

**Milos**

**CS M290-M400**

**Original user's manual**



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# 1. INTRODUCTION

BEFORE installing and operating a MILOS CS M290-M400, read this manual carefully and pay attention to the information provided. Use this manual to familiarise yourself with the products, its proper use and safety regulations.

## DANGER

**DANGER:** Indicates a hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.

## WARNING

**WARNING:** Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

## CAUTION

**CAUTION:** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

## NOTICE

**NOTICE:** address practices not related to personal injury.

## SAFETY INSTRUCTIONS

**SAFETY INSTRUCTIONS:** is used for lists of steps, procedures or instructions that might otherwise substitute a DANGER, WARNING or CAUTION notification. Note that equivalent phrases, such as SAFE OPERATION PROCEDURES or SAFE SHUT DOWN PROCEDURE, can be used in place of the words "SAFETY INSTRUCTIONS".

## SAFETY INSTRUCTIONS

*Make sure manuals are available at all times for all users, employees.*

For health and safety reasons people assembling, disassembling, transporting, maintaining and cleaning lifting bracket CS M290-M400 should wear adequate Personal Protection Equipment such as, but not limited to; gloves, hard hats and safety shoes.

Milos CS M290-M400 is a lifting bracket with a Safe Working Load of 1000 kg (2200 lbs) for trusses with centre-to-centre distance of 207-350 mm. The used clamps are suitable for main chords ranging from 48-51 mm (1.89"-2").

The lifting bracket is available in a Brut aluminium version as well as black powder coated.

Special attention has been placed to safety security. Therefore the lifting bracket has a safety factor of 8:1. The Lifting bracket is a lifting accessories under the EU machine Directive 2006/42/EC as well as German DGUV 17/BGVc1 for lifting and holding loads above persons.

Milos has Endeavoured to deliver the highest degree of accuracy possible. However continuous improvement of our products is a Milos Policy. Therefore, product specifications are subject to change without notice.

Readers and users are encouraged to notify Milos of errors and send in suggestions for improvements. All communications will be carefully considered for future printings of this manual and changes to our products.

The lifting bracket is composed of different elements each with an individual Working Load limit (WLL). Each having a sufficient safety factor for the foreseen application. The user however shall always stay within the limits of the Safe Working load (SWL) stated on the product. Therefore the lifting bracket shall be places symmetrical to it attached structure at all times.

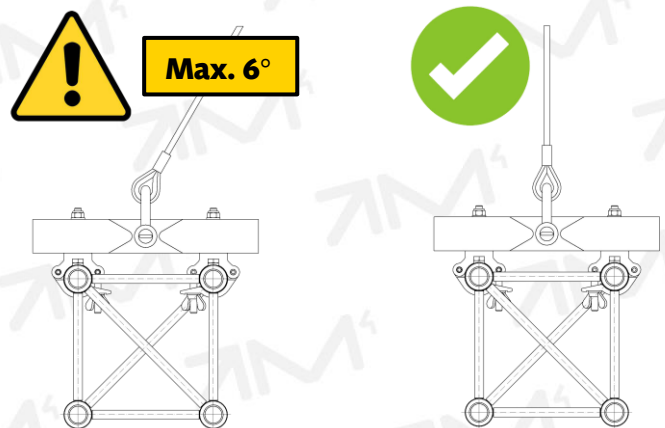
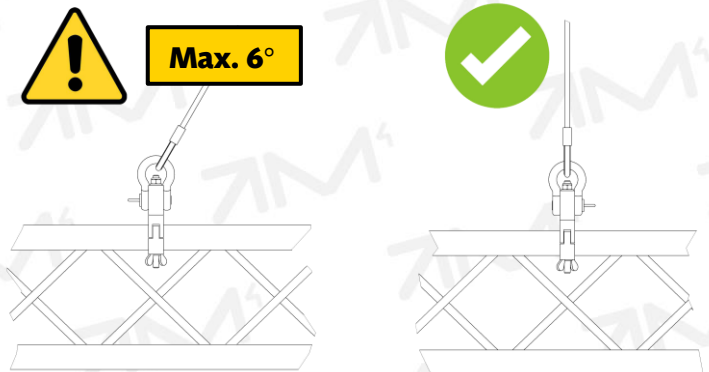
Resulting forces in the object attached shall be verified before applying a load.

# 2. SCOPE

Intended use of the lifting bracket CS M290-M400 is for lifting trussing structures above persons. The device is to be used only for its prescribed purpose. Any use other than that mentioned is considered to be a case of misuse. The user/operator and not the manufacturer shall be liable for any damage or injury resulting from such cases of misuse.

## WARNING

*Only apply a straight pull on the lifting bracket.*



- ✓ The system can be operated in -40 °C up to 60 °C.
- ✓ The use of trussing and truss systems is the sole responsibility of the operator.
- ✓ To use the lifting bracket the user must also observe the safety regulation, the assembly and disassembly instructions to be found in this manual.
- ✓ All persons who use and service this device have to be acquainted with this manual and must be informed about its potential hazards. The regulations of the BGV C1 have to be respected.
- ✓ It is also imperative to observe the local accident prevention regulations.
- ✓ The same applies for the general rules of occupational health and safety.
- ✓ The manufacturer is not liable for indirect consequential damage and financial loss. The manufacturer shall not be liable for any changes made to the device nor for any damage resulting from such changes.
- ✓ The lifting bracket can be used in two directions.

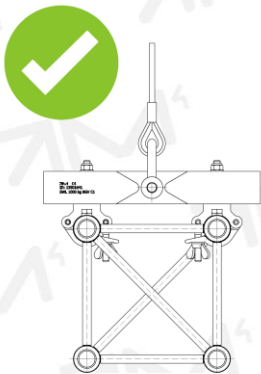


Fig. 1

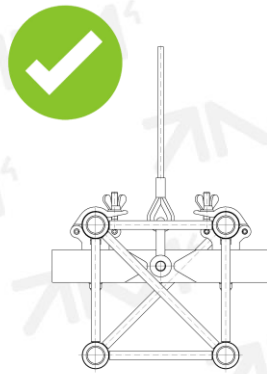
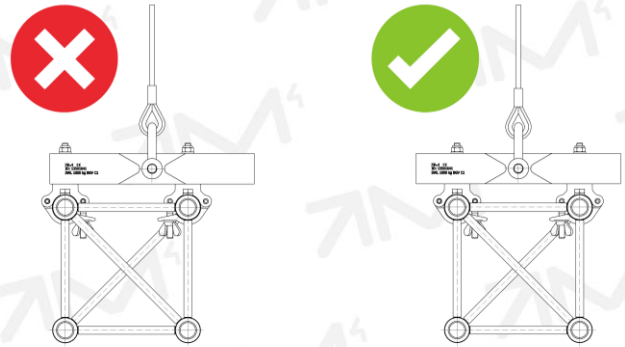


Fig. 2

### 3. SAFETY INSTRUCTIONS

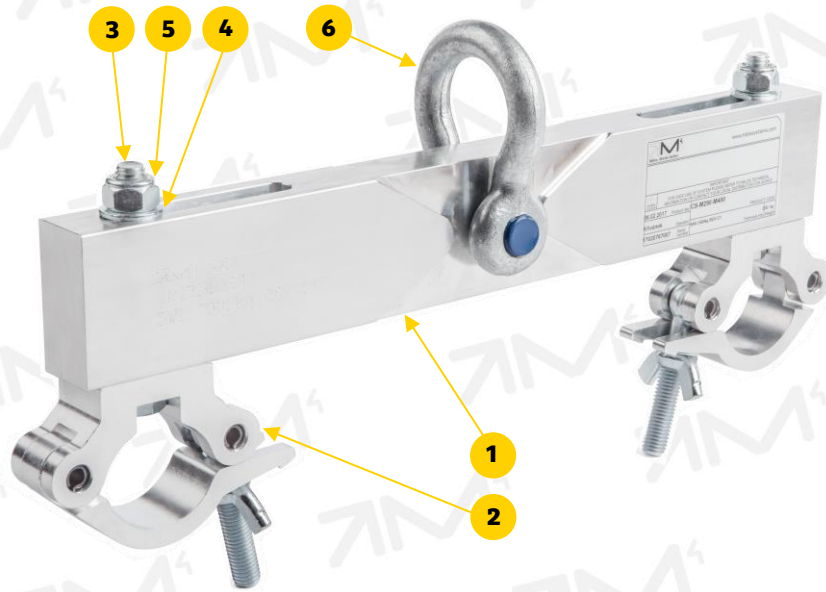
- ⚠ The lifting bracket shall be placed symmetrical to it attached structure at all times.



- ⚠ Make sure the resulting forces on the object attached are approved by a competent person.
- ⚠ All loads imposed shall be considered. E.g. dynamic forces caused by the lifting machinery attached.
- ⚠ Bolts or wing nuts shall be tightened by means of a spanner in such a manner they cannot be released by man power.
- ⚠ Check if all bolts and nuts are tightened after the first 1 meter of lift before proceeding.
- ⚠ Never exceed the allowed Safe Working Load (SWL) of 1000 kg (2200 lbs) for overhead lifting.
- ⚠ When loads are using electrical power, equip-potential bonding shall be put in place.
- ⚠ The choice of trussing and the lift capacity must be adapted to the load.
- ⚠ The Lifting bracket shall be inspected in compliance with the local law by a competent person. Re-certification shall take place as often as required but with a minimum of 1x per year. In case of doubt inspect and test the lifting bracket.
- ⚠ Inspect equipment before every use. Damaged equipment shall be taken out of service immediately.
- ⚠ The device has to be taken out of services immediately if, during use, repair or maintenance serious damages are discovered. Re-using is only allowed after proper repair, examination by authorized personnel. In case of doubt contact Milos.
- ⚠ Maintenance and repairs can be undertaken only by authorized personnel. In any doubt you should contact Milos.
- ⚠ Do not throw the lifting bracket. Treat it like a lady.

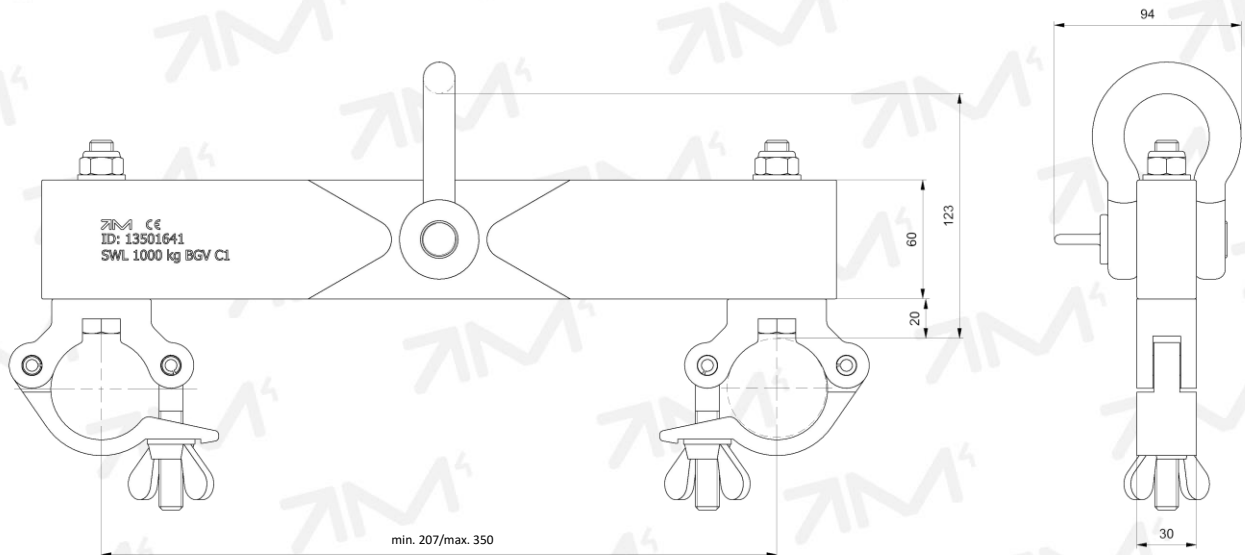


## 4. TECHNICAL SPECIFICATIONS



### CS M290-M400

Position	Item	Code
1	Alu bar, lifting bracket	MIL-V-B-29 01/15
2	Cell 207, alu clamp 30 mm	MIL-V-CELL-2700/03
3	M12x90 hexagon bolt	30201318
4	M12 washer	30201286
5	M12 Self locking nut	30201266
6	Shackle M19; 3.25t; type Omega	30201360



### Technical specification:

<b>Height:</b>	123 mm	4.48"
<b>Width:</b>	30 mm	1.18"
<b>Width incl. Shackle:</b>	94 mm	3.70"
<b>Length:</b>	400 mm	15.35"
<b>Safe Working Load (SWL):</b>	1000 kg	2200 lbs
<b>Safety Factor:</b>	8:1	8:1
<b>Self weight:</b>	3 kg	6.61 lbs
<b>Design standards:</b>	DIN-EN-1999; DGUV 17/BGV C1; 2006/42/EC	

## 5. ASSEMBLY INSTRUCTIONS

### WARNING

*Inspect the lifting bracket before every use. If damaged do not use.*

1. Open the lid of both clamps and place the lifting bracket in the node points or as close as possible.  
*TIP! It might help to release nut (item no. 5) slightly to match the main chords.*
2. Make sure the pick-up point sits symmetrical between the clamps.

### WARNING

*Not placing the lifting bracket symmetrical to the clamps lowers the load capacity and could lead to failure.*

3. Close the lid and tightened the nut of wingnut by means of spanner or wrench. Tighten in such a way that it cannot be released by hand anymore.
4. If the top nut was released (item no. 5) tighten this also.
5. Put the shackle in the required position and tighten its bolt firmly.
6. Attach the lifting device, steel wire, round sling or chain to the shackle.
7. Before applying the load make sure all bolts and nuts are tightened properly.
8. Apply the load and lift 1 meter. Make sure all bolts and nuts are still tightened properly.
9. Proceed with lifting.

## 6. DIASSEMBLY INSTRUCTIONS

1. Lower the load till there is no more tension on the lifting bracket.
2. Detach the lifting device.
3. Release the nuts of the cell calmps.
4. Inspect the lifting bracket if in good order and store properly.

## 7. STORAGE

### NOTICE

*Ensure the product is stored dry and kept in a dry enviroment to avoid corrosion.*

## 8. MAINTENANCE

### SAFETY INSTRUCTIONS

*The Lifting bracket CS M290-M400 need hardly any maintenance under normal use and environmental circumstances. For safety reasons however, all movable parts must be checked regularly for damages or loss and corrosion.*

### NOTICE

*The Lifting bracket shall be re-certified in compliance with the local law by a competent person. Re-certification shall take place as often as required but with a minimum of 1x per year. In case of doubt inspect and test the lifting bracket.*

- ▲ Check all components for damage and corrosion. Damaged and corroded parts shall be removed and thrown away.
- ▲ Replaced components shall be genuine Milos components only.
- ▲ Barks and sharp edges shall be removed by a fine sandpaper of a veil.
- ▲ Maintenance and repairs can be executed only by competent persons. In any doubt you should contact Milos.

## 9. GUARANTEE

- ✓ For a period of 12 month we undertake to repair, free of charge any damage attributable to faulty materials or workmanship, provided that the appliance is forwarded, freight paid, to our works or one of the Milos contract service organisations.
- ✓ The guarantee-period begins with the day of the delivery, proven by a purchase receipt like an invoice or delivery note or they copies.
- ✓ The guarantee only is applicable for new equipment.
- ✓ The guarantee does not cover damage due to transport damage, negligent handling, overload or parts subject to normal wear and tear. Nor damages that originate from a case of misuse because of non-observance the instructions in this manual.
- ✓ The fitting of replacement parts not supplied by Milos or modifications of our design by third parties also invalidates the guarantee.
- ✓ Guarantee repairs do not renew nor extend the guarantee period.
- ✓ In case of a claim under the guarantee, a malfunction or spare part requirements contact your point of sale or Milos.

# 10. EC-DECLARATION OF CONFORMITY



## EC-DECLARATION OF CONFORMITY FOR MACHINERY (Directive 2006/42/EEC Annex I)

MILOS STRUCTURAL SYSTEMS  
SPINDLERROVA 286  
ROUDNICE NAD LADEM  
413 01 CZECH REPUBLIC

Herewith declares that:

**MILOS: LIFTING BRACKET CS-M290-M400**

- are in compliance with the Machinery Directive 2006/42/EEC annex I
- the following harmonized standards have been applied (or parts/clauses of):  
DIN EN 1999-1, DIN EN 1993-1
- the following national technical standards and specifications have been used  
(or parts/clauses of): DGUV c1 (BGV C1 / GUV-V C1).

Roudnice nad Ladem, Czech Republic, 24-04-15

Mr. F. Zykan

CEO



## EG-KONFORMITÄTSERKLÄRUNG FÜR MASCHINEN (EG-Richtlinie 2006/42/EG, Anhang I)

MILOS STRUCTURAL SYSTEMS  
SPINDLERROVA 286  
ROUDNICE NAD LADEM  
413 01 CZECH REPUBLIC

erklärt hiermit daß:

**MILOS: LIFTING BRACKET CS-M290-M400**

- Konform sind mit den einschlägigen Bestimmungen der EG-Maschinenrichtlinie 2006/42/EG, Anhang I
- Folgende harmonisierten Normen zur Anwendung gelangten (oder Teile/Klauseln hieraus):  
DIN EN 1999-1, DIN EN 1993-1
- Folgende nationale technische Normen und Spezifikationen zur Anwendung gelangten (oder Teile/Klauseln hieraus):  
DGUV c1 (BGV C1 / GUV-V C1).

Roudnice nad Ladem, Czech Republic, 24-04-2015

Mr. F. Zykan

CEO



## DÉCLARATION CE DE CONFORMITÉ POUR LES MACHINES (2006/42/EG Annexe)

MILOS STRUCTURAL SYSTEMS  
SPINDLERROVA 286  
ROUDNICE NAD LADEM  
413 01 CZECH REPUBLIC

déclare que:

**MILOS: LIFTING BRACKET CS-M290-M400**

- est en conformité avec la Directive pour les machines 2006/42/EG annexe I
- est en conformité avec les normes Européennes harmonisées (parties/paragraphes de):  
DIN EN 1999-1, DIN EN 1993-1
- est en conformité avec les normes et spécifications techniques nationales et internationales  
(parties/paragraphes de): DGUV c1 (BGV C1 / GUV-V C1).

Roudnice nad Ladem, Czech Republic, 24-04-15

Mr. F. Zykan

CEO



## DICHIARAZIONE DI CONFORMITÀ CE PER LE MACCHINE (Direttiva 2006/42/EEC)

MILOS STRUCTURAL SYSTEMS  
SPINDLERROVA 286  
ROUDNICE NAD LADEM  
413 01 CZECH REPUBLIC

dichiariamo che:

**MILOS: LIFTING BRACKET CS-M290-M400**

- è in conformità alla Direttiva-CE Macchine 2006/42/EEC- annexe 1
- è in conformità con norme europee di normalizzazione (o parti di):  
DIN EN 1999-1, DIN EN 1993-1
- è in conformità con norme tecniche e certificazione nazionali o internazionali (o parti di):  
DGUV c1 (BGV C1 / GUV-V C1).

Roudnice nad Ladem, Czech Republic, 24-04-15

Mr. F. Zykan

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