

ESTABLISHED 1835

# GREENS



## LIGHT ROLLERS

11 CWTS - 4½ TONS

FOREMOST IN DESIGN • FAMOUS FOR DEPENDABILITY

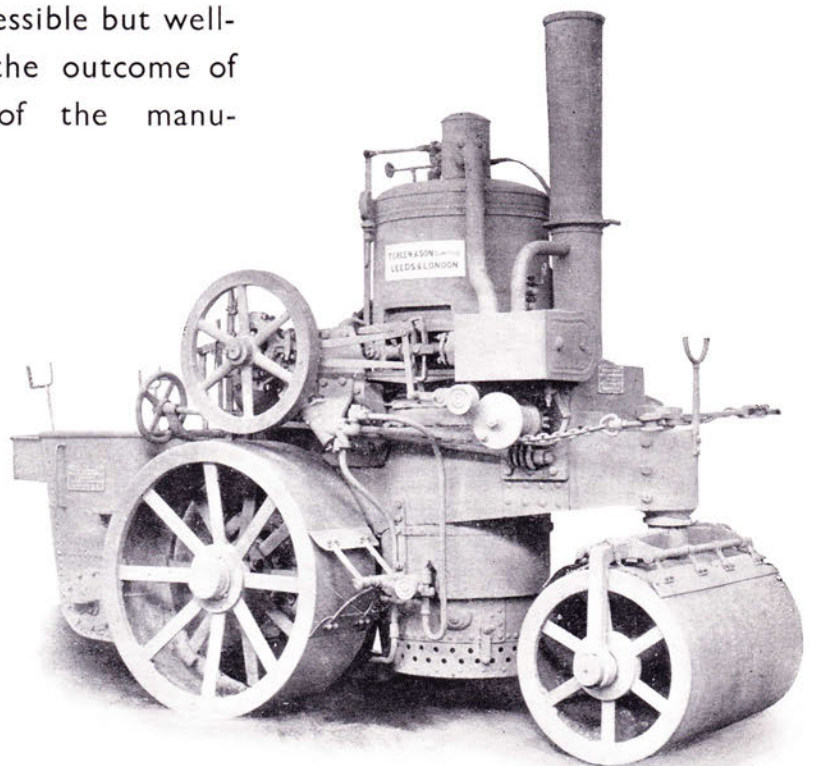
# Foreword

The Greens' Steam Roller illustrated on this page was supplied in 1874 to Her Late Majesty Queen Victoria, for service in the Royal Gardens, Windsor. It was built in the days when power-operated rollers were regarded as an interesting experiment, yet the principle underlying its design is still that of the most modern machines.

Of the many improvements to constructional details the most far-reaching have been those affecting the method of propulsion. The introduction of the internal combustion engine made practicable light power rollers of weights below 5 tons, and it is the light range of "GRIFFIN" Rollers which we illustrate in this publication.

The swing-over from steam to internal combustion engines for roller propulsion is the natural result of the many advantages of the latter type, but the serviceable designs of our simple and reliable machines, with their accessible but well-protected working parts, are the outcome of some 80 years' experience of the manufacture of road-making machinery.

Hundreds of "GRIFFIN" Rollers have been purchased by British Government Departments, and the many repeat orders from users in this country and overseas are a measure of their outstanding success.





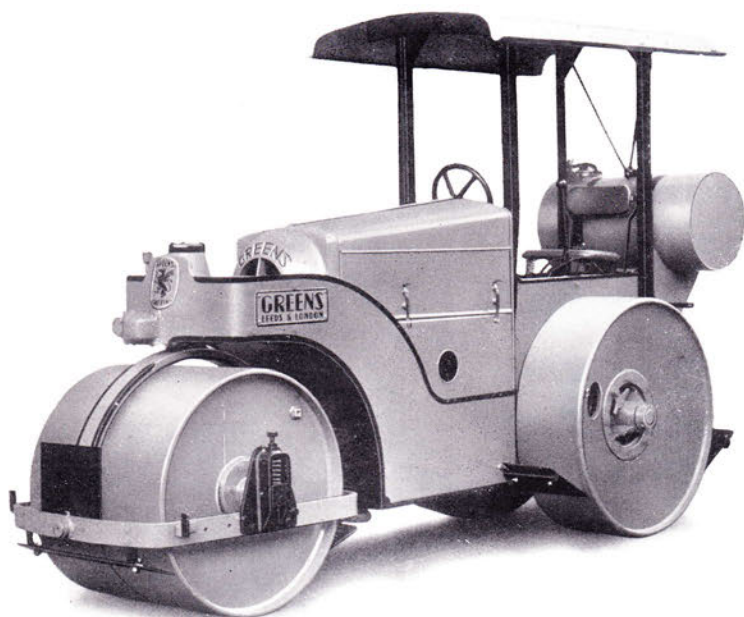


# DRX & PRX

## DIESEL & PETROL ROLLERS

The "GRIFFIN" type DRX and PRX Water Ballast Rollers are built in working weights of from  $2\frac{1}{2}$  to  $4\frac{1}{2}$  tons. The two models are equipped with Diesel and petrol engines respectively, but are otherwise of similar design.

A feature of outstanding interest of the  $2\frac{1}{2}$  tons machines is the reversible and interchangeable rear roll rims. The normal rolling width of machines of these weights is 3 ft. 6 in. but by reversing the rear rims a rolling width of 4 ft. 2 in. is obtained. This arrangement is particularly useful for work on footpaths where the narrow rolling width permits the machines to be manœuvred laterally and roll marks to be easily eliminated.



**WITH AWNING,  
SPRINKLERS AND TANK**

Interchangeable rear roll rims to give a rolling width of 6 ft. 0 in. can be fitted. So equipped, the  $2\frac{1}{2}$  tons rollers are suitable for grass work and will haul a Greens' Triple Mower in an offset position, enabling the operations of rolling and cutting to be combined.

Reversing and changing the rear roll rims are simple operations requiring no special knowledge or skill.

All the rollers of this range are free of projections beyond the outer edges of the rear rolls, and can be worked close to walls, fences, or other obstructions.

The efficient distribution of weight is assisted by the position of our engines, which are located between the axles. The engines are rendered completely accessible by the provision of quickly detachable side plates below the conventional car type bonnets.

The controls are conveniently grouped and the driver has an uninterrupted view all round the machine. When an awning is fitted he is well protected against inclement weather but an enclosed cab is offered as an alternative. The ease of operation and general comfort enable him to give his undivided attention to the rolling of the footpath or carriageway.

**THOMAS GREEN & SON LTD LEEDS LONDON ENGLAND**

# DRX & PRX

**DIESEL & PETROL ROLLERS**



**FRAME** —The main frame is built up of mild steel channels strengthened by cross plates and channels welded in position. Solid steel plates are carried upwards and forwards to connect with the cast-steel steering head. The side frames are secured to a rigid framework. This construction forms a deep chassis of immense strength and permits a low centre of gravity, ensuring pronounced stability.

The engine, gearbox, and main axle bearings are carried on the main frame and their permanent alignment is thus assured. The power unit, reverse clutches and the whole of the transmission are completely accessible.

**SPRING-MOUNTED FORE-CARRIAGE** —The spring-mounted under-slung forecarriage allows the front rolls to conform freely to the contour of the ground without loss of stability. It protects the engine and transmission when the machine is passing over rough surfaces and when it is reversed whilst in motion.

**ROLLS** —The water ballast rolling wheels are of generous proportions. The large diameters are advantageous in that they obviate the tendency of smaller rolls to push the road material ahead. The rolls are of mild steel plate which is exceptionally hard wearing and gives maximum road adhesion, assisting work on gradients and on difficult surfaces.

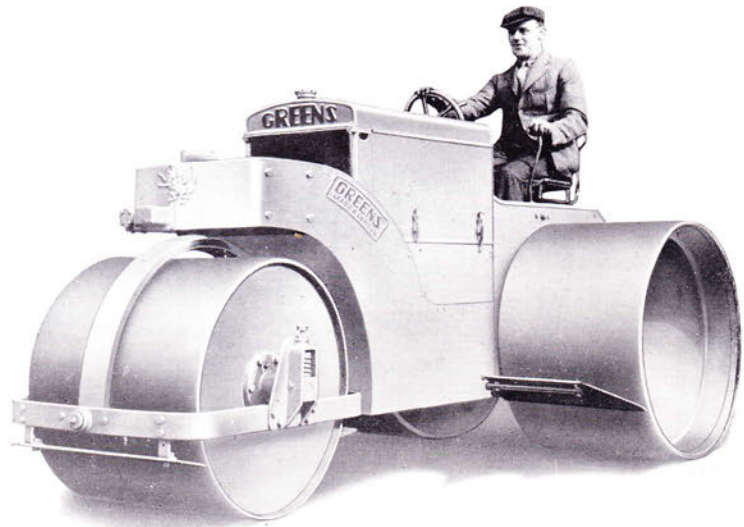
On the smaller machines the rear rims are reversible and interchangeable, as described on the previous page.

Adjustable scrapers are fitted to all rolls.

**STEERING** —The steering is by enclosed worm and segment and is irreversible. The driver's work is facilitated by an unobstructed view all round the machine.

**BRAKES** —Two powerful brakes are fitted, one operated by foot and the other by hand through a screw mechanism. Both have renewable metallic-fabric linings.

The hand brake operates on a brake rim on the driving roll and is, therefore, effective even in the unlikely event of driving pin failure.



**WITH  
WIDE REAR ROLLS  
FOR GRASS WORK**

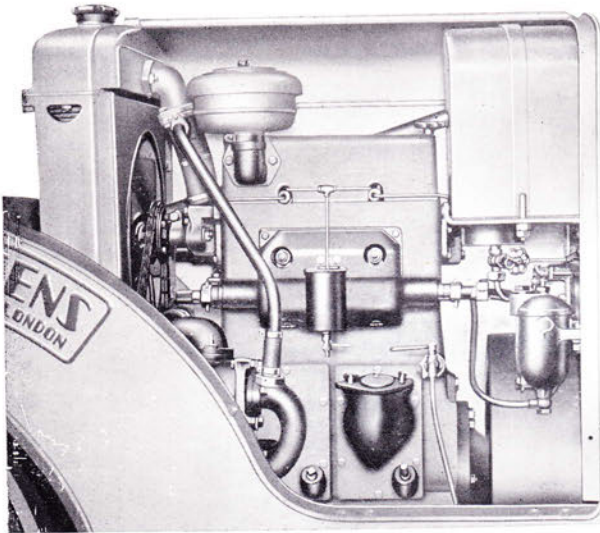
**THOMAS GREEN & SON LTD LEEDS LONDON ENGLAND**





# DRX & PRX

**DIESEL & PETROL ROLLERS**



**ACCESSIBLE ENGINES**

**ENGINES**—The Diesel engine of the "DRX" roller and the petrol engine of the type "PRX" operate on the four-stroke cycle principle and are sufficiently powerful to propel the rollers up any gradient upon which the rolling wheels can obtain a grip.

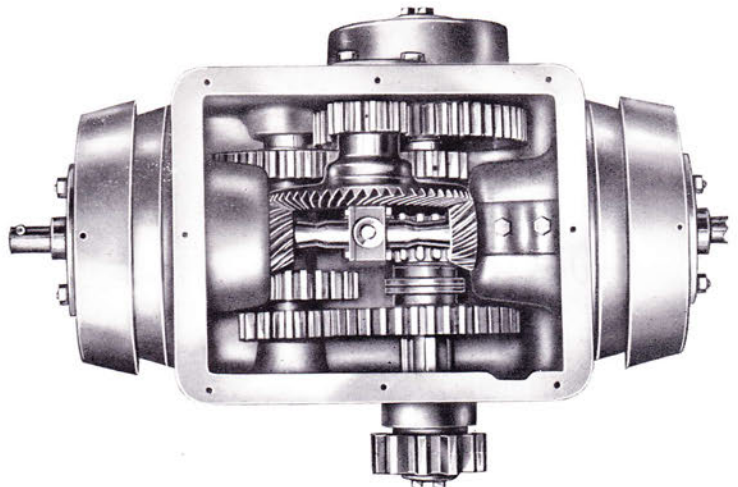
Both types are fitted with efficient filters and are well protected against dust and grit. The working parts are rendered easily accessible by the provision of detachable covers.

These engines have been carefully selected for the work and have a world-wide reputation for reliability and efficiency.

**QUICK REVERSE**—The reversing mechanism operates through the medium of two simple cone clutches, one of which is engaged for each direction of travel. These clutches are controlled by a single lever and the machines can be reversed smoothly and without perceptible pause in all gears.

## **TRANSMISSION**

—All-gear transmission, as fitted by most makers, is employed. It is of the spur and bevel type, all the gears being enclosed and operating in oil. The gearbox is of our own design and manufacture, and provides three speeds in each direction. The gears, including those of the final drive, are machine cut.



**GEARBOX AND REVERSE CLUTCHES**

**THOMAS GREEN & SON LTD LEEDS LONDON ENGLAND**

# DRX & PRX

**DIESEL & PETROL ROLLERS**



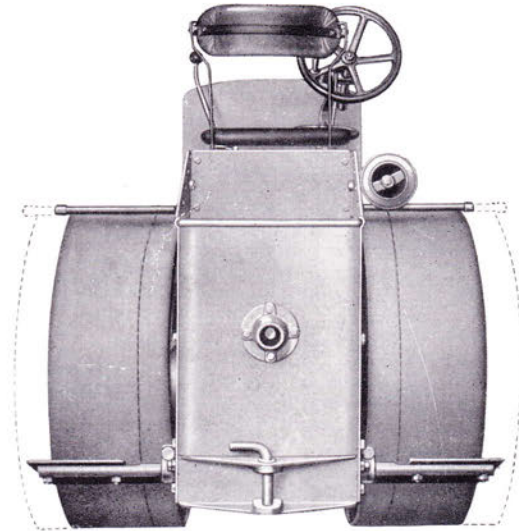
**DIFFERENTIAL**—The bevel type differential gear fitted as standard is of sturdy construction and is located on the rear axle. It is enclosed in a dust-proof oil-retaining steel casing together with the final drive. A simple means whereby the driver can lock the differential when necessary is provided.

Differential gears obviate the rear wheel spin otherwise experienced when rolling round corners. Severe stresses on the rear axles are thus avoided by its provision and considerable wear of the wheel rims is eliminated. Steering is facilitated and damage to the surface of the road or footpath prevented.

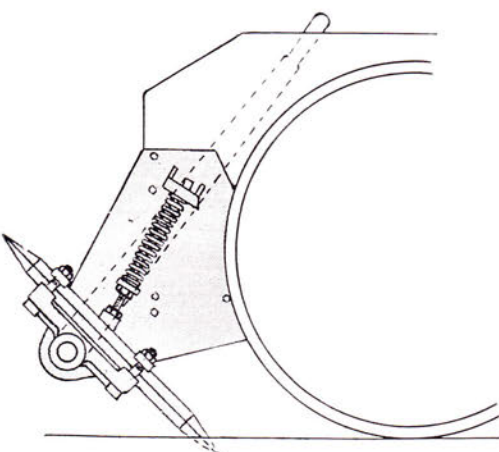
**TESTS**—The rollers are thoroughly tested on the road before despatch. Our test-hill includes a severe gradient with hairpin bends.

**EQUIPMENT**—The following are standard equipment of the "DRX" and "PRX" rollers—

Drawbar at rear      Set of tools in toolbox      Spring seat for driver  
Reversible rear rims on  $2\frac{1}{2}$ /3 tons model



**REVERSIBLE REAR ROLLS**  
( $2\frac{1}{2}$  TONS AND 3 TONS)



**LIGHT SCARIFIER**

**EXTRAS**—Extras include—

- Awning and curtains or cab
- Sprinklers to all rolls, with 30 gallons water tank
- One-tine light scarifier
- Set of lamps
- Set of spare parts
- Interchangeable rear rims (for 6 ft. 0 in. rolling width) for  $2\frac{1}{2}$  tons model
- Offset drawbar for hauling triple mowers

**THOMAS GREEN & SON LTD LEEDS LONDON ENGLAND**





# PRY & PRR

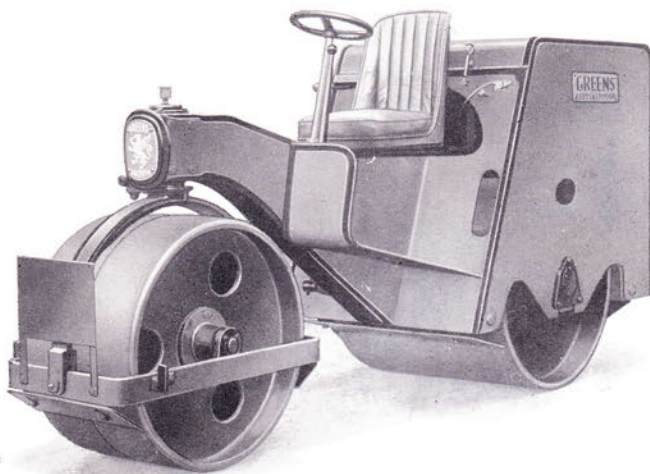
## LIGHT PETROL ROLLERS

The type "PRY" Tandem Petrol Rollers are recommended for rolling footpaths, school playgrounds, hard tennis courts and other surfaces which are required to be particularly free from rolling marks.

~~For some classes of work machines of three-roll construction may be preferred and these rollers can be supplied with two rear rolling wheels instead of the single roll illustrated. They are then designated type "PRR" and have a clear side enabling them to roll close to walls and other obstructions.~~

**WORKING WEIGHTS**—The tandem type "PRY" roller can be water ballasted at the rear and has a working weight of about 35 cwts. unballasted and 41 cwts. ballasted.

~~The three-roll type "PRR" is not arranged for water ballast and weighs about 35 cwts. in working order.~~



**ENGINE**—The power unit is a "Coventry" twin opposed, four-stroke petrol engine, air cooled. The absence of water cooling eliminates risk of frost damage.

**GEARBOX**—The oil-bath gearbox is of our own design and manufacture. It provides two speeds, which are both available in the forward and reverse directions.

The drive from the engine is taken through one of two cone type clutches. The attendant selects a gear and then engages a clutch by moving the control lever in the direction in which he intends to proceed. When the lever is moved in the opposite direction, the first clutch is disengaged and the other takes up the drive, reversing the direction of travel smoothly and without "dwell".

**BRAKES**—There is a powerful foot-operated brake for use when driving and a screw-actuated brake for parking.

**EQUIPMENT**—~~The type "PRR" has a differential gear which can be locked from the driver's seat.~~ Awnings, curtains and water sprinklers can be supplied ~~with both types.~~

**ACCESSIBILITY**—The engine, gearbox with reverse clutches, fuel tank, and sprinkler tank when fitted, are carried on a steel platform below the bonnet and can be instantly exposed for inspection.

**THOMAS GREEN & SON LTD LEEDS LONDON ENGLAND**

# UNIROL

## H A N D M O T O R R O L L E R



The "Unirol" Hand-guided Motor Roller has been produced to meet the requirements of the user whose light rolling work is not sufficiently extensive to warrant the purchase of a machine of the three-roll type.

There are two models, weighing 11 cwts. and 15 cwts. respectively. Prominent features of the design are strength of construction, simplicity of operation and maintenance, and easy accessibility for any running adjustments which may be required from time to time.

**MAIN ROLL**—The main roll is in two sections to facilitate steering, and is built up of mild steel plate, a material which is particularly hard wearing and gives maximum road grip.

**ENGINE**—The petrol engine is a single cylinder unit, operating on the four-stroke cycle principle. It develops  $2\frac{3}{4}$  B.H.P. at its normal working speed, giving a corresponding road speed of 2 miles per hour. Starting is facilitated by a trip type magneto.

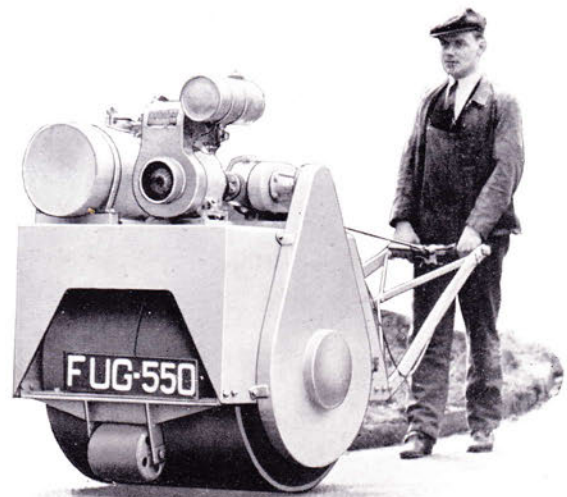
This engine is of ample capacity for the work. It is reliable and efficient and will give long service with the minimum of maintenance charges. Lubrication is automatic and an effective air cleaner is provided.

**REVERSE MECHANISM**—The roller is reversed through the medium of two fabric-lined cone clutches one of which is engaged for each direction of travel by means of a single hand lever mounted in a convenient position for the driver. The roller is reversed smoothly and without gear change or perceptible pause.

**DIFFERENTIAL GEAR**—Easy turning, without damage to the surface being worked, is ensured by the provision of a differential gear, which is totally enclosed and runs in oil.

**BRAKE**—A powerful brake of the internal expanding fabric-lined shoe type is fitted, and is powerful enough to hold the machine on any reasonable gradient.

**TESTS**—The rollers are thoroughly tested on the road before despatch. Our test-hill includes a severe gradient.

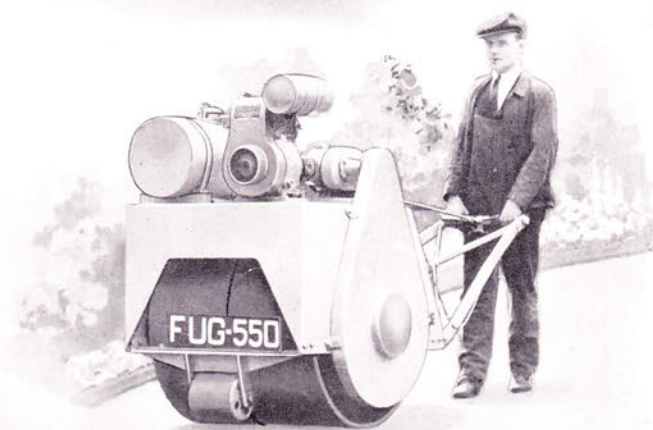
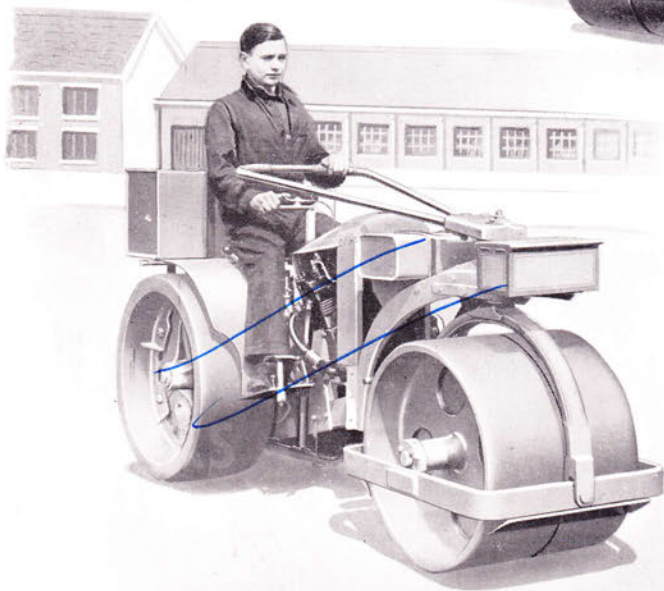
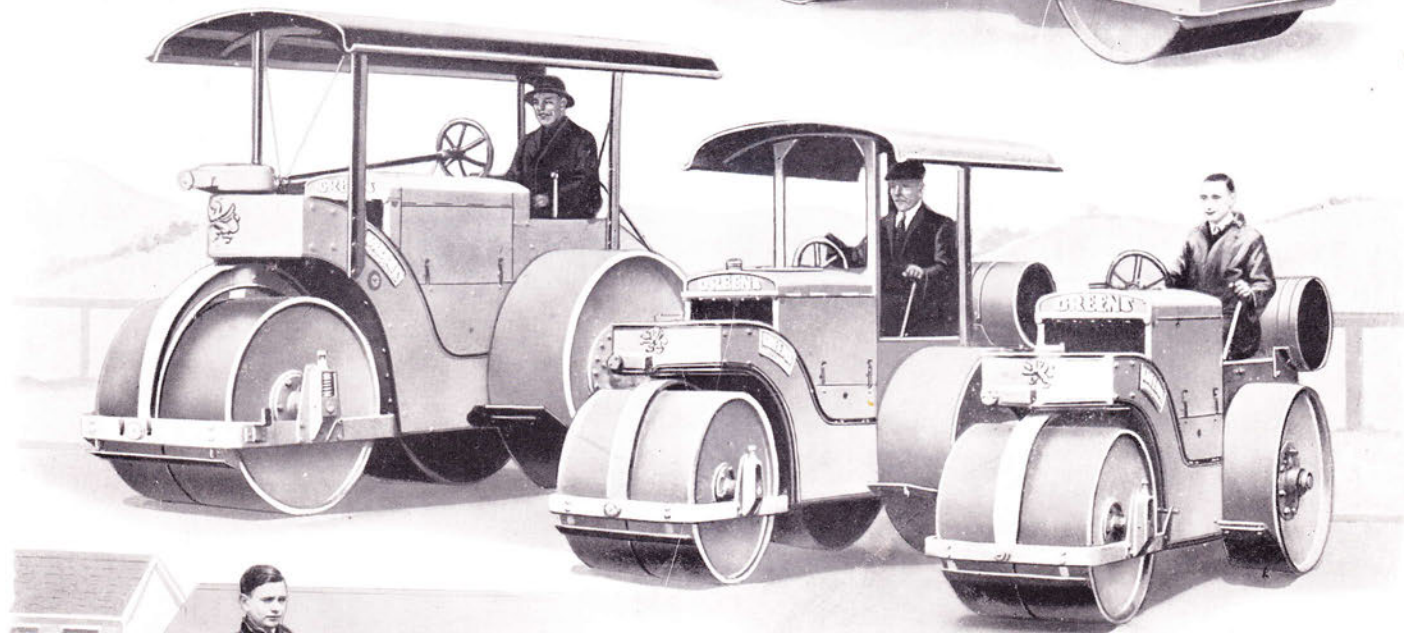
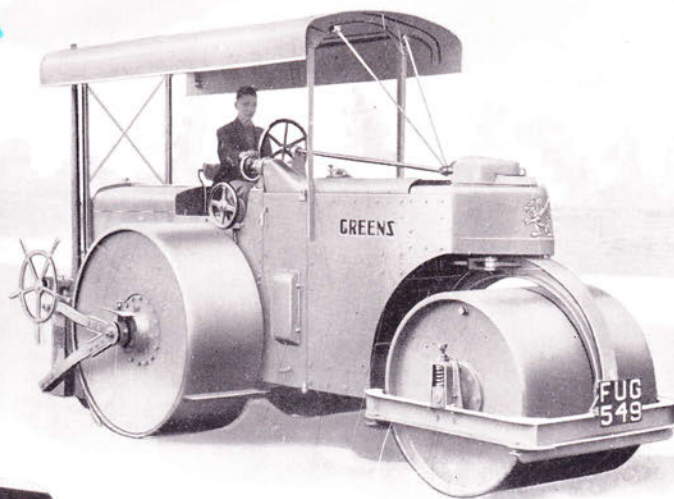


**THOMAS GREEN & SON LTD LEEDS LONDON ENGLAND**



# GREENS

DIESEL & PETROL  
ROLLERS



**THOMAS GREEN & SON LTD LEEDS & LONDON**

Telephone  
20357 (3 lines)

Telex  
London Waterline 450

SMITHFIELD IRONWORKS LEEDS 2

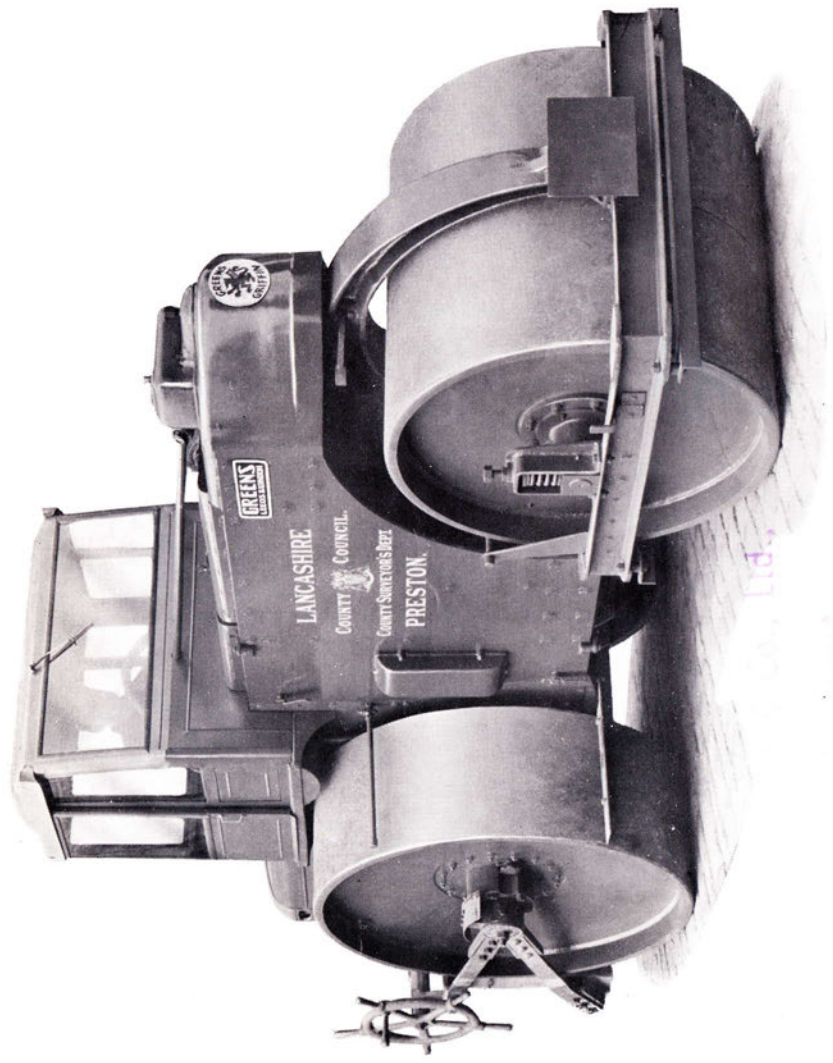
and

NEW SURREY WORKS SOUTHWARK STREET LONDON SE1

Telex  
SMITHFIELD LEEDS

Telex  
NEW SURREY WORKS LONDON

TYPE D.R.M. THREE WHEEL VARIABLE WEIGHT DISSEL ROLLER.



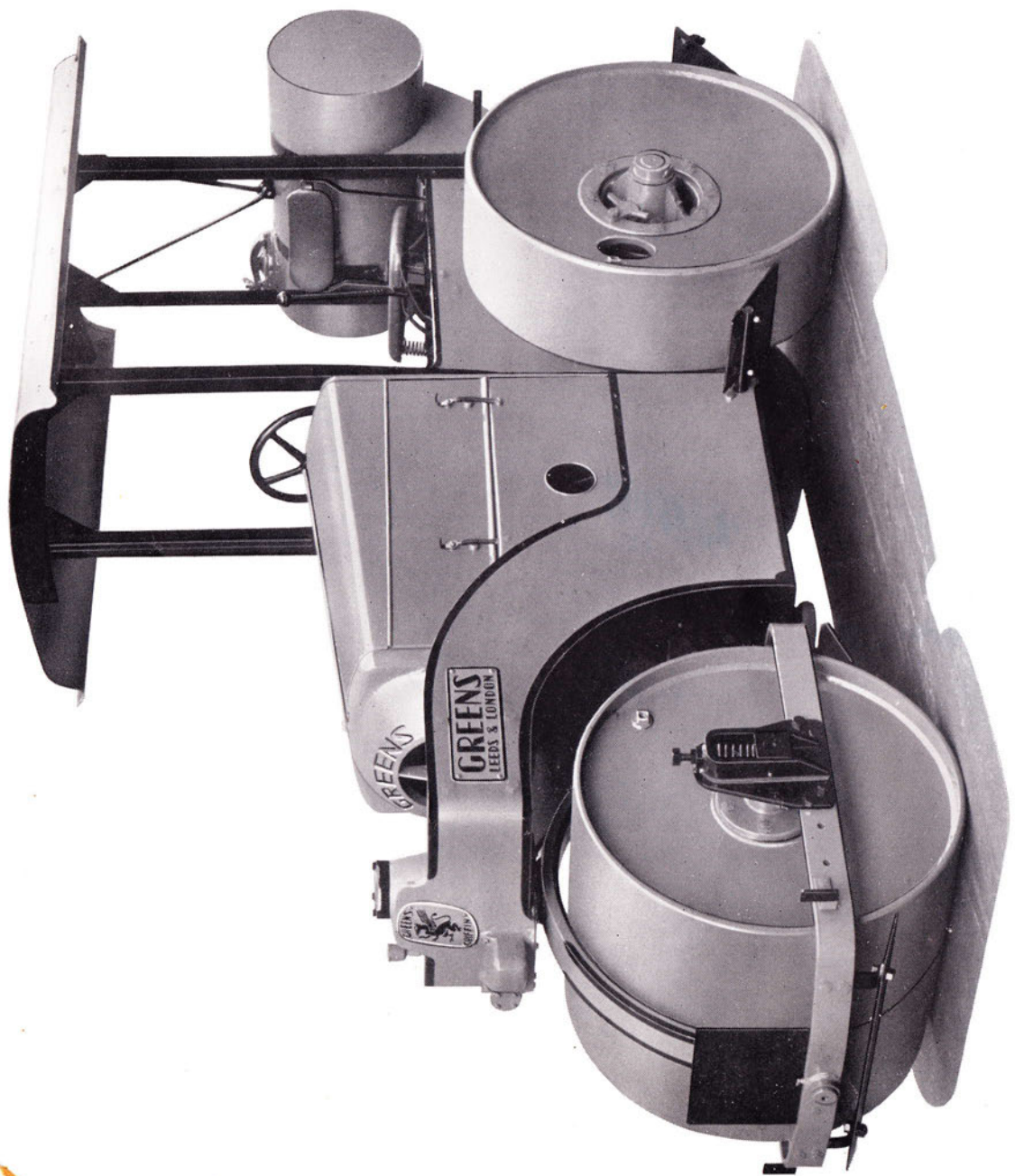
Green's Ltd.,

100, High Street,

PRESTON.



TYPE. P./D.R.X. PETROL AND DIESEL ROLLER.



London Address  
New Surrey Works Southwark Street  
London SE1

Telephone Waterloo 4301  
Private Branch Exchange

Telegrams SURREY WORKS LONDON



CONTRACTORS TO THE  
ADMIRALTY AIR MINISTRY  
WAR OFFICE AND CROWN  
AGENTS FOR THE COLONIES

Telephone Leeds 20357 (3 lines)  
Telegrams SMITHFIELD LEEDS 2

ABC (5th Edition) Bentlys  
and Engineering Codes used

ESTABLISHED 1835

# THOMAS GREEN & SON LTD LEEDS 2 ENGLAND

## SPECIFICATION OF GREEN'S PETROL ROLLER TYPE PRX

To Messrs. McCreath, Taylor & Co. Ltd.,  
15 Fairfield Street,  
Bolton.

25th October, 1956.

APPROXIMATELY 2½ TONS WITHOUT EXTRAS OR 2½ TONS IF FITTED WITH  
AWNING AND SPRINKLERS. THESE WEIGHTS CAN BE INCREASED BY  
ACCOMMODATING 6 CWT'S OF WATER BALLAST IN THE FRONT AND REAR ROLLS.

### Weight

Front Rolls	2' 9" dia. × 2' 4" wide (in halves)	= 838 × 711 mm.
Driving Rolls	3' 3" dia. × 12½" wide	= 990 × 318 mm.
Rolling Width	3' 7" or 4' 2"*	= 1092 mm. or 1270 mm.
Overlap	5" each side, with 3' 7" Rolling Width	= 127 mm.
Wheel Base	6' 8"	= 2032 mm.
Ground Clearance	10½"	= 267 mm.
Speeds	1.07. 2.15. 4.62. <del>1.16. 2.28 and 4.65</del> m.p.h.	1.72. 3.36. 7.43. <del>1.86. 3.72 and 7.4</del> k/h.
Overall Height	7' 5½" with awning	= 2273 mm.
„ Width	3' 7" or 4' 2"*	= 1092 mm. or 1270 mm.
„ Length	11' 7"	= 3531 mm.
Engine	"PETTER" TYPE P.A.2.W. VERTICAL, TWO CYLINDER, WATER COOLED PETROL ENGINE, 3.35" BORE X 3.25" STROKE, DEVELOPING 9/10 B.H.P. AT 1500 R.P.M.	



London Address  
New Surrey Works Southwark Street  
London SE1  
Telephone Waterloo 4301  
Private Branch Exchange  
Telegrams SURREY WORKS LONDON



CONTRACTORS TO THE  
ADMIRALTY AIR MINISTRY  
WAR OFFICE AND CROWN  
AGENTS FOR THE COLONIES

Telephone Leeds 20357 (3 lines)  
Telegrams SMITHFIELD LEEDS 2  
ABC (5th Edition) Bentleys  
and Engineering Codes used  
**ESTABLISHED 1835**

# THOMAS GREEN & SON LTD LEEDS 2 ENGLAND

## SPECIFICATION OF GREEN'S PETROL ROLLER TYPE PRX

To Messrs. McCreath, Taylor & Co. Ltd.,  
15 Fairfield Street,  
Bolton.

25th October, 1956.

Weight	IN WORKING ORDER APPROXIMATELY 3 TONS, THIS WEIGHT CAN BE REDUCED IF DESIRED BY DRAINING APPROXIMATELY HALF A TON OF WATER BALLAST FROM THE FRONT AND REAR ROLLS.	
Front Rolls	2' 9" dia. × 2' 4" wide (in halves)	= 838 × 711 mm.
Driving Rolls	3' 3" dia. × 12½" wide	= 990 × 318 mm.
Rolling Width	3' 7" or 4' 2"*	= 1092 mm. or 1270 mm.
Overlap	5" each side, with 3' 7" Rolling Width	= 127 mm.
Wheel Base	6' 8"	= 2032 mm.
Ground Clearance	10½"	= 267 mm.
Speeds	1.07. 2.15. 4.62. <del>1.16. 2.23. 4.65</del> m.p.h.	1.72. 3.46. 7.43. <del>1.86. 3.71. 7.41</del> k/h.
Overall Height	7' 5½" with awning	= 2273 mm.
„ Width	3' 7" or 4' 2"*	= 1092 mm. or 1270 mm.
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Engine	"PETER" TYPE P.A. 2.W. VERTICAL, TWO CYLINDER, WATER COOLED PETROL ENGINE. 3.35" BORE X 3.25" STROKE, DEVELOPING 9/10 B.H.P. AT 1500 R.P.M.	

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A B C (5th Edition) Bentleys  
and Engineering Codes used

ESTABLISHED 1835

# THOMAS GREEN & SON LTD LEEDS 2 ENGLAND

## SPECIFICATION OF GREEN'S DIESEL ROLLER TYPE DRX

To Messrs. McCreath, Taylor & Co. Ltd.,  
15 Fairfield Street,  
Bolton.

25th October, 1956.

	APPROXIMATELY 2 $\frac{1}{4}$ TONS WITHOUT EXTRAS OR 2 $\frac{1}{2}$ TONS IF FITTED WITH AWNING AND SPRINKLERS. THESE WEIGHTS CAN BE INCREASED BY ACCOMMODATING 6 CWT'S OF WATER BALLAST IN THE FRONT AND REAR ROLLS.	
Weight		
Front Rolls	2' 9" dia. × 2' 4" wide (in halves)	= 838 × 711 mm.
Driving Rolls	3' 3" dia. × 12 $\frac{1}{2}$ " wide	= 990 × 317 mm.
Rolling Width	3' 7" or 4' 2"*	= 1092 mm. or 1270 mm.
Overlap	5" each side, with 3' 7" Rolling Width	= 127 mm.
Wheel Base	6' 8"	= 2032 mm.
Ground Clearance	10 $\frac{1}{2}$ "	= 267 mm.
Speeds	1.07, 2.15 and 4.62 m.p.h.	= 1.72, 3.46 and 7.43 k/h.
Overall Height	7' 5 $\frac{1}{2}$ "	= 2283 mm.
„ Width	3' 7" or 4' 2"*	= 1092 mm. or 1270 mm.
„ Length	11' 7"	= 3530 mm.
Engine	"PETTER" TYPE A.V.A.2. VERTICAL, TWO CYLINDER, FOUR STROKE CYCLE AIR COOLED DIESEL ENGINE, 80 m.m. BORE X 110 m.m. STROKE, DEVELOP- ING 10 B.H.P. AT 1500 R.P.M.	



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London SE1

Telephone Waterloo 4301  
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## SPECIFICATION OF GREEN'S DIESEL ROLLER TYPE DRX

To Messrs. McCreath, Taylor & Co. Ltd.,  
15 Fairfield Street,  
Bolton.

25th October, 1956.

Weight	IN WORKING ORDER APPROXIMATELY 3 TONS. THIS WEIGHT CAN BE REDUCED IF DESIRED BY DRAINING APPROXIMATELY HALF A TON OF WATER BALLAST FROM THE FRONT AND REAR ROLLS.	
Front Rolls	2' 9" dia. × 2' 4" wide (in halves)	= 838 × 711 mm.
Driving Rolls	3' 3" dia. × 12½" wide	= 990 × 317 mm.
Rolling Width	3' 7" or 4' 2"*	= 1092 mm. or 1270 mm.
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Overall Height	7' 5½"	= 2283 mm.
„ Width	3' 7" or 4' 2"*	= 1092 mm. or 1270 mm.
„ Length	11' 7"	= 3530 mm.
Engine	"PETTER" TYPE A.V.2. VERTICAL, TWO CYLINDER, WATER COOLED DIESEL ENGINE, 80 m.m. BORE X 110 m.m. STROKE, DEVELOPING 10 B.H.P. AT ITS GOVERNED SPEED OF 1500 R.P.M.	

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London SE1

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## LEEDS 2 ENGLAND

To Messrs. McCreath, Taylor & Co. Ltd.,  
15 Fairfield Street,  
Bolton.

25th October, 1956.

### TENDER

2 $\frac{1}{2}$ /2 $\frac{1}{2}$  Ton P.R.X.  
Petrol Roller

ONE GREENS "GRIFFIN" TYPE P.R.X. THREE WHEEL VARIABLE WEIGHT PETROL ROLLER, generally in accordance with the attached Specification No.1003A and Description No.1006B and fitted as standard with:-

OIL BATH TYPE THREE SPEED GEARBOX.  
QUICK REVERSE BY DOUBLE CLUTCHES.  
COMPLETELY ENCLOSED ALL GEAR FINAL DRIVE.  
COMPLETELY ENCLOSED BEVEL TYPE DIFFERENTIAL.  
TWO POWERFUL BRAKES.  
SPRING MOUNTED UNDERSLUNG FORECARRIAGE.  
LARGE DIAMETER ROLLS OF HARD WEARING MILD  
STEEL PLATE.  
ADJUSTABLE SCRAPERS TO ALL ROLLS.  
REVERSIBLE REAR RIMS GIVING TWO ROLLING  
WIDTHS.  
IRREVERSIBLE STEERING BY WORM & SEGMENT.  
SET OF TOOLS.

PRICE.

Painted, lettered and delivered to your instructions and driving tuition by our man if desired..... £1026. 0. 0.  
(One Thousand & Twenty-Six Pounds).

Alternatively:-

2 $\frac{1}{2}$ /2 $\frac{1}{2}$  Ton D.R.X.  
Diesel Roller

ONE GREENS "GRIFFIN" TYPE D.R.X. THREE WHEEL VARIABLE WEIGHT DIESEL ROLLER, detailed as above but generally in accordance with Specification No.1001,

PRICE.

Painted, lettered and delivered to your instructions and driving tuition by our man if desired.....£1187. 0. 0.  
(One Thousand, One Hundred & Eighty-Seven Pounds).

Alternatively:-

2 $\frac{1}{2}$ /3 Ton P.R.X.  
Petrol Roller

ONE GREENS "GRIFFIN" TYPE P.R.X. THREE WHEEL VARIABLE WEIGHT PETROL ROLLER, detailed as above but generally in accordance with Specification No.1003A (1).

PRICE.

Painted, lettered and delivered to your instructions and driving tuition by our man if desired..... £1098. 0. 0.  
(One Thousand & Ninety-Eight Pounds).

Alternatively:-

2 $\frac{1}{2}$ /3 Ton D.R.X.  
Diesel Roller

ONE GREENS "GRIFFIN" TYPE D.R.X. THREE WHEEL VARIABLE WEIGHT DIESEL ROLLER, detailed as above but generally in accordance with Specification No.1001 (1).



PRICE.

Painted, lettered and delivered to your instructions and driving tuition by our man if desired..... £1257. 0. 0.  
(One Thousand, Two Hundred & Fifty-Seven Pounds).

EXTRAS IF DESIRED. (For Each Roller).

Awning with Curtains..... £ 44. 0. 0.  
OR Enclosed Driver's Cab..... £ 68. 0. 0.  
Water Tank and Sprinklers..... £ 44. 0. 0.  
Electric Starting..... £ 67. 0. 0.  
Electric Lamps (Available only if Electric Starting is fitted)..... £ 28. 0. 0.  
OR Set of Oil Lamps..... £ 17. 0. 0.

The prices of the above-mentioned extras are for fittings supplied with a roller.

TERMS OF PAYMENT.

Net Cash.

DESPATCH EX WORKS.

At the time of tendering we can despatch the rollers offered in approximately Two to Three weeks from receipt of an order.

CONDITIONS OF SALE.

As per the attached sheet.

The prices quoted are firm for acceptance within three months from the above-mentioned date.

GUARANTEED FOR TWELVE MONTHS

-

BRITISH MANUFACTURE THROUGHOUT.

THOMAS GREEN & SON LIMITED.,

*G. J. Kaye*  
SALES DEPARTMENT,  
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# THOMAS GREEN & SON LTD

LEEDS 2 ENGLAND

## DESCRIPTION OF GREEN'S PETROL ROLLER TYPE PRX

### General

The P.R.X. Roller is of the three-roll type and is of British manufacture throughout. The range of weights is from  $2\frac{1}{2}$  to  $4\frac{1}{2}$  tons in working order without extras. The weight of each model can be varied by water ballasting the front and rear rolls.

### Frame

The main frame is built up from mild steel channels strengthened by cross plates and channels welded in position.

This channel frame carries engine, gearbox, main axle bearings, etc. and their permanent alignment is thus assured.

Solid steel plates are carried upward and forward to connect with the main steering head, which is constructed of cast-steel. The side frames are secured to a rigid angle framework to ensure a continuous deep chassis of immense strength.

The chassis is so constructed that the power unit, clutches and the whole of the transmission are completely accessible for inspection or overhaul.

### Transmission

The transmission is of the spur and bevel type and all gears are totally enclosed and operate in oil.

Power is transmitted from the engine to the gearbox through a propeller shaft with a flexible coupling at each end.

Two large diameter cone clutches are provided to give a rapid and shock-free reverse without the necessity of disengaging gears.

The clutches are fitted with renewable linings and are readily accessible for inspection or service.

The gearbox provides three speeds in each direction and all the gears, which are of high tensile steel, have machine-cut teeth.

The shafts are also of high tensile steel carried, where necessary, in ball or roller bearings.



The sliding gears are mounted on deep splined shafts, the splines of which are formed integral with the spindles.

The transmission is by gears throughout and no chains, with their attendant adjusting devices, are employed.

The final drive gearing also is machine-cut, and, together with the bevel type differential, is completely enclosed in a dustproof, oil-retaining, steel casing.

A simple means whereby the driver can lock the differential gear is provided.

### **Steering**

The steering gear is of the irreversible worm and segment pattern, with the gearing completely enclosed in a dustproof case.

### **Forecarriage**

The spring-mounted underslung forecarriage is of advanced design and is constructed of steel throughout.

The fork is of great strength and rigidity, and is pivotally carried by the vertical pivot pin in large diameter renewable bushes which, in turn, are carried in the head casting.

The construction permits of a wide steering lock and ensures that the front roll maintains full-width contact with the road surface under all working conditions.

### **Brakes**

Two powerful brakes are provided, one operated by foot and one by hand-wheel. The foot brake is of the internal expanding type and works in a large drum secured to the final drive shaft and the hand brake is connected, through a screw mechanism, to a contracting band working on a brake rim on the driving roll.

The effectiveness of the hand brake is not dependent upon the driving pin. This brake will hold the roller even in the event of driving pin failure.

Both brakes have renewable metallic-fabric linings.

### **Scrapers**

Adjustable scrapers are fitted to all rolls.

### **Fuel Tank**

The fuel tank is of steel sheet and is of ample capacity.

### **Lubrication**

Grease-gun lubrication is employed throughout the roller, apart from engine and transmission, where lubrication is automatic.

### **Front Rolls**

The front rolls are of the all-steel fabricated pattern and will accommodate water ballast. The wrappers are constructed of hard-wearing mild steel plate with steel plate ends welded in. The hubs are of cast-iron, and are removable.

### **Driving Rolls**

The driving rolls are also of all-steel construction and generally similar to that of the front rolls.

The hubs are demountable and have renewable cast-iron bushes fitted.

### **Awning**

A sheet steel awning can be supplied as an extra.

### **Equipment**

The equipment includes a built-in rear drawbar and a set of tools in a lock-up tool box.

# THOMAS GREEN & SON LTD



ENGINEERS  
**LEEDS & LONDON**



ESTABLISHED 1835

## CONDITIONS OF TENDER

### GENERAL

Quotations are submitted and orders accepted by us subject to approval of the customer's credit, and the following provisions shall apply in all cases unless otherwise agreed by us in writing.

### ILLUSTRATIONS etc

Photographs, illustrations, drawings, and publicity matter shall be understood to represent, generally, the goods specified therein, but shall not be binding in detail.

Whilst the dimensions and weights quoted in our specifications are reasonably accurate, they shall be regarded as approximate.

We reserve the right to introduce improvements in design without previous reference to our customers.

### DELIVERY

Whilst we undertake to do our best to execute every order within the agreed delivery period, the customer shall not hold us responsible for any direct or indirect losses which may be due to delay in completing the order owing to faulty materials, strikes, lockouts, non-delivery of material or parts by other manufacturers, or any other unforeseen circumstances.

### PAYMENTS

The customer shall adhere strictly to the terms of payment stipulated in the quotation, and any alleged defects in the goods supplied, or other grievance, shall not influence the terms of payment, but shall be the subject of separate negotiations.

### GUARANTEE

In lieu of any warranty implied by law, we guarantee that the materials used in the manufacture of our machinery shall be of suitable quality of their respective kinds, and that should any defect occur within twelve months from date of despatch, and the part be returned immediately to our Works, carriage paid, we will repair it or replace it, at our option, free of charge, and deliver it to any Station in the United Kingdom, or F.O.B. English Port, provided we are satisfied that the defect is due to faulty material or workmanship.

This guarantee does not cover wear and tear, or damage due to improper adjustment, misuse, neglect, or accident, nor does it apply to engines or components of any make other than our own, but we will pass on to the customer the benefits of any Makers' guarantees covering such engines or components.

Our liabilities shall not exceed those stated above, and shall not include any consequential loss, damage, or responsibility