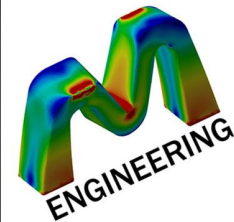


Innovation
research
development passion
sailing

 **KARVER**
sailing experience



Phantom

FSE ROBLINE
WORLD CLASS YACHTING ROPES

 **KARVER**
sailing experience

DECK GEAR SPECIALIST
RUNNING & STANDING RIGGING
PROJECT MANAGEMENT
YACHT MANAGEMENT
ENGINEERING

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Karver Team – In front of its new eco friendly office



CATALOG 2012

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After a year of research and testing, both in-house and at sea, we are proud to present you with the new 2012 products.

*The **KF** furler range has been entirely redesigned, developing further on its reliability, and adding new features which increase safety and performance.*

*The **KBO** block and the **KFH** furling lock range have evolved to ease their installation process.*

*The **KJH** is a new product on the market that will, most certainly, make trimmers happy.*

Main batten cars, tracks and mainsail halyard locks have been optimized to increase performance even more.

Finally, eco-production has been pushed forward with the use of green components in most of our products.

Enjoy your time at sea and fair winds,

Marin Clausin
Marin Clausin, CEO

Unique

Simple, reliable and efficient - the **Karver KB** block combines both freedom of attachment and extreme safety.



LIGHT WEIGHT

Compared to traditional blocks (at equal working load), the use of soft attachment through the center of the block reduces weight up to 50%.

VERSATILITY

With the use of lashing materials, multiple attachments are possible when installing the block (e.g Backstay systems), or even just to tie it up (eg. To prevent capsize).

SAFETY

Attachment through the center prevents the running line from becoming disconnected from the lashing line if the block fails under extreme load.

SILENT

Unlike metallic shackles, the use of textile attachments avoids metallic impacts on deck which contributes to keeping the boat quiet.

Launched 8 years ago, the **KB** block has won several awards including the famous Freeman K. Pittman Award (2006) granted by SAIL Magazine. Innovative, its design and its multiple attachment possibilities make this block super versatile.

Assembled with ball or roller bearings, **KB** blocks are extremely low friction.

Assembled with self-lubricating plain bearings, they ensure very high working load for a minimal size.

KB8
Rope shackle
Available for all KB blocks



KB12 Double
Link plate option
Available for all KB blocks



KB12 & KB10
Fiddle block



KB14
Becket block



KB16
Multiple attachment



KB range

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD* (T)	WEIGHT (g)	MAX LINE DIAMETER (mm)	SHEAVE DIAMETER (mm)	CORRESPONDING ROPE SHACKLE REFERENCE	CORRESPONDING LINK REFERENCE
KB6	PF190030	0.22	0,4	20	6	30	MP551701	PL191142
KB8	PF040030	0.6	1.2	51	10	35	MP551148	PL040774
KB8C	PF040031	0.8	1.6	44	8	33	MP551148	PL041089
KB10	PF020030	1	2	86	10	46	MP551148	PL021143
KB10C	PF020031	1.9	3.8	96	10	46	MP551149	PL022210
KB12	PF180030	1.4	2.8	119	12	54	MP551149	PL181094
KB12C	PF180031	3	6	167	12	56	MP551150	PL182211
KB14	PF050030	2	4	194	14	67	MP551149	PL050854
KB16	PF210030	3.5	7	497	16	100	MP551150	X

*Block safe working load. The lashing may hold a higher load. X: not available.

KB: Roller bearings, adapted for general usage.

KBc: Self-lubricating plain bearings, **KBc** blocks are ideal for applications when the line is required to run under very high load for a short distance (backstay, Cunningham, boom vang, out haul, etc).



Mast foot blocks

Fig 3.200 - © Kärcher System



LASHING BLOCKS
FAST ATTACHMENT



KBO10 bearings



KBO 10 without
lashing guide

Optimum evolution

Updated and redeveloped for 2012, the new **KBO** features a sleek design utilizing bearing technology inspired from the **KBTi** as well as aluminum material from the **KBO10** up and composite material from the **KBO8** down. The design integrates a lashing guide and allows large line diameters.



LIGHT WEIGHT

The design and material optimization make the block extremely light.

PERFORMANCE

The **KBO** block features a two stage bearing system from the **KBO8** to enhance low friction.

FAST ATTACHMENT

The rope shackle is included with the block for the whole line.

SIMPLICITY

Easy fitting from the lashing guide and rope shackle attachment simplifies the use of the **KBO** block, without bearing away from Karver benefits.

Designed from discussion with sailors, the **KBO** blocks have been created to enable every sailor to benefit from soft shackle attachment: it is easier and faster to install a **KBO** than a regular block with stainless steel shackle. The rope shackle will not get stuck or corroded because of the loads or the years.

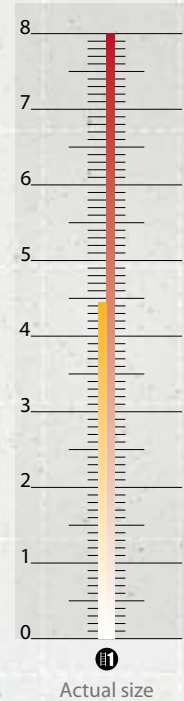
The KBO compared to its competition

A no compromise concept

A KBO is lighter and smaller for the same safe working load. Featuring roller bearings (from the KBO4 up) and rope shackle attachment, the block is lighter and more compact.

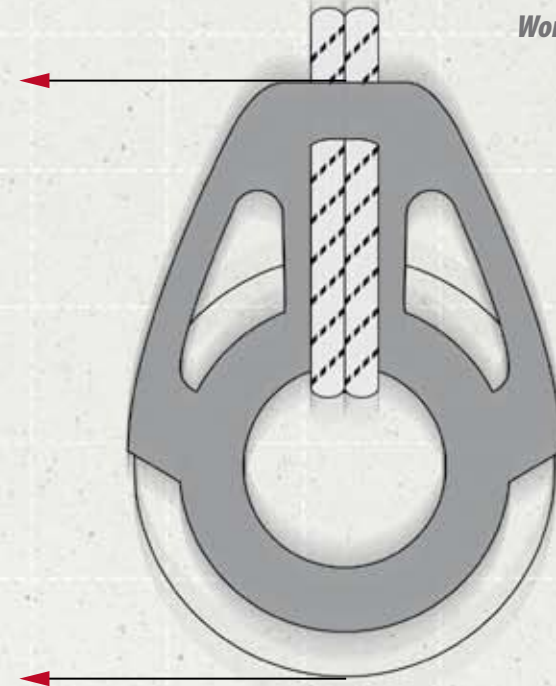


VS



**Competitor's
lashing block**

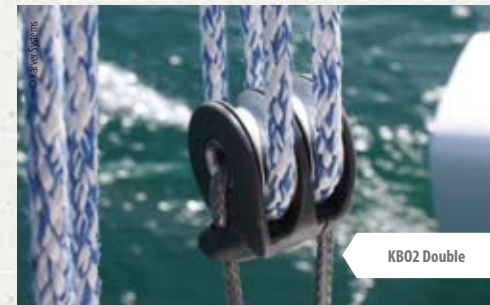
Working load: 360 Kg
Weight: 57 g



NEW 2012:

The KBO1, KBO2, KBO4, KBO6 and the new KBO8 features an integrated lashing guide that makes installation and alignment more efficient.

This new range is also available in double and triple block, still attached through the center.



KBO range

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD* (Kg)	WEIGHT (g)	MAX. LINE DIAMETER (mm)	SHEAVE DIAMETER (mm)	CORRESPONDING ROPE SHACKLE REFERENCE	CORRESPONDING GUIDE REFERENCE
KBO1	PF830030	150	300	10	6	22.5	MP551865	X
KBO1 double	PF830030 -D	250	500	17.5	6	22.5	MP553117	X
KBO1 triple	PF830030 -T	350	700	25	6	22.5	MP553118	X
KBO2	PF790030	220	440	26	8	32	MP551701	X
KBO2 double	PF790030 -D	350	700	50	8	32	MP553119	X
KBO2 triple	PF790030 -T	450	900	72	8	32	MP553120	X
KBO4	PF650030	400	800	27	8	32	MP551701	X
KBO4 double	PF650030 -D	650	1300	66	8	32	MP553119	X
KBO4 triple	PF650030 -T	900	1800	84	8	32	MP553120	X
KBO6	PF800030	600	1200	46	10	38	MP551148	X
KBO6 double	PF800030 -D	950	1900	103	10	38	MP553121	X
KBO6 triple	PF800030 -T	1300	2600	148	10	38	MP553122	X
KBO8	PF890030	850	1700	80	12	47	MP551148	X
KBO8 double	PF890030 -D	1300	2600	148	12	47	MP553123	X
KBO8 triple	PF890030 -T	1800	3600	213	12	47	MP553124	X
KBO10	PF660030	1200	2400	83	12	52	MP551148	PL662127
KBO15	PF670030	1800	3600	138	14	63	MP551149	PL672254
KBO20	PF680030	2600	5200	186	14	74	MP551149	PL682261
KBO20 large	PF680030 -L	2600	5200	244	2 X 10	74	X	X
KBO30	PF690030	3500	7000	334	16	97	MP551150	PL692262
KBO50	PF810030	5000	10000	610	18	123	X	X

*Block safe working load. The lashing may hold a higher load. X: not available.

KBO range Foot Block

KBO10 fb	PF660030 -FB	1200	2400	114	12	52	X	X
KBO15 fb	PF670030 -FB	1800	3600	196	14	63	X	X
KBO20 fb	PF680030 -FB	2600	5200	261	14	74	X	X
KBO30 fb	PF690030 -FB	3500	7000	482	16	97	X	X

**NEW
KB8**



**NEW double
and triple block**



**Large
Sheave
KBO20**



**Foot
Block**



A world first!

Attached through the center, the **Karver** ratchet block is the only block in which the ratchet can work in either direction.

RATCHET BLOCK **KBOw**

PERFORMANCE

The sheave locking mechanism is simple and reversible; precise sheet control due to 30 lock positions on the sheave inside diameter.

FAST ATTACHMENT

The KBOw integrated lashing guide gives the block fast fitting attachment via the rope shackle.

LIGHT WEIGHT AND STRONG

Reinforced composite fiber and soft attachment enable the KBOw to feature an unequalled weight to working load ratio.

SAFETY

If the block is over loaded or damaged, the running line will remain captive. Holding the line from both directions makes it possible in emergency situation to pass the line through the sheave without worry that it's been led wrong.



KBOw range

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD* (Kg)	WEIGHT (g)	SHEAVE DIAMETER (mm)	CORRESPONDING ROPE SHACKLE REFERENCE
KBOw1	PF760030	280	560	73	55	MP551148

*Block safe working load. The lashing may hold a higher load.

Designed for performance Maxi yachts



KBr250 on
Maxi yacht



KBr130 on
Maxi yacht



PERFORMANCE

Low friction ratio even under very high load (Titanium bearings).

LIGHT WEIGHT

Optimization of the design and use of high-tech components make the KBr extremely light.

COMPACT

The Titanium bearing system (Karver patent) ensures that the blocks hold high loads on smaller diameter sheaves.

SAFETY

The central sheave diameter is enlarged to allow multiple lashings to pass through.

2012 NEW

Side plates assembled with lashing.

Based on the **KBTi** bearing technology, the blocks feature HR aluminum side plates tested in the highest of performance yachts during the 33rd Americas cup. The new design prevents it from capsizing. The closed side plate structure prevents the block from damage resulting from crushing and decreases the friction ratio.

High load snatch block:

The entire KBr range is available* as a snatch block:

One of the side plates pivots from the center to open.

A self-gripping strap keeps the block closed.

Operating the block takes only a few seconds with the rope shackle.



The assembly of the block is screw free which prevents electrolysis from occurring when Aluminum/Stainless steel are combined and enables us to utilize aeronautical paint finishes.



Large selection of finishes available.

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD** (T)	WEIGHT (g)	MAX LINE DIAMETER (mm)	SHEAVE DIAMETER (mm)
KBr30	PF330002 [AL]	3	6	139	12	49
KBr50	PF330003 [AL]	5	10	227	14	64
KBr65	PF330005 [AL]	6.5	13	323	16	75
KBr80	PF330007 [AL]	8	16	494	18	89
KBr105	PF330009 [AL]	10.5	21	660	18	102
KBr130	PF330012 [AL]	13	26	994	20	115
KBr160	PF330016 [AL]	16	32	1321	20	135
KBr180	PF330018 [AL]	18	36	1667	22	147
KBr250	PF330025 [AL]	25	50	2522	30	160
KBr300	PF330030 [AL]	30	60	4480	35	180
KBr400	PF330040 [AL]	40	80	6152	40	206

* Available on request. **Block safe working load. The lashing may hold a higher load.



KBron Baltic 197



**TITANIUM/CARBON
LASHING BLOCKS**

Ultimate!

Made of Carbon and titanium, featuring ceramic bearings, these blocks are an exclusive **Karver** solution and take block technology to its limit.

These characteristics have made the **KBTi** the most compact and light weight block in the world since 2004.



PERFORMANCE

Minimum friction ratio even under maximum load (Karver patent).

LIGHT WEIGHT

Manufactured with high tech components, this is the lightest block available on the market.

SAFETY

The center sheave diameter is enlarged to allow several lashings to pass through.

COMPACT

Ceramic bearing enable a smaller sheave to work under very high loads.

Working load: **3T**
Weight: **92g!**

KBTi range

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD* (T)	WEIGHT (g)	MAX LINE DIAMETER (mm)	SHEAVE DIAMETER (mm)
KBTi30	PF330002	3	6	92	12	36
KBTi50	PF330003	5	10	180	14	49
KBTi65	PF330005	6.5	13	300	16	58
KBTi80	PF330007	8	16	450	18	70
KBTi105	PF330009	10.5	21	700	18	83
KBTi130	PF330012	13	26	966	20	95

*Block safe working load. The lashing may hold a higher load.

> **Used on projects such as the world record 'l'hydroptere', VOR 70 and IMOCA 60.**



New, greater innovation, greater performance

Use the same systems as the greatest skippers.



SAFETY

- Locking mechanism of the drum from the cockpit (Patent)
- Breaking load over twice the safe working load
- Swivel lightness decreases impacts in the mast when hoisting/lowering the sail

EFFICIENCY

- Fast fitting mechanism for the sail
- Fast fitting mechanism to the deck and halyard
- Captive parts
- Fast engagement of the continuous line

ERGONOMIC

- Composite spool around the drum to protect the drum, the sail and the deck from impacts
- Closed structure of the drum prevent fingers from getting caught when operating at sea

PERFORMANCE

- Extremely light
- Unequally compact
- Low friction bearings

Besides decreasing weight and size, the new line of **Karver** furlers features an exclusive locking mechanism of the drum from the cockpit.

KF1 on 23 feet trimaran

HOW DOES IT WORK?

The locking mechanism:

Removes a weakness of continuous line furlers - when the sails can unfurl on its own.
The new Karver KF standard line features a removable locking mechanism on the drum.
The locking engagement is activated by pulling on one of the two sides of the continuous line:

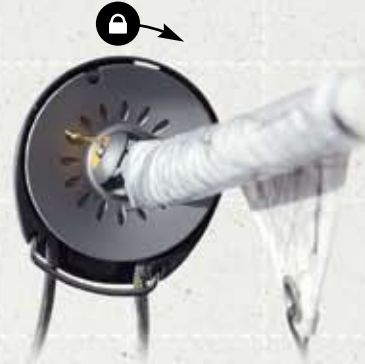
Unfurled sail.



Pull on the continuous line as normal to furl the sail. If one accidentally releases the furling line, the mechanism locks automatically.



When the sail is entirely furled, you can release the continuous line and the drum will lock automatically.



To unlock the drum, just pull a little on the line in the same direction as the sail was furled which releases the lock and enables the sail to unfurl.



Advantages:

- The furling can be done one handed.
- The sail cannot unfurl when being hoisted.
- Fast maneuver: once rolled, the continuous line doesn't require to be locked immediately.
- The locking mechanism can be removed at anytime if the lock is not wanted.

Mechanical reliability:

- The mechanism is simple and installed with a fuse. If a load is too great and could damage the drum, the mechanism unlocks automatically. The drum then works like a traditional continuous line furler.



The locking mechanism can be easily removed

Engagement of the continuous line in 3 steps:



KF range

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD (T)	WEIGHT (G)	CONTINUOUS LINE DIAMETER (mm)	DRUM DIAMETER (mm)	HEIGHT SWIVEL + DRUM (mm)	DRUM ONLY REFERENCE	SWIVEL ONLY REFERENCE
KF1 eco	PF100000 eco	1.5	3	420	6	88	97	PF100010	PF100020
KF1	PF100000	1.5	3	497	6	111	90	PF100010	PF100020
KF2	PF090000	2.5	5	829	8	150	111	PF090010	PF090020
KF5	PF080000	5	10	1570	10	175	138	PF080010	PF080020
KF8	PF110000	8	16	2200	10	212	171	PF110010	PF110020
KF12	PF030000	12	24	2300	10	212	205	PF030010	PF030020

Pack:

KF1/KF2 and **KF5** are provided with snapshackle under the drum and HR shackle on the swivel.

Fast fitting mechanism for the sail and captive pins:







**TOP DOWN
SPINNAKER FURLER**

Latest product in the KF range

Already approved by Maxi yachts!

The **KSF** furler includes all the advantages of the **KF** range, but incorporates an independent swivel on the top of the drum that enables the sail to furl from the top to the bottom.
Most spinnakers don't even need to be retrofitted!



KSF12 on Shipman 80'



PERFORMANCE

The tack line can be adjusted from the cockpit to fine tune spinnaker position and shape. Once the luff is tensioned, the furling is more efficient enabling user to drop the sail faster.

UNIVERSAL

The same furler can be interchanged to use with the full inventory of sails: Code sail, staysail, or asymmetrical spinnaker.

LIGHT WEIGHT

The only piece added compared to a standard **KF** drum is the independent swivel on the top, which helps to keep the system light.



KSF1 on board

KSF range

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD (T)	WEIGHT (g)	CONTINUOUS LINE DIAMETER (mm)	DRUM DIAMETER (mm)	HEIGHT (mm)	DRUM ONLY REFERENCE	SWIVEL ONLY REFERENCE
KSF1	PF100000 [SPI]	1.5	3	582	6	111	106	PF100010 [SPI]	PF100020
KSF2	PF090000 [SPI]	2.5	5	950	8	144	128	PF090010 [SPI]	PF090020
KSF5	PF080000 [SPI]	5	10	1985	10	166	146	PF080010 [SPI]	PF080020
KSF8	PF110000 [SPI]	8	16	2690	10	207	183	PF110010 [SPI]	PF110020
KSF12	PF030000 [SPI]	12	24	2950	10	214	248	PF030010 [SPI]	PF030020





STRUCTURAL
FURLERS

Installed on offshore racing boats for over 10 years

Structural furlers are the ultimate compromise between convenience, performance and safety.

Swivel
KF12



Working load: **12T¹**
Weight: **684g!**



> *Karver, worldwide leader
on structural furling solutions
on IMOCA OPEN 60*

KARVER ADVANTAGES

- Most compact system
- Unequaled light weight
- Locking mechanism from the cockpit (New 2012)
- Low friction bearing
- Carbon fiber spool*

Single line drum
Available from
KF8



Installed with a structural anti-torsion stay, it substitutes with a traditional forestay or inner stay.

With the **KFx** furlers, get back the finesse of a hanked on sail with the comfort of furling. Full range of furlers suited to every boat from a sports boat to a maxi.

*In option.



Structural KF8 on
SIG45

KF Options

Tylaska Snap Shackle

Available for KF5 and KF8



Blew Stoub Single Strop

Available for KF8 and KF12



2:1 / 3:1 Block

Available for all Karver furlers



Lashing Thimble

Available for all Karver furlers



Halyard Swivel

Available for KF1 and KF2



Drum or Swivel Protection Cover

Available for all Karver furlers



2:1 Friction Sheave

Available from KF5



3:1 Friction Sheave

Available from KF5



Lashing Eye

Available from KF5



Continuous line

Available for all Karver furlers



MODEL	TYLASKA SNAP SHACKLE REFERENCE	SINGLE STROPE REFERENCE	2:1 / 3:1 BLOCK	LASHING TIMBLE REFERENCE	DRUM COVER REFERENCE	SWIVEL COVER REFERENCE	2:1 FRICTION SHEAVE REFERENCE	3:1 FRICTION SHEAVE REFERENCE	LASHING EYE REFERENCE	CONTINUOUS LINE REFERENCE	HALYARD SWIVEL REFERENCE
KF1	X	X	PF100030	SF100636	MP101411	MP101413	X	X	X	MP101231	PF100020 [ETARQ]
KF2	X	X	PF090030	SF090410	MP091408	MP091409	CUSTOM	CUSTOM	CUSTOM	MP091232	PF100020 [ETARQ]
KF5	PF080040 [TY]	X	PF080030	PF080050	MP081269	MP081268	PL080812	PL081095	PL080440	MP081233	X
KF8	PF110040 [TY]	PF110040 [SS]	PF110030	PF110050	MP111227	MP111228	PL110995	PL110452	PL113212	MP081233	X
KF12	X	PF030040 [SS]	PF030030	PF030050	MP031429	MP031339	CUSTOM	PL030396	S:PL031538 D:PL031567	MP081233	X

X: not available.

Furling-lock (Karver patent)

Five years after its launch, the **KFH** remains unique to the market.



SAFETY

Once locked, the halyard is not tensioned anymore. The compression in the mast is halved and halyard wear is minimized.

LIGHT WEIGHT

The luff is tensioned from the bottom of the drum with a block, eliminating the need for a 2:1 halyard set up. It is also possible to use a smaller and lighter halyard as it only carries the weight of the sail.

SIMPLICITY

Once unlocked, only the lightest part of the mechanism remains on the top of the mast, the furling-lock is on deck leaving no moving parts aloft, making it easy to service.

ERGONOMIC

Only one line required as the halyard hoists, engages and releases the lock with mechanical simplicity.

The system has proven itself in several around the world races;
New 2012 – the **KFH** includes the unique Karver fast fitting captive pin system.

HOW DOES IT WORK?



To lock

Hoist the sail until reaching the first end stop. The furling-lock becomes a standard top swivel: just unfurl and enjoy your sail.



To unlock

Simply re-tension the halyard reaching the second end stop. The sail can now be lowered.



[APPLICATION EXAMPLES]

- Gennaker/Light Genoa

As most standard sailing yachts do not include a mast equipped with 2:1 halyard purchase for foresail, it becomes easy to have a powerful Gennaker or light Genoa using an accurate setting.

- Staysail and spin staysail

Better solution than an adjustable forestay.

The sail can be furled and easily stored, leaving the foredeck uncluttered and the genoa free to tack.

Upwind performance is unaffected.

Stay tensioned from below using friction sheave



KFH range

Package KFH+: Hook KFH + Drum + 2:1 block.

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD (T)	WEIGHT (g)	CONTROL HALYARD MAX DIAMETER (mm)	HEIGHT (mm)	PROTECTION COVER REFERENCE	COMPLETE SYSTEM KFH+ REFERENCE
KFL1	PF550020	1,5	3	265	7	100	X	PF550000
KFH2	PF480020	2,5	5	450	7	141	MP481410	PF480000
KFH5	PF470020	5	10	920	7	154	MP471229	PF470000
KFH8	PF410020	8	16	833	8	155	MP411230	PF410000
KFH12	PF400020	12	24	2200	10	212	MP401338	PF400000

X: not available.

4:1 purchase below a single line furler

Unique to the market!

The **KJH “Jaws Handle”** is the ideal system to tighten up a sheet without hurting one’s hands!

Floating Cam cleat:

To hold a line under load, the **KJH Handle** can also be used as a flying cam cleat.



KJH as a flying cam cleat

Application:

- Stopper during an emergency maneuver when there is an over ride on the winch
- Hold a halyard that is stuck, or set up a system to trim the spinnaker sheet (or any sheet)
- Free up a winch when striking a new sail



KJH used on a sheet



The strength resistance of the new high modules rope tends to reduce the line diameters, which compromises comfort and efficiency when trimming (It is impossible to pull hard on a small diameter line without getting one’s hand crushed!)

The **Karver Handle “Jaws”** enables to hold a line that is under load already. To release the line from the cleat, simply bend the wrist.

This new gear can easily be used to trim on a mainsheet or even a spinnaker sheet or for control lines on larger yachts.

MODEL	REFERENCE	WORKING LOAD (Kg)	BREAKING LOAD (Kg)	WEIGHT (g)	DIMENSIONS (mm)
KJH	PF840020	110	220	111	110 X 35 X 40



CIRRUS R

INNOVATION
and after

Phantom

KARVER

LOZARMOR
IDEATIONS

MARINE
POOL
SPIRIT OF THE OCEAN

F18

VX

VX

Julbo

High performance cam cleat

We have developed a new range of cam cleats using the **KARVER** principles of low weight, high strength, size and reliability.



KJ on
Maxi Yacht



KJ on
Trimaran



DESIGN

The closed aluminum structure strengthens and protects the cam cleat from impacts.

CUSTOM

A large range of accessories facilitate the adaptation of the cam cleat use according to its application:

- Aluminum fairlead to guide and capture the line
- Cam base straight or bended for an optimal orientation of the cam cleat
- Stand up base

PERFORMANCE

With its closed aluminum structure and high resistance bearings, the **KJ** features a weight to working load ratio much higher than its competitors. It is also perfectly adapted to the new generation of high modulus line.

MODEL	REFERENCE	WORKING LOAD/BREAKING LOAD WITHOUT FAIRLEAD (Kg)	WORKING LOAD/BREAKING LOAD WITH FAIRLEAD (Kg)	WEIGHT (g)	DIMENSIONS (mm)	FASTENER SPACING (mm)
KJ	PF840010	250 kg / 500 kg	310 kg / 635 kg	69	62.5 X 26.5	38
Fairlead	SF842531	-	-	8,9	-	38



Universal swivel cleat bases*

Assembled with KJ cam cleat, the compact and weight optimized **KSC** swivel cleat base is available in several models:

CAM
BASES



Swivel cleat bases for KB or KBO block



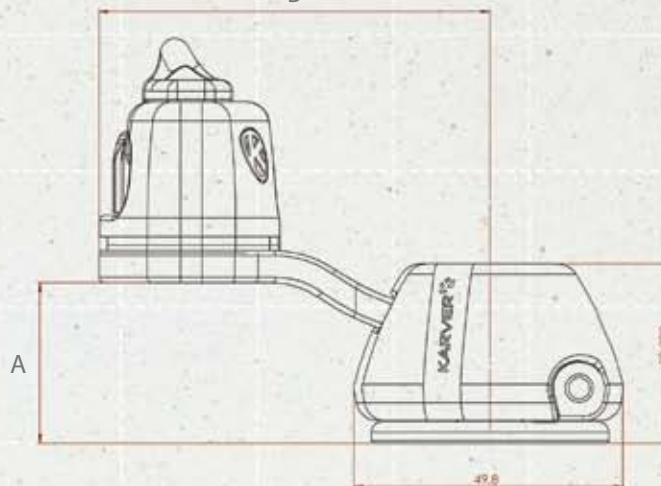
Swivel cleat bases for ratchet block



Swivel cleat bases with eye



B



Working load: **200 kg**¹
Weight: **183 g!**

MODEL	REFERENCE	WORKING LOAD (Kg)	BREAKING LOAD (Kg)	WEIGHT (g)	- A -	- B -
KSC for block	PF840031	200	400	183	28	72
KSC for winch	PF840032	200	400	205	48	93
KSC eye	PF840030	200	400	195	28	72

*Same parts for different applications.



The mainsheet track and traveler system developed for the l'Hydroptère.ch is by far the lightest on the market.

Developed in relationship with the biggest offshore racing teams, the **Karver** batten cars and track systems are reliable and light weight.

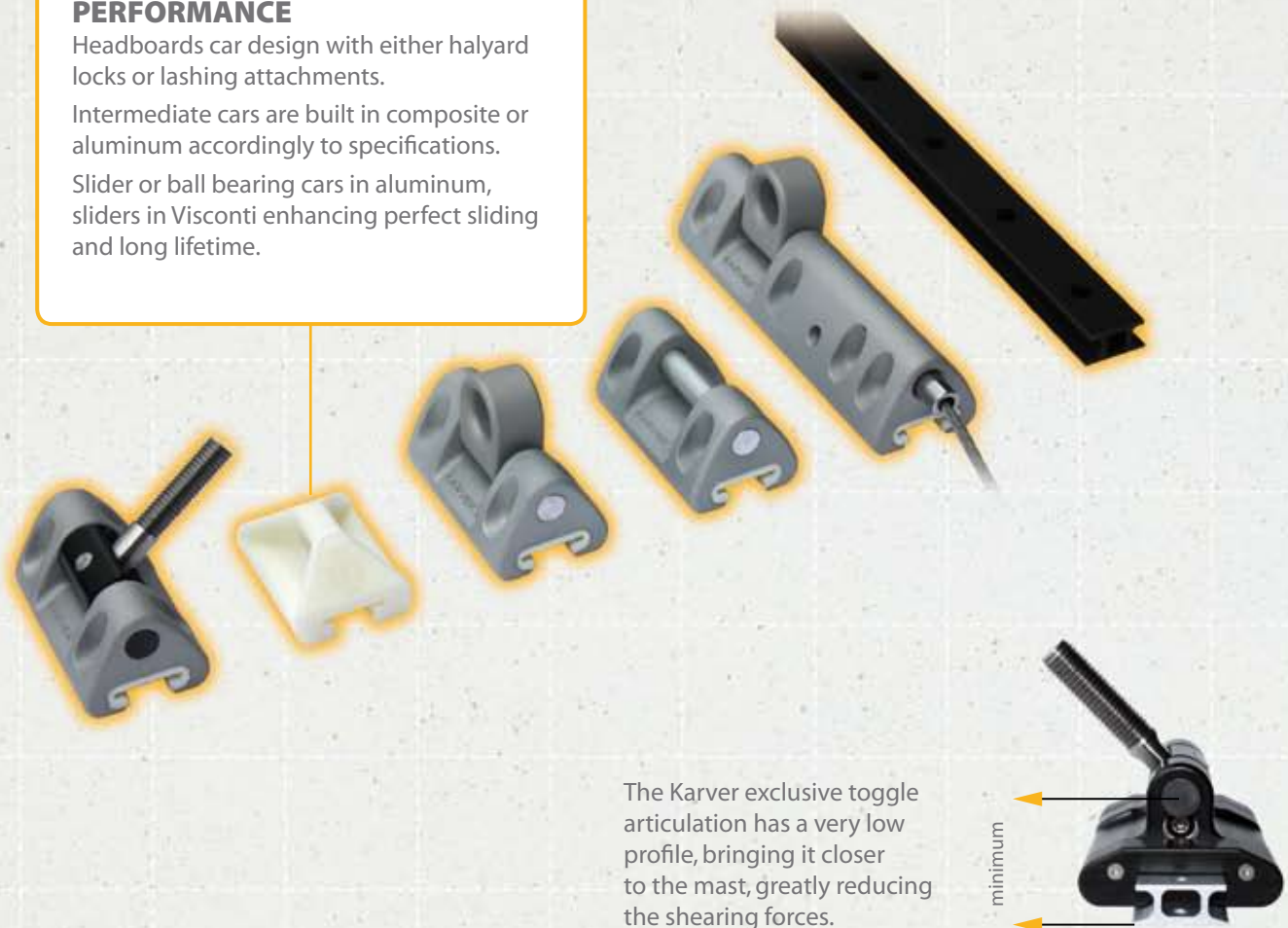
Karver benefitted from the knowledge of the company **Grec Marine**, which was integrated into the family in 2011, to come up with an exceptionally high quality product.

PERFORMANCE

Headboards car design with either halyard locks or lashing attachments.

Intermediate cars are built in composite or aluminum accordingly to specifications.

Slider or ball bearing cars in aluminum, sliders in Visconti enhancing perfect sliding and long lifetime.



The Karver exclusive toggle articulation has a very low profile, bringing it closer to the mast, greatly reducing the shearing forces.

minimum

KMS range

KMS40	LENGTH (mm)	WIDTH (mm)	WORKING LOAD (Kg)	WEIGHT (g)
For yachts from 12 to 16m				
Lashing headboard car	140	40	1700	270
Locking headboard car	140	40	1700	299
Batten car	70	40	800	150
Intermediate car	50	38	250	25
Gate l=200mm	12	20	X	86
End stop	30	30	X	11
Track	Depth: 12	20	X	320g/m

X: not available.

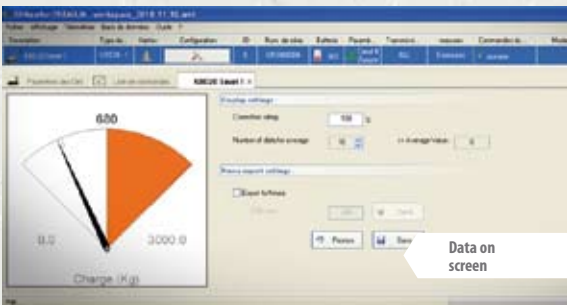
KMS60	LENGTH (mm)	WIDTH (mm)	WORKING LOAD (Kg)	WEIGHT (g)
For yachts from 16 to 22m				
Locking headboard car	200	48	3500	498
Batten car	90	48	1400	248
Intermediate car	50	48	700	26
Gate l=200mm	14	30	X	120
End stop	50	48	X	30
Track	Depth:14	30	X	490g/m

X: not available.

KMS90	LENGTH (mm)	WIDTH (mm)	WORKING LOAD (Kg)	WEIGHT (g)
For yachts from 22 to 30m				
Lashing headboard car	300	55	5300	800
Locking headboard car	300	55	5300	3500
Batten car	120	55	2200	440
Intermediate car	90	55	1200	210
Track	Depth:16	34	X	650g/m

X: not available.





Smart block on runner

The integrated electronic wireless load sensors send the load to the on board computer.

Smart eyes
Lashing eyes, wireless and solar powered



Our latest development has enabled us to integrate a solar panel that makes the **K2S** range power self-sufficient. Three products are available to enable you to record the load on both standing rigging and running rigging.



MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD (T)	WEIGHT (g)	FASTENER SPACING (mm)	EYES DIAMETER (mm)
KSM5	PF62005	5	10	240	43	18

Smart Block
KBO or KBr block featuring an integrated wireless K2S load sensor



The load recorded can be sent and read instantaneously on a display or on a computer. The custom software enables you to keep track of the loads on the smart systems. The smart sensors can also be put on sleeping mode and activate themselves upon reaching a preset load.

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD (T)	WEIGHT (g)	MAX LINE DIAMETER (mm)	SHEAVE DIAMETER (mm)
KSB20	PF680030 [SB]	2.6	5.2	353	14	74
KSB65	PF330005 [ALSB]	6.5	13	620	16	75
KSB105	PF330009 [ALSB]	10.5	21	985	18	102

Smart Pin
Solar powered sensor pin (upon request)







KDsb Sheave Box

Our Sheave Boxes are manufactured in aluminum alloy (series 7000), hard anodized, and they enable main, staysail and ORC halyards to go through with a minimum friction.

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD (Kg)	WEIGHT (g)	SHEA DIAMETER (mm)	CONTROL LINE DIAMETER (mm)	OUVERTURE DANS LE MÂT (mm)
KDsb 25	PF97010080	2500	5000	350	80	18	110x30
KDsb 60	PF97010100	6000	12000	600	100	18	134x34
KDsb 60	PF97010120	8000	15000	850	120	18	134x34
KDsb 60	PF97010160	15000	24000	1600	160	22	208x146

KDs sheaves

Featuring a plain bearing for high working loads and ball bearings for side efforts, the Karver sheave range offers a very low weight to working load ratio.

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD (Kg)	WEIGHT (g)	SHEA DIAMETER (mm)	CONTROL LINE DIAMETER (mm)	THICKNESS
KDs 22	PF98010071	2200	4400	150	64	12	24
KDs 25	PF98010086	2500	5000	185	80	18	23
KDs 60	PF98010106	6000	12000	318	100	18	25
KDs 80	PF98010126	8000	16000	450	120	18	25
KDs 150	PF98010166	15000	30000	950	160	22	29
KDs 280	PF98010207	28000	56000	2300	200	30	36

KHR Reefing lock

System working through a hook catching on a webbing loop on the sail, a line enables to unlock it.

The engineering is extremely light and reliable.

More information available upon request.

MODEL	REFERENCE	WORKING LOAD (T)	BREAKING LOAD (Kg)	WEIGHT (g)
KHR2	SF263125	2500	5000	180
KHR5	SF26012040-60	5000	10000	325
KHR10	SF26012041-60	7500	15000	538

Sheave Box

Ask for availability



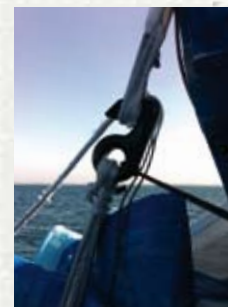
Sheave

Ask for availability



Reefing lock

Ask for availability





R&D

RESEARCH AND DEVELOPMENT

Each year,
Karver invests 20% of its sales
income in Research & Development.

Our R&D department is the core of Karver. It is defined by two complimentary entities:

- **Concept and innovation division:** Led by Marin Clausin, CEO, this department aims to develop new products and solutions, and the registration of new patents.
- **Custom service:** this is the R&D department working directly with our customer to develop custom solutions.

The R&D department is equipped with the most powerful C.A.O and R.D.M. software available today.

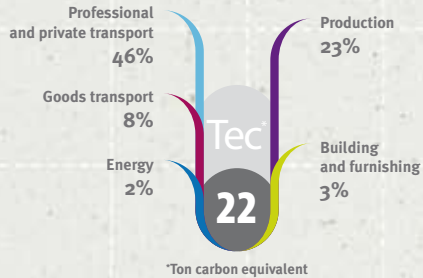
Our biggest strength is our reactivity, our sailboat racing experience and our desire to continually create better solutions. We develop solutions directly with the skipper and their team, this ensures highly innovative products developed within a short period of time.

Our R&D department works closely the purchasing department and the factory. Sailors drive the project from the conception, to the prototype testing, all the way to mass production.



ECOLOGICAL ENGAGEMENT

Carbon Footprint® 2009



ECO

Details of other "eco" block parts:

- Thermoplastic balls (can be recycled)
- Aluminum sheave (can be recycled)

Industrial flax source:

Normandy, world's first producer (qualitative).

Since 2008, we have been committed towards sustainable development.

Over the years, we have initiated several projects to understand and act upon our ecological impact:

[CARBON FOOTPRINT®]

Initiated in 2009, this action helped us to better understand our environmental impact and take action to decrease it.

[ENVIROMENTAL RESPONSIBILITY]

- We moved in August 2010 to a new office that has a sustainable wooden structure.
- We also installed a sustainable - locally sourced - wood-burning stove to heat up the building.
- We have invested in hybrid propulsion company cars and support carpooling between co-workers

[ECO PRODUCTION]

Launched in 2008, we developed bio-plastic from non-feeding oriented renewable resources. The new raw material in PA11 Rilsan® (castor oil) is reinforced with flax fibres. Latest tests have shown resistance over time superior to the Polyamides 6 coming from petrol.

In 2011, we conducted an eco-conception diagnosis of the different product lines:

KBO4 and KBO10 / KBR30 and KBTi30 / KF5 and KFH5 / KJ / KB8 PA66 vs KB8 Lintex® / Stainless steel shackle vs. Rope shackle (studies available on request)

This study has enabled us to quantify the impact of Karver products on the environment over their life cycle:

Manufacturing is the most polluting phase; metal parts (steel and aluminum) have an aquatic ecotoxicity and a human toxicity that is significant.

We are working to reduce this impact through:

Optimization of the size and weight of the products (**Karver** advantages since the creation of the company) to minimize the quantity of raw material used.

From 2012, our PLA/Lintex material will be consistently used in our full line of products



Karver is a proud sponsor of the Watch the Waste project, a team sailing around the world to study the waste impact on the sea.

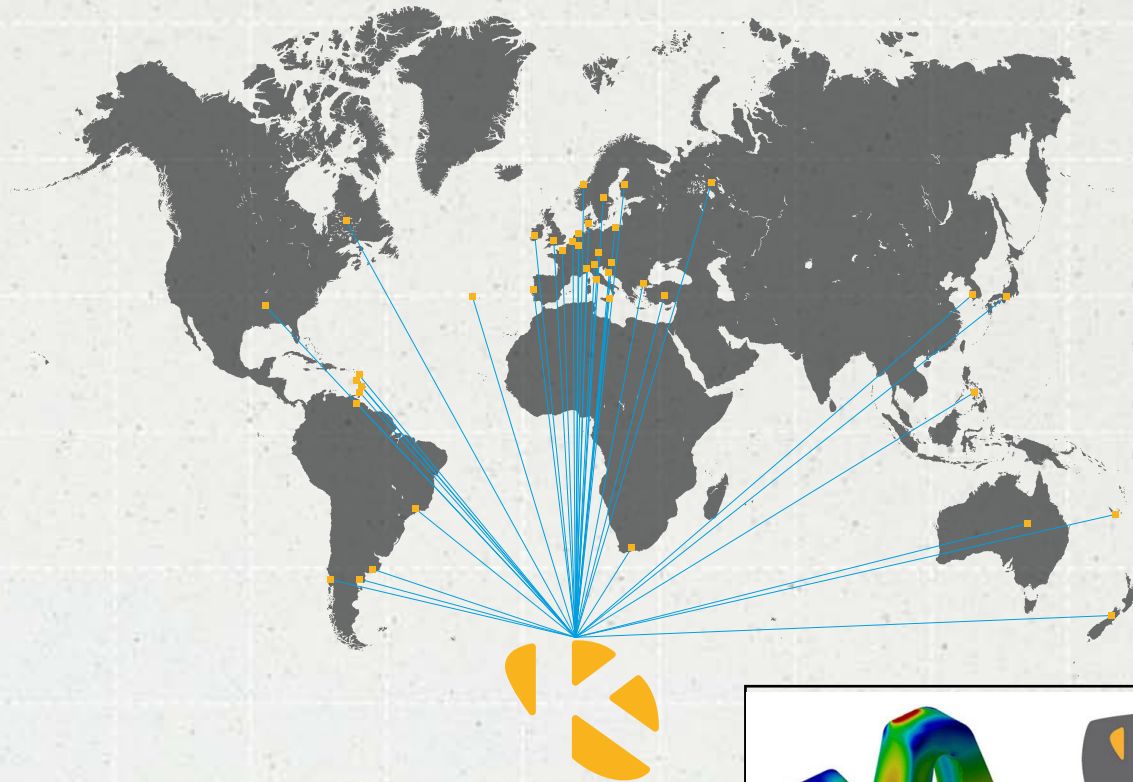
<http://watchthewaste.free.fr/>



Karver products are distributed in 36 countries.

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Find your closest Karver agent and download full product references, catalog and newsletter at:
www.karver-systems.com

Technical requests, comments and ideas are welcome to:
contact@karver-systems.com




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