

Hendrik Veder Group	Instruction safe use of shackles	Document no.	HVG-4-001
		Revision:	0
		Date:	23-01-2024
		Page:	1/7

# Instruction safe use of shackles

Rev.	Description	Date	By
0	Approved	23-01-2024	DP

<b>Hendrik Veder</b> Group	<b>Instruction safe use          of shackles</b>	Document no.	HVG-4-001
		Revision:	0
		Date:	23-01-2024
		Page:	2/7

## Content

1	Introduction.....	3
2	Use With Slings:.....	4
3	Use Shackle-Shackle Configuration .....	6
4	Reduction for elevated temperatures .....	7

<b>Hendrik Veder</b> Group	<b>Instruction safe use of shackles</b>	Document no.	HVG-4-001
		Revision:	0
		Date:	23-01-2024
		Page:	3/7

## 1 Introduction

Shackles are used in lifting operations as a removable coupling for connecting to wire rope, chain and other equipment.

They are the primary connecting link in all manner of rigging systems, from boats and ships industrial crane rigging, as they allow different rigging subsets to be connected or disconnected quickly.

**Using a shackle safely is crucial to prevent accidents or injuries. Underneath are some general guidelines for the safe use of shackles:**

**Always:**

- Check whether the serial number is present.
- Check that there is no damage or deformation.
- Store and handle shackles correctly.

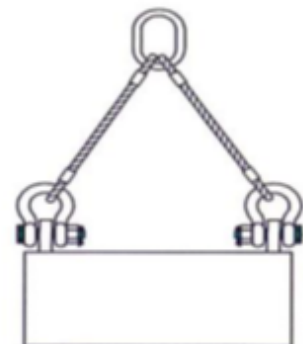
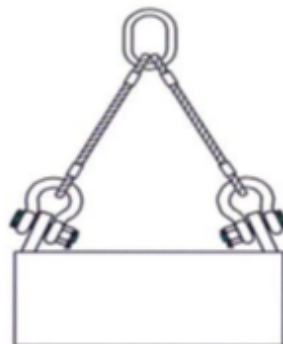
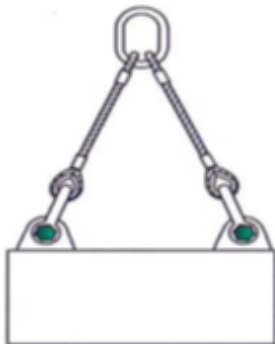
**Never:**

- Use shackles with bent pins or deformations.
- Perform welding on a shackle.
- Never use shackles that have not been inspected.
- Never return damaged shackles to storage.

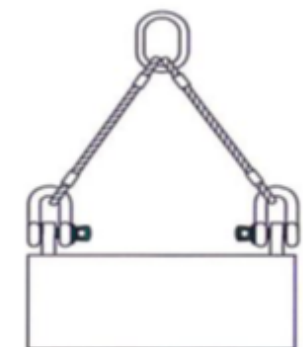
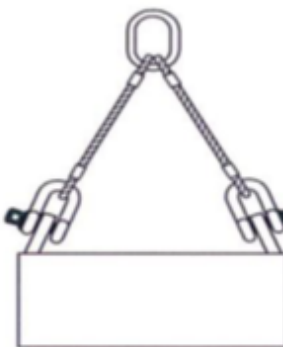
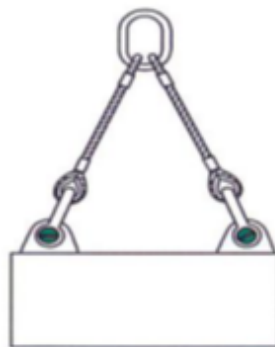
Hendrik Veder Group	<b>Instruction safe use of shackles</b>	Document no.	HVG-4-001
		Revision:	0
		Date:	23-01-2024
		Page:	4/7

## 2 Use With Slings:

- Make sure that the pin is screwed correctly into the nut/eye of the shackle: tighten it by hand and then tighten it further with a wrench. If you use a shackle with a nut and bolt, always use a safety pin. This prevents the nut from loosening the bolt.
- Make sure the shackle supports the load correctly (along the ax of the shackle's centerline). Avoid bending loads, unstable loads and overloading.



Only with reduced WLL

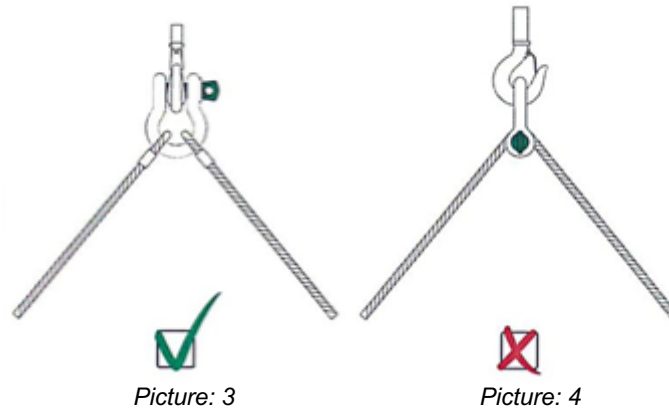


Only with reduced WLL

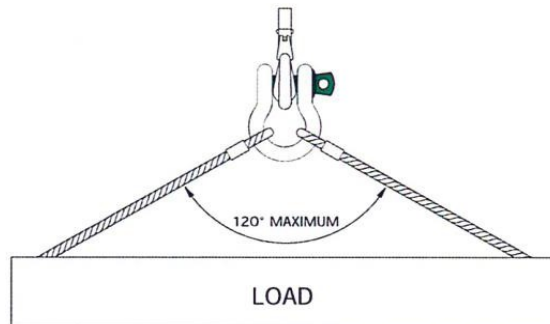
*Side loading (pictures 1 and 2) should be avoided, as the product is not designed for this purpose. If side loading is necessary, the manufacturer must be contacted to determine what the reduction should be.*

Hendrik Veder Group	<b>Instruction safe use of shackles</b>	Document no.	HVG-4-001
		Revision:	0
		Date:	23-01-2024
		Page:	5/7

When using multiple slings, the slings must be mounted on the rounding of the shackle and the pin of the shackle must be mounted on the hook. The angle between the slings may not exceed 120°. With symmetrical loading, the shackle must be used at full WLL.



*Picture: 3 Correct use of shackle in combination with hook and slings*

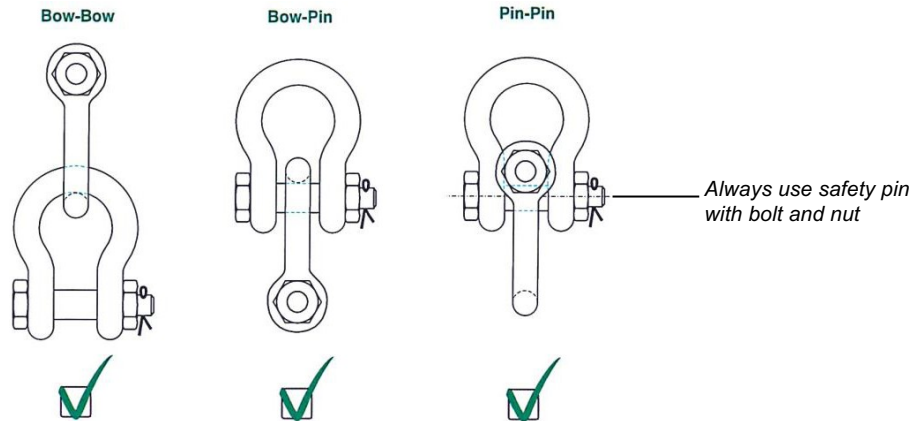


*Example: maximum angle between slings*

### 3 Use Shackle-Shackle Configuration

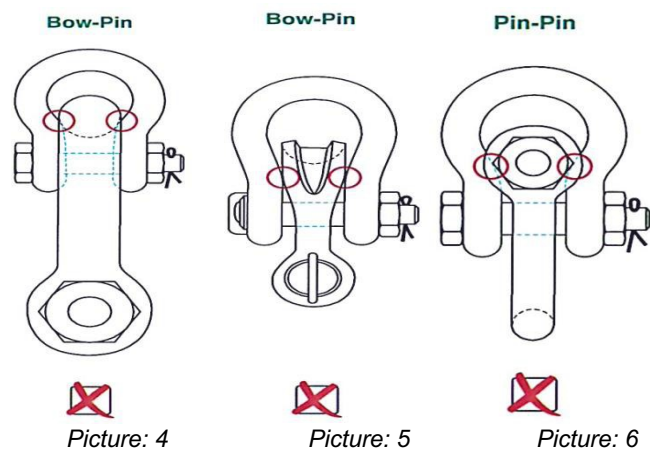
Shackles can also be used in configurations:

- Bow-bow
- Bow-pin
- Pin-pin



Shackle cannot be used in configurations below.

- If the inner shackle bow and the outer shackle eye are touching and the bow and pin are not supporting each other, this configuration should not be used (picture 4 and 5)
- If the eyes of inner and outer shackle touch but the pins do not support each other, this configuration should not be used (picture 6)



<b>Hendrik Veder</b> Group	<b>Instruction safe use of shackles</b>	Document no.	HVG-4-001
		Revision:	0
		Date:	23-01-2024
		Page:	7/7

#### 4 Reduction for elevated temperatures

Temperature	New Working Load Limit
Up to 200°C	100% of original Working load limit
200 - 300°C	90% of original Working load limit
300 - 400°C	75% of original Working load limit
400°C and above	Not allowed