



*Master-crafted*  
**Cutting Solutions  
for Composite Materials**

# Introduction

In addition to the right materials, high quality tools are an essential requirement needed to manufacture composite parts. To further support our customers, PRF Composite Materials have teamed up with Robuso, Europe's leading shears manufacturer, to provide a comprehensive range of master-crafted hand and electrical shears which are specifically designed to provide the complete cutting solution for our large range of high performance reinforcements. This catalogue provides the full details of our range.

All products can be ordered via the order form insert in this catalogue, or by contacting us directly:

**Tel:** 01202 680022

**Fax:** 01202 680077

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## PRF Composite Materials & Robuso

Throughout our 30 years at the forefront of the composites industry, PRF has maintained a high standard of quality throughout our growing range of products. This has guided our selection of Robuso as a premium manufacturer; proven not only by their company history and products, but also by the 'Made in Solingen' mark on all Robuso products. Known as the 'City of Blades', Solingen awards this mark to makers of products that meet and exceed specified quality standards. All scissors are subject to quality examination and are tested on the materials they are recommended for; testing cutting efficiency right down to the tips.



## Products

Forged from high carbon steel and developed with over 90 years of expertise, both the hand and electrical products are designed to ensure efficient, reliable and comfortable cutting for any composite material or process, including shears for cutting a number of technical fabrics including Kevlar® and Dyneema®, and mould-making and trimming shears to name a few. The quality of the raw materials used give these shears hardening qualities of between 57 and 59 HRC, providing guaranteed high cutting performance; the blades on certain models are also micro-serrated to prevent uncontrolled slippage. In addition, each model in our range of hand shears is hand-assembled and adjusted to perfection by skilled craftsmen; every blade is uniquely tailored.

The quality of this product ensures durability; you won't have to constantly replace the tools that you rely on. We also offer a regrinding and overhaul service which will extend the life of your shears and provides excellent value from this premium product.

Other shears and accessories from the Robuso range, for cutting leather, upholstery and other non-technical fabrics are also available from PRF Composite Materials.

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# Special features

Technical textiles pose a number of problems for cutting solutions:

- **Fabrics are tougher – meaning blades wear faster and cutting can require heavy and fatiguing effort.**
- **Fabrics have a smooth surface – allowing the material to slip without control.**
- **Fabrics can be saturated with resins and other chemicals – fouling the blades, preventing clean cutting and reducing the life of your shears.**

**Robuso's shears include a multitude of special features that deal with these problems and provide a comfortable, long-lasting solution to cutting these specialist materials:**

## Micro-serration

One or both blades of certain models are micro-serrated to prevent uncontrolled slippage during cutting.

## Multi-purpose handles

The handles are designed to provide durability and comfort:

### Powder-coated handles

A recently developed innovation, the new powder-coated handles provide an absolutely smooth surface for comfort, excellent impact-resistance and additional durability. These handles offer an easy-grip surface and controlled cutting, even with slippery hands or oily gloves.

### Solvent-resistant chrome handles

Fouling of shears through contact with resins and other saturates is undesirable; not only does this limit the lifespan of your shears, but it also provides the opportunity for cross-contamination of substances from handles to hands. The solvent-resistant chrome handles allow users to clean the shears fully without fear of damage. All of our mould-making shears are fully chrome-plated for quick and easy cleaning, improving durability and performance.

## Precision engineering

### Precision blue-grinding

This term comes from the process of polishing the outsides of the shears to show a super-fine surface finish with a blue-ish shimmer of light. Scissors finished by this process produce a noticeably better cutting performance due to the absence of surface deficiencies; they do not suffer from flash rust either.

### Precision eye-grinding

A skill that is hard to find: an endless polishing belt is threaded through the eye and skilfully manipulated over the contours by the operator. This provides greater comfort when handling the shears.

### Precision hollow-grinding

This is a particularly special feature of Robuso's shears for technical textiles. The hollow-grinding process requires the master grinder to hollow-grind the blades on special leather wheels, in order to create a hollow blade. This skilled process creates a clean and sharp cutting edge and provides the smooth cutting action characteristic of Robuso shears.

## Hand alignment

Robuso shears are almost entirely handmade. During the manufacturing process, the Master Assembler is responsible for ensuring that the blades respond in optimal harmony. This process is done by hand; the Master Assembler aligns the blades to the best possible fit, testing the cutting feel and efficiency to ensure precision in each pair.

## Regrinding service

We offer a comprehensive regrinding service to extend the life of your

shears. The shears are sent back to the workshop where they are disassembled, precision hollow-ground, reassembled, edge ground and serrated as necessary. All worn screws are replaced if required and the deficiencies in the blades are removed without weakening the steel; a result that requires a great deal of skill to achieve. All shears are efficiency-checked and quality inspected before being reissued to their owners.

## Special products

### Left-handed shears

These are true left-handed models; with blades and handles in mirror-inverted configuration for controlled cuts with a full view of the cutting path. Many models are available – look for the left-handed versions in the product range details.

### Leather cases

We also offer smart leather holsters to protect your shears, and your pockets.



*For precision, comfort and longevity in your cutting, order now by returning your completed order form by post, or by contacting us directly:*

**01202 680022**

**[sales@prfcomposites.com](mailto:sales@prfcomposites.com)**

# Proton® scissors and shears

*For cutting carbon, glass, aramid, Dyneema® and impregnated fabrics*

These shears feature a special Proton® coating, which acts as a barrier against abrasive wear and fouling of the blades with impregnated materials. The shears are made from C60 forged and hardened carbon steel which, with the Proton® coating, produces super-hard cutting edges (around 3400 HV). The special coating also means that the entire shear (including

the handles) can be safely cleaned with solvent to remove resin and/or adhesive residues.

Benefitting from micro-serrated blades, these shears provide controlled non-slip cutting and the precision eye-grinding (see p.3) ensures a comfortable grip.



**SHS-R1024-260R**



**SHS-R1071-200R**



**SHS-R1026-210R**



**SHS-R1253-185RC**



**SHS-R0615-130R**

## Product specifications

Model number	Size (")	Total Length (mm)	Length of Cut (mm)	Weight (g)	Micro-serration	Description
SHS-R1024-260R	10	260	100	361	1	Effortless cutting provided by the positive fulcrum.
SHS-R1026-210R	8	210	80	166	1	Featuring pointed blades and an extra-large 'oblong' eye. The fulcrum point is located closer to the blades for positive leverage and high cutting efficiency.
SHS-R1024-250R	9.5	250	95	230	1	As above, but a slightly larger model with a longer cutting length.
SHS-R1253-185RC	7	185	65	111	1	Mould-making scissors with bent-up blades and handles.
SHS-R1071-200R	7.75	200	50	208	1	For forceful, short-length cuts and starting cuts in corners and edges. Also suitable for cutting tapes, thin ropes and hoses.
SHS-R0322-130R	5	133	40	56	2	Thread-trimming scissors with rounded tips; pocketable and ready-at-hand.
SHS-R0615-130R	5	130	42	48	2	Thread-trimming scissors with a slightly longer cutting length than the SHS-R0322 model. With rounded tips for safe pocketing.
SHS-R1041-210L	8	210	90	191	1	Genuine left-hander's model with blades and handles in mirror-inverted configuration for controlled cuts with full view of cutting path. This version is similar to the SHS-R1026 model.
SHS-R1041-260L	10	260	105	340	1	As above, but a slightly larger model with a longer cutting length.



# Heavy-duty shears

For cutting carbon, glass, aramid and Dyneema®

Made from C60 forged and hardened carbon steel, these models feature one micro-serrated blade to control material slippage; blades are also precision blue-ground (see p.3) to provide a noticeably superior cutting performance.

A new innovation, these shears also feature powder-coated handles, which provide an easy-grip surface, high impact resistance, improved handling comfort, controlled cutting and excellent durability.



SHC-R1024-260R



SHC-R1026-210R



SHC-R1081-225R



SHC-R1071-200R



SHC-R0405-160R

Product specifications						
Model number	Size (")	Total Length (mm)	Length of Cut (mm)	Weight (g)	Micro-serration	Description
SHC-R1024-260R	10	260	100	361	1	With positive leverage factor, providing effortless cutting.
SHC-R1024-330R	12.75	330	130	553	1	As above, but a slightly larger model with a longer cutting length.
SHC-R1024-265R	10	260	100	361	1	As above, but smaller and with rounded tips for safe pocketing.
SHC-R1026-210R	8	210	80	166	1	Featuring pointed blades and an extra-large 'oblong' eye. The fulcrum point is located closer to the blades for positive leverage and high cutting efficiency.
SHC-R1026-250R	9.5	250	95	230	1	As above, but a slightly larger model with a longer cutting length.
SHC-R1026-210RA	8	210	80	166	1	Mould-making shears with straight blades and bent-up handles.
SHC-R1071-200R	7.75	200	50	208	1	The short, sturdy blades and long handles on this model result in excellent leverage for forceful, short-length cuts into light and medium weight fabrics. Also good with tapes, cords, thin ropes and hoses.
SHC-R1081-225R	8.5	225	65	240	1	As above, but a slightly larger model with a longer cutting length.
SHC-R1041-210L	8	210	90	191	1	Left-handed shears - true mirror-inverted blades and handles. This version is similar to the SHC-R1024 model.
SHC-R1041-260L	10	260	105	340	1	As above, but a slightly larger model with a longer cutting length.
SHC-R0405-145R	5.5	145	45	54	1	Straight precision blue-ground blades with a hardened screw for extra durability. Suitable for light-handed cuts requiring full power at the blade tips.
SHC-R0405-160R	6	160	50	55	1	As above, but a slightly larger model with a longer cutting length.

## ARS Aramid Eater

For cutting dry fabrics including aramid and Dyneema®

The blades on these Japanese shears are made of sintered 'PM' speciality steel with hardness rating of 1300 HV (equal

to a theoretical rating of approx. 72 HRC), making them extremely durable. The lightweight handles are cast in aluminium and are designed to fit the hand and balance with the blades. Both blades are micro-serrated for added material control. The contact pressure of the blades can be adjusted to suit the thickness of the material being cut.

Product specifications					
Model number	Size (")	Total Length (mm)	Length of Cut (mm)	Weight (g)	Micro-serration
SHS-A526H-260R	10	260	90	248	2



# Cost-effective cutting solutions

*For glass fibre*

## Pelloro®

**SHE-P1021-210R**

**SHE-P1021-260R**

Made in Italy, these lower cost shears have forged carbon steel blades and black lacquered handles. The blades are machine ground, with one micro-serrated blade for cutting control.

## Robur®

**SHG-R2050**

Stainless glass fibre shears with ergonomically styled plastic handles. Featuring one micro-serrated blade for material control.

## Pelloro® Weavers' scissor

**SHE-P2170-160R**

These Italian shears feature large eyes for handling comfort and induction hardened cutting edges. One blade is micro-serrated for cutting control.



**SHE-P1021**



**SHG-R2050**



**SHE-P2170-160R**

### Product specifications

Model number	Size (")	Total Length (mm)	Length of Cut (mm)	Weight (g)	Micro-serration
SHE-P1021-210R	8	210	90	210	1
SHE-P1021-260R	10	260	125	360	1
SHG-R2050-235R	9	245	90	203	1
SHG-R2050-260R	10	265	100	227	1
SHG-R2050-300R	11.5	305	140	275	1
SHE-P2170-160R	6	160	30	55	1

# Mould-making scissors and shears

*For working with impregnated laminate fabrics, carbon and glass fibre*

Made from C60 forged and hardened carbon steel, the durability of these shears makes them ideal for use with impregnated fabrics. The shears are entirely chrome-plated, allowing the entire tool to be cleaned to remove all traces of resin/adhesives and, thus, extend the life of your shears.

Models feature one micro-serrated blade to control fabric slippage. The blades are precision blue-ground (see p.3),

to improve cutting efficiency and durability, and the handles are precision eye-ground (see p.3) for improved comfort and handling.

Specifically developed for mould-making, this range features models with a number of configurations:

- Straight blades – for make-up cutting
- Bent blades – for surface-finishing
- Bent-up blades and handles – for trimming edges and borders

These configurations provide the following advantages in cutting impregnated laminate fabrics: the bent-up blades facilitate reaching projecting fibres without risk of piercing the fabric. Bent-up handles increase the distance between the cutting hand and the material; improving material management and restricting contact between the hand and resins/adhesives.



**SHB-R1024-260R**



**SHB-R1026-250R**



**SHB-R0405-160RB**



**SHD-R1253-185RD**



**SHB-R1249-160RC**

## Product specifications

Model number	Size (")	Total Length (mm)	Length of Cut (mm)	Weight (g)	Micro-serration	Description
SHB-R1024-260R	10	260	100	361	1	Features heavy-duty straight blades for use with impregnated laminates. The positive leverage factor provides effortless cutting.
SHB-R1026-210R	8	210	80	166	1	Featuring pointed blades and an extra-large 'oblong' eye. The fulcrum point is located closer to the blades for positive leverage; providing high cutting efficiency.
SHB-R1026-250R	9.5	250	95	230	1	As above, but a slightly larger model with a longer cutting length.
SHB-R0405-160RB	6	160	50	60	1	Finely shaped with bent-up, pointed blades, a hardened screw and large eyes.
SHB-R1026-210RB	8	210	80	166	1	Features pointed blades and an extra-large 'oblong' eye, with the fulcrum point located closer to the blades for positive leverage. This model features bent blades.
SHD-R1026-210RC	8	210	80	166	1	Same as the model above but with bent-up handles. Ideal for edge-trimming of impregnated laminates.
SHD-R1253-185RD	7	185	65	111	1	Sturdy shears for trimming borders and edges. The blades are bent-up and handles are offset.
SHB-R1249-160RC	6	160	60	38	1	Extra-light model for delicate work. Precision hollow-ground and completely nickel-plated, this model has offset handles, bent-up blades, and features a hardened screw.
SHB-R1076-180RC	7	185	45	85	2	Lightweight for precise trimming of borders and edges. These shears feature short, bent-up blades, offset handles and micro-serration on both blades.

# Trimming scissors and shears

*For use on technical threads including carbon, glass, aramid and Dyneema®*

These useful models are ideal with high-tech threads, including tough and smooth threads such as Dyneema®. Made from forged and hardened C60 carbon steel, the blades

and handles are precision ground and models feature one blade micro-serration (two in some cases) for additional material control.



**SHO-R0322-130R**



**SHO-R0721-100R**



**SHO-R0615-130R**



**SHS-A370-160R**

## Product specifications

Model number	Size (")	Total Length (mm)	Length of Cut (mm)	Weight (g)	Micro-serration	Description
SHO-R0322-130R	5	133	50	56	1	Nickel-plated, with precision hollow-ground blades and a hardened screw. These sturdy weavers' shears benefit from an optimum leverage factor and pointed blades.
SHO-R0322-130RS	5	133	50	56	2	Both blades on this model are micro-serrated for precise trimming of extremely smooth and tough threads such as Dyneema®. The tips are rounded for safe pocketing.
SHO-R0615-130R	5	130	42	48	1	This compact version of weavers' scissors are nickel-plated, precision hollow-ground and feature a hardened screw.
SHO-R0721-100R	4	105	38	23	2	Weavers' pocket scissors for very thin threads. These shears feature rounded tips, and are completely nickel-plated with precision hollow-ground blades.
SHS-A370-160R	6	160	30	71	2	Japanese ARS Weavers' scissors. The blades are made of sintered 'PM' speciality steel with a hardness rating of 1300 HV. Designed for excellent cutting performance with minimum physical effort and extended longevity. The black plastic handles and short blades provide a high leverage effect and the round-tipped blades make them safe for pocketing.



# Knives and cutters

For multi-layered glass and carbon fibre

## KAI Rotary Blade Cutter

Features a firmly mounted rotary blade made of tungsten steel with adjustable blade contact pressure; the blade remains in position under heavy pressure.

Product specifications				
Model number	Colour	Blade Diameter (mm)	Total Length (mm)	Weight (g)
SKO-R1150-028	Grey	28	155	35
SKO-R1150-045	Grey	45	195	87
SKO-R1150-451	Blue/Black	45	180	92

The grey version of this cutter features a classic design made from solid plastic; the blue/black version is a new design featuring an ergonomic handle made from solid plastic with a firm rubber grip for comfort and efficient cutting results.



SKO-R1150-028



SKO-R1150-451

## KDS Safety Cutters

Heavy-duty cutters for performing powerful cuts. These models feature ergonomic handles for safe and comfortable cutting.

Product specifications		
Model number	Weight (g)	Description
SKO-R1150-022	107	The blade control slider locks in position during the cutting operation. These blades are specially heat-treated for high durability.
SKO-R1150-021	109	This model features a handle-integrated magazine which allows the blades to reload automatically. The blade control slider locks in position during the cutting operation and the blade outlet features a lock-screw to freeze the blade for forceful cuts.
SKO-R1155-000	160	Self-loading from the integrated snap-off magazine, which holds 8 blades. The blade outlet features a lock-screw to freeze the blade in position when performing powerful cuts.



SKO-R1155-000

To order replacement blades call PRF on 01202 680022 or email [sales@prfcomposites.com](mailto:sales@prfcomposites.com)

## EC Cutter

Effortless single-layer cutting of aramid, carbon, Dyneema® and glass fibre fabrics up to 200 g/m<sup>2</sup>

This innovative product provides a number of benefits for cutting technical textiles:

- Ergonomically designed for comfortable handling
- Carbide-edged blades for excellent cutting performance
- Mains and battery powered for all working environments
- Clear view of the cutting zone for exact results
- Serrated blades for material control and reduced slippage

Maximum cutting thickness: 2mm

Order number: SE-R2960-021 (serrated set)

**Each set includes:** Power-drive handle, short bladed cutter head for curved cutting, cutter head plus foot for straight cutting, transformer and power cord, mains connector and rechargeable battery. Ball type cutter head and cutter head without guide foot are available separately.



SE-R2960-021



Cutter heads included

# Electro-powered heavy-duty shears

*Designed to cut multi-layered aramid and glass fibre, and other heavyweight materials without difficulty*

These shears operate on the principle of conventional hand shears, in that the cutting effect is produced by the up-and-down movement of the upper blade, the edge of which is in constant contact with the edge of the fixed lower blade. The advantage, over rotary shears, is that there is no bare shaft for threads to wind around and block the machine. The operator also has a clear view of the cutting zone.



Available with a choice of two shear feet:

## Shear Foot A:

**Maximum cutting thickness c. 6mm**

Ideal for use with extremely dense and tough materials due to the over-dimensioned blades and heavy-duty leverage. The special foot geometry design makes ready cutting of narrow radius contours possible.



**A40/A41 – Unserrated/unserrated upper blade**



**A50/A51 – Unserrated/serrated upper blade**



**Standard lower blade – Unserrated**

## Shear Foot B:

**Maximum cutting thickness is c. 15mm**

Excellent for use with voluminous woven and knitted fabrics.



**B71 – Uncoated upper blade**



**B60 – Proton®-coated upper blade with acute cutting angle  
B80/B81 Proton®-coated upper blade**



**Standard lower blade – Serrated/unserrated**

## Blade set options

Shear Foot A:	Blade combinations
SEO-R2921-040	A40 unserrated upper blade with standard, unserrated lower blade
SEO-R2921-041	A41 serrated upper blade with standard, unserrated lower blade
SEO-R2921-050	A50 unserrated upper blade with standard, unserrated lower blade
SEO-R2921-051	A51 serrated upper blade with standard, unserrated lower blade
Shear Foot B:	Blade combinations
SEO-R2921-060	Proton®-coated B60 upper blade with acute cutting angle and unserrated lower blade
SEO-R2921-071	B71 Uncoated upper blade with serrated lower blade
SEO-R2921-080	B80 with Proton®-coated upper blade and unserrated lower blade
SEO-R2921-081	B81 with Proton®-coated upper blade and serrated lower blade

## Recommended applications

Material	A40	A41	A50	A51	B60	B71	B80	B81
Aramid Fabrics/ Knitted fabrics		Optimal		OK			Optimal	Optimal
Aramid Felts		Optimal		OK			OK	Optimal
Aramid Composites (up to 2.5mm)		Optimal	OK	OK				
Dyneema® Fabrics/ Knitted fabrics		OK		OK			OK	Optimal
Dyneema® UD	OK	OK	OK	OK			Optimal	OK
Glass Fibre Fabrics/Layers		OK		OK	OK	Optimal	OK	OK
Zylon®		OK		OK				Optimal

# Pneumatic shears

For cutting multi-layered aramid and glass fibre, and other heavyweight materials

The heavy-duty shears are now available featuring all the same advantages but powered pneumatically. Perfect for use in work environments where electro-powered tools are not recommended, for example, cutting carbon fibre.

These shears are currently available in the B71 set, with uncoated upper blade and serrated lower blade. If you would like a different set, please contact us directly.



SEO-R2925-271

We also have a range of pneumatic shears designed for specific material cutting:

### CarbonCut

SEO-R2990-200

Carbide-edged plane durable blades for exact and swift cutting and making up of carbon fibre fabrics and other high-tenacity technical textiles.

### AramidCut

SEO-R2990-201

A micro-serrated carbide-edged blade which prevents slippage of tough fibres and provides a perfect cutting edge. The carbide metal-liner in the cutting head should ensure a long-service life.

### Recommended applications

Material	CarbonCut	AramidCut	CompositeCut	GlasCut
Carbon Fibre Layers/Fabrics	Optimal	Optimal		OK
Glass Fibre Layers/Fabrics	Optimal	Optimal		Optimal
Aramid Laminated	OK	Optimal		
Composites, hard, up to 2.5mm		OK	Optimal	OK

### Important Notice:

These are extremely powerful shears for which we recommend the use of appropriate personal protection equipment.

Accessories such as Dynaflex® safety gloves are also available. Made of Dyneema® material, these gloves prevent the penetration of glass fibre.

### Extraction device

SEO-R2920-850

An ideal accessory when cutting carbon fibre, this device works in combination with an industrial vacuum cleaner and can be readily attached to the pneumatic shears. The suction tube inlet is located at the blade edges to intercept the carbon dust the moment it is released.

### Blade Visor

SEO-R2920-800

The blade visor is hinge-mounted on the protective cap and remains in a safe position until it touches the edge of the material. At this point, the visor folds back and the cutting is performed as usual.

### CompositeCut

SEO-R2990-210

This tool features plane edges made of high tensile tool steel to cut cured GRP and CRP laminates. This tool can also be used to cut metals.

### GlasCut

SEO-R2990-211

With blade edges made from dual-serrated high-tensile tool steel, this version has been developed for the cutting and making up of glass fibre fabrics and layers.



SEO-R2990-200

The material handling glove features a metal-reinforced safety segment around the thumb and the index finger for extra protection. Available as large and extra-large.

Full range of upholstery and traditional textile shears and accessories are also available.



# Find out what PRF can do for your business

Make an enquiry today at  
**mail@prfcomposites.com** or  
**01202 680022** or visit our  
website: **www.prfcomposites.com**

