



ORIGINAL USER AND INSTALLATION INSTRUCTION: Key Eye Point 8-291K



CONFORMITY

In accordance with the Machinery Directive 2006/42EC. CERTEX Danmark A/S assures, that the equipment supplied is CE marked and delivered in accordance with Danish Standard.

If the customer makes any kind of modifications, or if the customer combines the product with a non-compliant product / component assumes CERTEX Danmark A/S is not responsible for the product.

BA11.428-291KUK13.10.21

INFORMATION

According to the Labour Inspection Authorization No. 2.3.0.4 "gripping" the staff to use lifting equipment must be instructed in the proper execution of work. The instruction must be in accordance with this authorization and shall include the specific actions required by each job.

Before the equipment into service, this manual should be read through. The information is intended to achieve the safe use of equipment.

User manual contains important information about how equipment is operating safely and properly.

Is the equipment used in accordance with these instructions may hazards and damage avoided.

Anyone using the equipment must read and act in accordance with instructions.

Furthermore, we refer also to WEA rules and regulations that otherwise apply on the spot. Including a.o. The message No 2:02:10.

IMPORTANT! WLL is not exceeded, and label instructions must be followed.

YOKE 8-291 Eye Point Safety Instruction

1. Safety Instructions

Warning Message

Wrong assembled or damaged Eye Point as well as improper use can lead to injuries of persons and damage of objects when load drops. Please inspect all Eye Point before each use.

When installed, the 8-291 Eye Point must be rotated 360° Refer to German standard, under rule 500 (DGUV BGR 100-500) or other country specific regulations. All the inspection should be operated by the competent persons

2. Intended use

The 8-291 Eye Point must only be used for the assembly of the load or at load accepting means
Their usage is intended to be used as lifting means.
The 8-291 Eye Point can also be used as lashing points for the fixture of lashing means.
The 8-291 Eye Point must only be used in the here described usage purpose.

3. Instruction manual

3.1 General Information

The Eye Point cannot be used in the following chemicals influence environment such as acid and steam. If you still cannot avoid, please contact the manufacturer to indicate how to use correctly.

Temperature effects:

As the DIN/EN bolts are used in the Eye Points, the working load limit must be reduced:

-40°C to 100°C no reduction (-40°F to 212°F)

100°C to 200°C minus 15% (212°F to 392°F)

200°C to 250°C minus 20% (392°F to 482°F)

250°C to 350°C minus 25% (482°F to 662°F)

Temperature above 350°C (662°F) is not allowed.

Please note the nuts' maximum temperature (optionally):

- Clamping nut according to DIN EN ISO 7042 (DIN 980) can only be used up to +150°C (302°F).

- Collar nut according to DIN 6331 can only be used up to +300°C (572°F).

Yoke Eye Point is supplied with 100% crack tested bolt. Use only YOKE parts as replacements.

3.2 Assembly hints

After determining the loads on each Eye Point, select the proper size Eye Point using the Working Load Limit ratings in Table 1.

The material construction, to which the Eye Point will be attached, should be of adequate strength to withstand forces during lifting without deformation. YOKE recommends the following minimum for bolt lengths:

(M = diameter of YOKE Eye Point bolt, e.g. M 20)

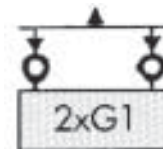
- 1.5 x M in Steel
- 1.5 x M in cast iron
- 2 x M in aluminum alloys
- 2.5 x M in aluminum-magnesium alloys

A plane bolting surface must be guaranteed. The holes must be drilled with a sufficient depth in order to guarantee compatibility with the supporting surface
The Eye Points must be positioned as suggestion below:

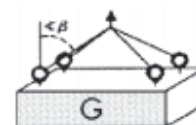
- The Eye Point should be vertically above the center of the load for single leg.



- The Eye Points must be equidistant to/or above the center of the load for two legs.



- The Eye Points should be placed symmetrically around the center of the load for three and four leg.



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Load symmetry:

Using the following formula as symmetrical loading calculation:

$$W_{LL} = \frac{G}{n \times \cos \beta}$$

W_{LL} = working load limit
 G = load weight (kg)
 n = number of load bearing legs
 β = angle of inclination of the chain to the vertical

The calculation of load bearing is as follows:

	Symmetric	Asymmetric
2 Legs	2	1
3/4 Legs	3	1

Attach lifting device ensuring free fit to Eye Point bail (lifting ring)

Apply partial load and check proper rotation and alignment. There should be no interference between load (work piece) and hoist ring bail.

3.3 Instructions for use

The Eye Point ring must not touch the edge and should be free to move.

When lifting, users should avoid sharp edges environment that will cause the damage of the lifting. To prevent unintended dismounting through shock loading, rotation or vibration thread locking fluid such as Loctite 2701 (depending on the application, need to pay attention to the

manufacturer's instruction) could be used to secure the bolt, or use form-closed devices.

Attention: Ring Body must be free to rotate.

3.4 Periodical Inspections:

Eye Point should be inspected periodically, determine by the usage, but at least once a year. It should be operated by a competent person

The inspection times depend on the usage condition, which wear, or corrosion increase by frequent use. In this case, user may need to inspect more than one time a year.

4. Inspection's criteria

Before each operation, observe and control the following points during regular period :

- The Eye Point should be complete.
- Evidence of cracks.
- The Eye Point must be free to rotate.
- The deformation of the component parts
- Confirm the compatibility of the bolt threads and tapped hole torque control
- The working load limit and manufacturer stamp should be visible clearly
- Mechanical damage, ex: notches, especially in the high-pressure area.
- Wear should not exceed 10% of the cross-sectional diameters.
- Evidence of corrosion.
- Damaged on the bolts, nuts and / or threads.

Table 1 YOKE 8-291 Eye Point normal load applications

Kind of attachment											
	Number of legs	1	2	1	2	2	2	2	3-4	3-4	3-4
Load direction	0°	0°	90°	90°	0-45°	45° - 60°	unsymm.	0 - 45°	45° - 60°	unsymm.	
Item No.	Thread	WLL(t)									
8-291K-003	M 8	1	2	0.3	0.6	0.42	0.3	0.3	0.63	0.45	0.3
8-291K-004	M10	1	2	0.4	0.8	0.56	0.4	0.4	0.8	0.6	0.4
8-291K-007	M12	2	4	0.75	1.5	1	0.75	0.75	1.5	1.1	0.75
8-291K-015	M16	4	8	1.5	3	2.1	1.5	1.5	3.1	2.2	1.5
8-291K-023	M20	6	12	2.3	4.6	3.2	2.3	2.3	4.8	3.4	2.3
8-291K-032	M24	8	16	3.2	6.4	4.5	3.2	3.2	6.7	4.8	3.2
8-291K-045	M30	12	24	4.5	9	6.3	4.5	4.5	9.4	6.7	4.5
8-291K-070	M36	16	32	7	14	9.8	7	7	14.7	10.5	7
8-291K-090	M42	24	48	9	18	12.6	9	9	18.9	13.5	9
8-291K-120	M48	32	64	12	24	16.8	12	12	25	18	12
8-291K-140	M56	34	68	+16	32	22.4	+16	+16	32	24	16
8-291K-150	M64	36	72	++18	36	25.2	++18	++18	36	27	18

+ WLL=16 (was 12)

++ WLL=18 (was 12)