



ROTAVATOR

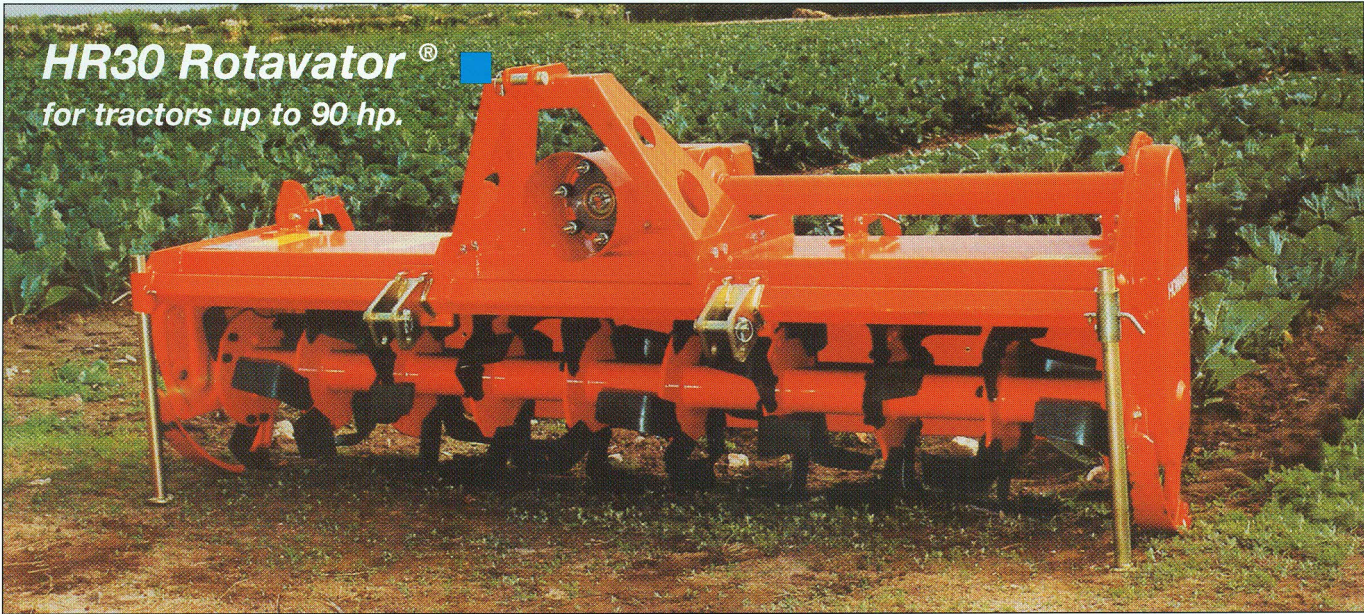
HR 30 - HR 35 - HR 40 - HR 50 - HR 60

Rotavator

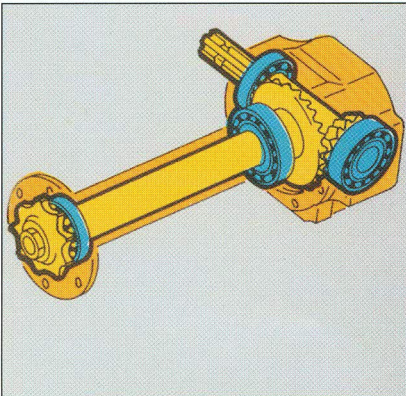


HR30 Rotavator®

for tractors up to 90 hp.



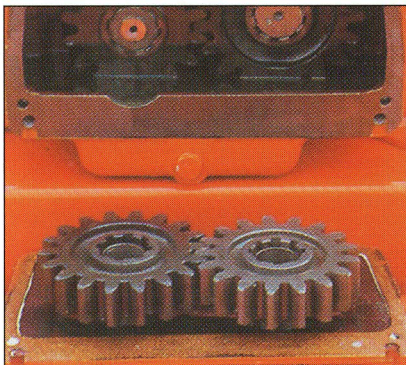
Robust transmission



The transmission on all Howard machines, particularly the gearbox and side drive, are designed to withstand extreme demands and provide long term reliability. The robustness follows the true tradition of the Rotavator manufacturing reputation.

Selectatilt gearbox

This gearbox offers as standard a choice of 4 speeds. The simple pick off gear system provides a



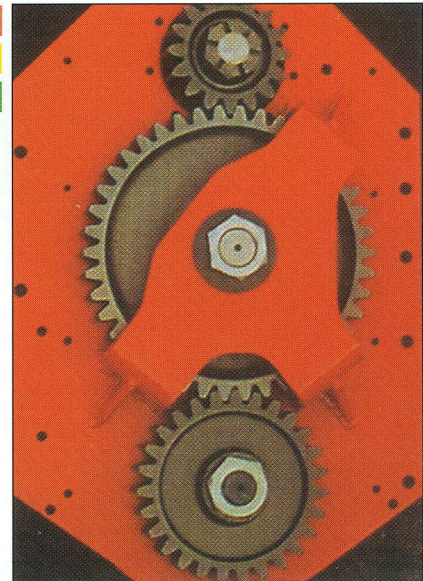
progressive range of rotor speeds enabling the Rotavator to be correctly set for the required standard of work. Additional gears, for very low or very high rotor speeds are available as an option thereby providing the selectatilt gearbox with a wide range of speeds. Moreover its reliability is well known to all users of Rotavators.

Lever change gearbox

The lever change gearbox offers 3 speeds as standard and may be set up on HR40 machines for 540 or 1000 r.p.m./PTO by simply reversing the rear gears. In either case the range of rotor speeds are the same. Additional rear gears are available as an option to provide a wide range of rotor speeds.



Gear Side Drive



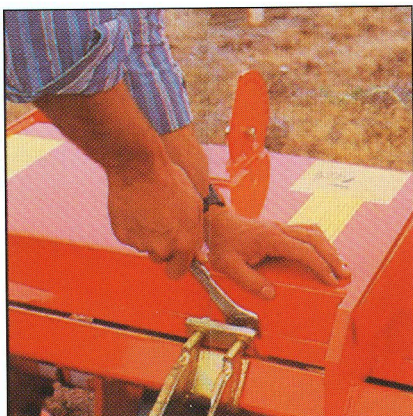
Gear side drives are for the more demanding cultivation applications, where higher horse power tractors are used. The gears, shafts and bearings are of heavy duty design as is the special "Y" idler gear support bracket which guarantees perfect alignment. The HR50 has two gear side drives and the rotor is driven from both ends: this provides long term reliability even when used in the most arduous of conditions.

HR35 Rotavator[®]

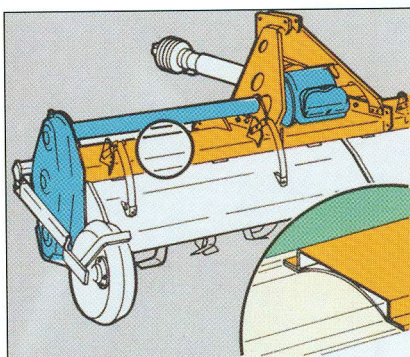
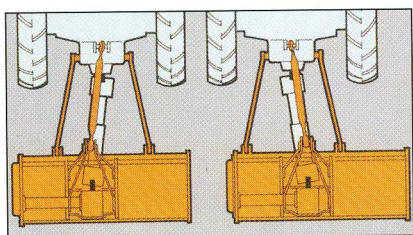
for tractors up to 105 hp.



Offset linkage



All models up to 1.80 m (70") may be operated centrally mounted or offset to the right hand side by simply repositioning the sliding clevis brackets. Offsetting enables the Rotavator to work close to the border line and even with the narrower models the right tractor wheel mark is taken out.

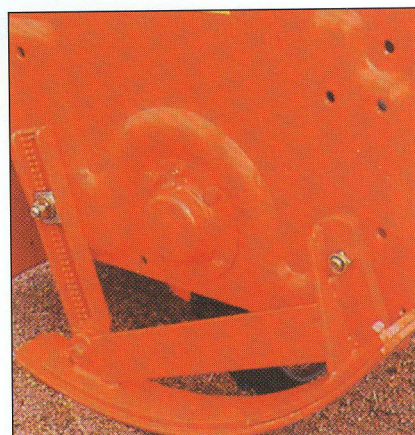


Topmast independent of the transmission

The linkage points and topmast are mounted on the Rotavator frame, not on the gearbox or the transmission assembly. Any stress which may occur in difficult cultivation conditions are therefore isolated from the transmission system. The double skin hull is fully welded and particularly rigid due to its design and the heavy gauge material used in its construction. The inner shield is radiused and absorbs any damage which may occur from stones and thereby leaving the upper visible surface free from dents.

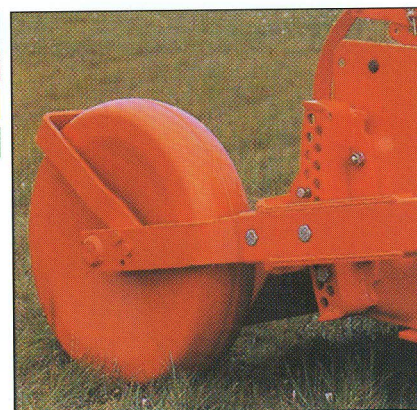
Skids

The working depth down to 25 cm (10") can be controlled by 2 adjustable side skids. The skids are supplied with a wearing sole which can be replaced and protects the skid itself.



Side wheels

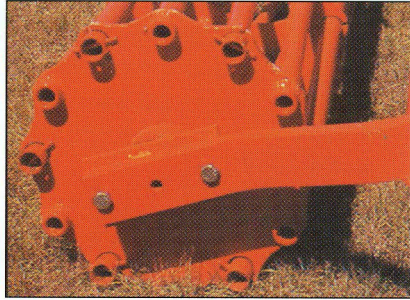
The side depth control wheels are recommended for the wider, heavier models. A multistop system is used ensuring fast depth control adjustments which are easily checked for identical setting on either wheel. The wheels are positioned inside the arms, thereby reducing the over-all width.





HR40 Rotavator[®]
for tractors up to 130 hp.

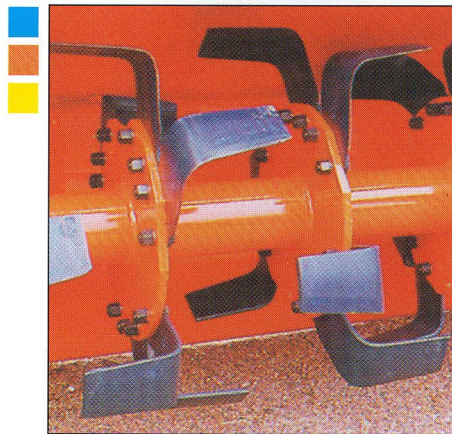
Rollers option extra



Rotavators from 2.05 m (80") can be equipped with crumble roller or tooth packer roller to ensure working depth, levelling and consolidation of the seedbed.

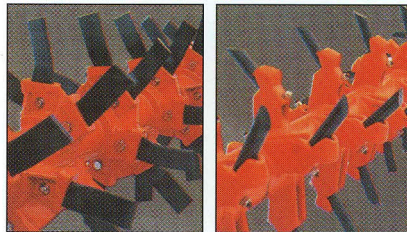
Rotavator rotor

The Rotavator rotor may be fitted with the 90° "L" blades or the "C" shaped speed blade. The "L" blade is a versatile blade suiting all kinds of applications. The speed blades which are less demanding in terms of horse power are suitable for sticky soil



types and for chopping and incorporating crop residue. The large diameter rotor enables deep cultivation, down to 25 cm (10") according to conditions.

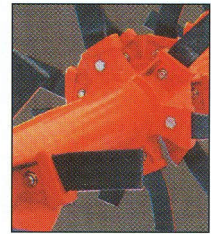
"Spike" rotors Rotalabour and Rotapointe



Most models may be fitted with a Rotalabour or alternatively a Rotapointe rotor. These rotors are suited for primary cultivation but perform particularly well in secondary tillage seed bed preparation, either deep for potatoes or shallow for cereals.

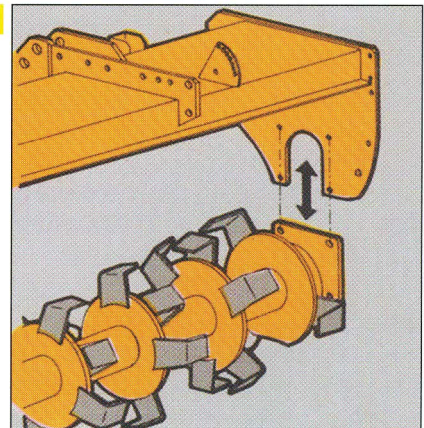
Rotasemis rotor

This rotor is intended for direct seed bed preparation for row crops such as maize, sunflowers etc. It can be used successfully in combination with the Paraplow with a view to direct planting of these types of crops (Parasemis technique).



Rapid rotor change

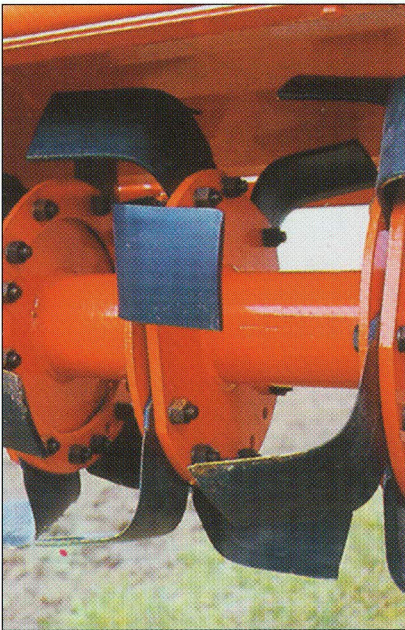
The HR40 is designed to accommodate a choice of rotor types. It is quick and simple to transform the machine to accomplish the cultivation job required.



HR50 Rotavator[®]
for tractors up to 180 hp.



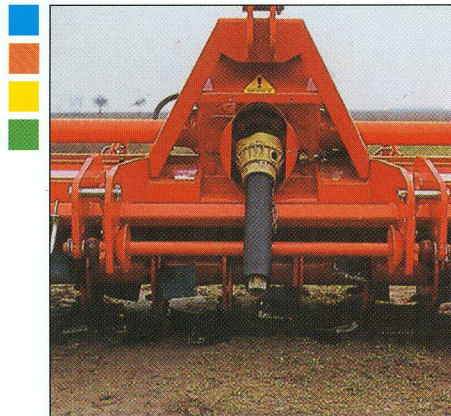
Double-flanges



Standard equipment on the HR50 Rotavator and optional on the HR40. For heavy duty application the flanges create a clevis which double the shear capacity of the blade bolts and provides additional strength to the rotor flange.

Coupling

HR 50 and HR 60 are provided with Cat. III coupling. All other models are provided with clevis type Cat. II attachments. All



models can also be equipped with quick coupling as an optional extra.

Safety clutch

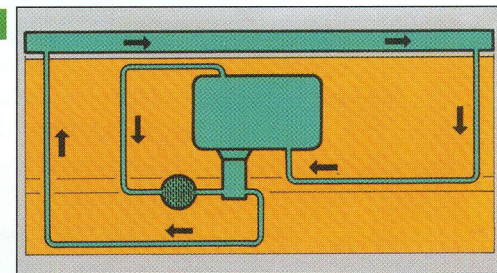
The Rotavators are equipped with a safety (friction) clutch, with bronze discs for intensive use, which protect both the trac-



tor transmission and the transmission of the machine. This clutch can be adjusted according to the horse power of the tractor. All machines are supplied with telescopic pto shafts.

Oil cooling system

The HR50 model is equipped with a gearbox cooling system which is achieved by oil circulation. A pump which is driven directly from the gearbox circulates the oil through the front square tube of the hull where it is cooled before returning to the gearbox, thereby providing the gears and bearings with a lubricant which is operating at its most efficient temperature.



Technical information

HR30-HR35-HR40-HR50-HR60 Rotavator

	HR 30							HR 35			HR 40					HR 50			HR 60		
Working width,	in	40	45	50	60	70	80	90	80	90	100	70	80	90	100	120	100	120	160	160	
	m	1,05	1,5	1,30	1,55	1,80	2,05	2,30	2,05	2,30	2,55	1,80	2,05	2,30	2,55	3,05	2,55	3,05	4,05	4,05	
Overall width on skids,	in	50	55	60	70	80	90	100	90	100	110	84	95	104	-	-	-	-	-	-	
	m	1,28	1,41	1,53	1,79	2,04	2,29	2,54	2,29	2,54	2,79	2,14	2,40	2,64	-	-	-	-	-	-	
Overall width on wheels,	in	-	-	-	-	-	106	105	106	105	125	-	98	107	118	138	122	142	181	181	
	m	-	-	-	-	-	2,68	2,93	2,68	2,93	3,18	-	2,50	2,73	3,00	3,50	3,10	3,60	4,60	4,60	
Max, hp		90							105			130					180			250	
Min, hp		28	31	35	42	49	53	63	53	63	69	59	68	76	84	100	84	100	140	150	
Mounting category		Cat. I & II					Cat. II		Cat. II			Cat. II					Cat. II & III			Cat. III	
Possible offset,	in	10	9	10	11	11	-	-	-	-	-	10	-	-	-	-	-	-	-	-	
	cm	25	23	25	27	27	-	-	-	-	-	26	-	-	-	-	-	-	-	-	
Single speed gearbox 540 rpm/pto version, rpm		202					-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Selectatilh gearbox 540 rpm/pto version, rpm		-	-	170-190-213-240				170-190-213-240			170-200					-	-	-	-		
Selectatilh gearbox 1000 rpm/pto version, rpm		-	-	220-250				220-250			175-195-215-235					-	-	-	-		
Leverchange gearbox 540 rpm/pto version, rpm		-	-	-	-	-	-	-	-	-	-	-	-	-	180-200-230	185-210-235			175-200-218-248 251-286-312-356		
Side drive		chain							gears			gears					gears double			gears double	
Number of blades		24	27	30	36	42	48	54	48	54	60	42	48	54	60	72	60	72	96	96	
Weight on skids,	lb	737	814	858	935	1012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	kg	335	370	390	425	460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	lb	-	-	913	990	1067	1188	1265	1164	1362	1621	-	-	-	-	-	-	-	-	-	
	kg	-	-	415	450	485	540	575	529	619	737	-	-	-	-	-	-	-	-	-	
Weight on wheels,	lb	-	-	-	-	-	-	-	-	-	-	1575	1725	1958	2094	2380	-	-	-	-	
	kg	-	-	-	-	-	-	-	-	-	-	716	784	890	952	1082	-	-	-	-	
	lb	-	-	-	-	-	-	-	-	-	-	-	-	-	2138	2424	2990	3080	3740	4840	
	kg	-	-	-	-	-	-	-	-	-	-	-	-	-	972	1102	1359	1400	1700	2200	

Accessories (optional extra)

Quick coupling	-	-	+	+	+	+	+	+	+	+	+	+	+	+	standard cat. III	standard cat. III			
Combi-hitch	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	
Front tines	+	+	+	+	-	-	-	-	-	-	-	-	+	+	-	+	-	-	
Counter flanges	-	-	-	-	-	-	-	-	-	-	-	-	-	-	standard	standard			
Crumble roller	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	
Teeth packer roller	-	-	-	-	-	-	-	-	-	+	+	-	-	+	+	+	+	+	+
Special pick off gears	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	



Single speed gearbox



Selectatilh gearbox



Lever change gearbox



HOWARD

In Canada contact: Kongskilde Limited
 231 Thames Rd. E., Exeter, Ontario, Canada N0M 1S3
 Tel.: 519 235-0840 / Fax: 519 235-2931
 E-mail: mail@kc.kongskilde.com

In the USA contact: Howard USA Inc.
 10 S. Jefferson Street, Harvard, Illinois 60033, USA
 Tel.: + 1 815 943 5401, Fax: + 1 815 943 3636
 E-mail: howardusa@owc.net
 Visit website: www.kongskilde.com

Dealer:



HOWARD ROTAVATOR
GUY MACHINERY
 14213 WASHINGTON ST.
 IL. HWY 120 WEST
 WOODSTOCK, IL 60098
 (815) 338-0600