

Interface Services Pte Ltd.

info@interfacesvs.com www.interfacesvs.com



Our Products

Oil Palm Harvesting & Pruning Poles

- ExTeL 16m (specifications on [this page](#))
- ExTeL 13.25m (specifications on [this page](#))
- ExTeL Custom (specifications on [this page](#))



Tube Repair Scheme

- ExTeL Tube Repair (specifications on [this page](#))



Oil Palm Harvesting & Pruning Blades

- Standard Model (specifications on [this page](#))
- Xtra-Long Model (specifications on [this page](#))



Interface Services is an OEM design and manufacture company for production orders only.
Dealer inquiries, please contact: info@interfacesvs.com

Always Innovating — Forever Ahead



Interface Services Pte Ltd.

info@interfacesvs.com www.interfacesvs.com



About Us

Background

Interface Services was founded as a professional Engineering company in 1982 and began developing solutions to oil palm harvesting in 1986.

By 1992 the company had fully developed a light weight composite harvesting pole and fixtures which doubled productivity over aluminum poles predictably and repeatedly in 14m palm. The field trials were published in *The Planter* - The Incorporated Society of Planters, Kuala Lumpur, Malaysia 'Field Trials of an Improved Oil Palm Harvesting Tool' [Vol. 68 No 799 Oct 1992] and a financial evaluation 'Investigating the True Cost of Conventional Harvesting Tools' [Vol. 69 No 811 Oct 1993]. This was further confirmed by PORIM (now Malaysia Palm Oil Board, MPOB) in 'The Effect of Physical Characteristics of Aluminum Poles on Harvesting Productivity of Tall Palms' [PORIM bulletin No.35 1998]. This productivity gain was again confirmed in trials by Golden Hope, Nalek Rubber Estate, Kulai, 6th February 1993.

In 1993 we entered our pole design in Forma Finlandia III, 'International Plastics Design Competition'. It was selected as 1 of 65 (out of 739 entrants from 36 countries) for tour through Sweden, France, Germany, Belgium, Italy, Portugal and UK.



Harvesting blade development started in 1986 but only by 2006 did newer industrial processes allow the manufacture of our superior design to an economic advantage. After 5 years of in-field testing this blade is the lightest in the industry, stays sharp 3 times longer than carbon steel, requires half the time to sharpen and is virtually indestructible.

Always Innovating — Forever Ahead



Interface Services Pte Ltd.

info@interfacesvs.com www.interfacesvs.com



ExTeL Pole Description

We manufacture:

ExTeL (Extendable and Telescopic) harvesting poles incorporate compound-wound composite hybrids manufactured by pultrusion, table-winding and blow-moulding techniques.

We deliver:

Ergonomics are the key to harvester's acceptance and productivity. Light weight alone is not sufficient: torque and relative stiffness are more critical criteria.

- **Ergonomics**

Productivity is our single focus and harvesters using EXTEL have predictably and repeatedly increased their productivity by 120% over aluminum in palms ranging 14m.

- **Productivity**

Crop recovery to 17 meters (16m for the pole plus 1 meter for the harvester) is easily achieved through the improved dexterity achievable with ExTeL.

- **Crop recovery**

- **Safety**

ExTeL is designed to be electrically non-conductive for protection around high tension lines (*not* guaranteed due to external influences not in our control). Vivid colours and the fact that composites give tactile warning before failure also contribute to safety in the field.

Using 'cutting edge' (state-of-the-art) technologies:

- **Extendable**

The 35mm top tube can be easily telescoped into the 42mm along the full 5 meters, utilizing a convenient proprietary collar. One half meter must be left as overlap in the 42mm.

- **Telescopic**

Top tube requires judicious design and manufacture to withstand the harshest treatment at the business end of the tool, while minimizing the weight at the top.

- **Top tube**

- **Bottom tube**

The bottom 42mm tubes can be extended or shortened using a proprietary coupling in any combination of lengths up to 11 meters. This may be useful in different heights of palm or for transport purposes.

- **Repair Kit**

Repair can be done to both tubes in-field by harvesters to original integrity. This extends the tool life by 600% and reduces the 'green footprint of plastic' through recycling.





ExTeL Pole Specifications

POLE MODEL:

This Pole Consist of:

- 1pc blade capture band:
- 1pc top tube 35mm/315mm (330g/m):
- 1pc PU telescopic collar:
- 2pcs s/s band clamps:
- 1pc s/s T-bolt clamp:
- 1pc T-bolt handle:
- 1pc bottom tube 42mm/385mm (410g/m):
- 1pc PU bottom end cap:

Total weight:

Optional Coupling (42mm only):

This extension coupling is used to couple/un couple 42mm tube in different lengths for different fields or for transport.

This may be inserted along any length up to 11m:

- 1 pc external sleeve (bonded 1 side)
- 2 pcs PU ring:
- 2 pcs T-bolt clamp:
- 2 pcs T-bolt handle:

Total coupling weight (optional):

Total weight with (optional) coupling:

Note: 42mm and 35mm tubes can be field-repaired to original strength by adding:

- 35mm repair internal sleeve:
- 42mm repair external sleeve:

	ExTel 13.25M	ExTel16M
	40g	40g
	1,815g (5.50m)	1,815g (5.50m)
	113g	113g
	46g	46g
	58g	58g
	32g	32g
	3,382g (8.25m)	4510g (11.00m)
	<u>59g</u>	<u>59g</u>
Total weight:	5,552g	6,673g
	150g	150g
	50g	50g
	116g	116g
	<u>64g</u>	<u>64g</u>
Total coupling weight (optional):	<u>370g</u>	<u>370g</u>
Total weight with (optional) coupling:	5,892g	7073g
	66g	66g
	42g	42g

ExTeL poles can be used with all existing conventional harvesting blades

ExTeL poles are designed to be electrically non-conductive for safety around high tension wires (not guaranteed due to factors outside our control)

No poles should be used during atmospheric electrical activity.





ExTeL Pole Repair Kits

Repair

Top tube 35mm/31.5mm can be field repaired by harvesters to original integrity incorporating an epoxy bonded internal sleeve, without interfering with the telescopic action.

Bottom tube 42mm/38.5mm can be field repaired by harvesters to original integrity incorporating an epoxy bonded external sleeve, without interfering with the telescopic action.

Both repairs can be done in under 15 minutes but must be left infield, undisturbed, overnight for full cure.

35mm repair kit consists of a plastic bag containing:

- one hack saw
- one half round file
- one boiler brush
- two packets of degreaser
- one packet of pre-measured epoxy
- one stirring stick
- one mixing tray clamshell
- one 35 mm repair sleeve



42mm repair kit consists of a plastic bag containing:

- one hack saw
- one half round file
- two packets of degreaser
- one packet of pre-measured epoxy
- one stirring stick
- one mixing tray clamshell
- one 42 mm repair sleeve

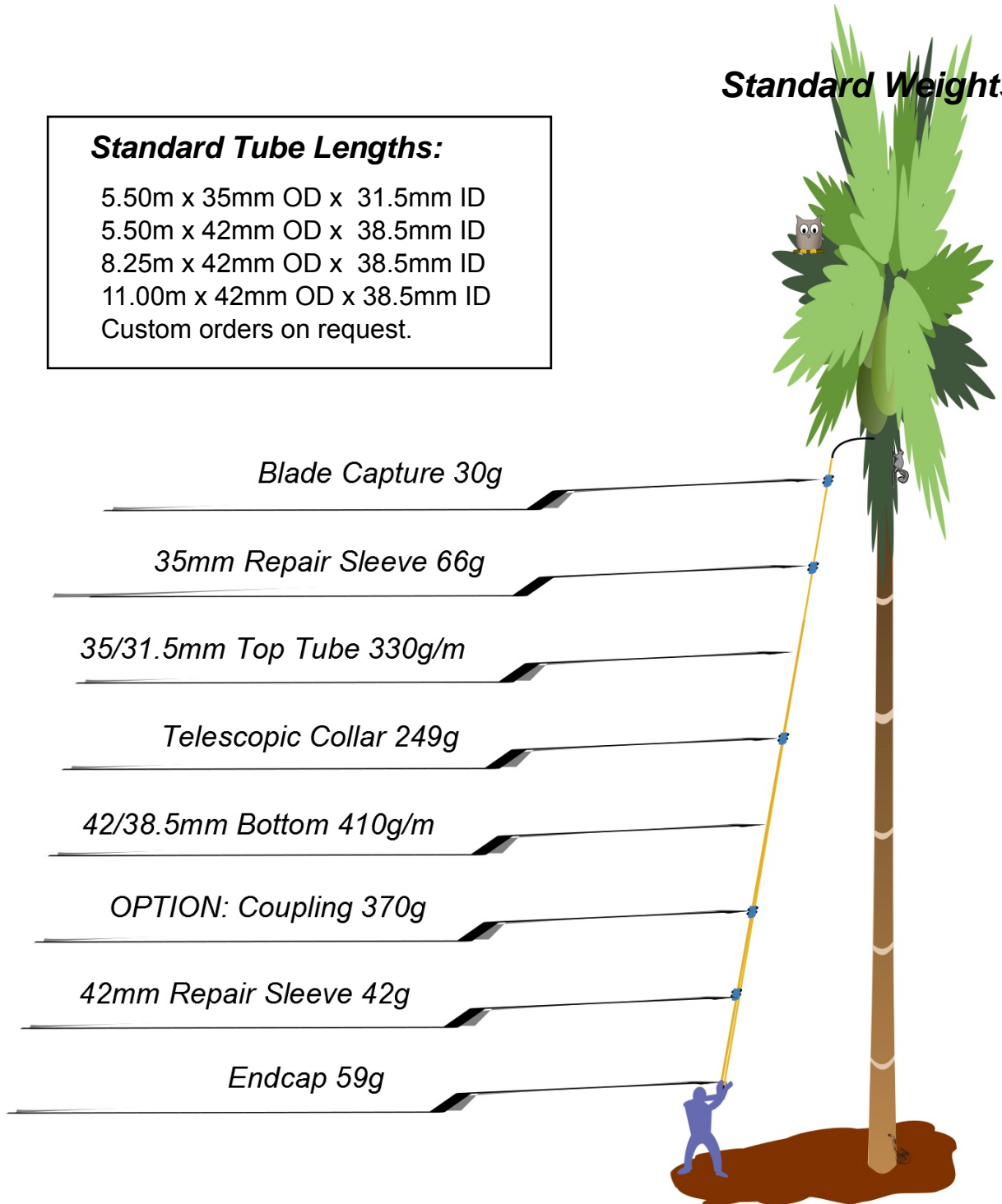




Standard Weights

Standard Tube Lengths:

5.50m x 35mm OD x 31.5mm ID
5.50m x 42mm OD x 38.5mm ID
8.25m x 42mm OD x 38.5mm ID
11.00m x 42mm OD x 38.5mm ID
Custom orders on request.



Interface Services Pte Ltd.

info@interfacesvs.com www.interfacesvs.com



ExTeL Composite — Custom Designs

Custom Design

Standard ExTeL poles may be ordered in any combination of length up to 5.5m for 35mm O.D. and up to 11m for 42mm O.D. This constitutes a custom order but at no additional cost.

Interface Services will undertake design for custom 'reach tools'. These could be for other crops, camera pods, underwater grabbers, window cleaning etc.

Design entails clearly understanding all facets of your requirement as it is not a simple matter of choosing length, diameters and weight.

The flexibility of composites allows adjustment of spring modulus, ultimate yield, and directional strength – bending and torsional.

We have made experimental reach tools as high as 21m for plucking coconuts and 20 meters in oil palm.

We have extensive experience in compound wound hybrid pulltrusions, table winds and bladder moulding.

Application Form - Custom Design

Environment to be used in:		
Above or below water:		
Length needed:		
Weight to be carried at the tip:		
Break down length:		
Weight limitations:		
Telescopic:	Yes No	Extendable:	Yes No
Electric conductivity:	Yes No	Reparability:	Yes No

Always Innovating — Forever Ahead



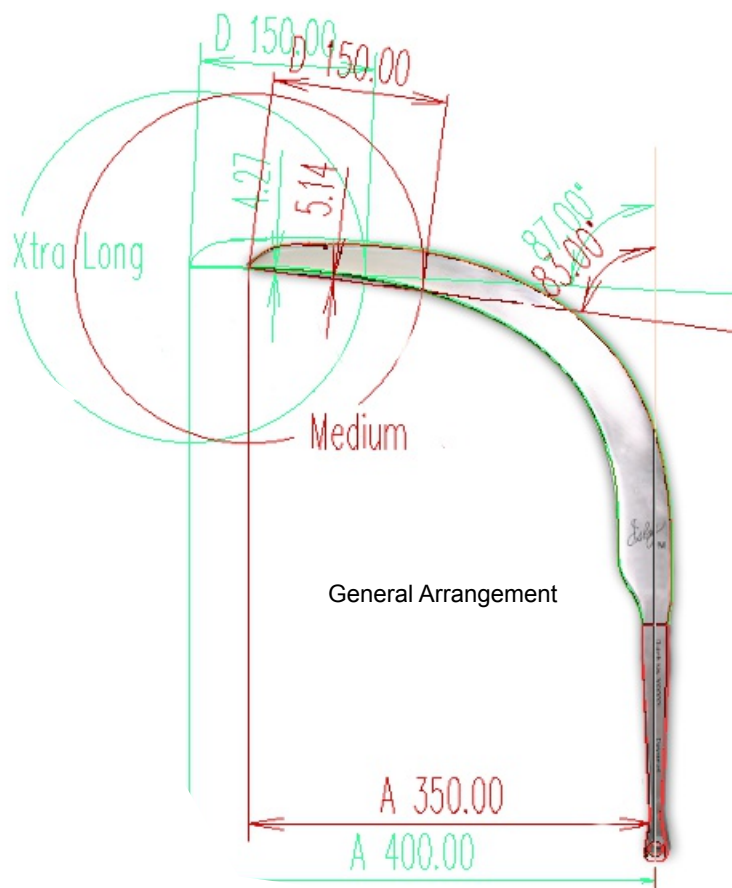
Interface Services Pte Ltd.

info@interfacesvs.com www.interfacesvs.com



Islay

- Manufactured in modern, high volume, production facilities
- Predictable, repeatable, and traceable quality (future RSPO)
- Each blade identical to the next, batch to batch
- Application-specific virgin blade-steel



- Stays sharp three times longer than carbon-steel
- Requires half as long to sharpen as carbon-steel
- Thru-hardend blade never loses its edge
- Highest tensile rating for survivability
- 10x longer projected life over carbon-steel blades
- Supplied fully sharpened, polished, and ready to use
- Can be mounted on all conventional harvesting poles
- Supplied with dedicated blade guard (RSPO)

Always Innovating — Forever Ahead

