel ejection plate coupled to a double acting multi-stage ram, specially designed to give high density compaction together with fast clean discharge.

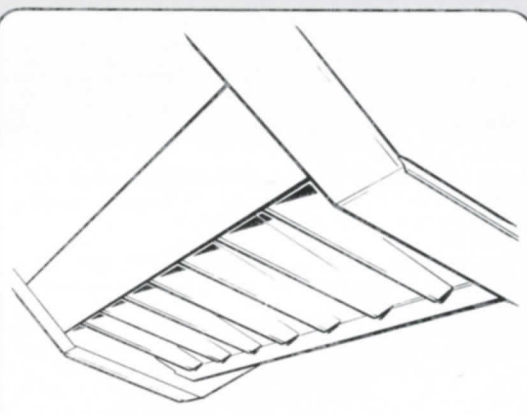
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OPERATOR SAFETY BAR

Rear hopper fitted with positive action safety bar which stops operation. Separate operation of reset button is necessary to restart packing cycle.

4



REINFORCED HOPPER FLOOR

Specially designed refuse hopper floor, manufactured from high tensile steel, with reinforced sections, for extra long operational life.

5

Specification

Following many years of experience in the Refuse Handling Industry throughout the world and the success of our refuse collection vehicles overseas, Powell Duffryn Engineering have produced the Ranger Refuse collector to fulfill the needs of a rapidly changing refuse collection and disposal environment in the United Kingdom.



Safety

Safety design features have been incorporated to eliminate the risk of operational hazards, and provide efficient clean working. The unique split-cycle compaction system stops the packer blade before the dangerous trap point on the first part of the cycle, thus eliminating the risk of possible injury. The whole cycle can be accomplished in approximately 12-15 seconds, and all phases of the operation are quickly and manually reversible.

A wide emergency stop bar operated by hand or knee runs under the hopper rave, and additional stop buttons are sited on the vehicle. Automatic reversing lights and an intermittent siren give added safety to the operators and bystanders.

On the tipping site safety again is the keyword. "In-cab" controls enable the driver to automatically unlock and raise the tailgate in one movement, and the load is quickly and easily ejected by the powerful double acting hydraulic ram. After tipping, the tailgate is lowered and locked in the same efficient manner, so that the vehicle spends the minimum amount of time in a potentially dangerous area without the crew having to leave the cab.

Efficiency

and high quality production has enabled lower capital outlay

by Authorities in original purchase together with much lower maintenance costs due to reduced downtime periods.

Aimed to maximise the economical collection of all kinds of waste, the Ranger is a rugged low cost machine, designed for ease of operation and maintenance, while giving a high degree of reliability in the field of operation.

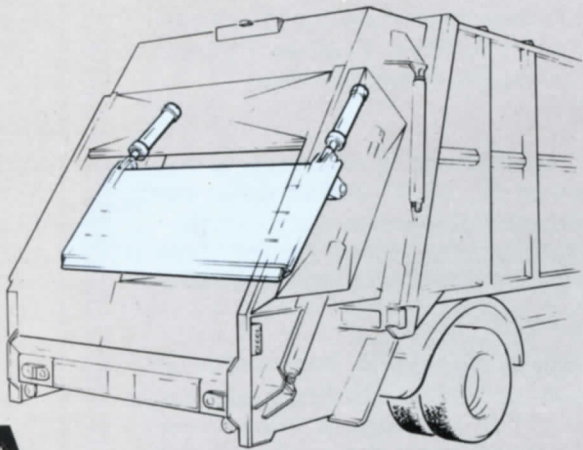
Powell Duffryn Engineering provide a network of service departments throughout the United Kingdom, giving complete service support for all their equipment.

The Ranger is manufactured in four body sizes, with an air space of 10, 13, 17 and 20 cubic yards. The efficient proven compaction mechanism, together with the specially shaped ejector blade, ensure maximum payload within legal operating requirements.

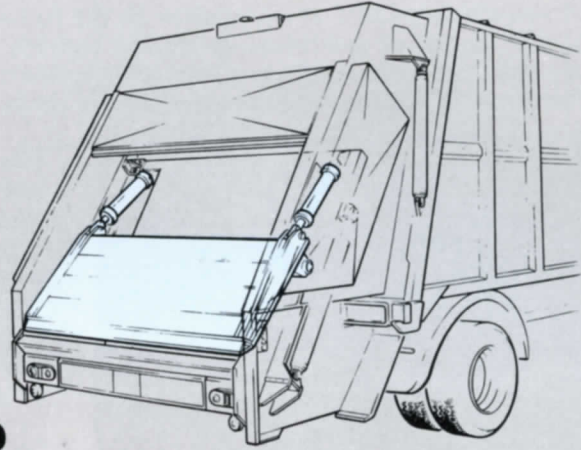
The stylish Ranger bodies can be mounted on all proprietary makes of chassis and fitted with single or crew cabs to suit all applications. The compact body and short turning circle allow efficient and speedy operation in confined areas where access is limited.



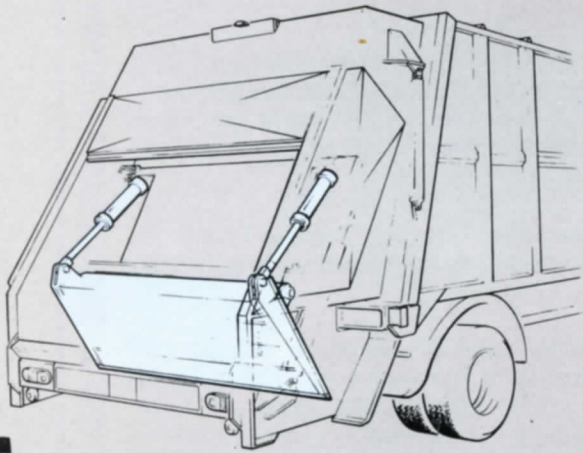
Principle of Operation



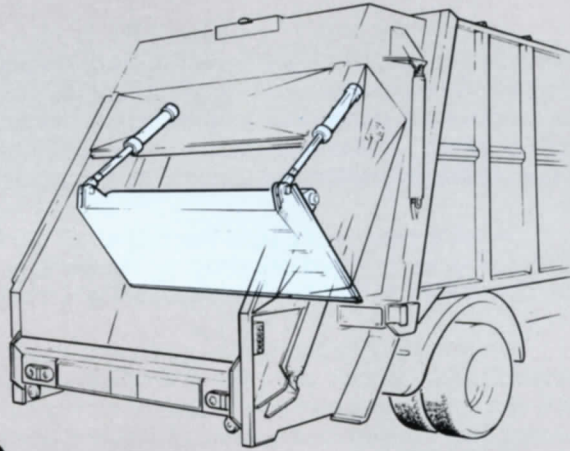
A



B



C



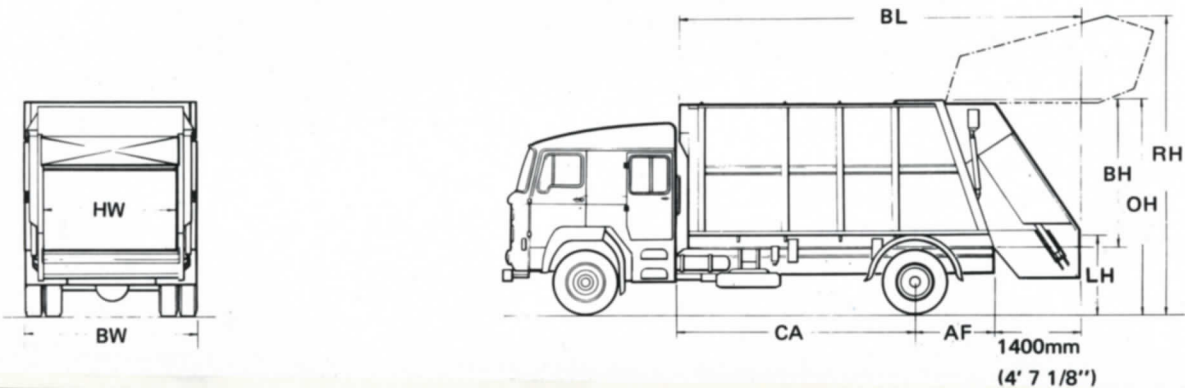
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PRINCIPLE OF OPERATION

The Ranger has a fast safe split cycle compaction operation taking only 12/15 seconds. Initial operation of the control levers provide phases A and B of the cycle while a second operation is required for phases C and D. Alternatively each phase of the cycle can be manually operated and reversed.

- A** Material is loaded into deep low profile hopper
- B** Packing blade retracts and moves towards hopper rear
- C** Packing blade sweeps hopper
- D** Refuse is packed tightly into body

Technical Data



KEY

U.C. Unit Capacity	H.W. Inside Hopper Width	Recom C.A. Recommended Cab to Axle	P.C. Packing Cycle
H.C. Hopper Capacity	B.H. Body Height	Recom A.F. Recommended After frame	* Height dimensions based on 915mm (3'-0") chassis height with 100mm (4") nominal sub-frame
B.L. Body Length	L.H. Loading Height	E.W. Equipment Weight	
B.W. Overall Body Width	R.H. Raised Height	Min G.V.W. Minimum Gross Vehicle Weight	

DIMENSIONS

Model	U.C.	H.C.	B.L.	B.W.	H.W.	B.H.	* L.H.	* O.H.	* R.H.	Recom C.A.	Recom A.F.	E.W.	Min G.V.W.	P.C.
R10	7.65m ³	1.15m ³	4460mm	2275mm	1905mm	1780mm	1035mm	2795mm	4015mm	2135mm	850mm	2835kgs	8430kgs	12 - 15
	10yd ³	1.5yd ³	14'-7½"	7'-5½"	6'-3"	5'-10"	3'-4¾"	9'-2"	13'-2"	7'-0"	2'-9½"	2.79tons	8.3tons	seconds
R13	9.95m ³	1.15m ³	4460mm	2450mm	1905mm	2135mm	1035mm	3150mm	4370mm	2135mm	850mm	3060kgs	9350kgs	12 - 15
	13yd ³	1.5yd ³	14'-7½"	8'-0½"	6'-3"	7'-0"	3'-4¾"	10'-4"	14'-4"	7'-0"	2'-9½"	3.01tons	9.2tons	seconds
R17	13m ³	1.15m ³	5220mm	2450mm	1905mm	2135mm	1035mm	3150mm	4370mm	3050mm	850mm	3700kgs	12300kgs	12 - 15
	17yd ³	1.5yd ³	17'-1½"	8'-0½"	6'-3"	7'-0"	3'-4¾"	10'-4"	14'-4"	10'-0"	2'-9½"	3.64tons	12.1tons	seconds
R20	15.3m ³	1.15m ³	5805mm	2450mm	1905mm	2135mm	1035mm	3150mm	4370mm	3505mm	850mm	4015kgs	14500kgs	12 - 15
	20yd ³	1.5yd ³	19'-0"	8'-0½"	6'-3"	7'-0"	3'-4¾"	10'-4"	14'-4"	11'-6"	2'-9½"	3.95tons	14.25tons	seconds

BODY

All steel welded construction reinforced and braced with pressed steel sections. Body and ejector design give high refuse capacity in short low profile body.

TAILGATE

All steel welded construction reinforced and braced with steel sections. Heavy duty loading sill and hopper floor is of 6mm high tensile steel.

Tailgate has fully automatic sliding hinges and lift out type body locks.

HYDRAULIC SYSTEM Ejector Head Cylinder

Ranger 10 & 13 2 stage double-acting telescopic with 1650mm (65") stroke.

Ranger 17 3 stage double-acting telescopic with 2360mm (93") stroke.

Ranger 20 4 stage double-acting telescopic with 2950mm (116") stroke.

Tailgate Lift Cylinders

All models 2 off single acting fitted with hose failure valves and speed restrictors.

Carrier Cylinders 2 off heavy duty 75mm (3") bore x 685mm (27") stroke.

Packer Cylinders 2 off heavy duty 90mm (3½") bore x 300mm (12") stroke

Pump Gear type 73 L.P.M. (16 G.P.M.) @ 950 R.P.M.

Operating Pressure 125 kg/Cm² (1750 PSI)

Powell Duffryn Engineering constantly seeks ways to improve and upgrade its products. For this reason, design changes are sometimes made. If any dimension or capacity is critical, check with factory for current specifications.

 **Powell Duffryn Engineering**

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