



**J.J.METCALFE & SON LTD**

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## THE NG CULTIVATION SYSTEM



**ARE YOU GETTING THE MOST OUT OF YOUR SOIL?  
INCREASE PERFORMANCE AND CROP YIELD  
WITH THE NG SYSTEM**

J.J.Metcalf & Son Ltd  
Willow Garth Farm, Newby Wiske,  
Northallerton, North Yorkshire, DL7 9ET



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## **ABOUT J.J.METCALFE & SON LTD**

With a wealth of 'in field' knowledge dating back to 1947, family run company J.J.Metcalf & Son Ltd believe in achieving the best possible crop yield from the most economically viable solutions.

Specialising in the application of tungsten carbide, J.J.Metcalf & Son Ltd focus on manufacturing wearing parts for agriculture that provide a consistently high performance throughout a long life using high grade steels, heat treatment methods and hard facing alongside tungsten carbide.

J.J.Metcalf & Son's extensive knowledge on the manufacture of castings and the application of tungsten carbide, means that they now supply some of the industry's largest brand names.



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## The NG System: An Introduction

With soil types varying considerably in fields and farms across the country and internationally, finding a cultivation system that performs well in the majority of conditions is no easy task. With a range of shin, wing and point options the versatile NG System from J.J. Metcalfe & Son can be configured for optimum performance in all soil types.

The System has been designed with three key initiatives. First and foremost the NG System has been designed to create the best possible soil structure for the crop. In most cases gaining a higher yield per acre is more valuable than fuel or wear savings, making this the most important factor when choosing a cultivation system.

Second, the NG System achieves the above using the lowest draft possible. However it is very important to take into account how the NG is creating the right environment for the crop before considering the fuel savings, as fuel can be wasted if parts are not doing the job properly.

And lastly, the NG System is designed in such a way that the wear is reduced to a minimum. The interchangeable parts help to get the most out of each individual component and the Tungsten Carbide ensures that the system performs well throughout its entire working life.

**KEY POINT > PERFORMANCE ALWAYS OUTWEIGHS FUEL & METAL SAVINGS. GET THE BEST CONDITIONS FOR YOUR CROPS!**



Any summer or weathered tilth must be retained. The vertical shin of the NG prevents the break out of clods before they come to the surface.

The NG system lifts and cracks the soil relieving compaction and allowing air, water and nutrients to penetrate, encouraging healthy root growth. For the best results where compaction is concerned, the wing should run just below the compaction layer.

The rear tip of the wing applies pressure upwards and cracks the soil whilst the inner wing relieves nearer the leg.

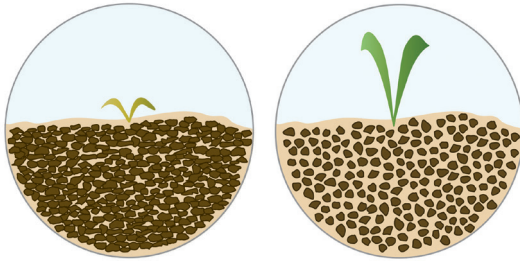
The NG systems steeper angled point increases soil shattering in dry conditions and the self-sharpening effect of the tungsten carbide prevents smearing.

The small difference in height between the wings leading edge and the point tip reduces unnecessary draft to keep fuel to a minimum.



## Creating the right environment for the crop

The NG system is designed with a small point tipped with tungsten carbide, the tungsten carbide self-sharpenes as it wears and cuts a track through the compacted soil. As the point is cutting and not pushing, the compaction layers are relieved instead of being compressed further to the sides and underneath the point, giving important drainage directly where it is needed. The steep angle of the tungsten carbide tile gives powerful shattering in hard, dry conditions as well as excellent penetration.

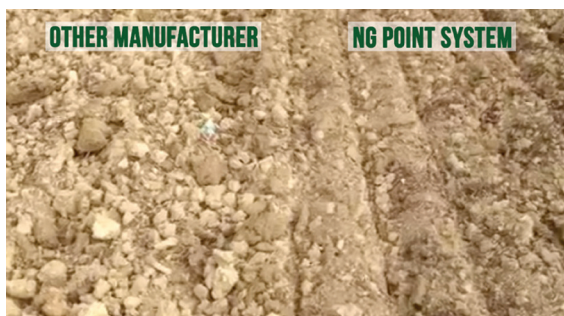


*These diagrams show how the crop suffers when in compacted ground. It is unable to establish root growth and lacks oxygen and water.*

The choice of four wing widths allows the system to give the best possible life in different soil types. Tungsten carbide tips the leading edge of the wing ensuring the wing stays at its full width for its entire working life. This gives a very consistent soil structure throughout the entire field.

The wings are designed to run flat in the ground, angled to cut as level as possible this moves a large amount of earth whilst leaving a flat sub soil. Due to the nature of this, subsequent operations such as drilling and spraying will be smoother, increasing accuracy.

The unique design of the shins is incredibly important, working with the vertical leg to part clods and stones before they reach the surface. The prevention of clods reaching the surface is key in retaining summer tilth to use as cover for the crop seed. The summer tilth provides good seed to soil contact which is essential for germination.



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## Low draft, fuel cost reduction and minimal wear

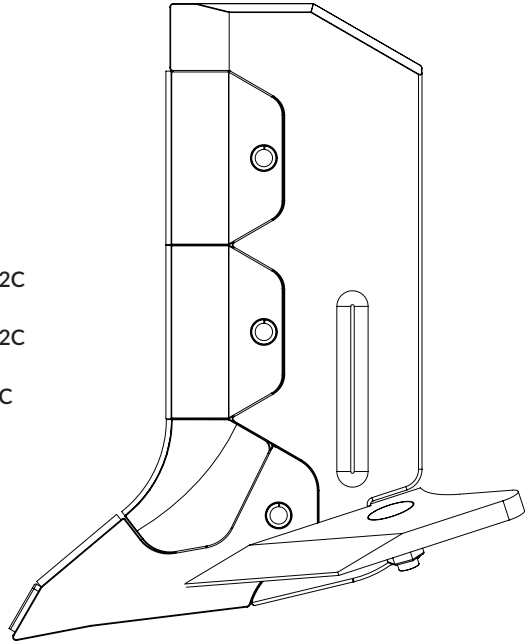
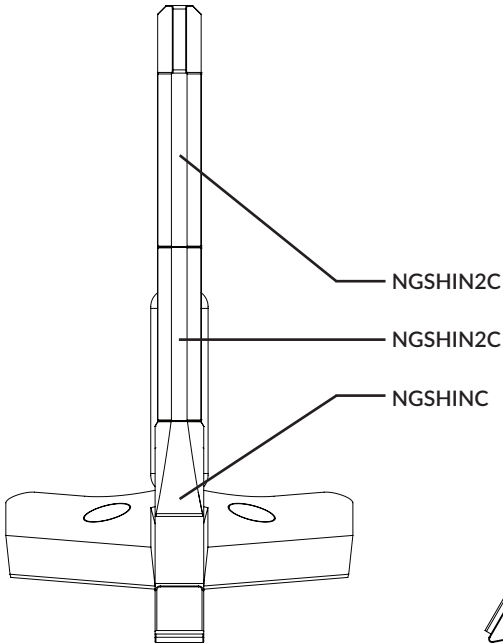
As a result of its slippery properties, the NG system glides smoothly through the ground, not only does this reduce wear but also the draft and fuel bill. The self-sharpening effect achieved by tungsten carbide further reduces draft by cutting through the soil rather than pushing.

The point on the NG system is short, as the tungsten carbide prevents it from wearing, this small distance between the point and wing means no unnecessary draft or fuel is being wasted on a long point.

**KEY POINT > RELIEVE COMPACTION AND RETAIN SUMMER TILTH FOR THE BEST CROP YIELD!**



## FULL ASSEMBLIES



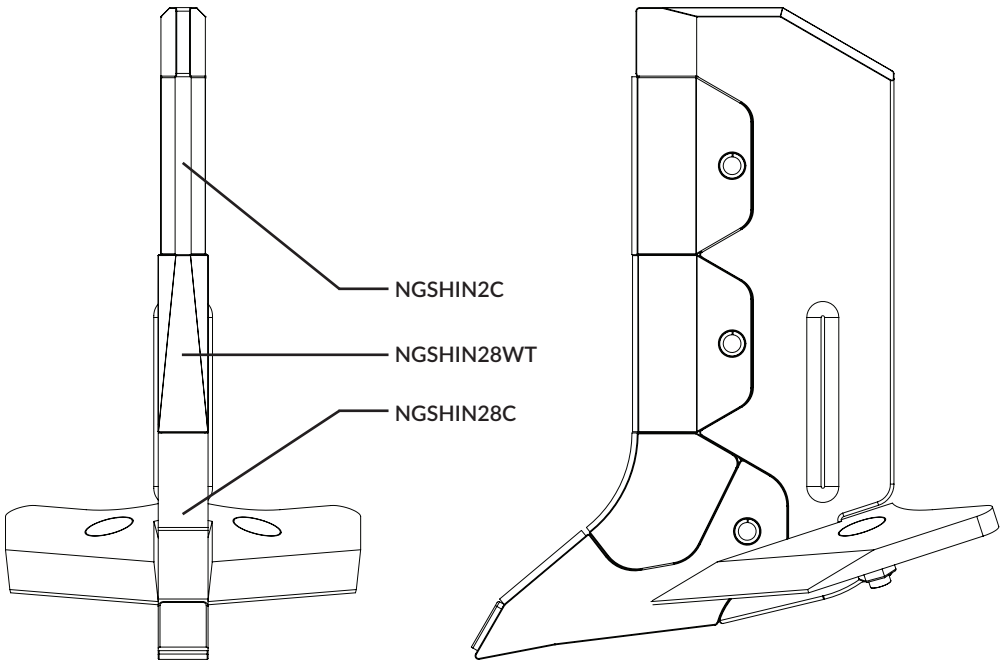
### OPTION ONE

- > Absolute minimum surface disturbance.
- > The lowest draft option.
- > 4" to 12" ideal working depth, (100mm - 300mm).

Wing Width	Option 1 Assembly Cost
150 T/C	£319.71
200 T/C	£348.94
250 T/C	£371.76
300 T/C	£397.08

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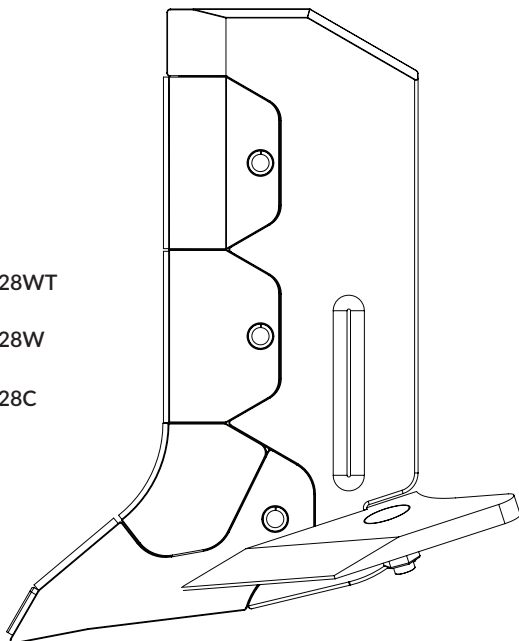
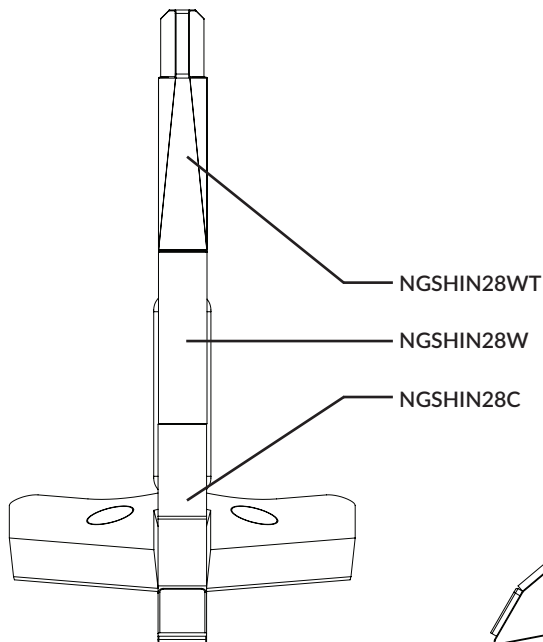
## OPTION TWO

- > Low surface disturbance.
- > Low draft.
- > Increased leg protection.
- > 6" to 14" ideal working depth, (150mm - 350mm).

Wing Width	Option 2 Assembly Cost
150 T/C	£349.48
200 T/C	£378.71
250 T/C	£401.54
300 T/C	£426.85



## FULL ASSEMBLIES

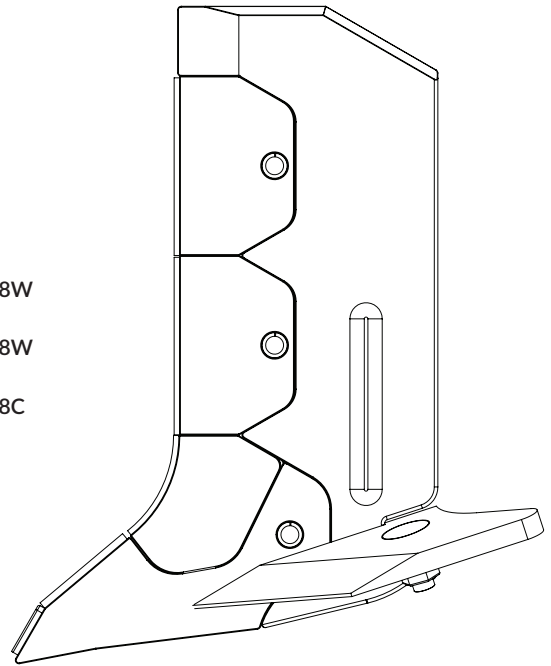
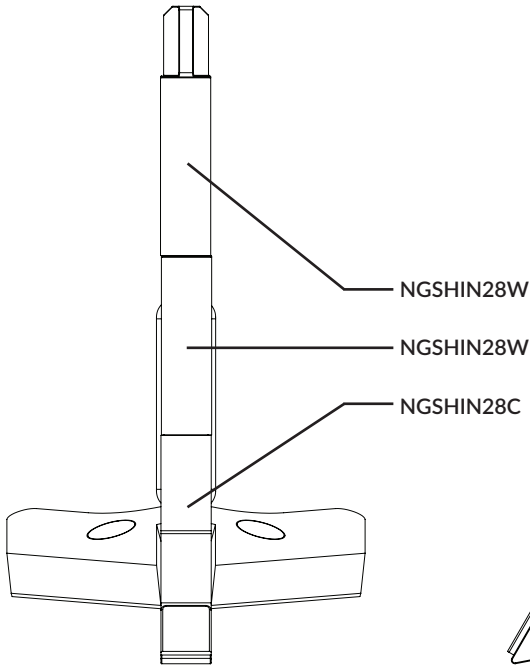


### OPTION THREE

- > Increased leg protection from option 2.
- > 8" to 16" ideal working depth, (200mm - 400mm).

Wing Width	Option 3 Assembly Cost
150 T/C	£371.63
200 T/C	£400.06
250 T/C	£423.68
300 T/C	£449.00

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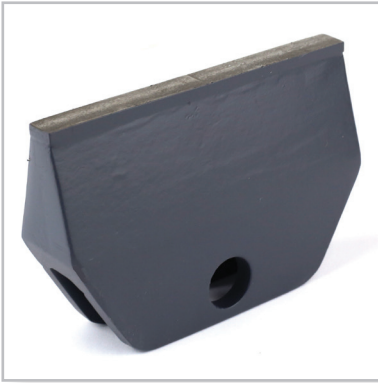
#### OPTION FOUR

- > Maximum leg protection.
- > For working at depth.
- > 12" to 20" ideal working depth, (300mm - 500mm).

Wing Width	Option 4 Assembly Cost
150 T/C	£371.69
200 T/C	£400.92
250 T/C	£423.74
300 T/C	£449.06



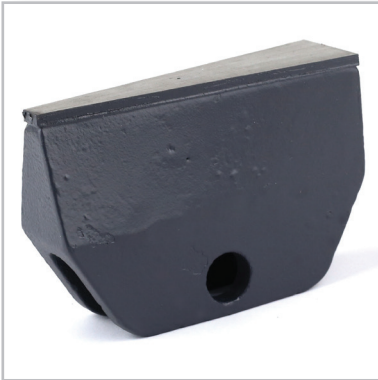
## SEPARATE REPLACEABLE PARTS



### **NG Narrow Replaceable Shin**

Product ID: NGSIN2C

£23.40



### **NG Tapered Replaceable Shin**

Product ID: NGSIN28WT

£45.49

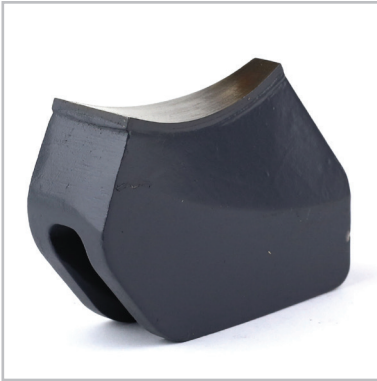


### **NG Wide Replaceable Shin**

Product ID: NGSIN28W

£45.55

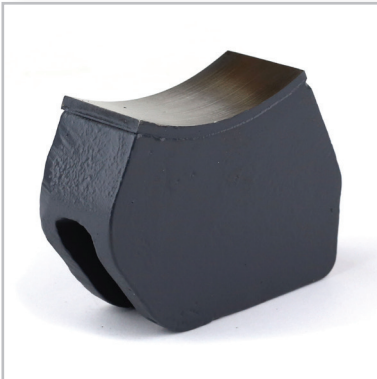
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**NG Tapered Curved Replaceable Shin**

Product ID: NGSHINC

£41.25



**NG Wide Curve Replaceable Shin**

Product ID: NGSHIN28C

£48.93



**NG Standard Replaceable Point**

Product ID: NGPOINT

£53.01

*These products are protected by Registered Community Design Application Number 002227322*



## SEPARATE REPLACEABLE PARTS



### NG Replaceable Stone Point

Product ID: NGSTONEPOINT

£55.62

In areas of high stone content, chipping of the tungsten carbide on a standard NG point may occur. The specialised stone point features a thicker 6mm tungsten carbide tile of a tougher grade, reducing chipping to a minimum.



### NG Replaceable Wing 150mm

Product ID: NGWG150T/C

£78.80



### NG Replaceable Wing 200mm

Product ID: NGWG200T/C

£105.56

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**NG Replaceable Wing 250mm**

Product ID: NGWG250T/C

£126.07



**NG Replaceable Wing 300mm**

Product ID: NGWG300T/C

£148.57



**NG Weld On Leg**

Product ID: NGWG350T/C

£75.27

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## SEPARATE REPLACEABLE PARTS



### **NG Steel Cover Plate 150mm**

Product ID: NGWNG150TOP

£16.50



### **NG Steel Cover Plate 200mm**

Product ID: NGWNG200TOP

£18.97



### **NG Replaceable Wing 250mm**

Product ID: NGWNG250TOP

£21.28

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**NG Steel Cover Plate 300mm**

Product ID: NGWNG300TOP

£24.10

**The NG Coverplate**

The specially developed coverplate helps the NG system to become even more economical. Due to the incredibly hard wearing nature of the tungsten carbide, the front edge of the wing long outlasts the steel behind it.

Made from chromium boron steel the coverplate acts as a sacrificial wing, protecting the steel of the original wing and allowing the tungsten carbide to work for longer.





## THE NG ENDURANCE RANGE

### **NG SYSTEM ENDURANCE RANGE > ACHIEVE THE SAME HIGH PERFORMANCE RESULTS FOR EVEN LONGER!**

The new NG Endurance range offers the same streamlined shape but with even greater longevity.

This is achieved with the use of specifically designed tungsten carbide which has been formed to sit within the existing profile of the NG shins and point. This offers an extra defence against abrasion without adding any drag.

The enhanced range will fit all existing NG systems and can be used alongside any standard NG parts meaning the end user can tailor the system to their own specific wear needs.



### **CURRENTLY AVAILABLE ON NG OPTION TWO SHINS & POINTS**

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NGSHIN2CE



**NG Endurance Narrow Shin**

£60.58

NGSHIN28WTE



**NG Endurance Tapered Shin**

£91.55

NGSHIN28CE



**NG Endurance Curve Shin**

£70.97

NGPOINTE



**NG Endurance Point**

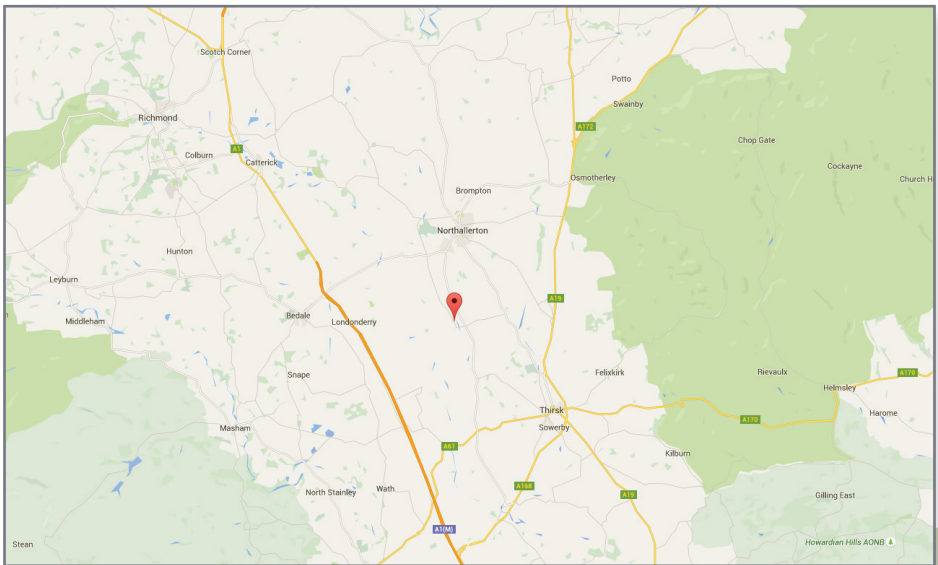
£96.95



## J.J.METCALFE & SON LTD

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### WHERE TO FIND US



**NEXT DAY SERVICE ON ALL IN STOCK PARTS**  
**WWW.JJMETCALFEANDSON.COM**

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