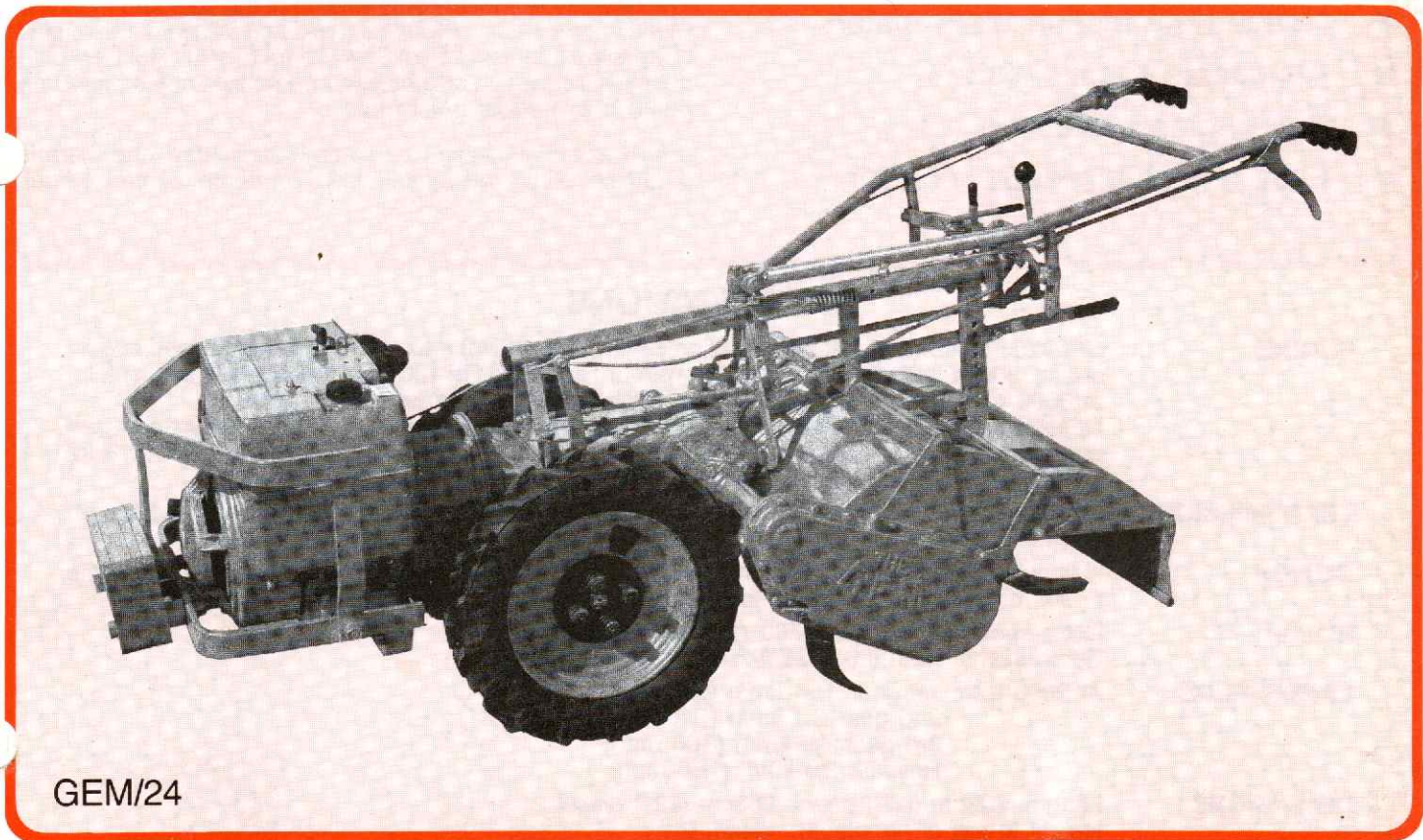


# **HOWARD** **GEM**



GEM/24

**for COUNCILS  
HIRE SHOPS  
NURSERYMEN  
LANDSCAPERS  
PRIVATE GARDENERS  
MARKET GARDENERS**

# HOWARD GEM

## Pedestrian Controlled Rotary Cultivator

- Choice of petrol or diesel engines
- 2 working widths
- Standard and super version
- Tough durable construction
- 3 forward speeds and 1 reverse
- Fully adjustable handlebars
- Heavy duty friction plate clutch
- Adjustable rotor clutch
- Full engine protection
- Fully adjustable depth control

In either standard 51cm (20") or 61 cm (24") versions with petrol or diesel engines, the **GEM** series are designed to go anywhere.

Councils/Authorities and Landscape Contractors choose **HOWARD GEM** Cultivators for their performance in the rough arduous conditions they meet as a matter of course. The machine's reliability is essential to the Hire Shop Proprietor as well as the Nurseryman who depends on the machine for fast efficient soil preparations and ground maintenance between crops.

The **GEM/24** is a heavy duty version of the standard machine with a thicker sheet metal rotor shield and tailboard, the engine powers are increased from 8Kw (12Hp) to 11Kw (16Hp) on the petrol version which also boasts a complete engine protection guard and a super quiet muffler.

A furrower is available for use on both models and there is a choice of an adjustable skid or depth control wheel.

### SPECIFICATIONS

<b>ENGINE</b>	<b>GEM/20</b> Kohler M12T 4-stroke petrol producing 8Kw (12Hp) max. at 3600 rpm governed engine speed. 30Nm (22lb-ft) torque at 2200 rpm or Rugggerini RF 120 Diesel producing 8Kw (12Hp) at 3000 rpm governed engine speed. 30NM (22.7lb-ft) torque at 2200 rpm. <b>GEM/24</b> Kohler M16T 4-stroke petrol producing 11Kw (16Hp) max. at 3600 rpm governed engine speed. 38Nm (28lb-ft) torque at 2600 rpm or Rugggerini RF 120 Diesel producing 8Kw (12Hp) at 3000 rpm governed engine speed. 30Nm (22.7lb-ft) torque at 2200 rpm.
<b>TRANSMISSION</b>	3 forward speeds and reverse with safety interlock. Full differential with automatic locking on engaging the rotor.
<b>CLUTCH</b>	Heavy Duty Friction Plate Clutch protects the engine and gearbox. A rotor clutch (adjustable to suit differing conditions is situated on the drive end of the rotor).
<b>ROTOR</b>	Rotor speed 199 rpm at 2800 rpm engine speed. Rotor widths 51cm (20") <b>GEM/20</b> 61cm (24") <b>GEM/24</b>
<b>LANDSPEEDS</b>	At 2800 rpm: 1st gear 1.54 km/h (0.96 mph) 2nd gear 2.3 km/h (1.46 mph) 3rd gear 4.9 km/h (3.05 mph) Reverse 2.9 km/h (1.85 mph)
<b>DIMENSIONS</b>	Length: 203cm (80") petrol: 208cm (82") diesel: Height to top of handlebar: 104cm (41") Width: 63cm (25") — 51cm (20") rotor. 74cm (29") — 61cm (24") rotor.
<b>WEIGHT</b>	<b>GEM/20</b> — Kohler engine 292kg (644lb) <b>GEM/24</b> — Kohler engine 312kg (688lb) <b>GEM/20</b> — Rugggerini engine 263kg (580lb) · <b>GEM/24</b> — Rugggerini engine 305kg (672lb)

\*Incident only

Howard Australia Pty Ltd and Howard Rotavator Co New Zealand reserve the right to amend specifications without notice.

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# GEM

This unit has proven itself over the years to be the most suitable hand held rotary hoe for market gardeners, councils, nurserymen, contractors, hire shops, and landscapers. Ruggedly constructed and reliable enough to withstand the most brutal use.

**Models** GEM/20, GEM/24

<b>Engine</b>	GEM/20 or	Kohler M12T 4-stroke petrol producing 8kw (12hp) at 3600 rpm. Ruggerini RF120 diesel producing 8kw (12hp) at 3000 rpm.
	GEM/24 or	Kohler M16T 4-stroke petrol producing 11kw (16hp) at 3600 rpm Ruggerini RF120 diesel producing 8kw (12hp) at 3000 rpm.

**Clutch** Heavy duty dry friction plate.  
Note: The final drive to the rotor is also clutched to protect the gearbox and rotor drive.

**Transmission** 3 forward speeds and 1 reverse with safety interlock on reverse. (The Safety interlock acts as a 'dead mans switch' as it requires a continuously hand applied force against the clutch to maintain operation in reverse gear, thus eliminating the possibility of Rotavating back onto the operator's feet.) Wheel differential is locked automatically when rotor drive is engaged.

<b>Speeds</b>	1st Gear	2nd Gear	3rd Gear	Reverse
	1.54 km/h (0.96 mph)	2.30 km/h (1.46 mph)	4.90 km/h (3.05 mph)	2.90 km/h (1.85 mph)

Ground speeds at 2800 motor rpm;

Note: Wheels clutched to allow for limited slip when rotavating.

**Tyres** 4.00 x 12 Ag tread.

<b>Rotor</b>		Gem/20	Gem/24
	Width	51cm (20")	61cm (24")

Rotor speed at 2800 engine rpm - 199 rpm. Depth of cut 23cm (11").

**Depth Control** Easily adjusted positive depth control skid at rear of rotor.

<b>Dimensions</b>		Width	Height	Length	Weight Petrol	Weight Diesel
	GEM/20	63cm	104cm	203cm	292kg	263kg
	GEM/24	74cm	104cm	203cm	312kg	305kg

Length for petrol models given in table. Diesel models length - 208cm.

## Features

- Well balanced machine requiring minimum control effort even in the hardest conditions.
- Slow rotor speed enables the cultivation of previously unworked soils.
- Easily adjusted handle bar for comfortable working height and offset.
- Recoil rope or crank handle engine start.
- Solid rod clutch and gear controls which do not have the problems that wire cables can.
- Choice of petrol or diesel engines and 2 working widths.