



# Backhoe Range

For Tractors from 15HP



## LEWIS Backhoe Range

The LEWIS range of backhoes are specifically designed to fit most makes of tractors from 15HP compact tractors up to 60+HP agricultural tractors. The design allows for quick and easy attachment and removal to further enhance the functionality of your tractor where digging operations are required. In most cases the frame of the backhoe is mounted to the frame of your LEWIS Loader with no need for additional tractor brackets. As with all LEWIS products, your LEWIS Backhoe is painted to match the colour of your tractor.



<b>110</b>	This is the smallest backhoe in the LEWIS range. With a digging depth of 1.9m, the 110 is for compact tractors from 15HP
<b>120</b>	Similar machine to the 110, but with a longer arm and a digging depth of 2.4m
<b>120S</b>	This machine has the same arm and digging depth as the 120, but also comes with a sideshift frame capable of 620mm of travel.

For compact tractors from 15HP



<b>310</b>	The next size of backhoe is the 310. This machine has the same digging depth of 2.4m as the 120, but is a heavier machine and has a greater digging force.
<b>320</b>	Similar machine to the 210, but with a longer arm and a digging depth of 2.7m
<b>320S</b>	This machine has the same arm and digging depth as the 220, but also comes with a sideshift frame capable of 830mm of travel.

For compact tractors from 25HP



<b>410S</b>	The next size of backhoe is the 410S. This machine has a similar digging depth of 2.7m as the 320S, but is a heavier machine and has a greater digging force.
<b>420</b>	This model has the largest digging depth in the range and is only available for large tractors with a CAT2 3PT linkage attachment.
<b>420S</b>	The largest machine in the LEWIS range, it is similar to the 410S, but with a longer arm, it has a digging depth of 3.2m.

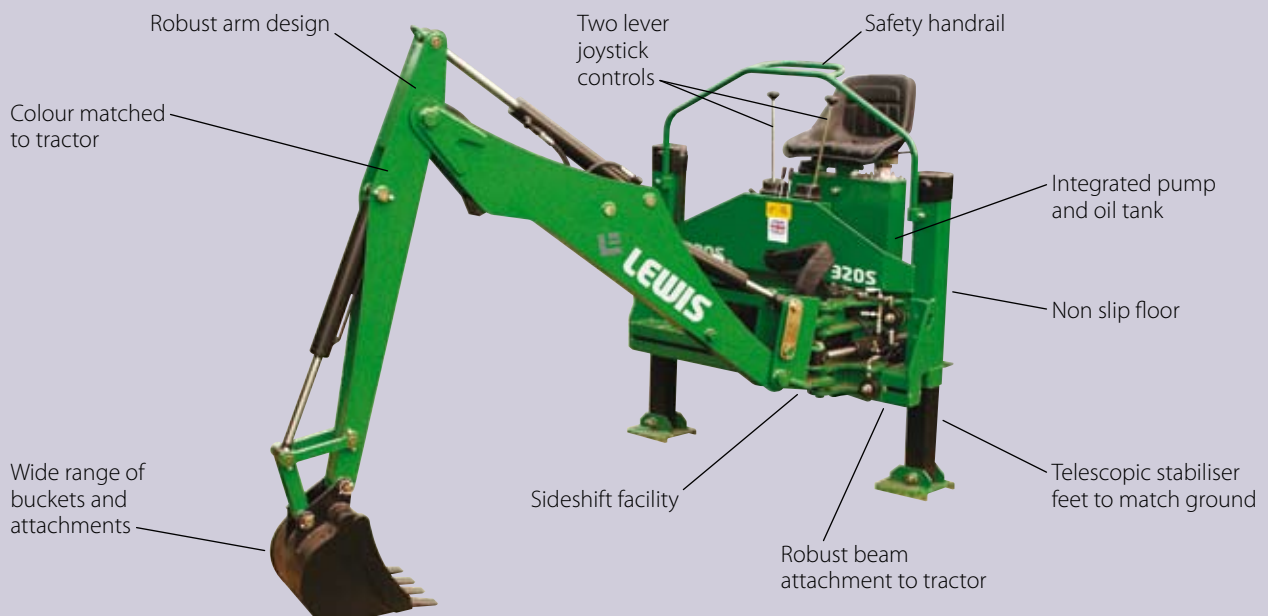
For compact tractors from 40HP and larger agricultural tractors



<b>430S</b>	A specialist machine suited to fit on the front of a skidsteer unit.
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For large and specialist tractor applications

## Features and Benefits



## 110 and 120 Models



The smallest models available in the LEWIS range of backhoes. They are ideal for small compact tractors for use in a variety of situations such as large garden use, work in horse stables, land management on small farm estates and general maintenance use.

	110	120
Max Digging Depth (mm)	1905	2440
Arm Reach (mm)	2670	3243
Bucket Digging Force (kg)	1107	1107
Sideshift Travel (mm)	N/A	N/A

### Key Features and Options

- Retractable stabiliser legs
- Can use tractor hydraulics instead of separate pump and oil tank
- Range of buckets from 15cm to 60cm
- Comfortable seating position
- Optional 3-point linkage fitting for larger tractors
- Twin slewing ram



## 120S Model



Similar to the 120, the 120S incorporates a sideshift frame, capable of 620mm of travel. This increases the flexibility of the machine use and makes digging holes near walls and other such features much easier. The sideshift can be clamped hydraulically or manually.

	120S
Max Digging Depth (mm)	2440
Arm Reach (mm)	3243
Bucket Digging Force (kg)	1107
Sideshift Travel (mm)	620

### Key Features and Options

- Retractable straight stabiliser legs
- Manual or hydraulic sideshift clamping
- Range of buckets from 15cm to 60cm
- Comfortable seating position
- Optional 3-point linkage fitting for larger tractors
- Twin slewing ram



## 310 and 320 Models



More heavily built than the 110 and 120, the 310 and 320 have a larger diameter ram giving greater digging and lifting capacity. The 320 version has a longer arm for extended reach. These machines are suitable for tractors of 25HP and over.

	310	320
Max Digging Depth (mm)	2440	2750
Arm Reach (mm)	3280	3570
Bucket Digging Force (Kg)	1655	1655
Sideshift Travel (mm)	N/A	N/A

### Key Features and Options

- Retractable stabiliser legs
- Range of buckets from 15cm to 60cm
- Comfortable seating position
- Optional 3-point linkage fitting for larger tractors
- Twin slewing ram



## 320S Model



Similar to the 320, the 320S incorporates a sideshift frame, capable of 830 mm of travel. This machine has been specifically designed for the professional user on medium to large compact tractors. Typical uses include golf course maintenance, cemetery work, roadside maintenance, laying services and pipework as well as numerous applications in large gardens and estates

	320S
Max Digging Depth (mm)	2750
Arm Reach (mm)	3570
Bucket Digging Force (Kg)	1655
Sideshift Travel (mm)	830

### Key Features and Options

- Retractable straight stabiliser legs
- Manual or hydraulic sideshift clamping
- Range of buckets from 15cm to 60cm
- 1.4m chasis width
- Comfortable seating position
- Optional 3-point linkage fitting for larger tractors
- Twin slewing ram



## 410S, 420 and 420S Models



These are the largest backhoes in the LEWIS range. More heavily built than the 300 range, the 400 range are for the largest of compact tractors as well as agricultural tractors of 60 HP+. These backhoes are used in applications where increased digging depth and lift capacity are a must.

The 410S and 420S have digging depths of 2.7m and 3.3m respectively and can be mounted via the LEWIS Backhoe chassis beams to large compact tractors.

The 420 is a centre pivot machine with a digging depth of 3.3m, but is only available for larger tractors with a CAT, 3-point linkage fitting.

	410S	420	420S
Max Digging Depth (mm)	2750	3200	3200
Arm Reach (mm)	3430	4130	4130
Bucket Digging Force (Kg)	2420	2420	2420
Sideshift Travel (mm)	970	N/A	970

### Key Features and Options

- Retractable straight stabiliser legs
- Manual or hydraulic sideshift clamping
- Range of buckets from 15cm to 60cm
- Comfortable seating position
- Optional breaker and auger service
- Optional 3-point linkage fitting for larger tractors
- Twin slewing ram



## 430S Skidsteer Model



This machine is designed for mounting to the front of a skidsteer loader. It features swing-in / swing-out controls to allow access on and off the machine, quick release mountings, hydraulic sideshift clamping and hydraulic cushioning on the rams.

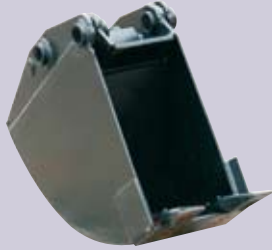
	430S
Max Digging Depth (mm)	2790
Arm Reach (mm)	3580
Bucket Digging Force (Kg)	2420
Sideshift Travel (mm)	914

### Key Features and Options

- Retractable straight stabiliser legs
- Manual or hydraulic sideshift clamping
- Range of buckets from 15cm to 60cm
- Comfortable seating position
- Optional breaker and auger service
- Optional 3-point linkage fitting for larger tractors
- Twin slewing ram



# Attachments



Standard Buckets (B)		
Options	Features	Applications
6" (12cm)	Heavy duty metal fabricated design	All types of digging applications from garden maintenance and trench work up to larger scale excavations.  Multiple sizes of buckets give increased flexibility for different jobs.
8" (20cm)		
12" (30cm)	Hardened metal-forged bucket teeth	
13" (33cm)		
16" (40cm)	Painted solid black	
18" (45cm)		
24" (60cm)		

Ejector Buckets (E)		
Options	Features	Applications
8" (20cm)	Heavy duty metal fabricated design	Used in place of a standard bucket where clearing the bucket digging is problematic. This is often the case for very heavy, wet or high clay content ground.
12" (30cm)		
	Hardened metal-forged bucket teeth	
	Painted solid black	
	Self clearing soil ejector	

Ditching Buckets (D)		
Options	Features	Applications
30" (75cm)	Heavy duty metal fabricated design	Used for cleaning out ditches and other areas where water can be an issue.
36" (91cm)		
48" (120cm)	Hardened metal blade	The holes in the bucket cowl allow water to escape during operation.
	Painted solid black	Used for landscape and grading operations.
	Self clearing soil ejector	

Rakes (R)		
Options	Features	Applications
30" (75cm)	Heavy duty metal fabricated design	To remove weeds and prepare ground for planting.
36" (91cm)		
	Individual rake spokes	A useful supplementary tool for garden and landscaping maintenance applications.
	Painted solid black	

Clam shell (C)		
Options	Features	Applications
30" (75cm)	Heavy duty metal fabricated design	This type of bucket is ideal for loading piles of material due to the grab effect of the clam shell.
36" (91cm)		
	Hardened metal blade	A popular choice for digging in easy soil conditions.
	Painted solid black	
	Swivel joint for 360° degree rotation	
	Optional hydraulic rotator for additional control	

Compatibility chart																
Type	B	B	B	B	B	B	B	D	D	D	E	E	R	R	C	
Size (inches)	6	8	12	13	16	18	24	30	36	48	8	12	30	36	16	
Size (cm)	15	20	30	33	40	45	60	75	91	120	20	30	75	91	40	
110 120 120S	•		•			•	•	•			•		•			
310 320 320S		•		•	•	•	•		•		•	•		•	•	
410S 420 420S		•	•			•	•			•	•	•		•	•	
430S		•	•			•	•			•	•	•		•	•	



## Bucket Quick Hitch System

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### Models:

For all models of backhoe.

### Applications:

The LEWIS Quick hitch bucket system greatly speeds up bucket changes. It functions by hooking into the buckets and locking with a single steel pin. This is the ideal tool for use where more than one bucket or attachment is required.

### Features:

- Heavy duty metal fabricated design
- Only one quick release pin required for operation
- Simple 'roll-on / roll-off' concept
- Greatly reduces bucket changeover time and effort
- Increases backhoe productivity where more than one bucket is required



## Backhoe Mounted Augers

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### Models:

For use with all backhoe models.

### Applications:

The LEWIS Auger system is the perfect tool for boring holes in a fast and effortless manner. It is perfect for fencing or general maintenance projects where holes of up to 1.2m (4ft) depth are required.

### Features:

- Hardened steel teeth
- Options of 150mm (6"), 225mm (9") and 300mm (12") diameters
- Uses hydraulics from bucket ram
- Robust drive unit and link to arm
- Universal swivel mounting on end of arm to ensure vertical operation



## Backhoe Mounted Breakers

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### Models:

For use with backhoe models from the 310 and larger.

### Applications:

The perfect tool to complement digging in difficult ground where very stony or concrete conditions are found. The breaker can be mounted to the end of the backhoe arm or a kit can be supplied for use by hand, with the oil supply from the backhoe.

### Features:

- Spare rock breaker supplied as standard
- Oil cooling pack and control valves mounted to backhoe
- Two sizes of beaker – 80Kg and 110Kg to match your backhoe and job size
- Low noise operation as standard
- Easy installation and maintenance

## Quick Fitting Features

A unique feature of the LEWIS Backhoe is the method of attachment to the tractor. Although a 3-point linkage system can be used for fitting some machines, most units are fitted using a robust beam and a tractor-mounted chassis system.

Used in combination with a LEWIS Loader, there is no need for any additional tractor chassis brackets as the loader itself contains all the features required to mount the backhoe.

The LEWIS Tractor beam attachment system provides a very stable and reliable fixing point for the backhoe and it can be removed or fitted in less than 5 minutes.



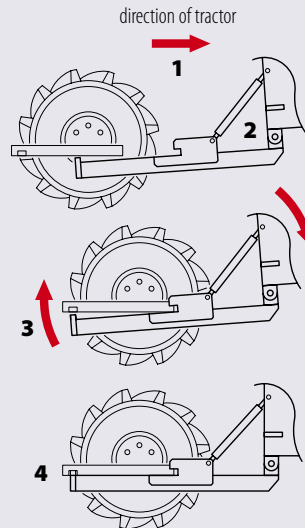
Pump connection to PTO



Secure front mountings



Boom and legs stabilise backhoe



- 1 Reverse towards the machine and align the spigots on the tractor chassis with the relevant slots in the backhoe beams.
- 2 Connect the backhoe pump to the PTO.
- 3 Use the control valves of the backhoe to raise the boom arm slowly. This will allow the location pins at the front of the backhoe beams to locate in their sockets in the tractor beams.
- 4 Secure the front mountings with the supplied lynch pins or rigid bolts to complete the fitting process.

## Technical Specifications

Backhoe Specification	110	120	120S	310	320	320S	410S	420	420S	430S
A Maximum operating height	2600mm	3100mm	3100mm	3210mm	3450mm	3450mm	3300mm	3810mm	3810mm	3300mm
B Maximum loading height	1740mm	2240mm	2240mm	2240mm	2480mm	2480mm	2195mm	2680mm	2680mm	2190mm
C Loading height (SAE)	1295mm	1645mm	1645mm	1450mm	1610mm	1610mm	1895mm	2060mm	2060mm	1860mm
D Loading reach (SAE)	1110mm	1475mm	1475mm	1390mm	1580mm	1580mm	1470mm	1940mm	1940mm	1470mm
E Reach from slew pivot (SAE)	2670mm	3243mm	3243mm	3280mm	3570mm	3570mm	3430mm	4130mm	4130mm	3580mm
F Maximum digging depth	1905mm	2440mm	2440mm	2440mm	2750mm	2750mm	2750mm	3200mm	3200mm	2790mm
G 2ft flat dig depth (SAE)	1875mm	2400mm	2400mm	2400mm	2680mm	2680mm	2650mm	3260mm	3260mm	2750mm
H Bucket rotation angle (SAE)	210°	210°	210°	193°	193°	193°	210°	210°	210°	210°
Sideshift travel	N/A	N/A	620mm	N/A	N/A	830mm	970mm	N/A	970mm	914mm
Slew Angle (SAE)	180°	180°	180°	180°	180°	180°	180°	180°	180°	180°
Overall width	1000mm	1000mm	1300mm	1190mm	1190mm	1500mm	1650mm	1850mm	1650mm	1550mm
Overall width (stabilizers out)	1230mm	1230mm	1370mm	1720mm	1720mm	1570mm	1930mm	2130mm	1930mm	1550mm
Digging force – Dipper	598Kgs	588Kgs	588Kgs	769Kgs	701Kgs	701Kgs	1190Kgs	945Kgs	945Kgs	1190Kgs
Digging force – Bucket	1107Kgs	1107Kgs	1107Kgs	1655Kgs	1655Kgs	1655Kgs	2420Kgs	2420Kgs	2420Kgs	2420Kgs
Hydraulic pump	21l/m	21l/m	21l/m	28l/m	28l/m	28l/m	41l/m	41l/m	41l/m	N/A
Hydraulic working pressure	172 bar/ 2500psi	172 bar/ 2500psi	172 bar/ 2500psi	172 bar/ 2500psi	172 bar/ 2500psi	172 bar/ 2500psi	172 bar/ 2500psi	172 bar/ 2500psi	172 bar/ 2500psi	172 bar/ 2500psi
Filtration	10 micron	10 micron	10 micron	10 micron	10 micron	10 micron	10 micron	10 micron	10 micron	N/A
Hydraulic Oil capacity	19 litres	19 litres	19 litres	30 litres	30 litres	30 litres	40 litres	40 litres	40 litres	N/A
Weight (complete with pump, tank and 13" bucket)	310Kgs	330Kgs	440Kgs	380Kgs	436Kgs	630Kgs	769Kgs	720Kgs	950Kgs	690Kgs

These dimensions are variable, depending on the tyre size and type of the model of tractor that they are fitted to.

