

# CHALLENGE IMPLEMENTS

AUSTRALIAN TECHNOLOGY TO LOAD, LIFT AND CARRY



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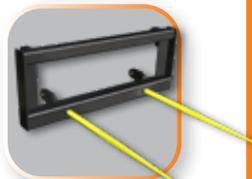
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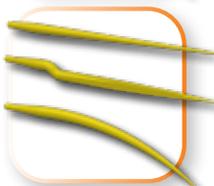
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## Over 60 Years of History

Challenge Implements is a tractor loader and attachment specialist with its major manufacturing plant situated in Orange, New South Wales, approximately 260 kilometres west of Sydney. Orange is a regional city with a population of 39,000 and the area is promoted as the agribusiness capital of New South Wales. Main agricultural activities in the surrounding area include: cereal and oilseed production; wool and prime lambs; beef; dairies; apple, pear and stone fruit orchards; grapes and vineyards; vegetables; flowers and pine plantations.

Challenge is a fully Australian-owned third-generation family company.

Challenge commenced manufacturing agricultural implements in Orange in 1957 with two employees and a capital of less than £500. The ultimate aim of the company was to develop a representative range of everyday agricultural equipment. Steps were taken even in the first year of operation to divert every available penny toward the necessary research and development required to produce such equipment.

The year 1962 marked the release of the first Challenge front end loader along with a three-point linkage grader. These products gained immediate market acceptance and established the brand name 'Challenge' as implements of good design, robust in construction and offering value for money.

Today Challenge continues to grow by expanding its operations throughout Australia. This allows Challenge to continue to support Australian farmers with fast, prompt and reliable service, with equipment designed by Australians for Australian conditions.

From the very first loader made by Challenge in 1962, this Australian-owned company and its brand has created enviable traditions of world-class engineering excellence and innovation.

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# General Purpose Buckets

All general purpose buckets have been designed to meet the high strength and safety requirements of today's environment. There is a large variety of buckets available to cover a wide range of applications and to enable a more compatible loader/tractor combination, ensuring you get the most from your loader.

All buckets are constructed from high tensile steel (570mpa) which is laser cut for accuracy and press formed to ensure superior strength.

When attached to a Challenge front end loader, the bucket profile has been designed to ensure there is no rollback, a condition whereby material spills or falls over the rear of the bucket as it is filled. All earthmoving buckets enable maximum fill with minimum effort, ensuring an efficient loading cycle.

The lower back portion of the bucket has a double plate arrangement that forms an enclosed 'box' section running the full width of the bucket, giving the bucket exceptional torsional strength.

Buckets have a high quality roll formed cutting edge for excellent durability as well as wear plates on the bottom face of the bucket.

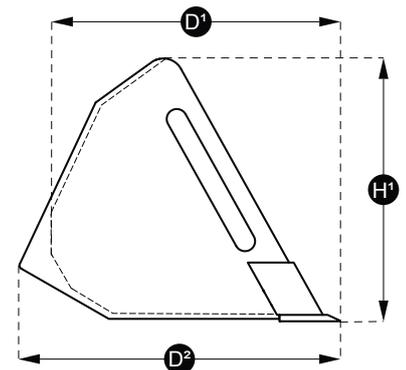


Heavy section pipe gives a clean smooth face to the top of the bucket.

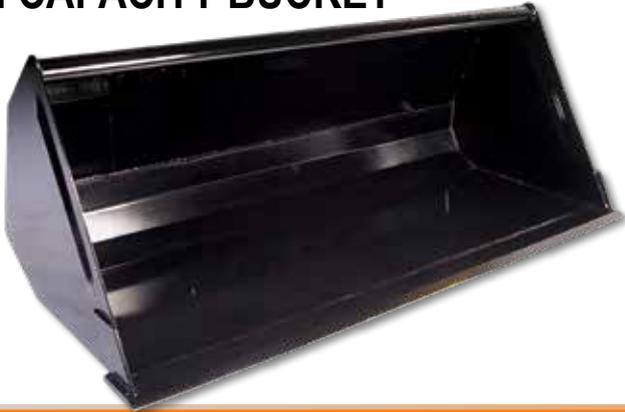
Most general purpose buckets can be fitted with ground-engaging teeth if required.

The buckets' cut ends have been pressed to give strength along the edge and sides of the bucket.

The attachment lugs on the rear of the bucket have plates that distribute the load to the strengthened sections of the bucket, directly behind the 'box' section and to the formed edge towards the top of the bucket. This eliminates deformation in the back of the bucket during loading cycles.



## GENERAL PURPOSE HIGH CAPACITY BUCKET



## GENERAL PURPOSE LOW CAPACITY BUCKET



	COMPACT 'LCC'			MID 'LCM'	LOW CAPACITY 'LC'			HIGH CAPACITY 'HC'	
Model	134LCC	150LCC	170LCC	186LCM	186LC	216LC	246LC	216HC	246HC
Horse power range	21-45 hp	21-45 hp	21-45 hp	45-70 hp	55-360 hp	55-360 hp	55-360 hp	55-360 hp	55-360 hp
Width	1340 mm	1500 mm	1700 mm	1860 mm	1860 mm	2160 mm	2460 mm	2160 mm	2460 mm
Weight	62 kg	78 kg	88 kg	178 kg	190 kg	220 kg	245 kg	240 kg	265 kg
Depth (D <sup>1</sup> )	460 mm	490 mm	575 mm	665 mm	672 mm	672 mm	672 mm	787 mm	787 mm
Overall depth (D <sup>2</sup> )	695 mm	740 mm	805 mm	940 mm	964 mm	964 mm	964 mm	1040 mm	1040 mm
Height (H <sup>1</sup> )	425 mm	445 mm	495 mm	600 mm	657 mm	657 mm	657 mm	700 mm	700 mm
Struck capacity	0.13 m <sup>3</sup>	0.17 m <sup>3</sup>	0.25 m <sup>3</sup>	0.38 m <sup>3</sup>	0.47 m <sup>3</sup>	0.55 m <sup>3</sup>	0.63 m <sup>3</sup>	0.66 m <sup>3</sup>	0.76 m <sup>3</sup>
Rated capacity	0.16 m <sup>3</sup>	0.22 m <sup>3</sup>	0.31 m <sup>3</sup>	0.49 m <sup>3</sup>	0.57 m <sup>3</sup>	0.67 m <sup>3</sup>	0.77 m <sup>3</sup>	0.80 m <sup>3</sup>	0.90 m <sup>3</sup>
Optional ground engaging teeth	-	-	-	-	7	8	9	8	9



## LIGHT MATERIAL BUCKET



The three light material buckets have different rated capacity and offer different widths. They have been developed to handle larger volumes of lighter material. They have the same features as the general purpose bucket with the addition of internal ribs near the attachment lugs for extra strength in the back of the bucket.

LIGHT MATERIAL BUCKET 'LM'			
Model	186LM	216LM	246LM
Horse power range	55-360 hp	55-360 hp	55-360 hp
Width	1860 mm	2160 mm	2460 mm
Weight	295 kg	348 kg	360 kg
Depth (D <sup>1</sup> )	980 mm	1087 mm	980 mm
Overall depth (D <sup>2</sup> )	1040 mm	1160 mm	1060 mm
Height (H <sup>1</sup> )	910 mm	940 mm	982 mm
Struck capacity	0.90 m <sup>3</sup>	1.20 m <sup>3</sup>	1.22 m <sup>3</sup>
Rated capacity	1.10 m <sup>3</sup>	1.45 m <sup>3</sup>	1.48 m <sup>3</sup>

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# Multi-Purpose Buckets (4-in-1)

For the ultimate in versatility, the multi-purpose 4-in-1 bucket gives you a bucket, a blade, a grab and a grader. This attachment requires a third hydraulic control circuit.

- **Bucket** – With the multi-purpose bucket in the closed position you have a standard earthmoving bucket to pick up and move loose materials, with the option to open the bucket to empty material instead of dumping (ideal for unloading material over a high side-board of a truck or trailer).
- **Blade** – With the multi-purpose bucket in the open position and the fixed half of the bucket in the vertical position you have an earthmoving blade.
- **Grab** – As you approach the material to be handled you can open the multi-purpose bucket and position it over or around the material then, closing the bucket jaws in a biting action, pick up the material.
- **Grader** – With the multi-purpose bucket in the open position and dumped forward so the front internal cutting edge is in contact with the ground, you can drag the bucket backwards to scrape material into a heap or to backfill trenches. With the multi-purpose bucket in a similar



orientation but with both internal cutting edges in contact with the ground, the bucket can be used as a leveller on firmer surfaces.

All multi-purpose buckets have been designed to exceed the requirements of the agricultural industry and, when used with the standard level-lift Challenge front end loader, have safety features to eliminate rollback, this feature prevents

material from falling over the rear of the bucket when it is filled. The multi-purpose buckets enable maximum fill with minimum effort, ensuring an efficient loading cycle. Buckets are available in a number of sizes to enable a more compatible loader/tractor combination, ensuring you get the most from your loader.

- The lower back portion of the bucket has a double plate arrangement constructed from high tensile steel (570mpa) that forms an enclosed 'box' section running the full width of the bucket, giving the bucket exceptional torsional strength.
- Buckets have high-quality roll-formed cutting edges for excellent durability.
- Heavy section pipe give a clean smooth face to the top of the bucket.
- The laser cut ends and hinges of the bucket have been cut from heavy high-grade plate to give maximum strength to the sides of the bucket.
- The bottom of the bucket has additional formed plate with internal rib section for maximum strength in the moving half of the bucket.
- Some multi-purpose buckets can be fitted with ground-engaging teeth if required.



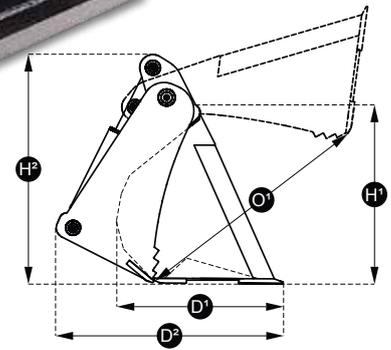
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# MULTI-PURPOSE (4-IN-1) BUCKET



Multi-purpose bucket with ground engaging teeth fitted



	COMPACT 'MLCC'			MID 'MLCM'	LOW CAPACITY 'MLC'			HIGH CAPACITY 'MHC'
Model	134MLCC	150MLCC	170MLCC	186MLCM	186MLC	216MLC	246MLC	216MHC
Horse power range	21-60 hp	21-60 hp	21-60 hp	55-70 hp	55-360 hp	55-360 hp	55-360 hp	55-360 hp
Width	1340 mm	1500 mm	1700 mm	1860 mm	1860 mm	2160 mm	2460 mm	2160 mm
Weight	113 kg	144 kg	165 kg	235 kg	326 kg	362 kg	391 kg	441 kg
Depth (D¹)	393 mm	380 mm	494 mm	545 mm	560 mm	560 mm	560 mm	750 mm
Overall depth (D²)	502 mm	514 mm	535 mm	702 mm	767 mm	767 mm	767 mm	950 mm
Height (H¹)	394 mm	440 mm	491 mm	553 mm	613 mm	613 mm	613 mm	755 mm
Overall height (H²)	520 mm	514 mm	560 mm	625 mm	776 mm	776 mm	776 mm	845 mm
Maximum opening (O¹)	433 mm	443 mm	625 mm	680 mm	824 mm	824 mm	824 mm	965 mm
Struck capacity	0.10 m³	0.12 m³	0.20 m³	0.25 m³	0.32 m³	0.37 m³	0.42 m³	0.56 m³
Rated capacity	0.13 m³	0.15 m³	0.26 m³	0.32 m³	0.40 m³	0.46 m³	0.52 m³	0.70 m³
Optional ground engaging teeth	-	-	-	-	7	8	9	8



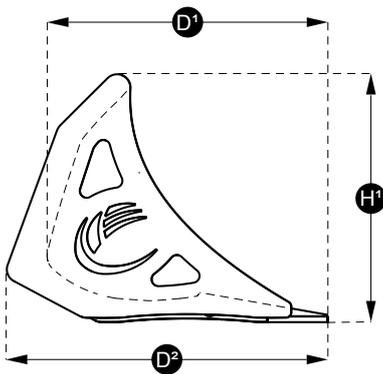
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# Rock Buckets



The Challenge rock bucket supplements our large range of standard and multi-purpose buckets for tractor front end loader usage. The rock bucket has many uses including; levelling, collecting materials for removal, general clean up around the work site, sifting rocks and other debris from soil leaving clean fill that can be used for other purposes. The heavy duty high grade steel blade edge with individual tine reinforcement increases the strength and life span of the attachment.

The Challenge rock bucket can sift rocks from soil collected in the bucket larger than the 55mm gap between the tines. The rock bucket also has the ability to sort larger rocks which some dedicated rock pickers can struggle with. The bucket is designed to help increase the ability to scoop up smaller rocks on flat surfaces (i.e. small rocks collected in wind rows in open paddocks) but the bucket does not replace the function of a dedicated rock picker that can collect individual small rocks from flat, harder surfaces. The Challenge Rock Bucket is ideal for many kinds of work with varying needs.



ROCK BUCKET 'RB'		
Model	186RB	216RB
Weight	383 kg	423 kg
Width	1860 mm	2160 mm
Depth (D <sup>1</sup> )	795 mm	795 mm
Overall depth (D <sup>2</sup> )	910 mm	910 mm
Height (H <sup>1</sup> )	715 mm	715 mm
Stuck capacity	0.30 m <sup>3</sup>	0.34 m <sup>3</sup>
Rated capacity	0.40 m <sup>3</sup>	0.46 m <sup>3</sup>
No. of tines	29	33
Tine spacing	55 mm	55 mm



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# Post Hole Diggers

The hydraulic post hole digger drive unit is operated by a third service from the front end loader to drive whichever size auger is fitted. The operator controls the loader arms to provide downward pressure while drilling the hole, or by raising the loader arms to lift the auger out of the hole.

The post hole digger is supplied with a one piece attachment carriage. The drive unit can be positioned to the left, right or centre of the carriage to suit individual needs.

There are a number of drive units to best match the tractor's hydraulic capacity and auger sizes to suit any job. All augers come standard with replaceable tungsten carbide cutting teeth and pilot.



## POST HOLE DIGGER 'PHD'

Model	35PHD	50PHD	100PHD	200PHD	300PHD
Flow rate range*	15-32 L / min	20-44 L / min	30-57 L / min	40-65 L / min	50-95 L / min
Torque	1164 Nm @ 185 Bar	1495 Nm @ 205 Bar	2010 Nm @ 220 Bar	2510 Nm @ 220 Bar	3500 Nm @ 240 Bar
Maximum Auger	250ATC	350ATC	350ATC	350ATC	600ATC
Weight	114 kg	125 kg	126 kg	127 kg	139 kg

\* Flow rate range refers to the flow rate delivered to the attachment. To determine the appropriate drive unit model to suit your tractor, check the tractor hydraulic specifications from your tractor manufacturer. Note: Hydraulic oil flow at the attachment may not always be equal to the total oil flow indicated in the tractor specifications.

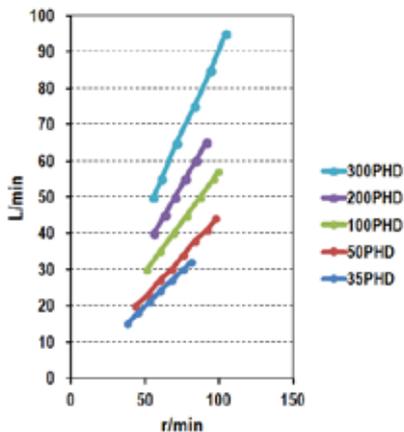
## AUGER TUNGSTEN CARBIDE 'ATC'

Model	100ATC	150ATC	200ATC	225ATC	250ATC	300ATC	350ATC	400ATC	450ATC	600ATC
Diameter	100 mm	150 mm	200 mm	225 mm	250 mm	300 mm	350 mm	400 mm	450 mm	600 mm
Weight	16 kg	18 kg	20 kg	23 kg	26 kg	29 kg	32 kg	36 kg	38 kg	44 kg

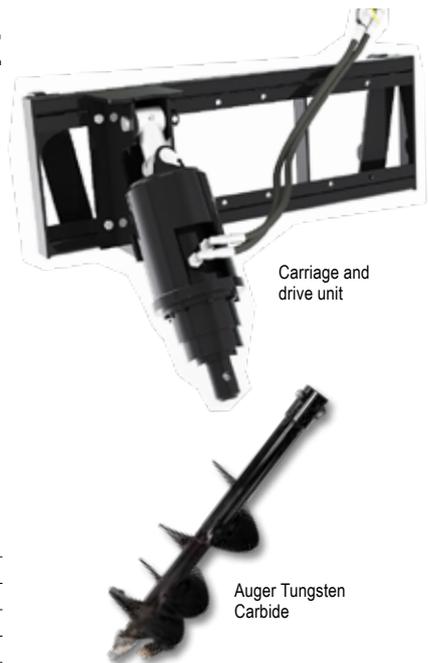
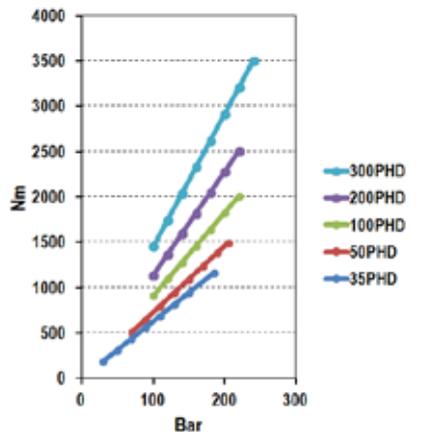
## AUGER EXTENSION 'AE'

Model	500AE	1000AE
Length	500 mm	1000 mm
Weight	10 kg	17 kg

## FLOW VS SPEED



## TORQUE VS PRESSURE



35PHD		50PHD		100PHD		200PHD		300PHD	
L/min	r/min	L/min	r/min	L/min	r/min	L/min	r/min	L/min	r/min
15	38	20	44	30	51	40	56	50	55.5
18	45	23	52	35	60	45	63	55	61
21	53	27	60	40	69	50	70	65	71
24	60	30	68	45	78	55	77	75	83
27	68	34	76	50	87	60	84	85	94
30	76	38	84	55	96	65	91	95	104

35PHD		50PHD		100PHD		200PHD		300PHD	
Bar	Nm	Bar	Nm	Bar	Nm	Bar	Nm	Bar	Nm
30	189	70	511	100	915	100	1141	100	1460
50	315	90	657	120	1097	120	1369	120	1752
70	440	110	803	140	1279	140	1597	140	2044
90	566	130	949	160	1461	160	1825	160	2336
110	692	150	1095	180	1643	180	2053	180	2628
130	818	170	1241	200	1825	200	2281	200	2920
150	944	190	1387	220	2007	220	2509	220	3212
185	1164	205	1496					240	3504

The figures shown are theoretical and provided as a guide only. The manufacturer accepts no responsibility/liability for any direct or indirect loss caused to person(s) who use this guide. Suitable test equipment must be used to obtain accurate values.



# Earthmoving Blades



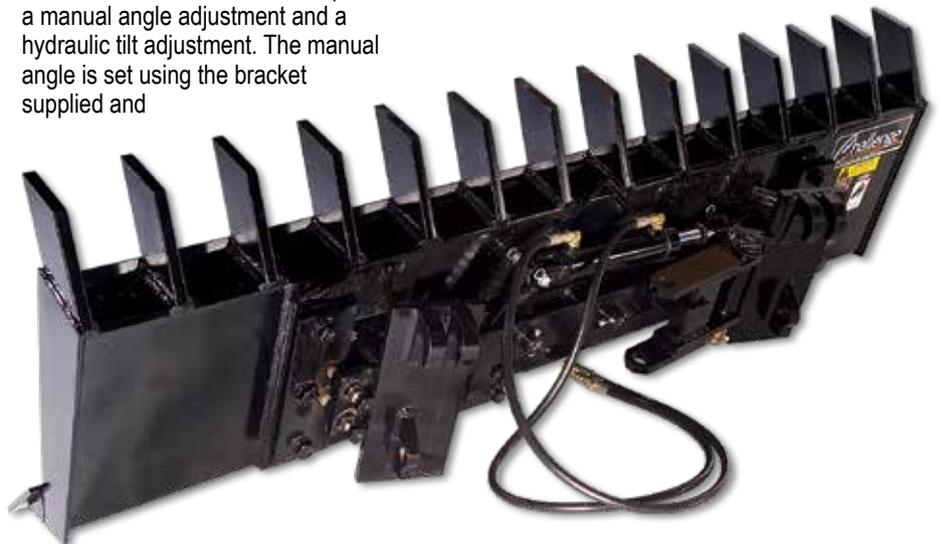
The bull blade is available in two widths and with a variety of configurations. All blades are formed from high grade steel and have a pressed mouldboard and are fitted with a replaceable bolt-on reversible cutting edge.

- Standard bull blades have the attaching lugs welded directly to the rear of the blade ready to couple to the front end loader.
- The bull blade can be inverted through an adaptor on the rear of the blade. This will position the rake tines towards the ground, allowing ripping and removal of small tree and shrub roots from beneath the ground surface. Alternatively, when pushing up debris, the tines allow topsoil to be left behind.
- The bull blade can also be set up with a manual angle adjustment and a manual tilt adjustment. These are

set through brackets supplied and attached to the back of the blade, allowing the operator to change from a standard configuration to either or both angle and tilt options.

- The bull blade can also be set up with a manual angle adjustment and a hydraulic tilt adjustment. The manual angle is set using the bracket supplied and

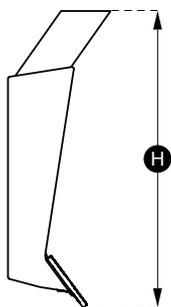
attached to the back of the blade. The tilt is controlled through a hydraulic third service which the operator can control during use.



**BULL BLADE**  
**WITH MANUAL ANGLE AND HYDRAULIC TILT**



## BULL BLADE WITH ROOT RAKES



	BLADE RAKE 'BR'		BLADE RAKE, MANUAL ANGLE AND TILT 'BRMAT'		BLADE RAKE, MANUAL ANGLE AND HYDRAULIC TILT 'BRHAT'	
Model	216BR	246BR	216BRMAT	246BRMAT	216BRHAT	246BRHAT
Description	Bull Blade with Root Rakes	Bull Blade with Root Rakes	Bull Blade Manual Angle and Tilt with Root Rakes	Bull Blade Manual Angle and Tilt with Root Rakes	Bull Blade Manual Angle, Hydraulic Tilt with Root Rakes	Bull Blade Manual Angle, Hydraulic Tilt with Root Rakes
Width	2160 mm	2460 mm	2160 mm	2460 mm	2160 mm	2460 mm
Weight	320 kg	360 kg	370 kg	410 kg	450 kg	490 kg
Blade Height	710 mm	710 mm	710 mm	710 mm	710 mm	710 mm
Root rake spacing	163 mm	157 mm	163 mm	157 mm	163 mm	157 mm



**Blade Rotation 1**



**Blade Rotation 2**

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# Hay Handling Attachments

## ESSENTIAL 'E' SERIES ROUND BALE SPIKE

The Essential Series round bale spike is designed to handle a single round bale when attached to a front end loader. The simple design of this attachment and the innovative positioning of the loader attachment lugs improves overall visibility, making it a safe attachment to use. This attachment is a perfect match with a 3-point linkage round bale spike to transport twice as many round bales whilst also ensuring tractor stability. Having two tough configurable tines used to spike into the flat side of a round bale, ensures the safety of the operator as the bale is unable to rotate while being handled.



ROUND BALE SPIKE 'RBS'		
Model	Compact	E-120RBS
Weight	45 kg	67 kg
Width	1000 mm	1220 mm
Compatible tines	2 x 810 mm (Conus 1) or 2 x 1100 mm (Conus 1)	2 x 810 mm (Conus 1) or 2 x 1100 mm (Conus 1)
Tine spacing	600 mm	670 mm


 A photograph showing the Essential 'E' Series Round Bale Spike attached to a tractor's front loader, positioned over a round hay bale in a field.

## COMPACT 'C' ROUND BALE SPIKE

The Compact round bale spike is suited for the smaller range of agricultural tractors with a compact loader attached. It is designed to spike into the flat side of a round bale.



ROUND BALE FORK 'E-RBF'	
Model	E-120RBF
Weight	90 kg
Width	1210 mm
Compatible tines	2 x 1100 mm (Conus 2) or 2 x 1250 mm (Conus 2)
Tine spacing	870 mm


 A photograph showing the Round Bale Fork 'E-RBF' attached to a tractor's front loader, positioned over a round hay bale in a field.

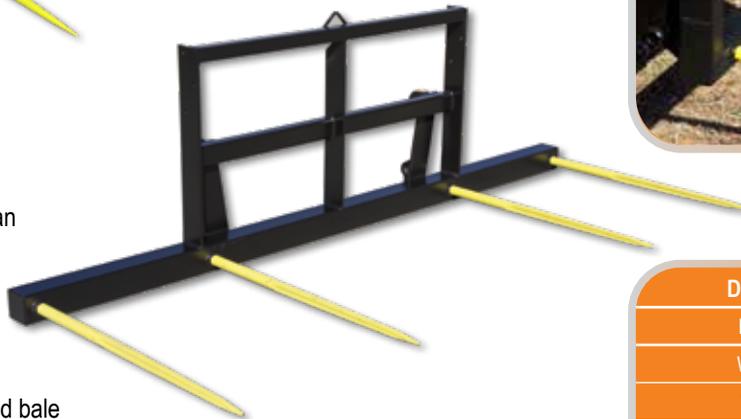
## ESSENTIAL SERIES ROUND BALE FORK

The Essential Series round bale fork is a similar design and functionality to the Essential Series round bale spike but built even stronger, with a larger frame and tougher tines, to allow the operator to spike into the flat side of a round bale or slide under a round bale to support loose/older round bales.



## DUAL ROUND BALE SPIKE

The dual round bale spike can carry two and up to three round bales when used with the backrest extension. When used in conjunction with the three-point linkage dual round bale spike you will be able to move four and up to six round bales at once. The option of using both dual round bale spikes together will save you time and fuel costs by reducing tractor movements when moving bales.



DUAL ROUND BALE SPIKE 'RB2C'	
Model	100RB2C
Weight	120 kg
Width	2680 mm
Compatible tines	4 x 1100 mm (Conus 1)
Inner tine spacing	1230 mm
Outer tine spacing	670 mm

## SQUARE BALE SPIKE

The square bale spike is designed to handle large square bales, but round bales may also be handled depending on the tine configuration.

The attachment is fitted with four tines as standard (five tines in the extra wide square bale spike - ideal for export bales) and these are driven into the long side of the bale to give maximum support to the bale while being handled.

The square bale spike has the loader attachment lugs welded directly to the attachment frame, making it a stand-alone attachment to allow for quick and efficient changeover.

The square bale spike can be fitted with a number of tine configurations to suit your individual needs. All tines fit into a tapered sleeve and are removable.

This attachment carries one standard large square hay bale; alternatively a maximum of two when fitted with an optional back rest extension.



SQUARE BALE SPIKE 'SBD'	
Model	100SBD
Weight	102 kg
Width	1710 mm
Compatible tines	2 x 810 mm (Conus 1) & 2 x 1100 mm (Conus 1), or 4 x 810 mm (Conus 1), or 4 x 1100 mm (Conus 1)
Tine spacing	535 mm



EXTRA WIDE SQUARE BALE SPIKE 'SBDE'	
Model	100SBDE
Weight	138 kg
Width	1910 mm
Compatible tines	5 x 1250 mm (Conus 2)
Inner tine spacing	420 mm
Outer tine spacing	480 mm

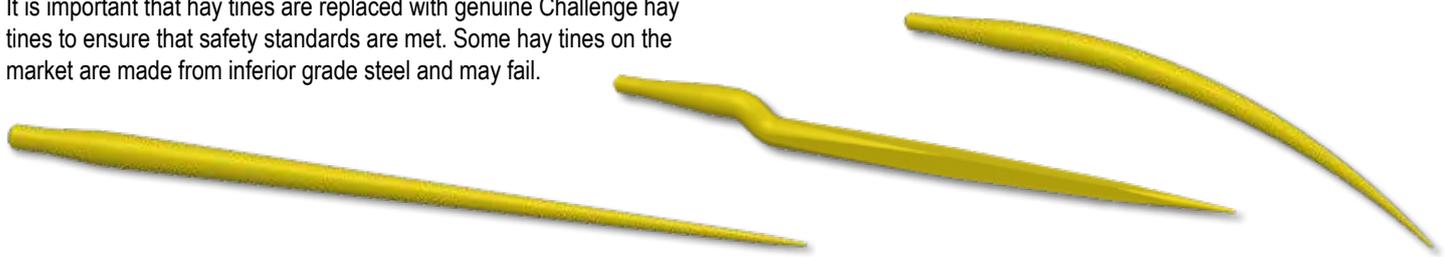


BACK REST 'BRD'	
Model	100BRD
Weight	21 kg
Width	1320 mm
Height	585 mm

**OPTIONAL BACK REST**  
 This back rest extension allows the operator to safely handle a maximum of two square bales at one time. Suitable for the square bale spike and dual round bale spike attachments.

## Hay Tines

It is important that hay tines are replaced with genuine Challenge hay tines to ensure that safety standards are met. Some hay tines on the market are made from inferior grade steel and may fail.



	Straight							Cranked	Curved
Length (full)	810 mm	1100 mm	810 mm	1100 mm	980 mm	1250 mm	1400 mm	800 mm	680 mm
Length (usable)	680 mm	970 mm	670 mm	960 mm	840 mm	1110 mm	1260 mm	670 mm	550 mm
Conus	1	1	2	2	2	2	2	1	1

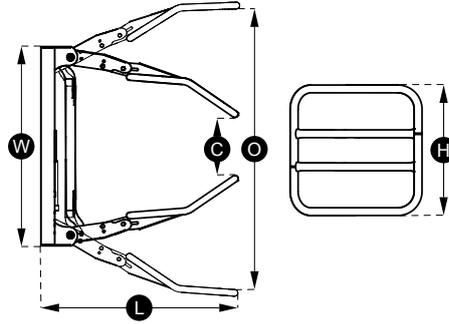
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# Silage Attachments

## ROUND WRAPPED SILAGE GRAB

The round wrapped silage grab has been designed to allow the efficient handling of wrapped silage bales and round hay bales. The large smooth surface area helps prevent damage to the wrapping material on silage bales. This attachment requires a third hydraulic control circuit, through which the grab arms are controlled. Bringing the arms together around the wrapped silage or round bale allows it to be handled, transported and stacked.



### ROUND WRAPPED SILAGE GRAB 'RSG'

Model	200RSG
Bale sizes	Up to 1800 mm
Width (W)	1456 mm
Length (L)	1450 mm
Minimum grab space (C)	50 mm
Maximum grab space (O)	2100 mm
Grab arm height (H)	800 mm
Weight	224 kg



The round wrapped silage grab also allows you to rotate the bale through 90° so that you can stack bales on their flat or round sides. This attachment is designed with several assembly configurations to accommodate the safe and secure handling of most bale sizes. The round wrapped silage grab is designed to carry a maximum of one round wrapped silage bale or one round hay bale.



## SILAGE GRAB BUCKET

The silage grab bucket has been designed to handle loose or fine chop silage and is ideal for cleaning up other loose materials such as straw. Having a bucket style bottom, this attachment allows for clean and easy handling of this type of material. After it is driven into the silage face, the attachment can be crowded back like a conventional bucket, ensuring maximum fill with the tines holding and containing the material being handled. Optional end plates are available which simply bolt to the side profile if extremely loose material is to be handled. This attachment requires a third hydraulic control circuit to activate the grab portion of the attachment. All tines fit into a tapered sleeve and are removable.



### SILAGE GRAB BUCKET 'SGB'

Model	156SGB	186SGB	216SGB
Weight	390 kg	430 kg	470 kg
Width	1560 mm	1860 mm	2160 mm
Depth	800 mm	800 mm	800 mm
Volume/capacity	0.73 m <sup>3</sup> / 449 kg	0.88 m <sup>3</sup> / 541 kg	1.03 m <sup>3</sup> / 633 kg
Compatible tines	6 x 680 mm (Conus 1)	7 x 680 mm (Conus 1)	8 x 680 mm (Conus 1)
Tine spacing	252 mm	260 mm	260 mm

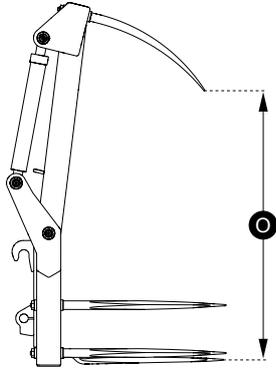
Note: Volume and capacity based on silage @ 615 kg/m<sup>3</sup> - 30% dry volume.

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OK TO USE

## POWER SILAGE GRAB

The power silage grab has been designed to handle pit silage easily and safely. This attachment requires a third hydraulic control circuit to activate the grab portion of the attachment. The tines are forced through the silage in a circular motion using minimal effort and ensuring an efficient cut, clamping the material in the attachment. The tines are spaced to ensure wastage from material falling through the tines is kept to a minimum. All tines fit into a tapered sleeve and are removable.



## SILAGE SHEAR GRAB

The silage shear grab is designed to cut silage blocks from the silage pit, leaving a smooth face that is sealed to prevent spoilage. This attachment requires a third hydraulic control circuit to activate the grab/cutting portion of the attachment, which features a hardened serrated front knife and hardened plain knives on the sides. The rounded front profile of the grab is forced through the silage in a circular motion, reducing the cutting force required and ensuring an efficient, clean cut. The two heavy-duty hydraulic cylinders provide ample cutting force and the attachment is fitted with quality heavy-duty tines to accommodate this. All tines fit into a tapered sleeve and are removable.



RELEASED

OK TO USE

### POWER SILAGE GRAB 'PSG'

Model	150PSG	180PSG
Weight	253 kg	304 kg
Width	1500 mm	1800 mm
Depth	860 mm	860 mm
Volume/capacity	0.64 m <sup>3</sup> / 394 kg	0.76 m <sup>3</sup> / 467 kg
Compatible tines (bottom)	9 x 800 mm (Conus 1)	11 x 800 mm (Conus 1)
Tine spacing (bottom)	175 mm	175 mm
Compatible tines (top)	6 x 680 mm (Conus 1)	7 x 680 mm (Conus 1)
Tine spacing (top)	251 mm	260 mm
Compatible tines (side)	2 x 810 mm (Conus 1)	2 x 810 mm (Conus 1)
Maximum opening (O)	1124 mm	1124 mm

Note: Volume and capacity based on silage @ 615 kg/m<sup>3</sup> - 30% dry volume.



### SILAGE SHEAR GRAB 'SS'

Model	140SS	170SS
Weight	370 kg	460 kg
Width	1400 mm	1700 mm
Depth	880 mm	880 mm
Volume/capacity	0.81 m <sup>3</sup> / 498 kg	0.98 m <sup>3</sup> / 602 kg
Opening	730 mm	730 mm
Compatible tines (bottom)	9 x 800 mm (Conus 1)	11 x 800 mm (Conus 1)
Compatible tines (side)	2 x 810 mm (Conus 2)	2 x 810 mm (Conus 2)
Tine spacing	125 mm	129 mm

Note: Volume and capacity based on silage @ 615 kg/m<sup>3</sup> - 30% dry volume.



# Other Lifting Attachments



## BULK BAG LIFTER

The bulk bag lifter has been designed to safely handle fertiliser bags with four lifting straps. Maximum lift height is achieved by the high strapping lugs allowing the bag to be attached to the bulk bag lifter while the attachment is on the ground. The four strapping points ensure stability of the bag during handling.

### BULK BAG LIFTER 'BBL'

Model	100BBL
Weight	146 kg
Height	1520 mm
Maximum load	1000 kg

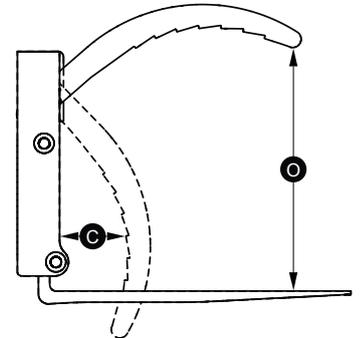


## POWER LOG GRAB

The power log grab has loader attachment lugs welded directly to the attachment frame making it a stand-alone attachment to allow for quick efficient changeover. This attachment requires a third hydraulic control circuit to activate the grab arm of the attachment. Additional pallet forks are available to increase the load bearing surface area.

### POWER LOG GRAB 'PLG'

Model	100PLG
Weight	240 kg
Width	1350 mm
Maximum opening (O)	870 mm
Minimum close (C)	210 mm



RELEASED  
OK TO USE

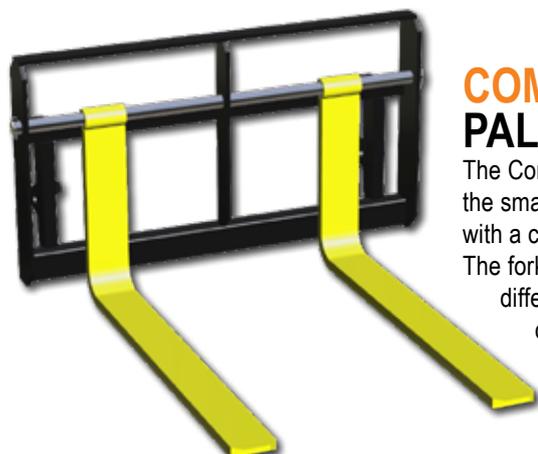


PALLET FORK 'PF'		
Model	C-PF	E-120PF
Weight	98 kg	210 kg
Width	1040 mm	1105-1250 mm
Maximum load	500 kg	2500 kg
Fork length	930 mm	1220 mm
Minimum tine spacing	210 mm	200 mm
Maximum tine spacing	880 mm	1200 mm



### ESSENTIAL 'E' SERIES PALLET FORK

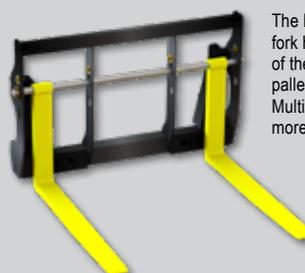
The Essential Series pallet fork can withstand heavy lifting of pallets and other appropriate objects with its two tough fork arms. With a simple and versatile design, the operator can remove or adjust the backrest to a desired height and move the fork arms along the frame to adjust to a desired width.



### COMPACT 'C' PALLET FORK

The Compact pallet fork is suited for the smaller range of agricultural tractors with a compact loader attached. The fork arms can be adjusted to different spacing depending on the operators' needs.

### MULTICARRIAGE PALLET FORK



The Multicarrriage pallet fork has all the attributes of the Essential Series pallet fork and more. See Multicarrriage section for more information.

RELEASED

OK TO USE

# Multicarriage



## MULTICARRIAGE

The innovative multicarriage is capable of three separate attachment functions when attached to a loader. Pallet forks can be easily fitted using the main shaft and the elongated holes allow 5 degrees of angle over the forks for use on uneven terrain, however, this feature can be locked out if fixed operation is required. When the pallet forks are removed either round bale forks or round bale spike can be fitted into the tapered sleeve making this product very versatile. The Multi Carriage has been designed to increase visibility through the attachment when attached to a loader making it easier and safer to lift up loads.

## MULTICARRIAGE ROUND BALE SPIKE

When the multicarriage attachment is configured with two Conus 1 tines, using the inner holes at the base of the frame, the attachment becomes a round bale spike. In this configuration, the attachment can be used to spike into the flat side of a round bale; with two tines it ensures the bale is unable to rotate while being handled. This attachment is designed to carry a maximum of one round hay bale.



### MULTICARRIAGE ROUND BALE SPIKE 'MCRBS'

Model	125MCRBS
Weight	91 kg
Width	1100-1250 mm
Compatible tines	2 x 810 mm (Conus 1) or 2 x 1100 mm (Conus 1)
Tine spacing	670 mm



### MULTICARRIAGE ROUND BALE FORK 'MCRBF'

Model	125MCRBF
Weight	108 kg
Width	1100-1250 mm
Compatible tines	2 x 980 mm (Conus 2) or 2 x 1250 mm (Conus 2) or 2 x 1400 mm (Conus 2)
Tine spacing	850 mm

## MULTICARRIAGE ROUND BALE FORK

When the multicarriage attachment is configured with two Conus 2 tines, using the outer holes at the base of the frame, the attachment becomes a round bale fork. In this configuration, the attachment can be used to spike into the flat side of a round bale; with two tines it ensures the bale is unable to rotate while being handled or the tines can be slid under the bale allowing the tines to cradle the bale (great for older or loose bales that need to be supported). This attachment is designed to carry a maximum of one round hay bale.



## MULTICARRIAGE PALLET FORK

When the multicarriage attachment is configured with two fork arms, the attachment becomes a versatile pallet fork. In this configuration, the attachment can be used to transport pallets across even and uneven terrain. The fork arms are made from alloy steel and are forged to ensure maximum load carrying capacity.



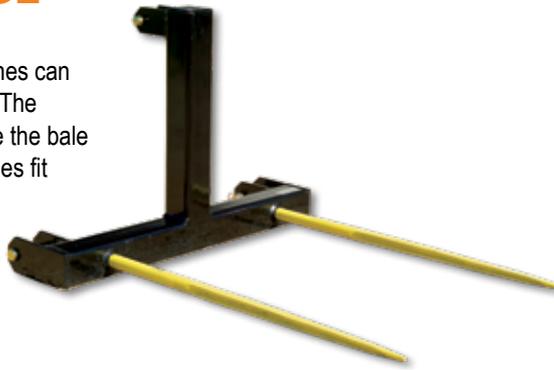
### MULTICARRIAGE PALLET FORK 'MCPF'

Model	125MCPF	
Weight	195 kg	
Width	1105-1250 mm	
Maximum load	2500 kg	
Fork length	1075 mm	
Tine Spacing	Minimum	Maximum
Aus Hitch	675 mm	1225 mm
Euro Hitch	530 mm	1080 mm
Universal	650 mm	1360 mm

# Three-Point Linkage Attachments

## THREE-POINT LINKAGE ROUND BALE SPIKE

The three-point linkage round bale spike tines can be driven into the flat side of a round bale. The attachment is fitted with two tines to ensure the bale is unable to rotate while being handled. Tines fit into a tapered sleeve and are removable. This attachment is designed to carry a maximum of one round hay bale.



3PL ROUND BALE SPIKE	
Model	3PLRBS
Weight	50 kg
Width	770 mm
Linkage hitch	Cat II
Compatible tines	2 x 1100 mm (Conus 1)
Tine spacing	547 mm



## THREE-POINT LINKAGE DUAL ROUND BALE SPIKE

The three-point linkage dual round bale spike can carry two and up to three round bales when used with the extension. Used in conjunction with the dual round bale spike attached to a front end loader you will be able to move four and up to six round bales at once. The option of using both dual round bale spikes together will save you time and fuel costs by reducing tractor movements when moving bales.



3PL DUAL ROUND BALE SPIKE	
Model	3PLDRBS
Weight	120 kg
Width	2680 mm
Linkage hitch	Cat II
Compatible tines	4 x 1100 mm (Conus 1)
Inner tine spacing	1230 mm
Outer tine spacing	670 mm



## THREE-POINT LINKAGE SQUARE BALE SPIKE

The three-point linkage square bale spike is designed to handle large square bales. The attachment is fitted with four tines as standard and these are driven into the long side of the bale to give maximum support to the bale while being handled. This attachment can be fitted with a number of tine configurations to suit your individual needs. All tines fit into a tapered sleeve and are removable. This attachment is designed to carry one standard large square hay bale; alternatively a maximum of two when fitted with an optional backrest extension.



3PL SQUARE BALE SPIKE	
Model	3PLSBS
Weight	80 kg
Width	1710 mm
Linkage hitch	Cat II
Compatible tines	2 x 810 mm (Conus 1) & 2 x 1100 mm (Conus 1)
Tine spacing	535 mm

RELEASED

OK TO USE

# Three-Point Linkage Attachments



## THREE-POINT LINKAGE CARRY ALL

Engineered for easy loading of heavy objects, such as generators, toolboxes and tanks. Built tough with a heavy duty folded checker plate platform. Safely secure loads with multiple tie-down points. Prevent objects, such as pipes, hoses and logs, from rolling off the end with tough end stops. Conveniently load the platform with adjustable height using the tractor's three-point linkage. The carry all hitch is designed to ISO 730 standards.



CARRY ALL 'CA'		
Model	CA12	CA18
Platform width	1200 mm	1800 mm
Platform length	1000 mm	1000 mm
Linkage hitch	Cat I	Cat I / II
Attachment weight	75 kg	119 kg
Attachment load limit	500 kg	1000 kg

RELEASED

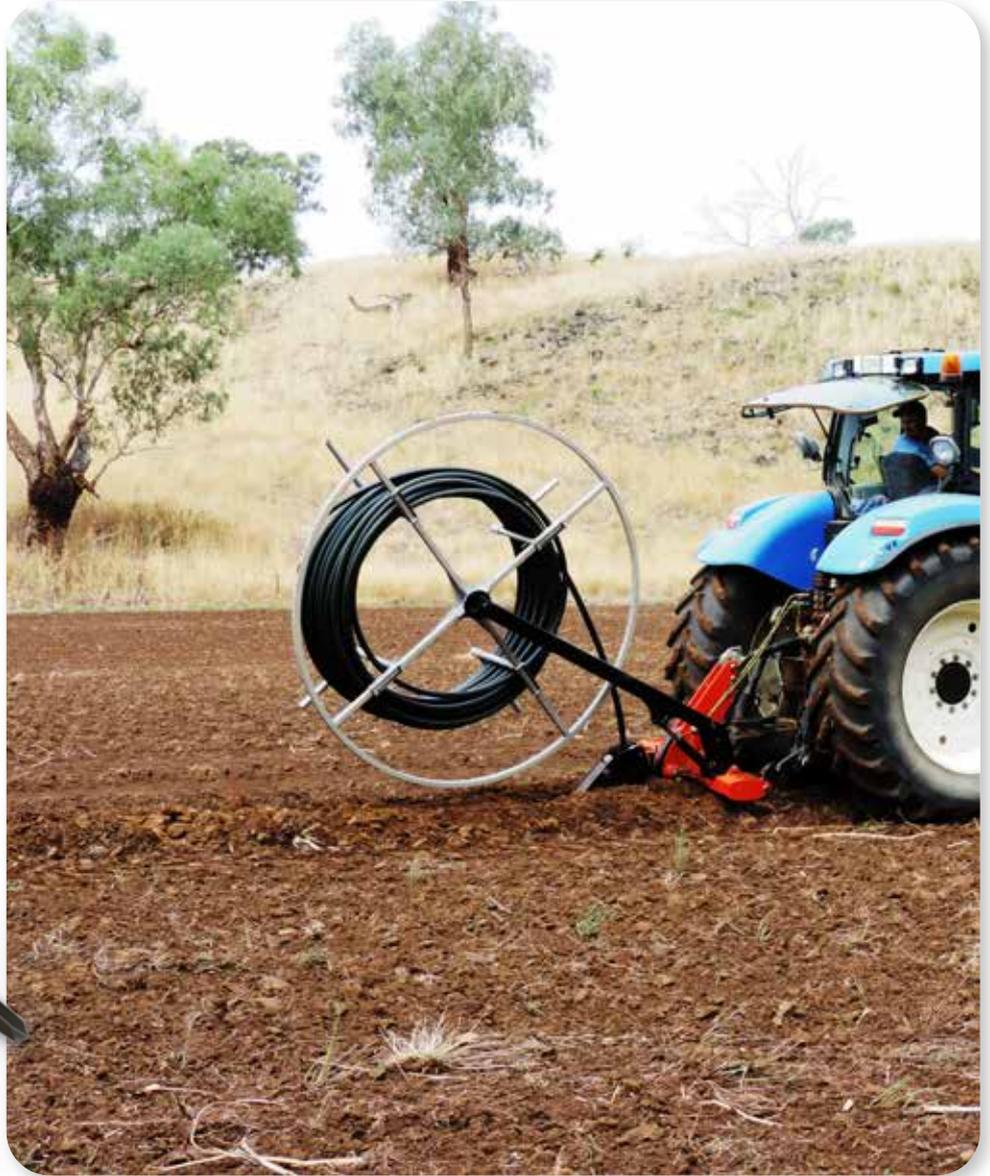
OK TO USE

## R SERIES RIPPER

The ripper has been designed for tough Australian conditions and is used to; rip pipe channels, rip drainage channels, rip channels to plant trees and break up compacted soil.

### RIPPER 'R'

Model	R 2/3
Tractor horse power	100-350 hp
Linkage hitch	Cat II / III / III QH
Weight	255 kg
Rip depth	600 mm
Tine width	50 mm
Cutting tip width	100 mm



## OPTIONAL PIPE LAYER

Save time by attaching the optional pipe layer to the ripper. The pipe layer features; Nylon tapered rollers to efficiently guide the pipe with minimum resistance and a removable back carriage for access to the pipe while laying. Available in two sizes.



### OPTIONAL PIPE LAYER

Model	50	63
Tractor horse power	100-350 hp	160-350 hp
Weight	66 kg	68 kg
Width	110 mm	125 mm
Pipe size	25-50 mm with joiner	25-63 mm with joiner

RELEASED

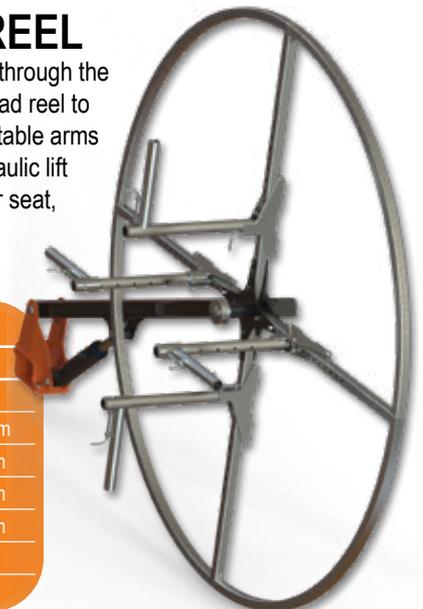
OK TO USE

## OPTIONAL PIPE REEL

Reduce the labour of feeding pipe through the pipe layer by attaching an Easy Load reel to the ripper. The reel features; adjustable arms for easy loading of pipe coils, hydraulic lift to adjust the height from the tractor seat, and an adjustable friction brake for smooth uncoiling of the pipe.

### OPTIONAL PIPE REEL

Model	EL
Weight	130 kg
Maximum pipe reel OD	2300 mm
Minimum pipe reel ID	740 mm
Maximum pipe reel width	475 mm
Minimum pipe reel width	100 mm
Load Capacity	220 kg



# Three-Point Linkage Attachments



## ESSENTIAL SERIES SMALL GRADER

The ESS grader is unique to its' range as the simplicity in design creates an ideal implement for the compact sized agricultural tractors with a Category I or II hitch. This grader comes in three blade widths to choose from; 1200 mm (4'), 1500 mm (5') and 1800 mm (6').



REAR END GRADER 'ESS'

Model	ESS12	ESS15	ESS18
Cutting width	1200 mm (4')	1500 mm (5')	1800 mm (6')
Tractor horse power	Up to 65 hp	Up to 65 hp	Up to 65 hp
Linkage hitch	Cat I	Cat I / II	Cat I / II
Mould board height	370 mm	370 mm	370 mm
Weight	136 kg	150 kg	160 kg
Blade angle	360°	360°	360°
Blade angle adjust	Manual. Increments of 15°	Manual. Increments of 15°	Manual. Increments of 15°
Cutting edge	1-piece wear resistant steel with reversible edge	1-piece wear resistant steel with reversible edge	1-piece wear resistant steel with reversible edge
Supporting stands	1	1	1

RELEASED

OK TO USE

## ESSENTIAL SERIES MEDIUM GRADER

Compatible with fixed or floating upper tractor hitch, the ESM grader is designed to suit agricultural tractors with 30 to 100 horse power, a Category I or II hitch and two sets of rear remotes available to operate the hydraulic blade adjustment features from the comfort of the tractor seat. This grader comes in two blade widths; 1600 mm (6') and 2100 mm (7').



*The options shown are; standard manual blade offset and tilt adjustment and hydraulic blade angle adjustment, optional hungry boards and optional depth wheel with standard manual adjustment.*



## ESSENTIAL SERIES LARGE GRADER

The ESL grader is designed to suit agricultural tractors with 60 to 120 horse power, a Category II hitch and two sets of rear remotes available to operate the hydraulic blade adjustment features from the comfort of the tractor seat. This grader comes in two blade widths; 2400 mm (8') and 3000 mm (10').

*The options shown are; standard hydraulic blade adjustments, optional hungry boards and optional depth wheel with optional hydraulic adjustment.*

REAR END GRADER 'ESM' & 'ESL'

Model	ESM18	ESM21	ESL24	ESL30
Cutting width	1800 mm (6')	2100 mm (7')	2400 mm (8')	3000 mm (10')
Tractor horse power	30-100 hp	30-100 hp	60-120 hp	60-120 hp
Linkage hitch	Cat I / II	Cat I / II	Cat II	Cat II
Mould board height	450 mm	450 mm	500 mm	500 mm
Weight	369 kg	376 kg	525 kg	565 kg
Blade offset	Minimum 600 mm left/right	Minimum 600 mm left/right	Minimum 800 mm left/right	Minimum 800 mm left/right
Blade offset adjust	Standard with telescopic arm or optional hydraulics.			
Blade angle	±45°	±45°	±45°	±45°
Blade angle adjust	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Blade tilt	±30°	±30°	±30°	±30°
Blade tilt adjust	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Cutting edge	1-piece wear resistant steel with reversible edge			
Supporting stands	2	2	2	2
Hungry boards	Optional @ 30 kg	Optional @ 30 kg	Optional @ 35 kg	Optional @ 35 kg
Depth wheel	Optional @ 45 kg	Optional @ 45 kg	Optional @ 50 kg	Optional @ 50 kg
Depth wheel adjust	Standard with ratchet ram or optional remote hydraulics.	Standard with ratchet ram or optional remote hydraulics.	Standard with ratchet ram or optional remote hydraulics.	Standard with ratchet ram or optional remote hydraulics.

RELEASED

OK TO USE

# Three-Point Linkage Attachments

## G SERIES REAR END GRADER

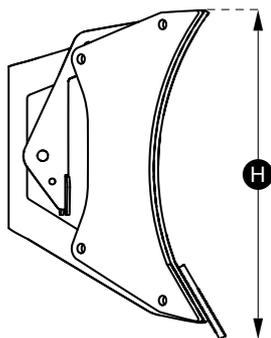
The G Series graders can be used for maintenance and repair of agricultural roads and other farm related operations. The blade can also be reversed for back blade work.

The rear end graders have been designed specifically to suit tough Australian conditions.

- The large high tensile 100 mm rotation pin ensures correct alignment and maximum forces can be sustained.
- The main boom structure has been designed to handle the large horse power of todays tractors.
- The hydraulic hoses are clearly routed to the tractor remote connections.
- The graders are equipped with two heavy duty, pneumatic depth wheels.
- The blade angle and rotation plate is fixed by two large machined brackets that take all the forces submitted through the blade.
- The front hitch is compatible with category 2 and 3 linkage and category 3 quick hitch system.
- The grader blades are constructed of 8 mm high grade steel with replaceable purpose built toughened wear edges.
- This attachment also includes two heavy duty frame stands that allow stable and easy storage of the rear end grader.



THREE-POINT LINKAGE ATTACHMENTS • PAGE 22



REAR END GRADER 'G'

Model	G24	G30
Tractor horse power	90-180 hp	120-220 hp
Linkage hitch	Cat II / III / III QH	Cat II / III / III QH
Blade width	2400 mm (8')	3000 mm (10')
Blade height	600 mm (2')	600 mm (2')
Hydraulic blade angle	Standard	Standard
Blade angle adjustment	45°	45°
Hydraulic blade tilt	Standard	Standard
Blade tilt adjustment	18°	18°
Hydraulic blade offset	Standard	Standard
Blade offset adjustment	830 mm (33")	830 mm (33")
Blade thickness	8 mm (5/16")	8 mm (5/16")
Weight	1070 kg (2360 lbs)	1120 kg (2470 lbs)
Side panels	Optional	Optional



RELEASED

OK TO USE

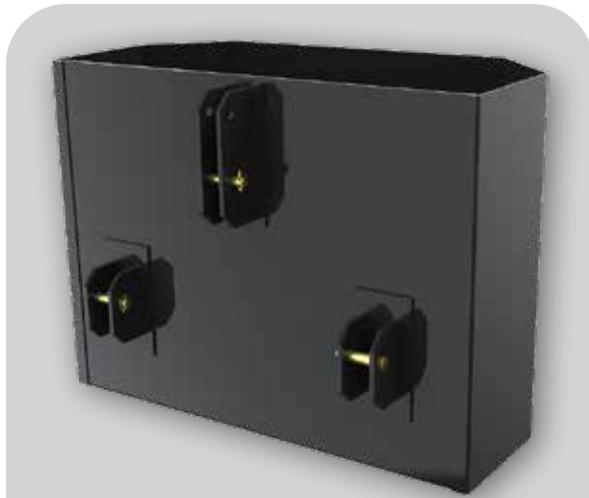


# Challenge Implements 100% Australian Owned

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OK TO USE

# Three-Point Linkage Attachments



*Challenge Implements strongly recommends the use of a three-point linkage counterweight to improve both the safety and performance of your Challenge loader/tractor unit.*

Challenge Implements has undergone an independent evaluation to ensure that the company complies with the Tractor & Machinery Association of Australia (TMA) code of practice for manufacture and supply of agricultural front end loaders.



Counterweight for low horse power tractors

## THREE-POINT LINKAGE COUNTERWEIGHT

A major safety factor in the operation of a front end loader/tractor unit is the stability of the machine whilst lifting and transporting a load.

After fitting a loader, the centre of gravity of the tractor is moved forward. When a load is raised, this combined centre of gravity is moved further forward and higher, potentially moving the centre of gravity outside the base triangle of the tractor, causing instability both longitudinally and laterally. Along with instability, there are high loads placed on tractor front-end components such as tyres, rims and axle.

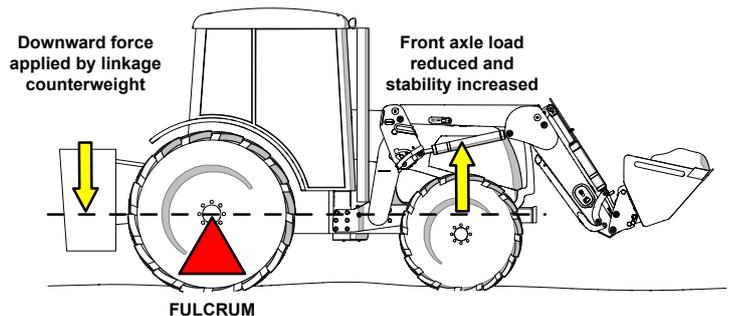
Traditionally, tractor owners have added ballast to increase the stability of the tractor when a loader is fitted by adding liquid fill to the rear tyres, or fitting rear wheel weights.

Although the addition of liquid fill or rear wheel weights may aid stability, neither will reduce the high front axle load when using the front end loader on the tractor. Also, an unnecessarily large amount of weight is required

to achieve a result, increasing total vehicle mass considerably.

The three-point linkage counterweight is designed to enhance the performance of the tractor/loader combination by providing suitable ballast behind the rear axle. Applying weight on the three-point linkage of the tractor will provide the greatest counterbalancing effect as it applies a downward force behind the rear axle, reducing the weight carried by the front tyres, rims and axle. The three-point linkage counterweight will not only reduce the front axle load but will also move the centre of gravity of the tractor/loader combination rearwards, and lower, to maintain stability and ensure safe, effective performance.

The three-point linkage counterweights are supplied without ballast and should be filled with cement to achieve the designed operational weights. Each tractor and loader specification should be considered when selecting the appropriate counterweight.



100190

### COUNTERWEIGHT 'CW'

Model	14CW	30CW	49CW	125CW
Weight (empty)	45 kg	70 kg	175 kg	380 kg
Weight (full)	360 kg	760 kg	1220 kg	3270 kg
Width	560 mm	800 mm	1015 mm	1610 mm
Height	780 mm	800 mm	950 mm	1210 mm
Depth	480 mm	600 mm	630 mm	715 mm
Volume	0.14 m <sup>3</sup>	0.30 m <sup>3</sup>	0.49 m <sup>3</sup>	1.25 m <sup>3</sup>
Linkage hitch	Cat I	Cat I	Cat II	Cat III
Standard hitch	Yes	Yes	Yes	Yes
Quick hitch	-	-	Yes	Yes



RELEASED

OK TO USE

# Telehandler Attachments

## TELEHANDLER LIGHT MATERIAL BUCKET

The telehandler range of buckets are available in three different widths for both Manitou and JCB hitch. These buckets are purposely designed for light material with a bulk density of up to 1200 kg / m<sup>3</sup> allowing for large volumetric scoops. The light material buckets are designed with hard wearing cutting edge and side leading edges. The design caters for a bolt on hard wearing leading edge and a weld on rear wear pad to protect the underside of the bucket. The buckets have an optional level gauge.



Level gauge

### TELEHANDLER LIGHT MATERIAL BUCKETS

Model	TM-15LM	TM-25LM	TM-35LM	TJ-15LM	TJ-25LM	TJ-35LM
Width	2100 mm	2400 mm	2400 mm	2100 mm	2400 mm	2400 mm
Height	1042 mm	1257 mm	1491 mm	1018 mm	1164 mm	1381 mm
Depth	1264 mm	1494 mm	1734 mm	1429 mm	1612 mm	1888 mm
Rated Volume	1.5 m <sup>3</sup>	2.5 m <sup>3</sup>	3.5 m <sup>3</sup>	1.5 m <sup>3</sup>	2.5 m <sup>3</sup>	3.5 m <sup>3</sup>
Bolt-on Edge	Yes	Yes	Yes	Yes	Yes	Yes
Optional level gauge	Yes	Yes	Yes	Yes	Yes	Yes
Weight	485 kg	620 kg	775 kg	500 kg	630 kg	785 kg
Rated Material Density less than or equal to	1200 kg/m <sup>3</sup>					

## TELEHANDLER LARGE SQUARE BALE SPIKE

The telehandler large square bale spike is designed to handle three large square bales in a single go; thereby reducing travel and operator time. The design features a collapsible back rest for the purposes of reducing transportation costs to the customer. The design also features a braced back rest that will ensure a very strong structure with maximum visibility.



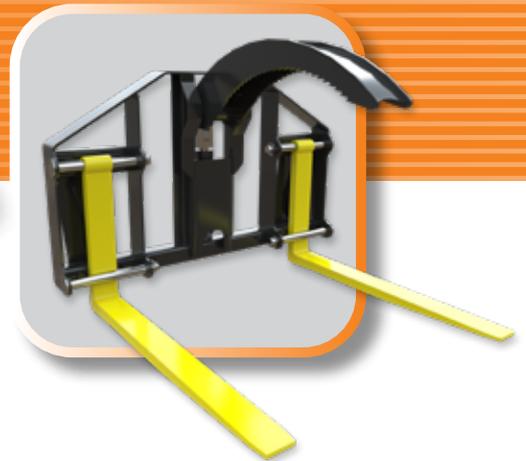
RELEASED

OK TO USE

### TELEHANDLER LARGE SQUARE BALE SPIKE 'BS'

Model	TM-19BS		TJ-19BS	
Hitch type	Manitou		JCB	
Height	2075 mm		2075 mm	
Width	1910 mm		1910 mm	
Weight	305 kg		305 kg	
Compatible tines	4 x 1250 mm (Conus 2)	5 x 1250 mm (Conus 2)	4 x 1250 mm (Conus 2)	5 x 1250 mm (Conus 2)
Inner tine spacing	900 mm	450 mm	900 mm	450 mm
Outer tine spacing	450 mm	450 mm	450 mm	450 mm
Maximum lift	3 bales		3 bales	
Total handling capacity	1800 kg		1800 kg	





# Challenge Implements

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Challenge Implements reserves the right to improve specifications and change the design of its products without prior notification. Challenge Implements designs, manufactures and supplies agricultural attachments that are intended to be used on Challenge Implements front end loaders and other front end loaders approved by the company. Challenge Implements front end loaders and attachments are made to comply with the Tractor and Machinery Association (TMA) code of practice. Attachments must not be modified and should only be used for their stated use.

RELEASED

OK TO USE