# Tractor fittings

All Bomford hedge cutters attach to the tractor using 1 of 2 mounting systems.

## System 1

**3 point linkage kits that allow quick and easy attachment to the tractor using the standard 3 point mounting and machine support frame. There are 3 types of 3 point mounting kits;**

### Quick Hitch

This type of mounting frame is fitted to the tractors 3 point linkage before attachment to the machine.

The linkage incorporates a coupling bar that allows quick mounting and dismounting of the machine to the tractor and held in position with pin lockable claws.

The top link is then fitted, the machine raised to it's working height and the telescopic support rods locked via pins to hold the machine at the correct height. The machine is levelled using the top link and the lift arms lowered so that the machine is carried on the frame and not supported by the tractors hydraulic lift arms. The check chains are tightened to prevent sideways movement.

### A frame

This type of mounting frame is fixed and is fitted to the tractors top link clevis, the top link is then fitted between the frame and the machine, the lift arms fitted to the lower pins of the machine and the machine lifted to working height.

With the machine at the correct height the frame can be bolted to the machine using one of the series of attachment holes. The machine is levelled using the top link and the lift arms lowered so that the machine is carried on the frame and not supported by the tractors hydraulic lift arms. The check chains are tightened to prevent sideways movement.

### Three point linkage

This type of mounting frame is fitted to the machine before fitting to the tractor. The tractors 3 point linkage is then attached to the machine and mounting frame. The machine is then lifted to its working height and the telescopic support rods locked via pins to hold the machine at the correct height. The machine is levelled using the top link and the lift arms lowered so that the machine is carried on the frame and not supported by the tractors hydraulic lift arms. The check chains are tightened to prevent sideways movement.

## System 2

**Axle brackets that allow rigid mounting of the machine to the tractor with no sway or movement between tractor and machine. The axle brackets are attached to the underside of the tractor rear axle.**

### Axle bracket

Axle bracket are incorporated where necessary, with stabiliser and cab suspension mounting positions. The mounting forks of the machine then attach to the axle brackets and are locked on using removable chocks that clamp around the axle bracket mounting pin. The machine is held in position at its working height by means of a mounting yoke that is fitted to the tractors drop arms and the centre lower part of the machines mainframe. The tractors drop arms are lowered to their lowest position and the machine is levelled by the screw adjustment of the tractors drop arms.

### Sub frame

On Hawk & Falcon machines, the sub frame & axle brackets may be specified as an alternative to the 3 point mounting system.

### System compatibility

| A Frame | Telescopic Three point linkage | Quick Hitch | Axle Bracket | Sub Frame |
|---|---|---|---|---|
| MicroKlippa | Kite | Falcon | Hawk | Buzzard |
| B315 | Kestrel | | Falcon | Heron |
| | Hawk | | Buzzard | 81-81 |
| | Heron | | | |

# Controls

## ICS Intelligent Control System

Fully proportional fingertip control for the first and second arm, as well as head angling, slew and telescopic arm functions. LCD display for, hours worked, faults, error and warning messages. Allows operator to select individual ram speeds for each operation.

## EPPIII Electrical Proportional Parallel Control

Fully proportional control of the first and second arms, with joystick functionality for all other services.

## EPC

Fully proportional control of the first and second arms, switch functionality for all other functions.

## LPH Low Pressure Hydraulics

Due to the low pressure control the subsequent low force required to move the joystick means a reduction in operator fatigue and consequently higher potential output. Head angle, slew and telescopic functions are also controlled from the purpose built ergonomically designed joystick grip.

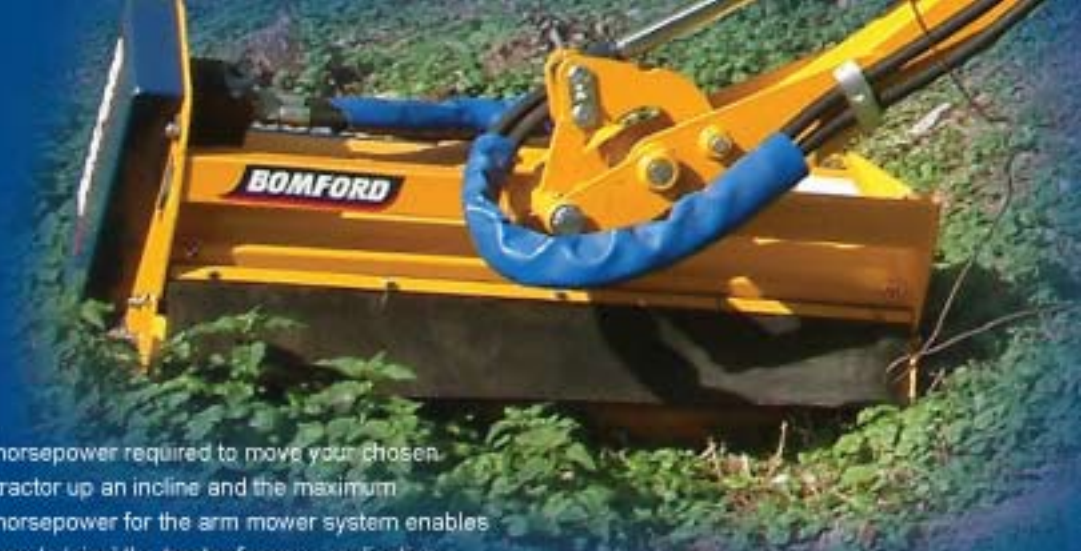
## Low friction cable controls

Lever arm controls provide basic operation of first and second arm, along with head angling, and all other available functions depending on specification.

### System compatibility

| Intelligent Control System (ICS) | Electronic Proportional (EPPII/EPC) | Low Pressure Hydraulics (LPH) | Low Friction Cable Controls (CC) |
|---|---|---|---|
| Hawk | Microklippa | Kite | MicroKlippa |
| Falcon | B315 | Kestrel E | Kite |
| Buzzard | Kestrel S | Kestrel S | Kestrel E |
| Heron | Hawk | Hawk | Kestrel S |
| 81-81 | Falcon | Falcon | Falcon |
| | Buzzard | Buzzard | Buzzard |
| | Heron | Heron | Heron |
| | 81-82 | | |
| | B49, 54 & 58FM | | |

# Heads




We at Bomford are very proud of the power delivered to the cutting head, reflecting our efficient engineering designs.

The charts below enable you to see the maximum cutting power delivered to the head of your choice. This short introduction to power will explain the relevance of these figures.

Horsepower technically, is defined as the rate of doing work. Horsepower is attributed to James Watt inventor of the Steam engine. To sell steam engines Watt had to find a way of comparing the work done by a team of horses raising water out of mineshafts and the steam engine he proposed to replace them with. Consequently one horsepower is the power required to raise 33000 pounds weight through one foot distance in one minute of time. In hydraulic terms this means that hydraulic horsepower is proportional to flow rate in litres per minute and head pressure; the column of water supported by a given pressure.

Bomford's independent hydraulic systems employ two pumps, one for the cutting head and one for the ram circuits. By adding together the horsepower capability of these two pumps we can indicate the maximum power required to operate our machine with all services at maximum. This indicates to you the minimum power required from your tractor unit. We like to show both pump capabilities to help you make a more informed decision in your purchase of an arm mower.

Your tractor of course will still need some power to propel itself and so adding the horsepower required to move your chosen tractor up an incline and the maximum horsepower for the arm mower system enables you to 'size' the tractor for your application.

Typically, most operators will not use all ram services whilst cutting and so some of the available horsepower is retained as a reserve. But, cutting the power supply to a minimum runs the risk of reducing the available cutting horsepower at the cutting head when adjustment is made to one of the rams. Which brings us to the important point of our introduction to power, after all, the head is where we do our work and it is here where we have the power to succeed.

| Flow rate (lpm) | Cutting power at head (hp) | Ram pump (hp) | Total system capability |
|---|---|---|---|
| 50 | 25 | 4 | 29 |
| 70 | 28 | 5 | 33 |
| 84 | 45 | 9 | 54 |
| 100 | 48 | 12 | 60 |
| 114 | 69 | 29 | 98 |
| 125 | 58 | 7 | 65 |

### *System compatibility*

| 950LW | 1107MW | 1257LW | Pro Trim 1.2 | Pro Trim 1.5 | Pro-Trim ISMP 1.2 | Pro Cut 1.2 | Pro Cut 1.5 | Pro-Cut ISMP 1.2 | Pro-Cut ISMP 1.5 | HD 2.0m | Rotary Head (Except Forward arm) | Blade Runner (Except Forward arm) | Ditcher (Except Forward arm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B315 (50Litres) | B315 (50Litres) | B315 (50Litres) | Kestrel E (70Litres) | Hawk (100Litres) | Hawk (100Litres) | Falcon (125Litres) | Falcon (125Litres) | Falcon (125Litres) | Falcon (125Litres) | | Falcon (125Litres) | Falcon (125Litres) | Falcon (125Litres) |
| Kite (70Litres) | Kite (70Litres) | Kite (70Litres) | Kestrel S (80Litres) | | | Buzzard (125Litres) | Buzzard (125Litres) | Buzzard (125Litres) | Buzzard (125Litres) | Buzzard (125Litres) | Buzzard (125Litres) | Buzzard (125Litres) | Buzzard (125Litres) |
| Kestrel E (70Litres) | Kestrel E (70Litres) | Kestrel E (70Litres) | Hawk (100Litres) | | | Heron (114Litres) | Heron (114Litres) | Heron (114Litres) | Heron (114Litres) | | Heron (114Litres) | Heron (114Litres) | Heron (114Litres) |
| | | | | | | 81-81 (114Litres) | 81-81 (114Litres) | 81-81 (114Litres) | | | 81-81 (114Litres) | 81-81 (114Litres) | 81-81 (114Litres) |

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**Flail head fitment is dependent on the model purchased, with a choice available on most. The range starts with 800mm cutting width and rises to a full 1.5m. Most heads offer a choice of flails and the ability to adjust the rotor speed to suit verge or hedge.**

## 950 / 1257 LW

The 950 and 1257 LW heads are lighter weight, for smaller machines. Direct driven from an end drive motor reducing the overall weight as there is no need for belts and pulleys.

## 1107 MW

The 1107 MW heads are of medium weight but with all the advantages that belt drive gives, close-in cutting and damage limitation from unseen obstacles.

## Pro-Trim

The Pro-Trim range offers double helix shaft technology delivering up to 45% overlap of the flails, belt driven protection against unseen debris and close in cutting and interchangeable shaft options allowing speedy flail change times.

## Pro-Cut

The Pro-Cut range is heavier duty & offers double helix shaft technology delivering up to 45% overlap of the flails, belt driven protection against unseen debris and close in cutting and interchangeable shaft options allowing speedy flail change times.

## Double helix shaft

The Pro-Trim range offers double helix shaft technology (a Bomford innovation) delivering up to 45% overlap of the flails, belt driven protection against unseen debris and close in cutting.

## Anti wrap

Pro-Trim, Pro-Cut and ISMP heads are equipped with "Anti Wrap" bearings to reduce the risk of debris fouling the all important rotor bearings.

## ISMP

The ISMP head enables the whole shaft assembly to be changed saving considerable down time when different flails are required for different jobs. Bushmaster flails, for example, are perfect for three year growth need to be on a different shaft to the standard double helix and can be kept ready for use in suit on the shaft to be replaced as one unit.

## Variable Track Brackets

The new VTB has been designed for operators who need to work in restrictive areas such as narrow lanes. Perfect for getting up close and personal to hedges on rural roads and country estates.

## Belt drive verses Direct drive

The belt housing on belt driven heads is typically 75mm narrower than the end drive motors enabling the head to get closer in to the hedge or fence. Belt drives can slip when the rotor hits an obstacle were direct shaft driven end drive may sheer resulting in expensive repairs and prolonged down time.

## 2 meter HD

The 2m head offers the widest cutting width on the market, heavy duty build and a range of flail choices.

## Head weights

| | |
|---|---|
| 950 | 130 kgs |
| 1107 MW | 160 kgs |
| 1257 LW | 145 > 170 kgs |
| Pro-Trim 1200 | 240 > 260 kgs |
| Pro-Trim 1500 | 320 > 330 kgs |
| Pro-Trim 1200 ISMP | 300 > 340 kgs |
| Pro-Trim 1500 ISMP | 320 > 360 kgs |
| Pro-Cut 1200 | 240 > 260 kgs |
| Pro-Cut 1500 | 350 > 370 kgs |
| Pro-Cut 1200 ISMP | 300 > 360 kgs |
| Pro-Cut 1500 ISMP | 360 > 380 kgs |

*Nb* All weights depending on flail choice*

# Cutterbars

## Rotary Heads

Ideal for longer material Bomford's Rotary Heads, Blade or HD Chain cutting options, operating in either vertical plane or horizontal plane, its 2.25m sq cutting area makes short work of even the most challenging of tasks.

## Ditch Cleaner

The ditch cleaner head is both compact and powerful, capable of operating in wet or dry conditions the Bomford ditch cleaner can be turned through 90 degrees and used to clean existing roadside "grips" and can be changed from left to right and visa versa in minutes. The Bomford ditch cleaner has a choice of blades and cutting teeth.

## Blade-Runner

Blade-Runner is offered with a choice of three or four blade configurations, and optional blade diameters of 600mm, 650mm or 700mm. Centralised bearing lubrication results in very low maintenance and its fast belt tension system allows adjustment without removal of the blades. The 700mm four blade option will cut through materials of 350mm diameter.

## 1500 Cutter Bar

- Rear mounted piston motor with "wobble block" action to sectional knife
- Maximum cutting ability 20mm diameter
- Cutting width 1500mm specially designed for B315

**Suitable for:**

***B315***

## Standard Sheartrim

- Hydraulic motor drive and Pitman wheel to "sectional" reciprocating Bomford cutter bar
- Standard 70mm square clamp mount
- Hydraulic flow divider and overloader protection (max flow 60 litre/min - min flow 30 litre/min)
- Maximum cutting ability 20mm diameter
- Length available 1500mm only

**Suitable for:**

***Kestrel, Harrier, Hawk & Falcon***

## Medium Duty Sheartrim

- Hydraulic ram and shuttle valve to solid tool steel cutter bar
- Standard Bomford 70mm clamp mount
- Overload/reversing valve protection
- Maximum cutting ability 50mm diameter
- Hydraulic requirement 34-45 litre/min at 240 bar max
- Lengths available 1600mm 2000mm

**Suitable for:**

***Kestrel, Harrier, Hawk & Falcon***

## Heavy Duty Sheartrim

- Hydraulic ram and shuttle valve to solid tool steel cutter bar
- Standard Bomford 70mm clamp mount
- Overload/reverse valve protection
- Maximum cutting ability 100mm diameter
- Hydraulic requirements 40-45 litre/min at 240 bar max
- Length available 1350mm 2200mm

**Suitable for:**

***Falcon, Buzzard & B81 - 81***

# Flails

### 'T' Flail 40mm

Designed for fine finish hedge trimming the 40mm 'T' Flail has the ability to cut material up to 50mm (2") thick for added versatility.

### BB Flail-40mm

Reversible shackle mounted back to back flail. The narrow profile and sharp cutting edges gives a clean cut with low power consumption.

### MP44-44mm Bootee Flail

Dual purpose hedge and vegetation flail. Drop forged and will cut material up to 35mm (1'1/2").

### HS60-60mm Bootee Flail

Dual purpose hedge and vegetation flail. Drop forged and will cut up to 35mm (1'1/2"). Interchangeable with the 'T' Flail 60mm.

### Bushmaster

The bushmaster flail is very heavy duty and able to cut growth of up the 100mm (4") perfect for three year hedge growth or brush cutting.

### True-Cut Flail

A longer body producing a faster tip speed combined with a more pronounced leading edge on the shaft that removes unwanted build up of material and allows the flail to retain better cutting characteristic's and delivers "cutting hedge perfection".

### 'T' Flail-60mm

The professionals choice. Gives an excellent finish on hedges from six months growth to 50mm (2") thick. Interchangeable with the HS60 bootee flail.

### Pro Flail-40mm

For annual hedge trimming and vegetation control.

## Cutting Heads permitted

| | | MP44 | HS40 | T60 | T40 | Pro Flails | BB | Bushmaster | No. Flails |
|---|---|---|---|---|---|---|---|---|---|
| 1257mm LW with 102mm roller | Flails | o | • | × | × | × | o | × | 36 |
| 1257mm LW with 150mm roller | Flails | • | o | × | × | × | o | × | 36 |
| 1107mm MW with twin back to back, 115 roller | Flails | × | o | × | × | × | • | × | 32 |
| 1.2m Pro-Trim 115mm roller | Flails | o | o | o | o | o | o | × | 32 |
| 1.2m Pro-Trim with 150mm roller | Flails | o | o | o | o | o | o | × | 32 |
| 1.2m head ISMP with 115mm roller | Flails | o | o | o | o | o | o | • | 24 |
| 1.2m head ISMP 150mm roller | Flails | o | o | o | o | o | o | • | 24 |
| 1.5m Pro-Trim with 115mm roller | Flails | o | o | o | o | o | o | × | 40 |
| 1.5m Pro-Trim with 150mm roller | Flails | o | o | o | o | o | o | × | 40 |
| 1.5m head ISMP 115mm roller | Flails | o | o | o | o | o | o | × | 30 |
| 1.5m head ISMP 150mm roller | Flails | o | o | o | o | o | o | × | 30 |
| 2m HD head | Flails | o | o | o | o | o | o | × | 54 |

*All of the above flails fit Pro-Trim and Pro-Cut heads.*