

# Original user manual

# CLAMPS AND COUPLERS



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Distributed by ADMIRAL

VERSION 01 October 2023

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# 1. INTRODUCTION

The ADMIRAL CLAMPS and COUPLERS are intended to hang loads from supporting structures generally made out of round tubes. For the ease of reading this manual, the word "CLAMP" is used also for products called "coupler(s)".

The embossed Working Load Limit (WLL) on the CLAMPS is compliant with the German regulation for loads above persons DGUV 17/8 (formerly known as BGVc1).

ADMIRAL has endeavored to deliver the highest degree of accuracy possible. However continuous improvement of our products is ADMIRAL policy. Therefore product specifications are subject to change without notice. Readers and users are encouraged to notify ADMIRAL of errors and send in suggestions for improvements. All communications will be carefully considered for future iterations of this manual and changes to our products.

# 2. SAFETY INSTRUCTIONS

This user manual must be read and understood prior to assembly, setup and servicing. All people using and servicing the CLAMPS must familiarize themselves with the safety instructions and user guidelines written in this manual. This manual needs to be available for users at all times.

#### LEGEND

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

#### 

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

#### NOTICE

NOTICE: Addresses 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 INSTRUCTION".

#### <u> CAUTION</u>

DO NOT lift or load above people without the following precautions:

- The CLAMPS must be taken out of service immediately if, during use, repair or maintenance damages are discovered.
- Remove people from the area during installation.
- Use solely instructed and/or trained personnel.
- Wear appropriate Personal Protective Equipment (PPE) such as hard hats and gloves during installation.
- Make sure there is adequate amount of working light during the installation of the product.

#### 3. SCOPE

The intended use of the CLAMPS is to create a fixing and/or suspension point for loads installed above people from supporting structures within the entertainment industry.

Loads can be truss, sound systems, set pieces or lighting equipment.

Any other way of use is considered to be a case of misuse. Solely the user is liable for any damage or injury resulting from such cases.

#### 🚹 WARNING

The use of CLAMPS for scaffolding purposes under EN74 is not allowed.

#### 🚹 WARNING

Check local legislation for the application of use.

## 4. LIMITATIONS OF USE

#### 🚹 WARNING

Exceeding the limitations of use can severely endanger the audience and users.

#### 

Dynamic factor of lifting must be considere d separately.

- The CLAMPS can be used on supporting structures with tube diameters which differ per clamp type.
- Make sure the CLAMPS are suitable for the pipe diameter of the support structure.
- Do not overtighten bolts and nuts as this could lead to deformation of the chords of the support structure.
- The CLAMPS can be operated from -20° up to 60° Celsius.
- Do not exceed the maximum WLL (working load limit) or ELL (entertainment load limit) stated on the product.
- Make sure the resulting forces on the supporting structure are approved by a competent person before applying the load.
- To determine the maximum suspended load on the product, all imposed loads shall be considered. e.g. the dynamic factor caused by the lifting machinery.
- Sound systems can be suspended but users must check regularly the integrity of the clamp as severe vibrations could loosen bolts/knobs.
- The CLAMPS must be inspected by a competent person as often as required but with a minimum of 1x per year.

Records of these inspections must be kept.

- Inspect equipment before every use. Damaged COUPLER shall be taken out of service. Outdoor use shall be approved by a competent person and might influence the load capacity. Do not expose the product to full rain or snow. Outdoor use is the sole responsibility of the operator.
- In case of use in the vicinity of saltwater, the

product shall be rinsed regularly with fresh water to avoid corrosion.

- It is also imperative to observe the local accident prevention regulations and/or occupational health and safety regulations.
- The support structure, on which the CLAMPS are used, must have lightning protection when used outdoors.
- The support structure, on which the CLAMPS are used, might need to have electric potential bonding.
- Do not use the CLAMPS to guide currents for electric potential bonding.
- Make sure the CLAMPS and supporting structure are dry and free of dirt.
- Use appropriate packaging to transport the products. e.g. a flightcase.
- Solely use ADMIRAL approved parts to replace damaged or lost parts.
- Do not re-zinc steel components as they might be subject to hydrogene embrittlement.
- Use solely bolts and nuts of 8.8 quality and correct diameter.

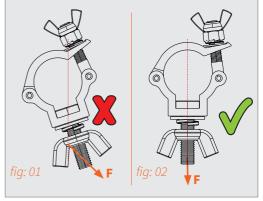
#### 🚹 WARNING

If CLAMPS are used to support loads above people it might be needed to secure the load with an additional safety cable. Make sure this cable is attached with as less slack as possible and has the correct load capacity.

In some countries the use of safety cables is not required if the clamp and the load attached to it can only be released by use of tooling. In that case the bolt/nuts must be fastened with a minimum torque setting of 25Nm and the wingnut must be removed in order to create the condition to comply with this regulation (DGUV 215-313).

#### <u> W</u>ARNING

solely apply vertical loads unless approved by a competent person



#### 🚹 WARNING

The allowable load from CLAMPS also strongly depends on the types of supporting structure. A load that is too heavy can cause the structure to fail.

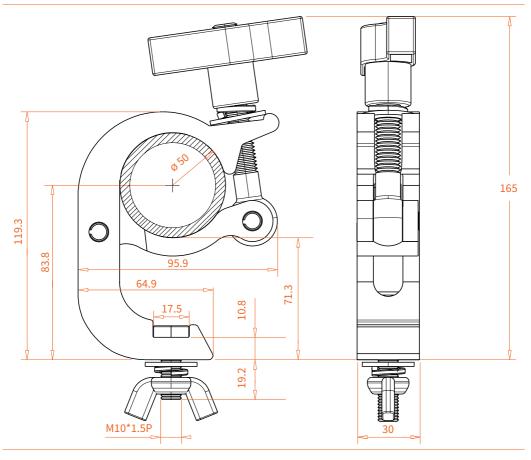
#### <u> CAUTION</u>

Do not throw the CLAMPS, as it might damage the product.

## TECHNICAL DATA Quick coupler

Article code:	RIHAHCA10
EAN:	8720094421285
WLL:	250 kg
Material:	aluminium alloy
Weight:	0.47 kg
Colour:	silver
Diameter tube	48-51 mm

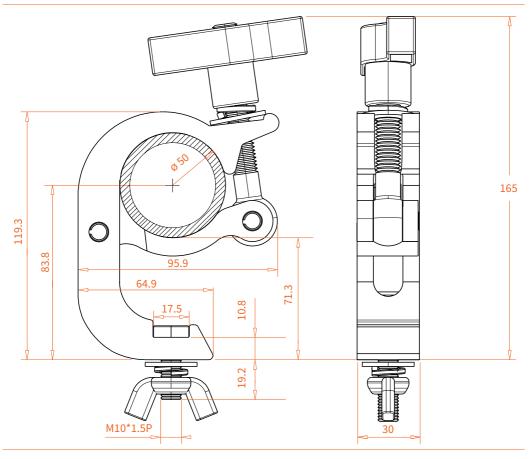




## TECHNICAL DATA Quick coupler

Article code:	RIHAHCA12
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WLL:	250 kg
Material:	aluminium alloy
Weight:	0.47 kg
Colour:	black
Diameter tube	48-51 mm

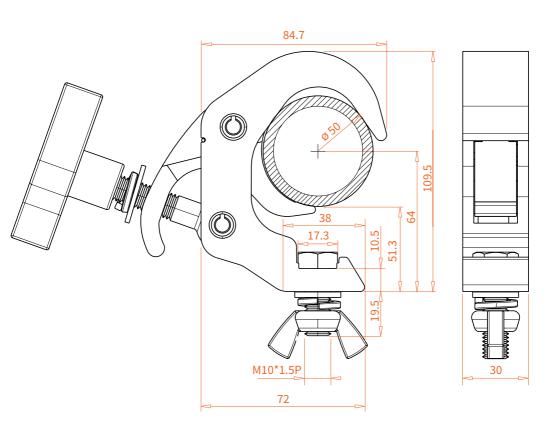




#### TECHNICAL DATA Selflock coupler easy

Article code:	RIHAHCA14
EAN:	8720094421308
WLL:	250 kg
Material:	aluminium alloy
Weight:	0.50 kg
Colour:	silver
Diameter tube	48-51 mm

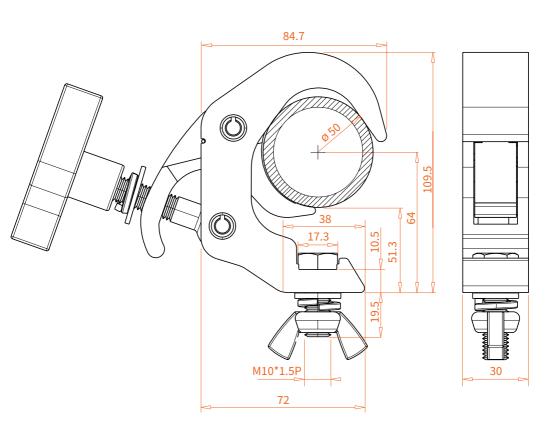




#### TECHNICAL DATA Selflock coupler easy

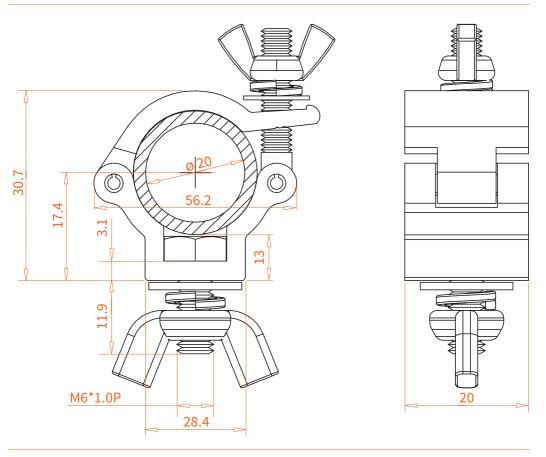
Article code:	RIHAHCA16
EAN:	8720094421315
WLL:	250 kg
Material:	aluminium alloy
Weight:	0.47 kg
Colour:	black
Diameter tube	48-51 mm





Article code:	RIHAHCA22
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Weight:	0.031 kg
Colour:	silver
Diameter tube	18-21 mm

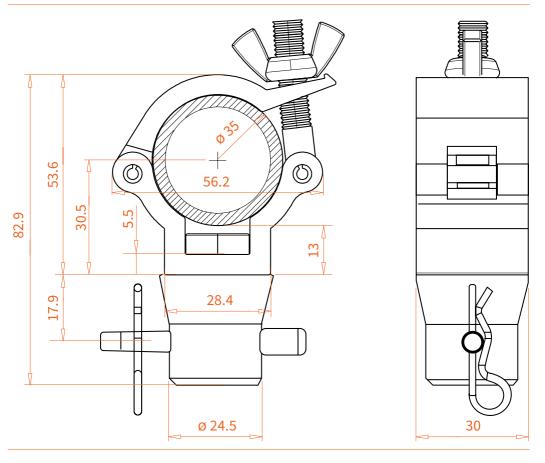




#### TECHNICAL DATA Halfcoupler with 25 mm halfcone

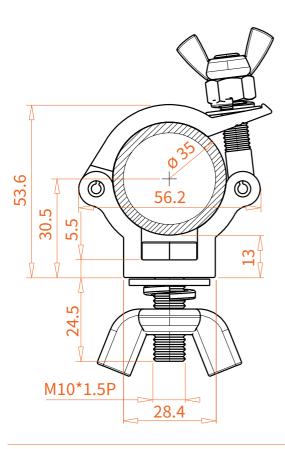
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Material:	aluminium alloy
Weight:	0.15 kg
Colour:	silver
Diameter tube	32-35 mm

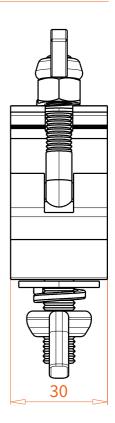




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Material:	aluminium alloy
Weight:	0.15 kg
Colour:	silver
Diameter tube	32-35 mm

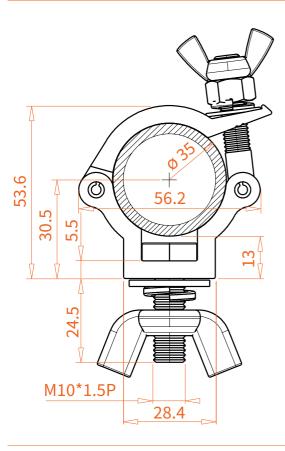


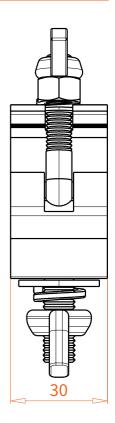




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Material:	aluminium alloy
Weight:	0.15 kg
Colour:	black
Diameter tube	32-35 mm

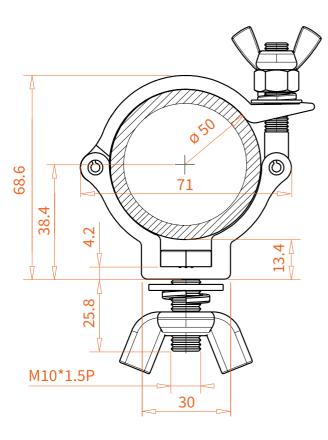


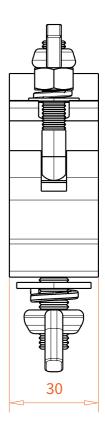




Article code:	RIHAHCA35
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WLL:	100 kg
Material:	aluminium alloy
Weight:	0.16 kg
Colour:	silver
Diameter tube	48-51 mm

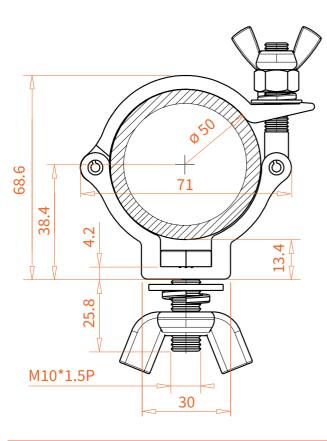


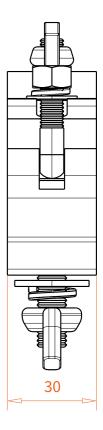




Article code:	RIHAHCA37
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Material:	aluminium alloy
Weight:	0.16 kg
Colour:	black
Diameter tube	48-51 mm

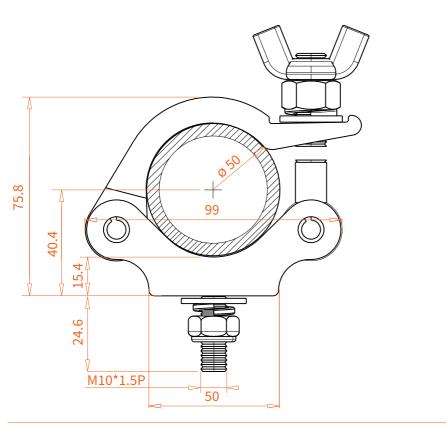


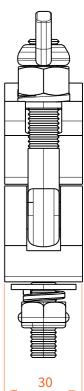




Article code:	RIHAHCA40
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Material:	aluminium alloy
Weight:	0.38 kg
Colour:	silver
Diameter tube	48-51 mm

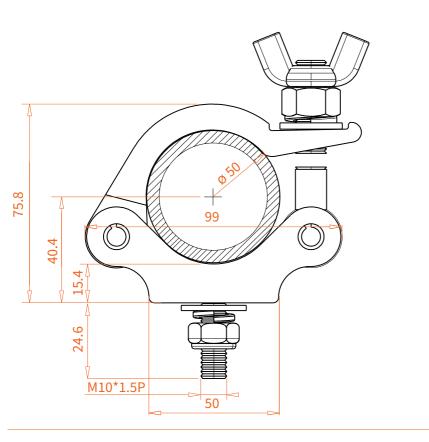


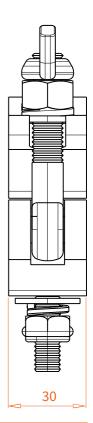




Article code:	RIHAHCA41
EAN:	8720094421391
WLL:	200 kg
Material:	aluminium alloy
Weight:	0.37 kg
Colour:	black
Diameter tube	48-51 mm

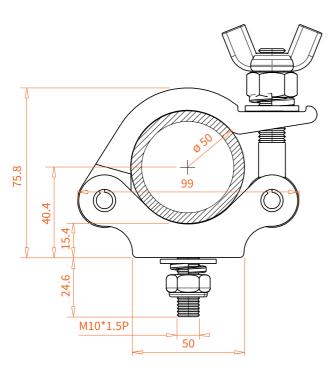


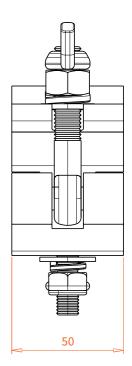




Article code:	RIHAHCA42
EAN:	8720094421407
WLL:	500 kg
Material:	aluminium allo
Weight:	0.55 kg
Colour:	silver
Diameter tube	48-51 mm

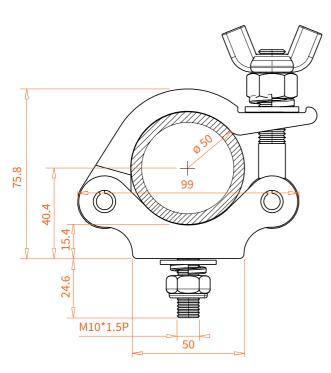


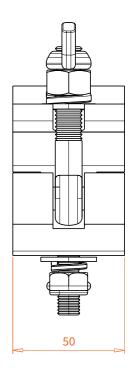




Article code:	RIHAHCA44
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WLL:	500 kg
Material:	aluminium alloy
Weight:	0.55 kg
Colour:	black
Diameter tube	48-51 mm

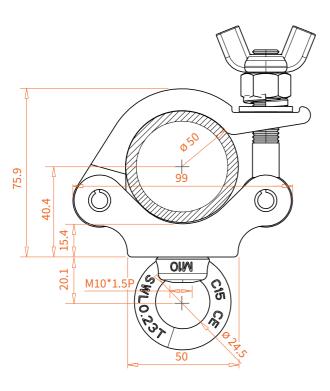


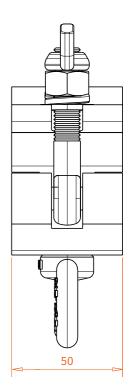




Article code:	RIHAHCA48
EAN:	8720094421421
WLL:	200 kg
Material:	aluminium alloy
Weight:	0.37 kg
Colour:	silver
Diameter tube	48-51 mm

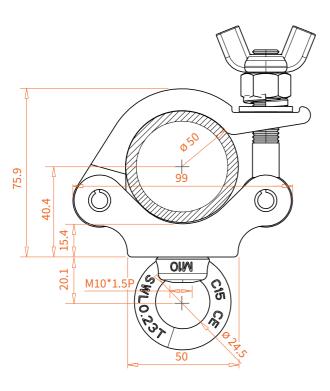


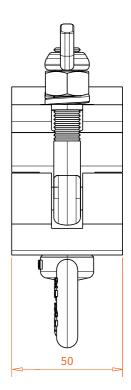




Article code:	RIHAHCA50
EAN:	8720094421438
WLL:	200 kg
Material:	aluminium alloy
Weight:	0.37 kg
Colour:	black
Diameter tube	48-51 mm

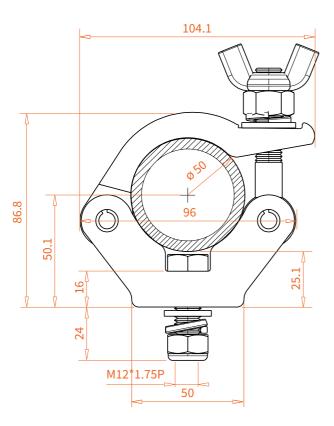


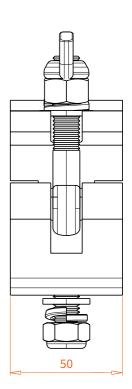




Article code:	RIHAHCA52
EAN:	8720094421445
WLL:	750 kg
Material:	aluminium alloy
Weight:	0.55 kg
Colour:	silver
Diameter tube	48-51 mm

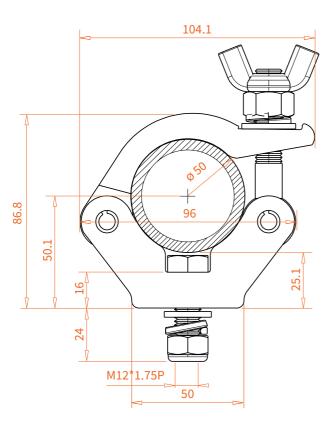


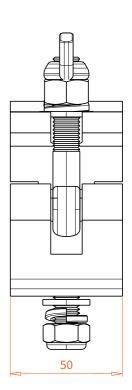




Article code:	RIHAHCA54
EAN:	8720094421452
WLL:	750 kg
Material:	aluminium alloy
Weight:	0.55 kg
Colour:	black
Diameter tube	48-51 mm



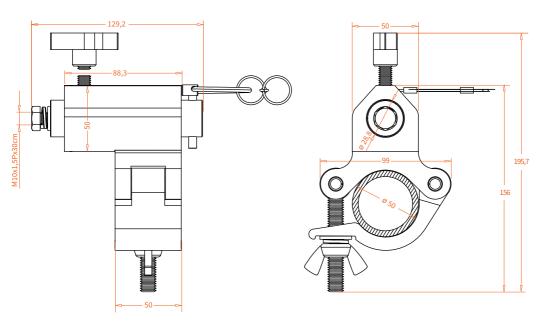




## TECHNICAL DATA Halfcoupler with spigot mount

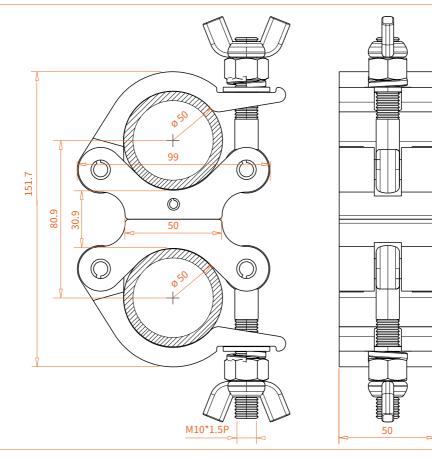
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EAN:	8720094429786
WLL:	100 kg
Material:	aluminium alloy
Weight:	0.33 kg
Colour:	silver
Diameter tube	48-51 mm





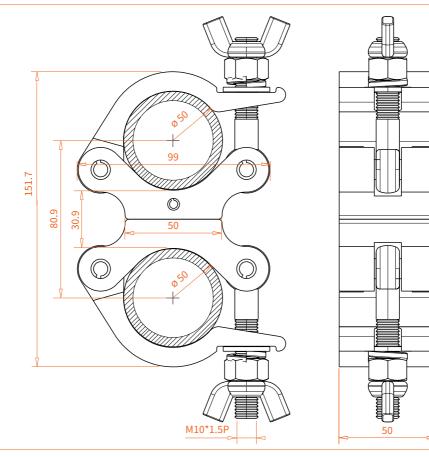
Article code:	RIHAHCA60
EAN:	8720094421469
WLL:	500 kg
Material:	aluminium alloy
Weight:	1.07 kg
Colour:	silver
Diameter tube	48-51 mm





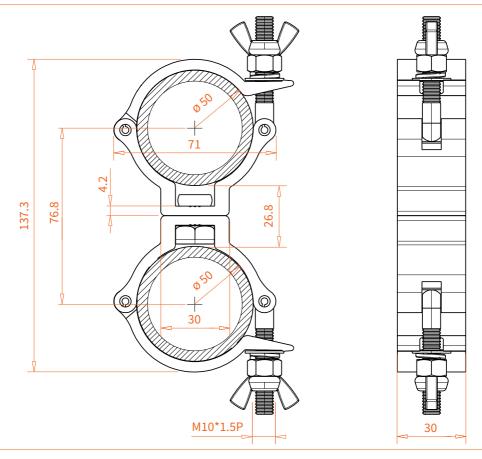
Article code:	RIHAHCA62
EAN:	8720094421476
NLL:	500 kg
Material:	aluminium alloy
Neight:	1.06 kg
Colour:	black
Diameter tube	48-51 mm





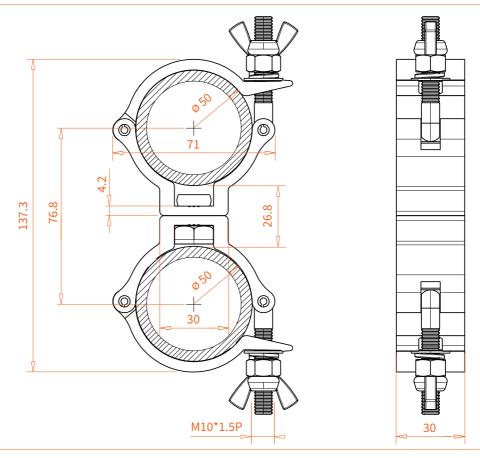
Article code:	RIHAHCA64
EAN:	8720094421483
WLL:	100 kg
Material:	aluminium alloy
Weight:	0.25 kg
Colour:	silver
Diameter tube	48-51 mm





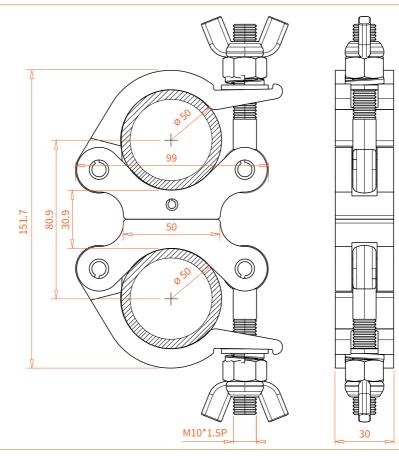
Article code:	RIHAHCA66
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WLL:	100 kg
Material:	aluminium alloy
Weight:	0.25 kg
Colour:	black
Diameter tube	48-51 mm





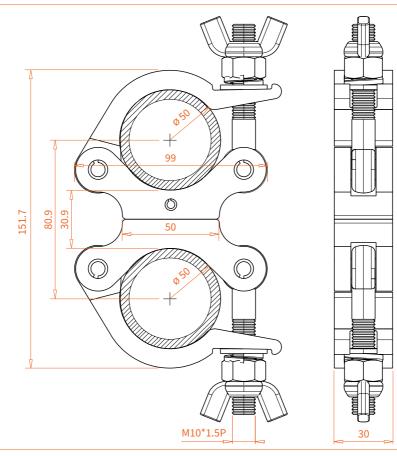
Article code:	RIHAHCA67
EAN:	8720094421506
WLL:	200 kg
Material:	aluminium alloy
Weight:	1.07 kg
Colour:	silver
Diameter tube	48-51 mm





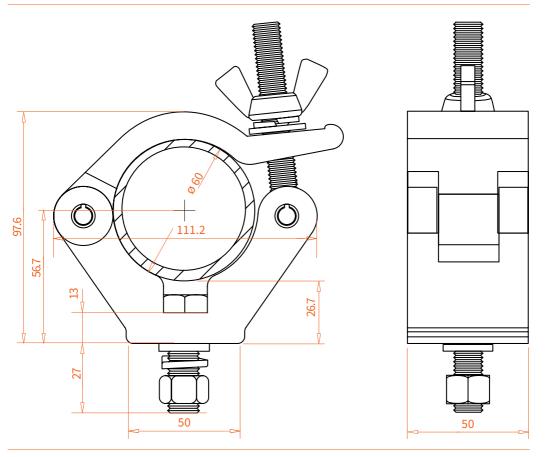
Article code:	RIHAHCA69	
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WLL:	200 kg	
Material:	aluminium alloy	
Weight:	1.07 kg	
Colour:	black	
Diameter tube	48-51 mm	





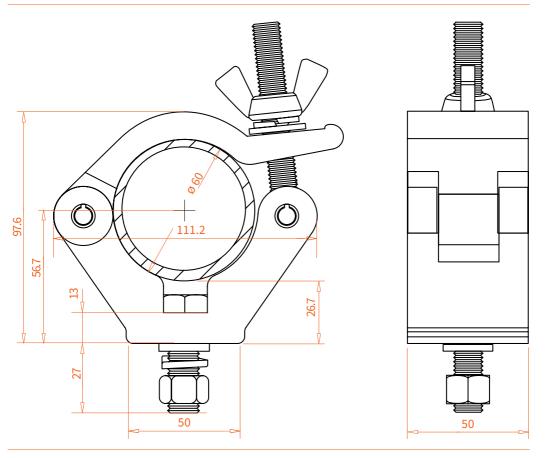
Article code:	RIHAHCA70	
EAN:	8720094421513	
WLL:	750 kg	
Material:	aluminium alloy	
Weight:	0.73 kg	
Colour:	silver	
Diameter tube	58 - 61 mm	





Article code:	RIHAHCA72	
EAN:	8720094421520	
WLL:	750 kg	
Material:	aluminium alloy	
Weight:	0.73 kg	
Colour:	black	
Diameter tube	58 - 61 mm	





#### Applicable Directives, Regulations, Standards and Information Papers

#### The following directive is applicable

2006/42/EC Machinery directive

#### The following regulation is used

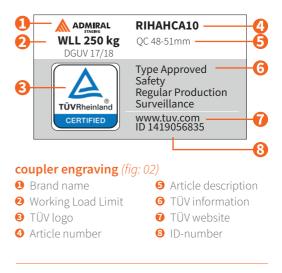
DGUV regulation 17

Regulations for stages and studios (formerly known as BGVc1)

# Parts of the following standards and information papers are used

- DGUV Information Safety at productions and events for television, radio, film, theatre, 215-313 exhibitions: Loads above persons (formerly known as BGI 810-3)
- EN 17206:2020 Lifting and load bearing equipment for stages and other production areas within the entertainment industry
- BS 7905-1:2001 Lifting equipment for performance broadcast and similar applications. Part 1 specifications for the design and manufacture of above stage equipment

## 7. EXPLANATION OF THE TÜV-sticker

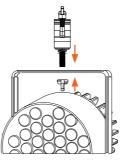


#### 8. ASSEMBLY INSTRUCTIONS

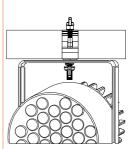
#### 🚹 WARNING

Inspect the CLAMPS before use. Make sure all components are in place and in good order. If damaged, mark the item clearly and take out of service\*. Make sure the CLAMPS and supporting structure are dry and free from dirt. \*See chapter 11 for further instructions!

# Image: complex (fig: 01) Image: window wi

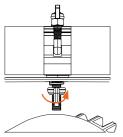


**Step 1** Mount the clamp to the load.

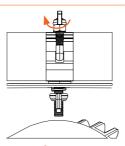


**Step 2** Attach the clamp to the supporting structure.

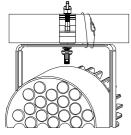
#### 6. IDENTIFICATION



**Step 3a** Tighten the wingnut.



**Step 3b** Tighten the wingnut.



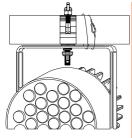
**Step 4** Mount the safety cable.

**Step 5** Check if object is securely fastened.

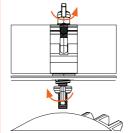
#### 🚹 WARNING

Check the integrity of the CLAMPS after severe vibrations caused by sound systems or if the supporting structure was subject to severe movement e.g. due to heavy winds.

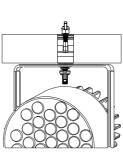
# 9. DISASSEMBLY INSTRUCTIONS

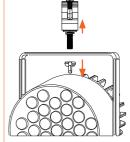


**Step 1** Unmount the safety cable.



Step 2 Unscrew both of the wing nuts.





**Step 3** Remove the clamp from the supporting structure.

#### Step 4

Remove the clamp from the load.

# 10. STORAGE

The CLAMPS must be stored in a dry, non-aggressive environment.

- Make sure the parts cannot bend.
- Avoid vibrations. Rubbing parts can cause excessive wear and tear.

#### 11. MAINTENANCE & REJECTION CRITERIA

#### SAFETY INSTRUCTIONS

The CLAMPS hardly need any maintenance under normal use and environmental circumstances.

For safety reasons however, all parts must be checked regularly for dirt, damages, loss and corrosion.

The CLAMPS shall be checked in compliance with the local law by a competent person. Checking shall take place as often as required but with a minimum of 1x per year. In case of doubt contact ADMIRAL.

#### 🚹 WARNING

# If damaged, mark the item clearly and take it out of service.

- Missing or damaged bolts and nuts should be replaced by genuine ADMIRAL bolts and nuts only. Tighten the bolts and nuts with a torque wrench set at 25 Nm.
- Check all components for damages like cracks, deformations, scratches and corrosion. Damaged and corroded parts shall be rejected and thrown away.
- In general, scratches > 10% of the wall thickness mean the product needs to be rejected from use.
- In general, deformations > 10% of a straight line from the outer surface mean the product needs to be rejected from use.
- Remove all sharp and rough feeling edges and surfaces by using sand paper or a file.
- Check roll pins and welds for cracks. If cracked, replace.

#### 12. WARRANTY

- For a period of 24 months we will repair, free of charge, any damage attributable to faulty materials or workmanship under the condition that the equipment is forwarded, freight paid, to our warehouse or one of the ADMIRAL distributors' warehouses.
- The warranty-period begins with the day of the delivery, proven by a purchase receipt like an invoice or delivery note or their copies.
- The warranty does not cover damage due to transport, negligent handling, overloading the equipment or parts subject to normal wear and tear signs.
- Nor damages that originate from a case of misuse because of nonobservance of the safety regulations in this instruction manual.
- The warranty will be invalid when other parts than the original ADMIRAL parts have been used or modifications of our design have been made by third parties.
- Warranty repairs do not renew nor extend the warranty-period.
- In case of a claim that falls under the warranty, e.g. a malfunction or spare part requirements please contact your point of sale or ADMIRAL.
- The manufacturer is not liable for indirect consequential damage and financial loss.
- The manufacturer shall not be liable for any changes made to the CLAMPS parts nor for any damage resulting from such changes.

# 13. TÜV CERTIFICATE

Certificate Blatt Sheet 0001		EUVRheinland	
Unser Zeichen Our Reference 05-LRW-50126508 001	Ausstellungsdatum 04.04.2018	<b>Date of Issue</b> (day/mo/yr)	
Holder Fertigungs	stätte Manufacturing Plan	t	
Geprüft nach Tested acc. to 2 PfG 1230/02.16			
Vertifiziertes Produkt (Geräteidentifikation) Vertified Product (Product Identification)		Lizenzentgelte - Einheit License Fee - Unit	
.num Clamp)			
Zulässige Belastung: (Permissible Load) 250kg 250kg 10kg 50kg 75kg 100kg 200kg 200kg 750kg 500kg 100kg 200kg 750kg			
1			
ndards und Prüfgrundlagen. Zusätzliche Anforderung hr gebracht werden soll, müssen zusätzlich tifizierten Produktes wird überwacht. l Certification Regulation and states the conformity 1g requirements as indicateä above. Any additional 2 is golng to be marketed have to be considered		sstelle	
	Blatt Sheet 0001 Unser Zeichen Our Reference 05-LRW-50126508 001 Holder Fertigungss Geprüft nach Tested acc. to 2 PfG 1230/02.16 entifikation) Identification) .num Clamp) Zulåssige Belastung: (Permissible Load) 250kg 10kg 50kg 10kg 50kg 10kg 50kg 10kg 50kg 10kg 50kg 10kg 50kg 10kg 50kg 10kg 50kg 10kg 50kg 10kg 50kg 10kg 50kg 10kg 50kg 50kg 10kg 50kg 10kg 50kg 50kg 10kg 50kg 10kg 50kg 50kg 10kg 50kg 50kg 50kg 50kg 10kg 50kg	Blatt Sheet 0001       Unser Zeichen Our Reference 05-LRW-50126508 001       Ausstellungsdatum 04.04.2018         Holder       Fertigungsstätte Manufacturing Plan         Geprüft nach Tested acc. to 2 PfG 1230/02.16       Izenzent License Fa         entifikation)       Lizenzent License Fa         Mund Clamp)       Zulässige Belastung: (Permissible Load) 250kg 250kg 250kg 10kg 500kg 200kg 500kg 200kg 500kg 200kg 750kg       Zulässige Belastung: (Permissible Load) 250kg 250kg 10kg 50kg 750kg         1       Iternangsordnung zugrunde und es bestätigt die Konformtidt nadas und Prügrundlagen. Zusätliche Anförderungen Töbkg 200kg 750kg       Zertifizierung         1       Iternangsordnung zugrunde und es bestätigt die Konformtidt nadas und Prügrundlagen. Zusätliche Anförderungen Töbkg       Zertifizierung	

#### 14. EC DECLARATION OF CONFORMITY



# EC-DECLARATION OF CONFORMITY FOR MACHINERY (2006/42/EG Annex II)

Rolight Theatertechniek Josink Kolkweg 10 7545 PR Enschede The Netherlands

Herewith declares that:

ADMIRAL "CLAMPS & COUPLERS"; all codes starting with RIHAHCA\*\*\*

- is in compliance with the Machinery Directive 2006/42/EC annex II
- the following harmonized standards have been applied (or parts/clauses of): EN 12100-1-2010
- Part/clauses of the following technical regulations , standards and information papers have been used: German DGUV 17-18, German DGUV 215-313, EN 10204:2004, EN 17206 :2020, BS 7905-1 :2001

Enschede, The Netherlands 9-Oktober-2023

Ms. E. Dijk Owner Rolight Theatertechniek b.v.



Rolight theatertechniek bv Josink Kolkweg 10 7545 PR Enschede 053 - 4 320 644 info@rolight.nl www.rolight.nl iban : NL38RABO 0127148426 bic : RABONL2U k.v.k. : Enschede 06048772 btw : NL 8078.53.355 B01





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