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Original

User Manual English

User Manual for aseke Lifting & Offshore Shackles

Approved according to EN—13889, US Fed.Spec. RR-C-271 and DNV 2.7-1

Bow shackle with wide nut, Bow shackle with threaded eye bolt, and D shackle with threaded eye bolt.

Anyone who uses lifting applications and lifting equipment must have the required training and knowledge for safe use. The user must also be able to understand the dangers associated with the use of the equipment. Maintenance and control of the equipment should be conducted at a minimum once a year by a certified organization.

*Original instructions for use are made in accordance with the Regulations on machinery 544, section 1.7.4 instructions for use, and include all CE-marked shackles produced and marked **aseke** on the shackle body.*

1. Shackles included in this user manual:

aseke Bow Shackle with Wide Nut for OFFSHORE

(Produced acc. to DNV 2.7-1)

ITEM NO	BOW X BOLT	W L L TONS	GAP OPENING	INNER HEIGTH	INNER WIDTH
902413	13 X 16 MM	2	20	47	33
902416	16 X 19 MM	3,25	27	60	42
902420	19 X 22 MM	4,75	31	71	51
902422	22 X 25 MM	6,5	36	84	58
902425	25 X 28 MM	8,5	42	95	68
902428	28 X 32 MM	9,5	46	108	74
902432	32 X 35 MM	12	51	119	82
902435	35 X 38 MM	13,5	57	131	89
902438	38 X 42 MM	17	60	148	98
902445	45 X 51 MM	25	73	177	127

aseke Bow Shackle with Wide Nut for LIFTING

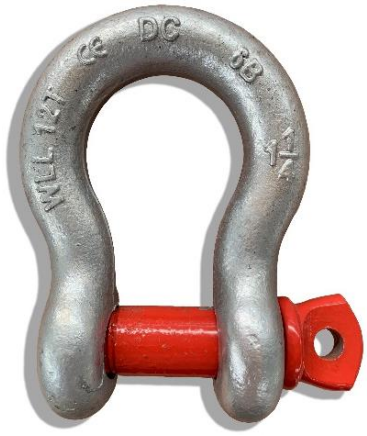
(Produced acc. To EN—13889 & US. Fed Spec RR-C-271)

ITEM NO	BOW X BOLT	W L L TONS	GAP OPENING	INNER HEIGTH	INNER WIDTH
902808	8 X 10 MM	0,75	13	26	21
902810	10 X 11 MM	1	16	35	26
902811	11 X 13 MM	1,5	19	42	29
902813	13 X 16 MM	2	20	47	33
902816	16 X 19 MM	3,25	27	60	42
902820	19 X 22 MM	4,75	31	71	51
902822	22 X 25 MM	6,5	36	84	58
902825	25 X 28 MM	8,5	42	95	68
902828	28 X 32 MM	9,5	46	108	74
902832	32 X 35 MM	12	51	119	82
902835	35 X 38 MM	13,5	57	131	89
902838	38 X 42 MM	17	60	148	98
902845	45 X 51 MM	25	73	177	127
902851	51 X 57 MM	35	82	197	146
902864	69 X 70 MM	55	105	267	179
902876	79 X 85 MM	85	127	327	200
902889	92 X 95 MM	120	133	372	229
902899	100 X 107 MM	150	140	368	254
902901	115 X 120 MM	200	184	398	279
902902	127 X 135 MM	250	216	506	330

aseke Bow Shackle with Threaded Eye Bolt for LIFTING

(Produced acc. to EN—13889 & US. Fed Spec RR-C-271)

ITEM NO	BOW X BOLT	W L L TONS	GAP OPENING	INNER HEIGTH	INNER WIDTH
902713	13 X 16 MM	2	20	47	33
902716	16 X 19 MM	3,25	27	60	42
902720	19 X 22 MM	4,75	31	71	51
902722	22 X 25 MM	6,5	36	84	58
902725	25 X 28 MM	8,5	42	95	68
902728	28 X 32 MM	9,5	46	108	74
902732	32 X 35 MM	12	51	119	82
902735	35 X 38 MM	13,5	57	131	89
902738	38 X 42 MM	17	60	148	98
902745	45 X 51 MM	25	73	177	127
902751	51 X 57 MM	35	82	197	146
902764	69 X 70 MM	55	105	267	179



aseke D Shackle with Threaded Eye Bolt for LIFTING

(Produced acc. to EN—13889)

ITEM NO	BOW X BOLT	W L L TONS	GAP OPENING	INNER HEIGTH
902613	13 X 16 MM	2	20	41
902616	16 X 19 MM	3,25	27	51
902620	19 X 22 MM	5	31	60
902622	22 X 25 MM	6,5	36	71
902625	25 X 28 MM	9	42	81
902628	28 X 32 MM	9,5	46	91
902632	32 X 35 MM	12	51,5	100
902635	35 X 38 MM	13,5	57	111
902638	38 X 42 MM	17	60	124

2. Intended use

aseke shackles must be used by competent persons who have the necessary training.
aseke shackles are also intended for use in controlled lifting operations of various structures. Shackles are mainly used as a "connecting element" between the load and the lifting hook / chain application. It is important that the necessary technical calculations are available in relation to load and environmental factors.

3. Check before use:

1. The shackle's body is marked with CE, Manufacturer and Charge number (ID-code) and WLL.
2. The bolt must have traceability markings.
3. The body and bolt cannot have visible deformations, notches, cracks, or corrosion that impair its properties.
4. Where there is a nut, the threads on the bolt must be undamaged, and the cotter pin must be the right size, so that the bolt is properly locked.
5. The bolt hole must be round and without wear.
6. The bolt must be straight and without wear.
7. Check whether the shackles have heat damage or welding spatter.
8. Check that the shackle is not deformed, cracked, or worn.
9. Wear, cuts, or wounds that do not exceed more than 10% of the diameter can be accepted.

4. Assembly/Installation (See illustration of Point Loading page 13)

- When installing the shackle, make sure that the bolt locks securely.
- For repeated lifting, a bolt with double locking (nut and cotter pin) should normally be used. You should check and make sure that the cotter pin is mounted so that it provides effective protection against the nut being unscrewed.
- Shackle bolt with nut must not be tightened more than the bolt can rotate freely (normally it is sufficient to tighten by hand).
- Eye bolt must be installed so that the head is in contact with the shackle eye, with the bolt threads fully screwed in.
- For tightening bolts, you can for example use a wrench.

5. To ensure safe use:

- Never stand under suspended loads.
- The maximum permissible workload must never be exceeded.
- The shackles must be used so that the load is applied as much as possible in the longitudinal direction, as they are designed and certified for this. Other use may result in deformation or damage.
- The load on the bolt must be distributed as best as possible over the width of the bolt.
- Remember that the bolt on the shackle must be secured with a cotter pin that is bent after the nut has been tightened.
- Do not use the loops in temperatures above +250 C^{o} or below -40 C^{o}.

6. Use of shackles in a chain lifting application

- When shackles are used at the top of multi-part lifting application, the effect of the angle between the parts must be taken into account. The stated WLL of the shackle applies at up to 120° top angle. Greater top angle than 120° should be avoided!
- When connecting shackles with webbing straps or round slings, the minimum installation diameter for these must be taken into account. If necessary, the shackle bolt can be lined with a suitable sleeve to achieve the desired installation diameter.
- If two shackles are to be connected to each other, they should be connected body to body. See EN 13889, Annex A (Safe Use of Shackles) for more recommendations in relation to the safe use of lifting shackles.

7. Marking on aseke shackles:

Body	WLL, size, **aseke**, C€, ID-code. The body on offshore shackles is also marked «OFFS».
Bolt	Steel quality 8.8.

8. Certificates and documentation

Shackles are only permitted for lifting when a valid certificate is available to the user.
aseke lifting shackles are supplied with a manufacturer's certificate in accordance with EN 10204-3.1, declaration of conformity, user manual and form 4. Dealers will often deliver with their own certificates but will also be able to supply our certificates on request.

9. Expert inspection

In Norway, requirements for an expert inspection are laid down in the Regulations on the execution of work (FOR-2011-12-06-1357) in accordance with § 13-2 of these regulations expert inspection of work equipment must be carried out...

- Every 12th month (*)
- When the work equipment has not been used for the last 6 months and it may cause a risk to life or health when it is put into use again.
- When due to the environment in which the work equipment is placed, more frequent checks are required.
- When the work equipment has been exposed to significant overload, and/-after major repairs or conversions.

***EN—13889 recommends an expert inspection at minimum every 6th month.**

10. Warnings and limits of use

Asymmetrical load

Shackles are designed to absorb load at the crown on the body, and evenly distributed on the shackle bolt. If shackles are subjected to skew or side loading, this will result in a reduction in capacity which must be taken into account.

Deformation

If during assembly it is found that there is a poor fit between the shackle body and the bolt, it may be due to distortion or deformations. The shackle should then be checked by an expert company or manufacturer.

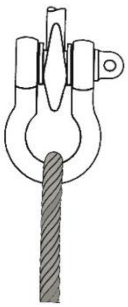
Chemicals

Shackles must not be exposed to acids, acid fumes or other corrosive chemicals.

Modifications

Modifications to the shackle that may affect the material and/or load characteristics are not permitted.

ILLUSTRATION OF POINT LOAD



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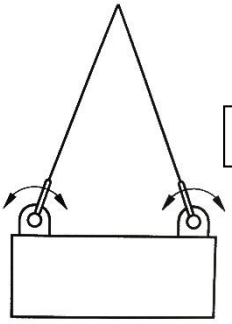

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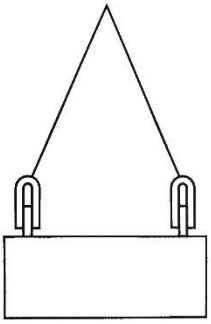

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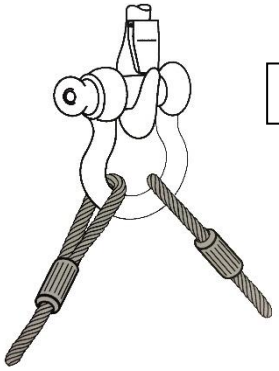

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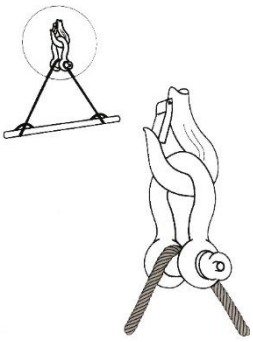

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Point load on bolt
In general, it is recommended that the load is distributed over as much of the bolt's length as possible. If point loading cannot be avoided, the load should be centered on the bolt as much as possible to avoid biased loading of the shackle. However, one must never press the opening together or weld parts to the bolt to control the load.

Wear
Shackles with more than 10% wear on the hoop or the bolt's goods diameter must be discarded. The original diameter is stated in the measurement tables on page 9 and 10 of this user manual and in our product catalog at www.aseke.no.

Temperature

- Shackles must not be subjected to heat treatment (i.e., welding). Operating temperature is between -20° to +200° Celsius.

New load capacity in % of original WLL at temperature:

200-300°C	90%
300-400°C	75%
> 400°C	Not allowed.

Unstable load
In general, lifting operations where the load is unstable should be avoided, and shackles in particular should not be exposed to shock loads and jolts.

11. Maintenance and control after use

- After use, the shackles must be checked for damage, wear or deformation.
- If sufficient damage is discovered, shackles must be marked with the disposal color white, and replaced with a new one.
- Shackles should be stored dry in a suitable place.