# TWIN-PATH SLINGS®

THE WORLD'S SAFEST, LIGHTWEIGHT LIFTING SLINGS



Manufactured by Beaver Brands | 1300 783 606

### FOR LIFTS FROM 5 TO 600 TONNES

Twin-Path<sup>®</sup> Slings have been an important rigging solution for heavy lifting applications across a number of industries for over 20 years. And now under licence with Slingmax<sup>®</sup>, our Twin-Path<sup>®</sup> Slings are manufactured to order in Australia, supplied within short lead times.

Not only do the slings have the precision strength and flexibility to successfully

perform lifts from 5 tonnes to an incredible 600 tonnes – they are a fraction of the weight of wire rope slings.

The lightweight nature of the slings, coupled with several important safety features ensures lifts are performed quicker, safer and much easier than traditional wire slings.

Australian Made

Twin Path<sup>®</sup> Slings have been used around the world since 1987.

#### K-Spec<sup>®</sup> Core Fibre Technology

Unlike other fibre slings, Twin-Path<sup>®</sup> Slings are constructed from a unique proprietary blend of K-Spec<sup>®</sup> high-performance fibres, which will not stretch under load – enabling the accurate planning of a heavy lift. Less time and manpower is spent on rigging for most construction and maintenance schedules and a range of engineered protective pads and covers protect the slings from wear and tear.

Twin Path<sup>®</sup> Slings contain K-Spec<sup>®</sup> high performance, no stretch fibres.



CornerMax<sup>®</sup> Sleeves provide cut protection for a variety of edges.

The unique slings are capable of safely lifting up to 600 tonnes.

### ADVANTAGES

#### **Handling Features**

- Weight Advantage: 80% lighter than wire rope and chain slings and 50% lighter than polyester slings.
- Control of Slings: Rigging becomes quick and more manageable due to the low weight.
- Storage retrieval and salvage: Easily rolled up and shelved after use.
  Transportable and can easily be tossed in the back of a car or van.
- Marine Applications: The slings do not absorb moisture and are naturally buoyant, making them ideal for all offshore and salvage work.

#### **Cost Efficiencies**

- Wear Resistant Covermax<sup>®</sup> Outer Cover: The fabric is four times more abrasion resistant than common nylon or polyester, increasing the sling life.
- Repairable: Twin-Path<sup>®</sup> Slings can be repaired by the manufacturer if the internal core fibres are not already cut or damaged. All slings are re-tested after repairs are completed.
- Reduced Rigging Times: Rigging can be reduced by as much as 80% with less exposure to possible accidents.
- Low Maintenance: Twin-Path<sup>®</sup> Slings do not require lubrication or annealing like wire rope.

#### **Safety Features**

- Twin-Path<sup>®</sup> Sling Design:
- Constructed using two independent paths each capable of carrying the rated working load limit.
- Low Stretch: Less than 1% elongation at working load limit.
- Chemical Environments: Can be safely used in chemical environments.
- Check-Fast<sup>®</sup> Early Warning Indicator (EWI): The Check-Fast<sup>®</sup> system provides for a pass/fail inspection of the internal load bearing core yarn.
- Optic Fibres: The optional optic fibre system can alert you to heat exposure, cutting and chemical damage of the core fibre, simply by shining a flashlight into one end of the optic fibre.



The slings are ideal for marine applications.



Twin Path® Slings can be cost effectively repaired, if the core fibres are not already cut or damaged.

Twin Path<sup>®</sup> Slings are

80% lighter than wire

rope slings.

## SAFETY FEATURES EXPLAINED

### **Check-Fast® Inspection**

The Check-Fast® system provides for a pass/fail inspection of the internal load bearing core yarn. Damage to the core yarn from fibre on fibre abrasion, fatigue, and severe overload can be detected. If the sling is mistakenly loaded beyond rated capacity, the early warning indicator (EWI), which is the internal load bearing core yarn, will disappear before the sling fails.



If the early warning indicators (EWI) is missing, the sling may be unfit for use.

### **Rifled Cover® Technology**

A major breakthrough for improved break strength is the spinning or helical winding of the core yarn within Twin-Path® Slings.

This process increases the slings breaking strength by 18% without the need for any additional core yarn.

Optional Fibre Optic Cable



The simple fibre optic test indicates whether a sling has sustained heat or chemical damage.

The optional fibre optic cable provides another simple and effective method of inspection. A light shone through one end of the fibre optic cable will travel throughout the body of the sling and reflect out the other end. A light that does not pass through the sling may indicate heat or chemical damage.

#### **Two Independent Cores**

Twin-Path® provides unique, patented backup protection. There are actually two independent cores of K-Spec<sup>®</sup> fibre in the one sling. If a single path is damaged in use, the second path will perform as a backup and maintain control until the load is lowered. The Twin-Path® helps reduce the potential for catastrophic material mishandling.

Another early warning system is built into Twin-Path® slings through the use of two independent, colour-coded covers. If the outer cover is cut, the patented red inner cover is instantly visible, providing a visual alert to remove the sling from service. As long as the inner core yarns are not damaged, Twin-Path® slings can be repaired with bulked nylon patches, proof tested and re-certified.



Twin-Path® Slings consist of two independent cores.

### **Superior Patented Design Features**

Armor Wear Pads resist abrasion to prevent sling damage.

Covermax® outer cover, is 4 times more abrasion resistant than polvester outer cover.

Safety Red inner sleeve acts as an early warning device when the outer sleeve is cut or worn.

Armor Wear Pads are removable or sewn directly over sling.

Optional optic fibre allows for an internal integrity check of the core yarn.

K-Spec<sup>®</sup> high Twin-Path<sup>®</sup> performance fibres have less than 1% elongation at rated capacity.

design, contains 2 individual paths of core yarn.

## TWIN-PATH<sup>®</sup> SLING PROTECTION

### **CornerMax<sup>®</sup> Pads and Sleeves**

Most synthetic sling accidents are caused by cutting. There are many kinds of protective sleeves and pads available, but only two synthetic protectors provide adequate cut protection:

CornerMax® Pads and CornerMax® Sleeves have been engineered and tested to provide 4464 kg of protection per centimetre of sling width.

CornerMax® pads are designed for 90° straight edges, whereas CornerMax® sleeves are for other edges.

### **Sling Protection**

CornerMax® sleeves may look like traditional protection sleeves, but are made of a high tech fibre that is specially woven to provide cut protection for a variety of edges and surfaces.

The chart below shows the results of testing slings protected by 12 different synthetic materials that are often used for sling protection. In our tests, ten of the most commonly used materials do not allow a sling to reach its working load before the sling is cut and fails. The CornerMax® pad and sleeve allow the synthetic sling to meet its working load with no damage to the sling or the protection.



#### **Other Forms of Sling Protection**

For synthetic slings, the most critical decision is whether cut protection is needed. In some circumstances no cut protection, or simplified softeners only, are required.

At Beaver Brands we have a full line of engineered softeners that are excellent for abrasion protection or for protecting a load surface.



CornerMax® Pads create a "tunnel" of cut protection – a no-touch zone. Therefore, the edge does not come in contact with the pad or sling. Note that the sides of the pads must be completely supported in order to create and maintain the "tunnel".



CornerMax® sleeves are made of a high tech fibre that is specially woven to provide cut protection for a variety of edges and surfaces.





### WORKING LOAD LIMITS

	Product Code	Vertical WLL (kg)	Choker WLL (kg)	Basket WLL (kg)	60 Deg WLL	Tube Width	Weight Per Metre
			B	U		(mm)	(kg)
2	TPXC5	5000	4000	10000	8500	75	0.57
	TPXC6	6000	4800	12000	10200	75	0.58
	TPXC8	8000	6400	16000	13600	75	0.91
	TPXC10	10000	8000	20000	17000	100	1.14
	TPXC12	12000	9600	24000	20400	125	1.36
	TPXC15	15000	12000	30000	25500	125	1.70
	TPXC20	20000	16000	40000	34000	125	2.27
	TPXC25	25000	20000	50000	42500	150	2.84
	TPXC30	30000	24000	60000	51000	150	3.41
	TPXC35	35000	28000	70000	59500	200	3.98
	TPXC40	40000	32000	80000	68000	200	4.55
	TPXC45	45000	36000	90000	76500	200	5.11
	TPXC50	50000	40000	100000	85000	200	5.68
	TPXC55	55000	44000	110000	93500	250	6.25
	TPXC60	60000	48000	120000	102000	250	6.82
	TPXC65	65000	52000	130000	110500	250	7.39
	TPXC70	70000	56000	140000	119000	300	7.96
	TPXC75	75000	60000	150000	127500	300	8.52
	TPXC80	80000	64000	160000	136000	300	9.09
	TPXC85	85000	68000	170000	144500	300	9.66
	TPXC90	90000	72000	180000	153000	300	10.23
	TPXC95	95000	76000	190000	161500	300	10.80
	TPXC100	100000	80000	200000	170000	300	11.37
	TPXC105	105000	84000	210000	178500	250 & 100	11.93
	TPXC110	110000	88000	220000	187000	250 & 100	12.50
	TPXC115	115000	92000	230000	195500	250 & 100	13.07
	TPXC120	120000	96000	240000	204000	250 & 100	13.64
	TPXC125	125000	100000	250000	212500	250 & 100	14.21
	TPXC130	130000	104000	260000	221000	250 & 100	14.77
	TPXC135	135000	108000	270000	229500	250 & 150	15.34
	TPXC140	140000	112000	280000	238000	250 & 150	15.91
	TPXC145	145000	116000	290000	246500	250 & 150	24.72
	TPXC150	150000	120000	300000	255000	250 & 150	25.27
	TPXC155	155000	124000	310000	263500	250 & 150	26.42
	TPXC160	160000	128000	320000	272000	250 & 150	27.28
	TPXC165	165000	132000	330000	280500	250 & 150	28.13
	TPXC170	170000	136000	340000	289000	250 & 150	28.98
	TPXC175	175000	140000	350000	297500	250 & 150	29.83
	TPXC180	180000	144000	360000	306000	250 & 200	30.69
	TPXC185	185000	148000	370000	314500	250 & 200	31.54
	TPXC190	190000	152000	380000	323000	250 & 200	32.39
	TPXC195	195000	156000	390000	331500	250 & 200	33.24
	TPXC200	200000	160000	400000	340000	250 & 200	34.10

**Note:** To obtain the MBS (Minimum Breaking Strength) for towing, multiply the WLL by 5. Example TPXC5 = WLL 5000kg  $\times$  5 = 25,000kg.

### TWIN-PATH® ACCESSORIES

### **Equaliser Block**

The Equalizer Block is used to maintain tension on all legs of the sling during a lift. Rather than adjusting slings and hooks prior to completing a lift, the Equalizer Block will automatically adjust itself when pressure is put on the device from the sling. This was designed specifically for Twin-Path<sup>®</sup> slings.

Part No. 1	Capacity (5:1 DF)	Inside Width (mm)	Suggested Sling for 90° Basket	Block Weight (kg)
SEB10	10 US ton	70mm	TPXCF1000	20kg
SEB25	25 US ton	100mm	TPXCF2500	36kg
SEB50	50 US ton	150mm	TPXCF5000	100kg
SEB75	75 US ton	150mm	TPXCF7500	122kg
SEB125M	125 metric ton	200mm	TPXCF15000	290kg



The equaliser block automatically adjusts itself when under pressure.

#### **G-Link Connectors**

G-Link Connectors are used to lengthen or shorten a Twin-Path<sup>®</sup> Sling to it's desired length. This enables the sling to be used for a number of different applications.





Two G-Link Connectors are used to lengthen or shorten a sling.

### Twin-Path<sup>®</sup> Adjustable Bridles

Twin-Path<sup>®</sup> Adjustable Bridles are a very useful rigging tool. They replace standard two or four leg bridles, with the additional value of self-adjustment to awkward loads. One leg has twice the capacity of the other leg. As tension is applied, Twin-Path<sup>®</sup> Adjustable Bridles self-adjust over the centre of gravity to find the lifting point for level, load handling.



Twin-Path<sup>®</sup> adjustable bridles self adjust over the centre of gravity.



### **GENERAL CARE & STORAGE**

- Check Australian Standard AS4497 and AS1353 for use and inspection guidelines
- Never overload the equipment
- Do not use if ID tag is removed
- Inspect sling for damage prior to use
- Do not use sling if there is any sign of cut webbing, snagging, heat or chemical damage, excessive wear, damaged seams, any other defect or presence of grit, abrasive materials or other deleterious matter
- Do not tie knots in sling webbing
- Protect sling webbing from sharp edges of load. Use protective sleeves
- Do not expose slings to temperatures above 90°C

- Do not allow abrasive or other damaging grit to penetrate the fibres
- Consult with manufacturer's recommendations before immersing a sling in a chemical solution
- Keep away from strong alkalis and phenolic compounds
- When not in use, synthetic slings should be stored in a clean dry place. Heat sources and non-ventilated places should be avoided
- Chemically active environments can affect the strength of synthetic lifting slings. Different chemicals will react with different exposure to Covermax<sup>®</sup> bulked nylon polyester, aramids and Olefins.



### SAFE CARE & USE



1 Smooth folds & wrinkles out of covers before placing on bearing points.



3 Adjust slack out by hand.



**5** Sling paths should be smooth in the choker hitch without any twisting.



Place slings directly on top or side by side of each other.



2 Squeeze both paths together to fit sling into fitting.



4 Equalise the slack side by hand.



6 Place sling identification 45 - 60cm away from bearing point & facing away from load.



B Use sling protection over the pin to protect the sling from cutting on the edges of the shackle's holes.

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