

# shizll®

## Rigging products



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### **INSTRUCTIONS FOR USE**

Read this user manual carefully and follow the instructions given!

Complies with all relevant provisions of the Machinery Directive 2006/42/EC.



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## GENERAL INFORMATION

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This section of the manual applies to all **shizll**<sup>®</sup> rigging products.

Despite of careful translations, **shizll**<sup>®</sup> cannot be held responsible for any translation errors in the manual. When in doubt, use the authenticated English version or contact **shizll**<sup>®</sup>.

If this manual is **not** fully understood, do **not** use any **shizll**<sup>®</sup> rigging products.

**shizll**<sup>®</sup> is not responsible for any use other than specified in this manual.

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## GENERAL WARNINGS

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- **No PPE!** No Personal Protection Equipment! For security reasons it is not allowed to use **shizll**<sup>®</sup> rigging products in a climbing system as personal safety equipment.
- All **shizll**<sup>®</sup> rigging products should be used by persons who are capable and trained in working with climbing and rigging materials in the way they are purposed.
- Other products used in combination with **shizll**<sup>®</sup> rigging products should be used according to the instructions and safety precautions given by the manufacturer of these products.
- When other products are used in combination with **shizll**<sup>®</sup> rigging products, the user has the responsibility to make sure the combinations are valid.
- If a **shizll**<sup>®</sup> rigging product is damaged or deformed it is not permitted to use it anymore on account of property damage, accidents, serious injury and possibly death.
- In case of illegibility of labelling or engraving inscription, it is no longer allowed to use our products.
- When in doubt about the safe use of **shizll**<sup>®</sup> products, please contact your dealer or go to [www.shizll.com](http://www.shizll.com)



**Not following the instructions may result in property damage, accidents, serious injury and possibly death.**

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## PRODUCT WARNINGS

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- Avoid sharp objects or contact with salt, sand, chemicals, electricity etc.
- Be aware of the ability to elongate and that the Minimum Breaking Strength (MBS) of a rope reduces during use.
- Weather conditions, such as humidity, temperature, sunlight, snow and ice and dirt in any form negatively affect rope properties.
- All **Shizil**<sup>®</sup> rigging products are regularly tested during production for MBS in their application of use. Tests are performed with new, dry and clean materials and connections. All tests are performed under static conditions.
- All knots and splices reduce breaking strength of a rope considerably.
- All our knots, splices and hardware are tested on a class 1 universal testing machine. We take no responsibility for splices not produced by **Shizil**<sup>®</sup>.
- Shock loading reduces the strength of any product.

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## SECURITY TO RIGGING OPERATIONS

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- Be aware that a competent person is responsible to plan all rigging operations. A competent person is trained in calculating / estimating rigging forces, and must know the relationship between section mass, fall distance, rope type, rope length and further relevant factors. A competent person must be present on site and manage rigging operations at all times.
- Carry out a proper risk assessment and make sure that the entire team knows the plan and risks involved.
- Minimise all risks and take precautions to avoid accidents.
- Properly demarcate the worksite to prevent passage of people and animals.
- All team members (including the climber) inside the demarcated site should wear the proper personal protection equipment.
- Take all measures for the safety of the climber. The climber, and his fall protection (PPE), shall stay outside the anticipated trajectory of the load and any part of the rigging system.
- Anchor points should be chosen carefully. The integrity of the chosen anchor points can differ by the species of the tree, the condition, the position, weather conditions, vegetation on the tree, the intended use of the rigging system and size and weight of the load.
- It is strictly forbidden to stay underneath a suspended load and a rigging system under tension.
- Be aware that the direction or orientation of the load can be altered by wind and the position of the chosen anchor points and loads. Take this in consideration for the position of the climber, ground team and the demarcated site.

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# GENERAL CHECKS

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If there is any doubt of the integrity of any **shizil**<sup>®</sup> rigging product, it must be retired or quarantined. When quarantined, it may only return to use when a competent person has tested the product and signed for use.

Before each use, the products have to be inspected by visual and physical inspection. Feel with your hand along the hardware or textile if there is any deformation or damage. If so, stop using the product, and retire it.

In case of illegibility of labelling or engraving inscription, it is no longer allowed to use **shizil**<sup>®</sup> products.

Ropes and splices should be regularly checked, at least yearly, by a competent and skilled person. The checks should be performed following the procedure given by the manufacturer of the ropes.

The maximum service life of **shizil**<sup>®</sup> products depends on how often and how intensively the products are used. The maximum service life may also differ depending on how carefully the product is used and stored.

## **Cleaning, storage and transport**

For cleaning, use lukewarm water and a mild cleaning solution. After cleaning, rinse with clean lukewarm water and let it dry before storage. All products should dry naturally at room temperature without any source of heat.

For disinfection, only use disinfection products that do not damage the material in any way.

Always store **shizil**<sup>®</sup> products in their original casing. Always store under clean, dry and ventilated conditions and distanced from sharp objects, chemicals and gasses. Store at room temperature (15 – 25 degree Celsius) and in a dark environment (no UV-light).

Always transport **shizil**<sup>®</sup> products in their original casing, if included. Transport should always happen under clean, dry, ventilated and dark conditions and distanced from sharp objects, chemicals, gasses.

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# EXPLANATION OF LABELLING

Shizil®

CE 2006/42/EC

Spider, etc.

Type

Ø = xxmm

L = yym

20zz

Dead end/2 eye slices



WLL 1:5

Name of manufacturer, Shizil.

Product satisfies to machinery directive 2006/42/EC

Product name

Application

Nominal diameter in [mm]

Length in [m]

Year of manufacturing

Type of rope end

Minimum Breaking Strength (MBS) in [kN] in connector application

Minimum Breaking Strength (MBS) in [kN] in self-clamping application




Symbol indicating product is No Personal Protection Equipment

Symbol indicating that the instructions for use must be read and understood

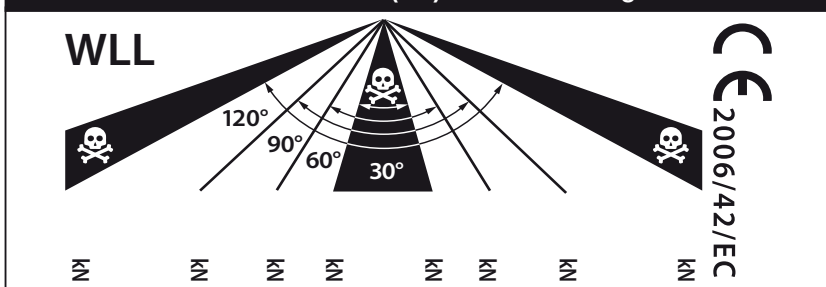
Symbol indicating to be cautious with this product

Work Load Limited is a fifth of the Minimum Breaking Strength (MBS)

## Work Load Limit (WLL) in different applications

Choked	Through ArboRing	Basket	CE 2006/42/EC
			
kN	kN	kN	

## Work Load Limit in (KN) for different angles



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# PRODUCT APPLICATIONS AND DATA

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All **shizil**<sup>®</sup> products are regularly tested during production for MBS in their application of use with new, dry and clean materials and connections. All tests are performed under static conditions.

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## SPIDERPLATE

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The (Big) Spider is designed for use with hardware, lines or (rope) slings.

### USE AS A CONNECTOR

The Spiderplate can be used as a rigging plate to create multiple anchor points.



### Minimum Breaking Strength:



MBS 50 kN (Spider)

MBS 100 kN (Big Spider)

We recommend using a WLL of 1:5. This means the workload limit is 10 kN (Spider) and 20 kN (Big Spider). When the (Big) Spider is used as a connector application force should be directed outward.

### USE AS A SELF-CLAMPING SYSTEM

The (Big) Spider is also designed for use as a self-clamping system with ropes. By means of self-clamping, pressure can be given on the line like a guy rope. The Spiderplate can serve like a metal knot which is easy to untie. The (Big) Spider can be used with one or more lines.

### Minimum Breaking Strength:



MBS 25 kN (Spider) or 50kN (Big Spider)

No force over 25 kN (Spider) or 50 kN (Big Spider) may be applied on a single section of line that runs through two or more holes of the (Big) Spider. We recommend using a WLL of 1:5. This means the workload limit when used as a self-clamping system is 5 kN (Spider) or 10 kN (Big Spider).



< 120°: When the (Big) Spider is used for horizontal balancing, the angle between the two outmost legs may not exceed 120°.

The Spider is suitable for lines of 12-13 mm, the Big Spider is suitable for lines of 14-16 mm. Use of thicker lines than indicated on the (Big) Spider is not allowed, use of thinner lines is allowed on the user's own discretion and at own risk. When using thinner lines pay close attention to the chosen material.

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# SPIDERPLATE

Minimum Breaking Strength (MBS) Spiderplate*					
Product (code)	Connector	Connecting two lines	Spiderknot choked line	Spiderknot adjustable/solid loop	Spiderleg
<b>Spider (SP)</b>	50 kN	25 kN	25 kN	25 kN	25 kN
<b>Big Spider (BSP)</b>	100 kN	50 kN	50 kN	50 kN	50 kN

(\*tested on a class 1 universal testing machine)

Material: CNC milled high quality Aluminum 7075T6

Weight: SP: 55 gram

BSP: 134 gram

Dimensions: SP: 58 mm x 58 mm x 10 mm Ø 4 x 14 mm

BSP: 76 mm x 76 mm x 14 mm Ø 4 x 17 mm

Finish: Anodised against corrosion and wear

MBS: SP: 25 kN

BSP: 50 kN when used with lines and self-clamping pressure.

MBS: SP: 50 kN

BSP: 100 kN when used as a connector application.

WLL: 1:5 According to Machinery directive 2006/42/EC –Appendix I 4.1.2.5

## SPIDERSLING (WITH ARBORING)

The adjustable Spidersling is developed to make rigging easier and faster. The length of the sling is easily adjustable by pulling the rope through the Spiderplate. After installation, you can make adjustments by pulling the Spiderplate.





# SPIDERSLING (WITH ARBORING)

The length of the Spidersling will be locked under load and immediately released when the load is removed. Visit [www.shizll.com](http://www.shizll.com) for installation tips.

The Spidersling can be used as a base anchoring sling or a high anchoring sling to attach hardware.

The Spidersling is available in different lengths.

Minimal Breaking Strength and Work Load Limit in different applications <b>shizll</b> ® Spiderslings*					
Product CE 2006/42EC	Ø Rope diameter [mm]	Material	Basket [KN]	Choked [KN]	Through ArboRing [KN]
<b>Spidersling (SPS)</b>	12 Orange	Polyester cover and core	MBS 42 WLL8.4	MBS 38 WLL 7.6	MBS 45 WLL 9
<b>Spidersling BIG (SPSB)</b>	14 Green	Polyester cover and core	MBS 55 WLL 11	MBS 50 WLL 10	MBS 60 WLL 12
<b>Spidersling MAX (SPSM)</b>	14 Blue/ Black	Polyester Technora cover and Vectran core	MBS 65 WLL 13	MBS 55 WLL 11	MBS 75 WLL 15 (with ArboRing)

(\*tested on a class 1 universal testing machine)

**Choked**



**Through ArboRing**



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# DEAD EYE SLING

A traditional rigging sling for installation of hardware. All tests are performed with the Dead Eye Sling installed with a timber hitch with backup. Installation instructions are shown below.



## Timber hitch



Use a minimum of three tucks or turns.

The Dead Eye Sling is available in different lengths.

<b>Shizil® Dead eye slings Minimal Breaking Strength and Work Load Limit*</b>			
<b>Shizil® Product CE 2006/42EC</b>	<b>Ø Rope diameter [mm]</b>	<b>Material</b>	<b>Choked [kN]</b>
<b>Dead Eye sling SMALL (DES)</b>	12 Orange	Polyester cover and core	MBS 36 WLL 7.2
<b>Dead Eye Sling BIG (DEB)</b>	14 Green	Polyester cover and core	MBS 48 WLL 9.6
<b>Dead Eye Sling MAX (DEM)</b>	14 Blue/Black	Polyester/technora cover and Vectran core	MBS 52 WLL 10.4

(\*tested on a class 1 universal testing machine)

# EASY BALANCER

The Easy Balancer is developed to make balancing of a load easier and faster. After installation, both legs of the Easy Balancer can still be adjusted by pulling the middle of the rope (shorten), or by pulling the friction hitch (lengthen). This makes it possible to adjust the angle between both legs and putting the centre of mass under the attachment point. After proper installation, the load will stay horizontally balanced when suspended and can be lowered gently.



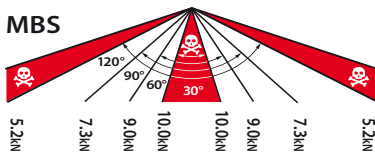
**This product should only be used by highly skilled riggers. The rigger must be very cautious, because the load will stay suspended.**

**When misjudged, the load could swing towards the rigger or even upwards, with risk of serious injury and possibly death.**

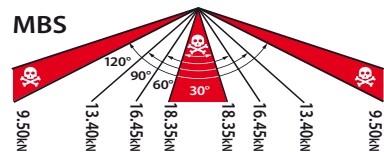
**Always connect both ends to your load and be aware that when you increase the angle between both legs, the maximum load will decline. See image below.**



**The Easy Balancer is only intended for static rigging. Shock loading not allowed.**



Easy Balancer Small (MBS for each leg)



Easy Balancer Big (MBS for each leg)

## Total Minimum Breaking Strength (MBS) Easy Balancer\*

Product (code)	Ø Rope, diameter	< 30°	30°	60°	90°	120°	> 120°
<b>Easy Balancer SMALL (EBS)</b>	10mm Polyester (Polyester)	-	20,0 kN	18,0 kN	14,6 kN	10,4 kN	-
<b>Easy Balancer BIG (EBB)</b>	12mm Polyester (Vectran, Technora)	-	36,7 kN	32,9 kN	26,8 kN	19,0 kN	-

(\*tested on a class 1 universal testing machine)

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# EASY BALANCER

Total Workload Limit (WLL) Easy Balancer*						
Product (code)	< 30°	30°	60°	90°	120°	> 120°
<b>Easy Balancer SMALL (EBS)</b>	-	4,0 kN	3,6 kN	2,9 kN	2,1 kN	-
<b>Easy Balancer BIG (EBB)</b>	-	7,3 kN	6,6 kN	5,35 kN	3,8 kN	-

(\*tested on a class 1 universal testing machine)

WLL According to Machinery directive 2006/42/EC –Appendix I 4.1.2.5 1:5

## Connections to load

When connecting a load to a normal straight end of a rope with a knot, we recommend using a double bowline or a spiderplate. When the end of the rope has an eye splice, a sling could be used. Installation instructions are shown in the images below.



**Knots and splices reduce the strength of a rope considerably!**

### Double bowline



### Choked spiderknot



### Sling



# ARBORING

Material: Aluminum 7075T6  
Weight: 112 gram  
Dimensions: 59.5mm x 37.8mm x Ø 28 mm  
Grove 14mm (Maximum Rope diameter)  
Code ARBR  
MBS 120 KN  
WLL 24 KN

1:5 According to Machinery directive 2006/42/EC –Appendix I 4.1.2.5

**No PPE! (No personal protection equipment )**



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# DECLARATION OF CONFORMITY

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The company: **Shizll**<sup>®</sup>  
Postbus 578, 4100AN Culemborg, The Netherlands

**Shizll**<sup>®</sup> declares that the machinery described below:

Name: Shizll rigging gear  
Function: Products used for lifting and lowering of a load  
in rigging operations  
Model/Type: Spiderplate (big),  
Spidersling (small, big, max),  
Spidersling with ArboRing (small, big max)  
Dead Eye Sling (small, big, max),  
Easy Balancer (small, big),  
ArboRing  
Serial number: See product label

Fulfills all the relevant provisions of the Machinery Directive 2006/42/EC  
as amended.

Culemborg, March 1th, 2015



T. Verhagen  
Director  
**Shizll**<sup>®</sup>  
Postbus 578  
4100AN Culemborg  
The Netherlands

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# WARNING! DO NOT USE FOR CLIMBING

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**shizll**<sup>®</sup> rigging products are working materials and may only be used for purposes other than personal protection.



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You can find us on  
[facebook.com/Shizll](https://facebook.com/Shizll)

For more detailed information  
and applications see [www.shizll.com](http://www.shizll.com)

CE all **shizll**<sup>®</sup> rigging products satisfy  
to the Machinery Directive 2006/42/EC.

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## KEEP THIS USER MANUAL

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