



Safety is our first priority™

www.yoke.net

-- An ISO 9001 Certified Company --

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Yellow Point

## YOKE 8-291/8-291K Eye Point Safety Instruction

This safety instruction/declaration of the manufacturer has to be kept on file for whole lifetime of the product

TYPE APPROVAL BY: :



certificate no. QA 1951025 dated 2019-03-26



Translation: In any case, the German original shall prevail.

### DGUV Test Certificate

Name and address of the holder of the certificate (customer): YOKE INDUSTRIAL CORP., #39, 33rd ROAD, TAICHUNG INDUSTRIAL PARK, 407 TAICHUNG, R.O.C., TAIWAN

Product designation: eyepoint, grade 10

Type: 8-291K-003, 8-291-003, 8-291K-004, 8-291-004, 8-291K-007, 8-291-007, 8-291K-015, 8-291-015, 8-291K-023, 8-291-023, 8-291K-032, 8-291-032, 8-291K-045, 8-291-045, 8-291K-070, 8-291-070, 8-291K-090, 8-291-090, 8-291K-120, 8-291-120

Testing based on: QS-Q4-15-04:2015-12 Principles for the testing and certification of lifting points

Test report: case number 19.03.01 from 2019-03-25

Further details: Intended use: Lifting accessory

The type tested meets the requirements specified in article 3 para. 1 of the German Product Safety Act. Thus, the type tested also complies with the provisions laid down in the directive 2006/42/EC (Machinery). The holder of the certificate is entitled to affix the DGUV Test mark shown overlaid to the products complying with the type tested. The present certificate including the right to affix the DGUV Test mark is valid until: 2024-03-25. Further provisions concerning the validity, the extension of the validity and other conditions are laid down in the Rules of Procedure for Testing and Certification.



Dir. 881-Ing. Christian Adler



8-291 Eye Point



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Q1 0467



QMS 0726





Please read user instruction before initial operation of the bolt-on YOKE Eye Point 8-291. Make sure that you have comprehend all subjected matters. Non observance can lead to serious personal injuries and material damage and eliminates warranty.

### 1. Safety Instructions

<b>Warning Message</b>	
	<i>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.</i>

- 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.

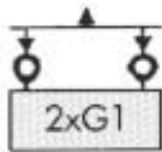
#### 3.2 Assembly hints

- 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:

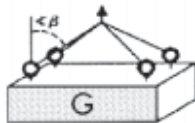
-The Eye Point should be vertically above the center of the load for single leg.



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



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



● 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  
 $\beta$  = 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 has to 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. Inspections 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)