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PURPOSE OF THE DOCUMENT

The purpose of this operating manual is to provide the operator of the beam clamp with all the necessary information regarding:

- how the beam clamp works,
- how to operate the beam clamp,
- safety instructions and
- maintenance.

OPERATING PERSONNEL

The component must only be operated by suitably trained personnel. Details of the training that personnel have been given are to be recorded in the handover report.

OTHER DOCUMENTS

All the technical documents relating to this component are kept at the manufacturer's works where they may be consulted at any time.

These also include a complete set of documentation for any components or assemblies bought in.

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Basic safety instructions

This operating manual contains essential instructions on how to operate the component safely.

1.1 Obligations and liability

- Knowledge of the basic safety instructions and safety regulations is a basic prerequisite for guaranteeing safe working and the fault-free operation of this component.
- This operating manual, especially the safety instructions, is to be heeded by everyone who works on the component.
- In addition, the rules that apply at the location where the component is to be used and accident prevention regulations are to be heeded.

Take note of the instructions provided in the operating manual

The component is constructed using state-of-the-art technology and in accordance with the accepted rules for safe operation. Nevertheless, its use may constitute a risk to life and limb of the user or of third parties or cause damage to the component or to other property.

Hazards when working with the component

The component must only be used:

- **for its intended use,**
- **if it is in a safe and fault-free state.**

Defects which could impair safety are to be rectified immediately.

In the event of personal injury and damage to property, warranty and liability claims are excluded if the injury or damage is due to one or more of the causes listed below:

Warranty and liability

- the unapproved use of the component;
- the incorrect assembly, commissioning, operation and maintenance of the component;
- the operation of the component with defective safety devices or with
- safety and protective devices that have been fitted incorrectly or are not in good working order;
- failure to heed the instructions provided in the operating manual regarding the transportation, storage, installation, commissioning, operation, maintenance and set-up of the component;
- unauthorised structural modifications to the component;
- the inadequate monitoring of parts subject to wear;
- improper repairs carried out;
- emergencies caused by external influences and force majeure.

1.2 Safety symbols

Explanation of symbols and instructions

The following names and hazard symbols are used in the operating manual:



Danger

This symbol indicates an immediate threat to the life and health of individuals.
Failure to heed this advice will result in severe damage to health with the possibility of life-threatening injuries.



Warning

This symbol indicates a potential threat to the life and health of individuals.
Failure to heed this advice may result in severe damage to health with the possibility of life-threatening injuries.



Caution

This symbol indicates a potentially hazardous situation.
Failure to heed this advice may result in minor injuries or damage to property.



This symbol indicates important instructions on how to use the component properly.
Failure to heed these instructions may result in defects in the component or environmental disturbance.



This symbol is used to indicate tips on how to use the component and particularly useful information.
These will help you to make optimum use of all the functions of your component.

1.3 Intended use

The Kito beam clamp was designed for quick and easy installation and to enable loads up to the capacity specified to be clamped safely. The load-carrying capacity specified on the component is the maximum load that must not be exceeded.

Intended use

1.4 Unapproved use

Uses other than those listed above are prohibited. Hazards can occur during unapproved use.

Unapproved use

Neither personal protection equipment to prevent personnel from falling nor passenger transport facilities must be attached to the beam clamp!

1.5 Installation

When installing the component, the operator is to make sure that the beam clamp can be operated in such a way that the operator is not put at risk either by the device itself or by the load-supporting device or the load. In particular, it is to be ensured that the steel beam to which the beam clamp is attached has sufficient load-carrying capacity and is basically suitable for use. This is to be assessed by an expert. The width of the beam flange to which the beam clamp is to be attached must comply with the requirements relating to the beam clamp in question.

Installation

The Kito beam clamp is classified as a load suspension device so that it is essential for the local safety regulations for load suspension devices to be heeded.

1.6 Temperature range

The component can be operated within an ambient temperature range of between **-10 °C and +50 °C**. Different temperature ranges are to be agreed with the manufacturer beforehand.

Temperature range

1.7 Organisational measures

The operator is to provide the personal protection equipment required. All the safety devices provided are to be checked regularly.

Organisational measures

1.8 Informal safety measures

- The operating manual is to be kept with the component at all times.
- In addition to the operating manual, the generally valid local accident prevention and environmental regulations are to be provided and heeded.
- It is to be ensured that all safety instructions and hazard advice relating to the component remain legible and are replaced if necessary.

Informal safety measures

1.9 Staff training

- Only suitably trained and instructed personnel may work on the component.
- The responsibilities of personnel for operation, retrofitting and maintenance are to be clearly defined.
- Personnel being trained may only work on the component under the supervision of an experienced member of staff.

Staff training

1.10 Safety measures

Before using the component, make sure that no-one may be put at risk by the component.

Check the component for signs of visible damage and make sure that it is seated firmly on the beam flange at least once a day.

It is forbidden to stand underneath suspended loads.

It is forbidden to carry out work that generates heat in the vicinity of the beam clamp.

Safety measures

1.11 Maintenance and repairs and troubleshooting

- Prescribed adjustments, maintenance and inspections are to be carried out at the specified time. The beam clamp is to be checked by an expert at least once a year in order to ensure that it remains in good working order.
- Make sure that the threaded spindle is lubricated sufficiently.
- After carrying out maintenance work, check safety devices to make sure that they are working properly.
- Troubleshooting must be carried out by trained personnel from Kito.

Maintenance and repairs and troubleshooting

1.12 Structural modifications to the component

- Ohne Genehmigung des Herstellers keine Veränderungen, An- oder Umbauten an der Trägerklemme vornehmen. Dies gilt auch für das Schweißen an tragenden Teilen.
- Komponenten in nicht einwandfreiem Zustand sofort austauschen!
- Nur Original Ersatz- und Verschleißteile verwenden!
- Bei fremdbezogenen Teilen ist nicht gewährleistet, dass sie beanspruchungs- und sicherheitsgerecht konstruiert und gefertigt sind.

Structural modifications to the component

1.13 Cleaning the component and disposing of substances

- Substances and materials used must be handled and disposed of properly, particularly:
 - when working on lubricating systems and devices
 - when cleaning using solvents.

Cleaning the component and disposing of substances

2. Operation

2.1 Installation of the beam clamp

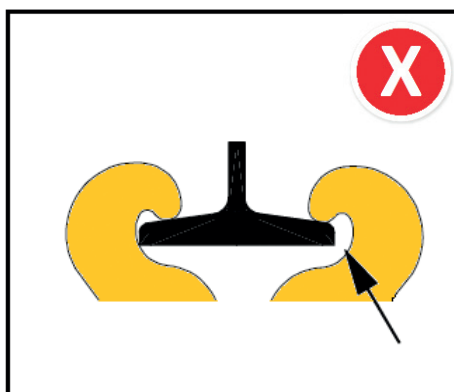
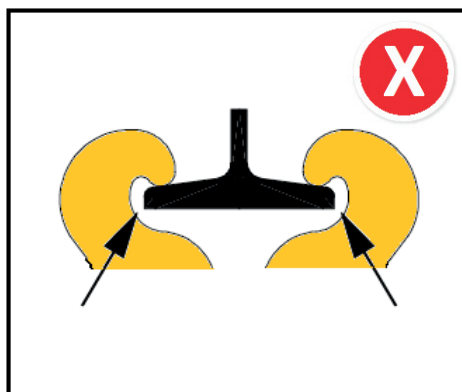
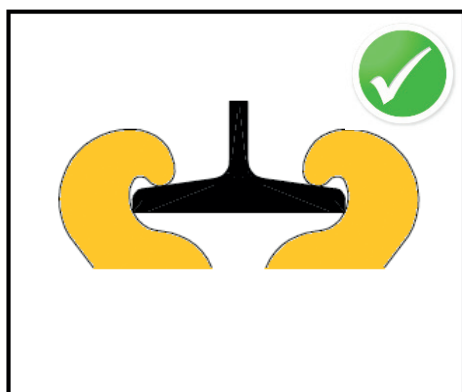
The beam clamp is to be opened wide enough, by turning the spindle, to allow the arms to pass along the beam flange. After the beam clamps have been passed along the beam flange, the clamp is fastened to the beam flange by turning the spindle in the opposite direction (cf. diagram below!).

The beam clamp must not be put under load during installation. The user is responsible for ensuring that the beam clamp is installed safely.

Installation of the beam clamp

It is imperative for the basic safety instructions to be heeded during installation!

RIGHT – The arms of the beam clamp are resting on the vertical or horizontal part of the beam flange.



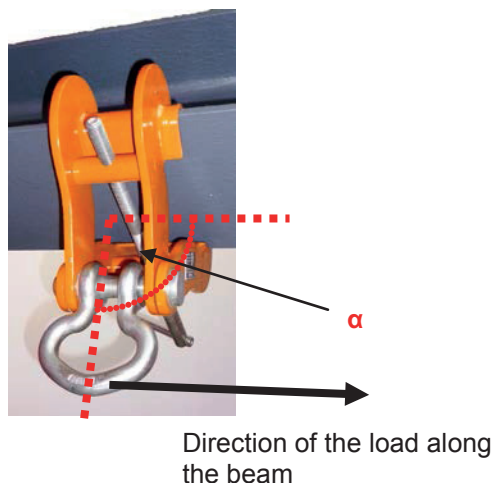
WRONG – There is a gap between one or both of the arms of the beam clamp and the beam flange.

2.2 Operating limits of the beam clamp:

BEFORE USING THE BEAM CLAMP THE BEAM SHOULD BE TESTED BY AN EXPERT OR THE MANUFACTURER OF THE BEAM TO CHECK THAT IT IS SUITABLE FOR USE WITH THE BEAM CLAMP!

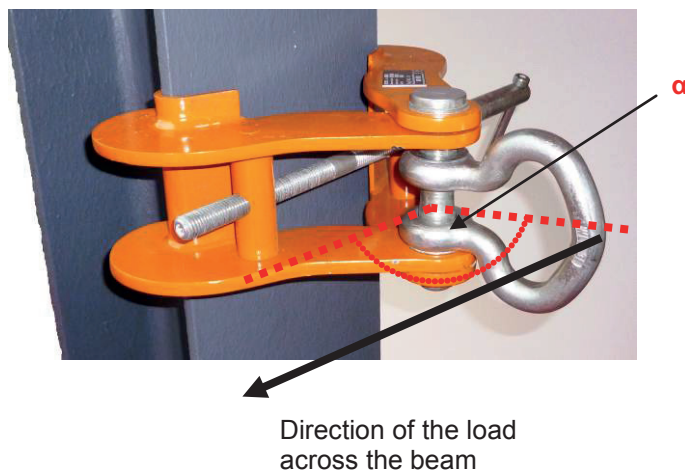
Loading of the beam clamp along the beam:

The beam clamp may be positioned up to an angle α (the angle between the beam clamp and the load) of 15° relative to the specified longitudinal loading limits of the beam. **If the angle $\alpha \geq 15^\circ$, the beam clamp must not be used!**



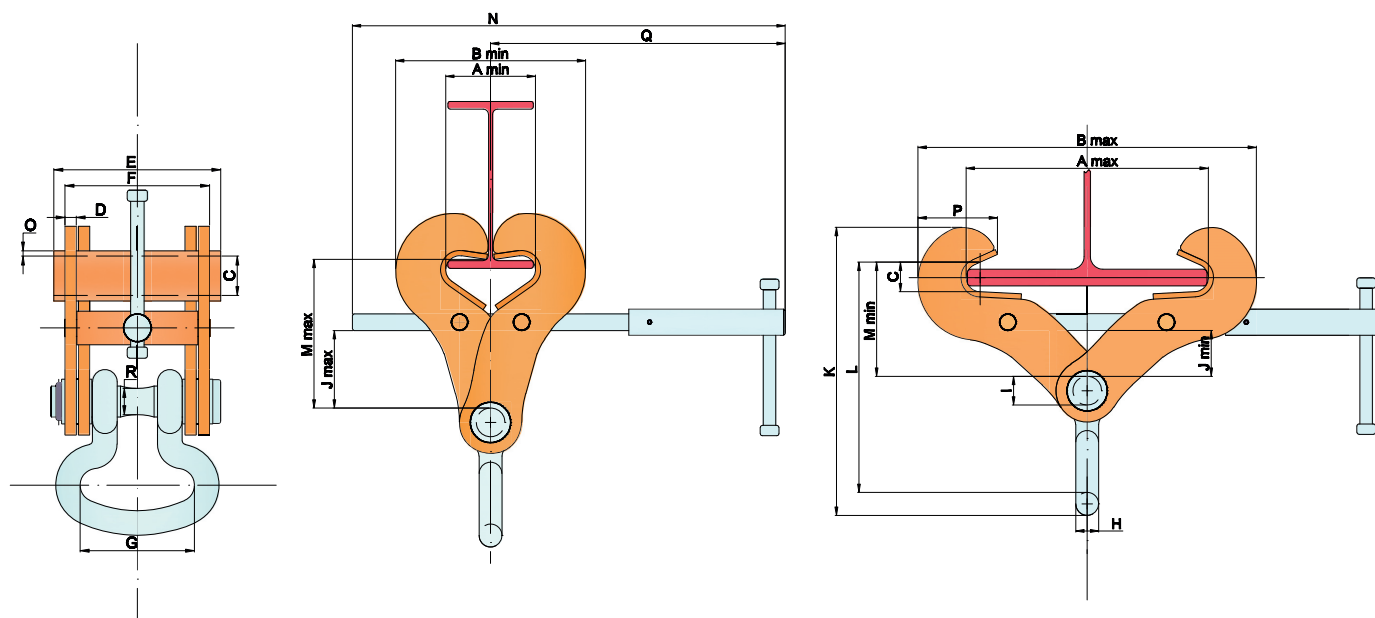
Loading of the beam clamp across the beam:

The beam clamp may be used and loaded in accordance with the **maximum allowable load across the beam up to an angle α of 45° to the beam**. The expected lateral load is to be approved by the beam manufacturer in advance.



3.3 Technical data

TYPE		TK010A	TK020A	TK030A	TK050A	TK075A	TK100A	TK030B	TK050B
A	min	75	75	75	75	90	90	140	140
	max	230	230	230	230	320	320	320	320
B	min	153	153	182	194	213	213	258	258
	max	308	308	325	336	436	436	434	434
C		18,9	18,9	28,2	28,2	30,1	30,1	28,3	28,3
D		5	8	10	12	15	15	10	12
E		106	129	149	170	207	207	149	170
F		86	109	129	150	187	187	129	150
G		75	89	102	118	146	146	102	118
H		16	19	22	25	32	32	22	25
I		20,5	22,5	27,5	28,5	36,5	36,5	27,5	28,5
J	min	28	27	44	43	35	35	40	40
	max	65	64	74	73	100	100	98	98
K	min	205	220	276	291	331	331	279	280
	max	261	263	320	335	414	414	354	356
L	min	161	173	221	232	266	266	225	224
	max	207	205	254	265	328	328	284	283
M	min	81	80	109	109	110	110	113	112
	max	126	125	143	142	173	173	173	173
N		385	385	415	415	475	475	475	475
O		3	3	5	5	6	6	5	5
P		63	63	76	82	83	83	84	84
R		17,4	19,1	23,4	24,2	31	31	23,4	24,2
Q		253	253	283	283	313	313	313	313



TYPE	Load-carrying capacity kg	Flange width mm	Weight kg
TK010A	1000	75-230	4,0
TK020A	2000	75-230	5,3
TK030B	3000	140-320	11,0
TK030A	3000	75-230	9,0
TK050A	5000	75-230	11,0
TK050B	5000	140-320	13,5
TK075A	7500	90-320	20,0
TK100A	10000	90-320	20,0

4. Disposal/Removal

4.1 Safety regulations

The disposal or removal of the component is carried out by following the commissioning sequence in reverse.

All materials are to be removed and/or disposed of correctly. The beam clamp does not contain any hazardous substances.



Danger

4.2 Requirements relating to the operating personnel

All work in connection with the disposal of the component may only be carried out by competent personnel.

ProTectum

Declaration of conformity

according to EC Machinery Directive 2006/42/EC

Hereby we confirm that the following machine correspond in its conception and design as well as the format launched by us to the basic safety and health protection standards of the EC Directive. In the case of a modification which is not agreed with us, this document is invalid.

Manufacturer:	Kito Europe GmbH Heerdter Lohweg 93 40549 Düsseldorf
Description of the machine:	Beam-Clamp
Year of manufacture:	2011
Type of the machine:	lifting accessories
Number of the machine:	
Relevant EC Directive:	EC Machinery Directive 2006/42/EG
Used codes in particular:	DIN EN 12100-1, DIN EN 12100-2, DIN EN ISO 14121-1, DIN EN 13155, DIN EN 15018-2
Date:	19.07.2011
Cooperator of the creation:	Dipl.-Ing. Luisa Noetzel
Signature:	
Signature of manufacturer:	
Function of the signee:	

KITO Kito Europe GmbH
Heerdter Lohweg 93
40549 Düsseldorf
Tel: 0211 / 528009-0
Fax: 0211 / 528009-99