

Original instruction manual

# FREEDOM

MODULAR RIGGING SYSTEM



Manufacturer:

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Distributed by Admiral Staging

VERSION 03

April 2023

SKU: all codes starting with: R1PF\*\*\*\*

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## 1. INTRODUCTION

Admiral Freedom modular rigging systems can be used to hang loads at a certain, predetermined distance underneath a structure. It is mostly used in temporary set ups in the entertainment industry but can be used for permanent set ups in museums, event venues, theatres etc. as well. To increase readability, in this manual, Freedom Modular Rigging Systems will be referred to as FMRS.

Clamps, couplers and safety cables used to couple and secure the FMRS to the supporting structure are not included. The user must use certified clamps or couplers with a WLL (Working Load Limit) of at least 200 kg, with minimum safety factor of 8:1 as required for overhead lifting.

The FMRS is labelled with a redundant working load safety factor to meet the German standard for loads above persons DGUV17/18 (formerly known as BGVc1).

Admiral Staging has endeavoured to deliver the highest degree of accuracy possible. However continuous improvement of our products is Admiral Staging policy. Therefore product specifications are subject to change without notice.

Readers and users are encouraged to notify Admiral Staging of errors and send in suggestions for improvements. These suggestions will be considered for future printings 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 FMRS must familiarise themselves with the safety instructions and user guidelines written in this manual. This manual needs to be accessible for all users at all times

### LEGENDA



**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:** Relevant general information, not related to physical injuries.

### 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.”

 **WARNING**

**Clamps must be connected to the top brackets by means of self-locking nuts .**

 **WARNING**

**Do not lift or load above people without the following precautions:**

- Only use certified clamps or couplers which are made for the M10 bolt-nut connection.
- Use a certified additional, **secondary** safety cable to both, secure the FMRS to the supporting structure and the load coupled to the FMRS.
- A FMRS must be taken out of services immediately if, during use, repair or maintenance, serious damages are discovered.
- Remove people from the area during installation.
- Use solely instructed and/or trained personel.
- Wear appropriate Personal Protective Equipment (PPE) such as hard hats and gloves during installation.
- Make sure there is adequate amount of working light during installation of the product.

**NOTICE**

**An additional, secondary safety component is not necessary if the fixing device (clamp or coupler) is inherently safe, can only be loosened by using a tool and is secured to prevent loosening of its own accord (self-locking nut).**

### 3. SCOPE

The intended use of the FMRS is to hang loads at a certain, pre-determined distance underneath a supporting structure.

Loads can be lighting fixtures, video projectors, sound systems and/or set pieces.

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

 **WARNING**

**Check local legislation for the application of use.**

## 4. LIMITATIONS OF USE

 **WARNING**

**Exceeding the limitations of use can severely endanger audience and users.  
This product is NOT designed to lift people**

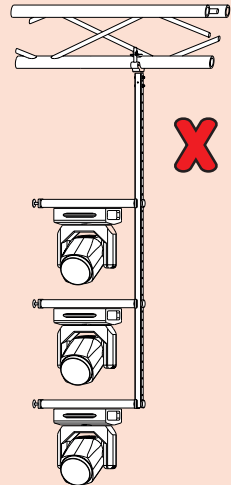
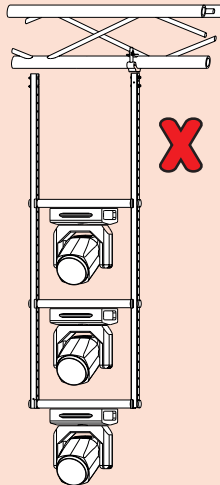
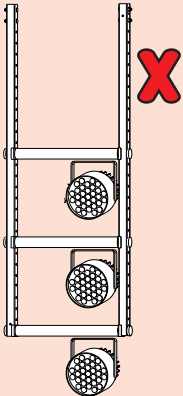
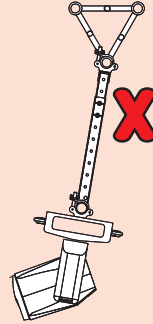
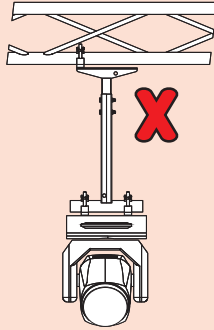
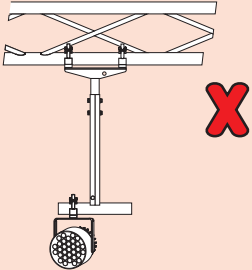
- The FMRS can be operated from -20° up to 60° Celsius.
- Do not exceed the maximum ELL (entertainment load limit) stated on the product.
- Only load the FMRS in a vertical direction as indicated on the product.
- Make sure the resulting forces on the supporting structure are approved by a competent 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.
- The FMRS must be inspected by a competent person as often as required but with a minimum of 1 x per year. Records of these inspections must be kept.
- Inspect equipment before every use. A damaged FMRS 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 SHARK is used, might need to have electric potential bonding .
- Do not use the shark to guide currents for electric potential bonding.
- The support structure, on which the FMRS is used, must have lightning protection when used outdoors.
- Use clamps or couplers which are made for the respective pipe diameters from the supporting structure. The use of clamps or couplers suitable for other diameter pipes could lower the allowable working load significantly.
- Use appropriate packaging to transport the FMRS. E.g. a flightcase.
- Solely use by ADMIRAL approved parts to replace damage or lost parts.

**⚠ CAUTION**

Do not throw the FMRS, as it might damage the product

**⚠ WARNING**

Do not suspend the FMRS as shown below. It creates torsional forces, influences the stability of the supporting structure and lowers the allowable working load.



## 5. TECHNICAL DATA & LOADCHART



### WARNING

This product is NOT designed to be used in a predominantly dynamic loaded situation.

### 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 215-313** Safety at productions and events for television, radio, film, theatre, 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

## 6. IDENTIFICATION

### Freedom profiles

The aluminium length profiles are available in four sizes. They are mutually connectable with coupler set: RIPFZK10, allowing the user to build a construction in the desired height.

The Freedom length profiles are equipped with the following stickers. ►

### Freedom profiles

#### top side sticker (fig: 01)

- 1 While adding multiple length profiles, this indicator indicates where to align with the other length profile.
- 2 While adding coupler set: RIPFZK10 this arrow indicates where to tighten the set screws.

### Freedom profiles

#### bottom side sticker (fig: 02)

- 3 Product name and code
- 4 Applicable standard (page 7)
- 5 CE marking
- 6 Product weight
- 7 While adding coupler set: RIPFZK10 this indicates where to tighten the set screws.
- 8 Read manual before use
- 9 Working Load Limit in the vertical direction
- 10 Indicates that every component of the Freedom system you add to the structure needs to be secured with two bolts.
- 11 While adding multiple length profiles, this indicator indicates where to align with the next one.

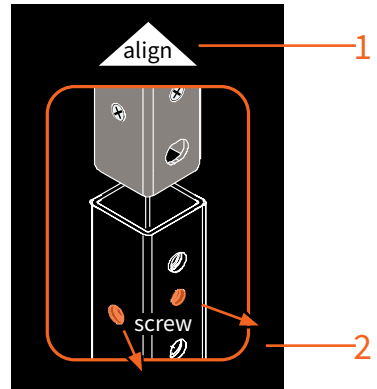


fig: 01

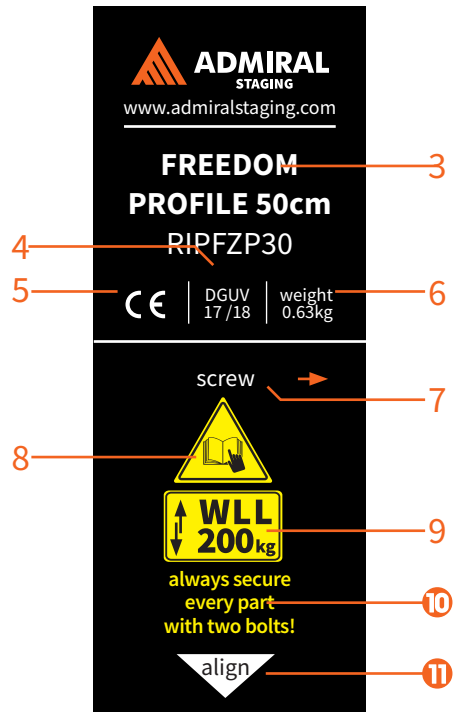
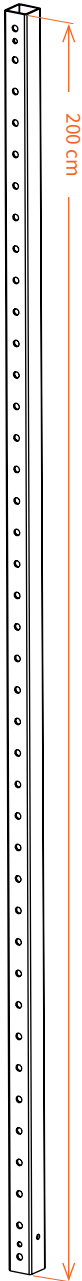


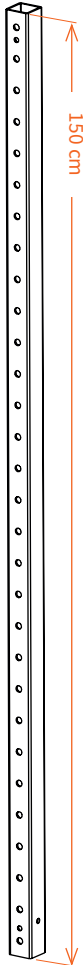
fig: 02





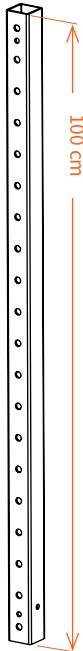
### Freedom profile 200 cm black

code: R1PFZP45  
EAN: 8720094422664  
L x W x H: 200 cm x 4 cm x 4 cm  
weight: 1.87 kg  
material: aluminium  
colour: black powdercoated  
WLL: 200 kg †



### Freedom profile 150 cm black

code: R1PFZP40  
EAN: 8720094422657  
L x W x H: 150 cm x 4 cm x 4 cm  
weight: 1.87 kg  
material: aluminium  
colour: black powdercoated  
WLL: 200 kg †



### Freedom profile 100 cm black

code: R1PFZP35  
EAN: 8720094422640  
L x W x H: 100 cm x 4 cm x 4 cm  
weight: 1.19 kg  
material: aluminium  
colour: black powdercoated  
WLL: 200 kg †



### Freedom profile 50 cm black

code: R1PFZP30  
EAN: 8720094422633  
L x W x H: 50 cm x 4 cm x 4 cm  
weight: 0.63 kg  
material: aluminium  
colour: black powdercoated  
WLL: 200 kg †

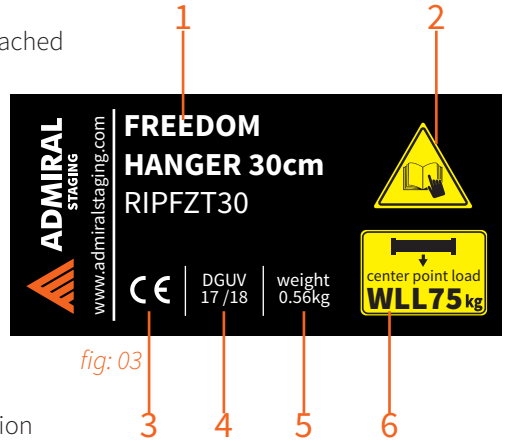
## Freedom hangers

The aluminium hangers are meant to be attached horizontal between two length profiles.

The Freedom hangers are equipped with the following sticker ►

### Freedom hanger sticker (fig: 03)

- 1 Product name and code
- 2 Read manual before use
- 3 CE marking
- 4 Applicable standard (page 7)
- 5 Product weight
- 6 Working Load Limit in the vertical direction



### 1 Freedom hanger 30 cm

code: RIPFZT30  
EAN: 8720094422688  
tube: 30 cm /  $\varnothing$  48 mm  
weight: 0.56 kg  
material: aluminium  
colour: black powdercoated  
WLL: 75 kg  $\updownarrow$   
Provided: Freedom safety set (page 11)

### 2 Freedom hanger 40 cm

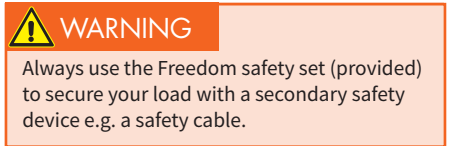
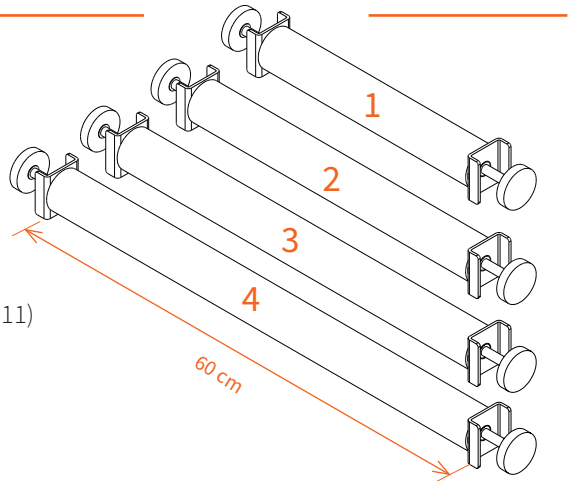
code: RIPFZT37  
EAN: 8720094422695  
tube: 40 cm /  $\varnothing$  48 mm  
weight: 0.67 kg  
material: aluminium  
colour: black powdercoated  
WLL: 75 kg  $\updownarrow$   
Provided: Freedom safety set (page 11)

### 3 Freedom hanger 50 cm

code: RIPFZT50  
EAN: 8720094422701  
tube: 50 cm /  $\varnothing$  48 mm  
weight: 0.80 kg  
material: aluminium  
colour: black powdercoated  
WLL: 75 kg  $\updownarrow$   
Provided: Freedom safety set (page 11)

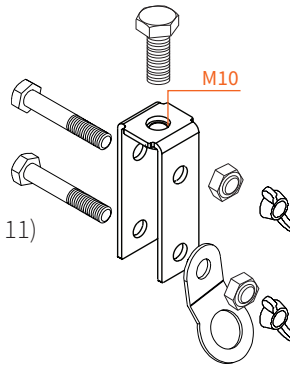
### 4 Freedom hanger 60 cm

code: RIPFZT57  
EAN: 8720094422718  
tube: 60 cm /  $\varnothing$  48 mm  
weight: 0.92 kg  
material: stainless steel  
colour: black powdercoated  
WLL: 75 kg  $\updownarrow$   
Provided: Freedom safety set (page 11)



### Freedom nut plate set M10

code: RIPFZM10  
EAN: 8720094422626  
weight: 0.36 kg  
material: 3 mm stainless steel  
WLL: 200 kg †  
Provided: Freedom safety set (page 11)  
2 x bolt M10 x 55  
1 x bolt M10 x 20  
1 x safety plate  
2 x wing nut M10  
2 x self lock nuts M10

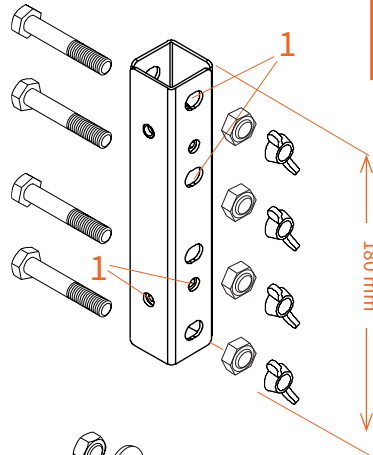


### WARNING

Always use the Freedom safety set (provided) to secure your load and secure the connection between the FMRS and the supporting structure with a secondary safety device e.g. a safety cable.

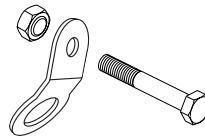
### Freedom coupler set

code: RIPFZK10  
EAN: 8720094422619  
weight: 0.68 kg  
material: 2 mm stainless steel  
WLL: 200 kg †  
1 set screws (attached)  
Provided: 4 x bolt M10 x 55  
4 x wing nut M10  
4 x self lock nuts M10



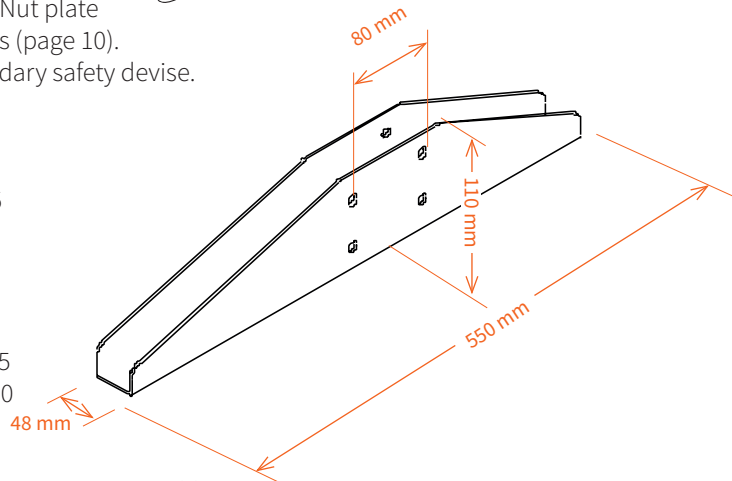
### Freedom safety set

code: RIPFZS10  
EAN: 8720094422671  
weight: 0.14 kg  
Provided: 1 x bolt M10 x 55  
This item is provided in the Nut plate set (page 11) and all hangers (page 10).  
always use it for your secondary safety devise.



### Freedom support base

code: RIPFZV05  
EAN: 8720094422725  
length: 43 cm  
weight: 2.58 kg  
material: stainless steel  
WLL: 200 kg  
Provided: 2 x bolt M10 x 55  
2 x wing nut M10



## Freedom Drop Arm

The basic Freedom Drop Arm set allows the user to hang a single moving head or static fixture on a variable height from 57.2 up to 87.2 cm.

The length can be extended with standard freedom length profiles in combination with coupler set: RIPFZK10.

The Freedom Drop arm set is equipped with the following stickers ►

## Freedom Drop Arm

### top / bottom side sticker (fig: 4)

- 1 Product name and code
- 2 Read manual before use
- 3 Working Load Limit in the vertical direction
- 4 Special safety warning that indicates that every component of the Freedom System you add to the structure needs to be secured with two bolts.
- 5 CE marking
- 6 Applicable standard (page 7)
- 7 Product weight

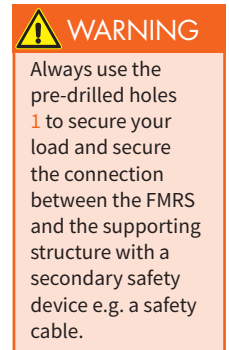
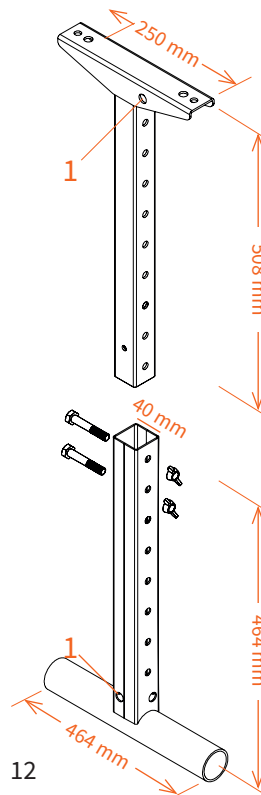
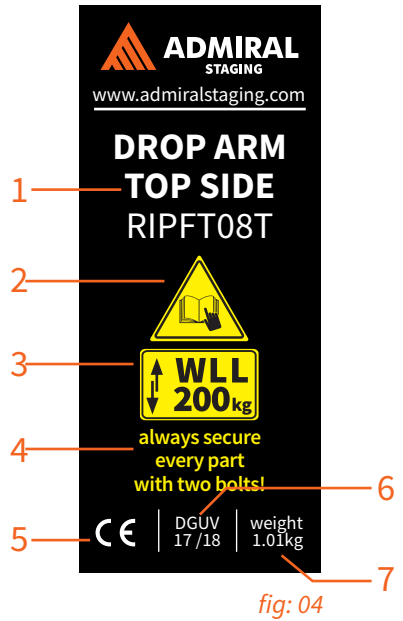
## Freedom Drop Arm top side

code: RIPFT08T  
EAN: 8720094422602  
length: 50 cm  
weight: 1.01 kg  
material: stainless steel  
colour: black powdercoated  
WLL: 200 kg †

## Freedom Drop Arm bottom side

code: RIPFT08B  
EAN: 8720094422596  
length: 50 cm  
tube:  $\varnothing 50 \times 380$  mm  
weight: 1.13 kg  
material: stainless steel  
colour: black powdercoated  
WLL: 200 kg †

This item is provided with the necessary screw set to connect it to the Drop Arm top side. 12



## 7. ASSEMBLY INSTRUCTIONS

### WARNING

Clamps must be connected to the top brackets by means of self-locking nuts.

### WARNING

Inspect the FMRS before use.  
If damaged, mark the item clearly and take out of service.

### CAUTION

Use solely M10 Grade 8.8 bolts and self-locking nuts to connect clamps or couplers to the FMRS as well as connecting the vertical length profiles.

### WARNING

Use a certified, secondary safety cable to both, secure the FMRS to the supporting structure and the load coupled to the FMRS.

## 7.1 ASSEMBLY INSTRUCTIONS LENGTH PROFILES AND COUPLE SET

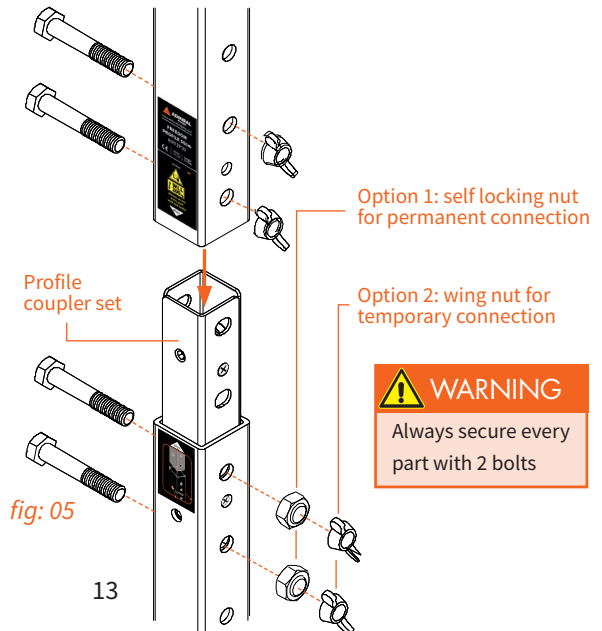
### Step 1

Choose which length the FMRS needs to be.

### Step 2 (fig: 5)

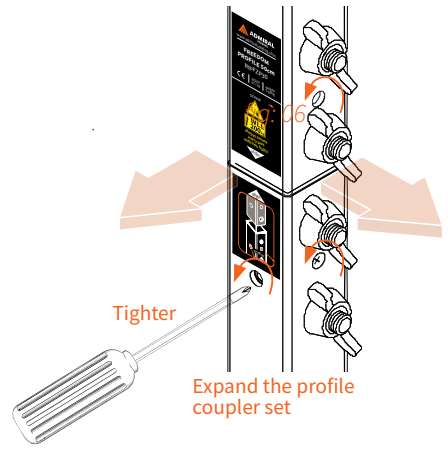
Connect all the length profiles by using profile coupler set: RIPFZK10. Use two bolt sets M10 x 65 on each profile.

Choose your nuts depending on the use, permanent (option 1) or temporary (option 2). Tighten the self-locking nuts in such a way that three threads of the bolt are visible from the nut.



### Step 3 (fig: 6)

Adjust the the set-screws (see page 11, part indentification) to expand profile coupler set: RIPFZK10. This removes backlash and gives the system more rigidity.



## 7.2 ASSEMBLY INSTRUCTIONS HANGERS

### Step 1

Choose which size hanger you want to use.

### Step 2

Decide where on the length profile you want to assemble the hanger.

#### WARNING

Always assemble the hanger between two length profiles. (fig: 07)

#### WARNING

Always use the Freedom safety set (provided) to secure your load with a secondary safety device e.g. a safety cable.

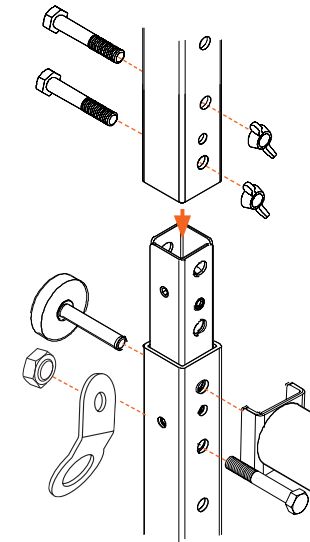
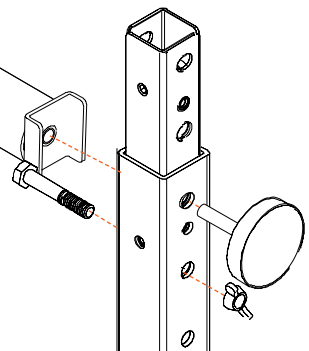


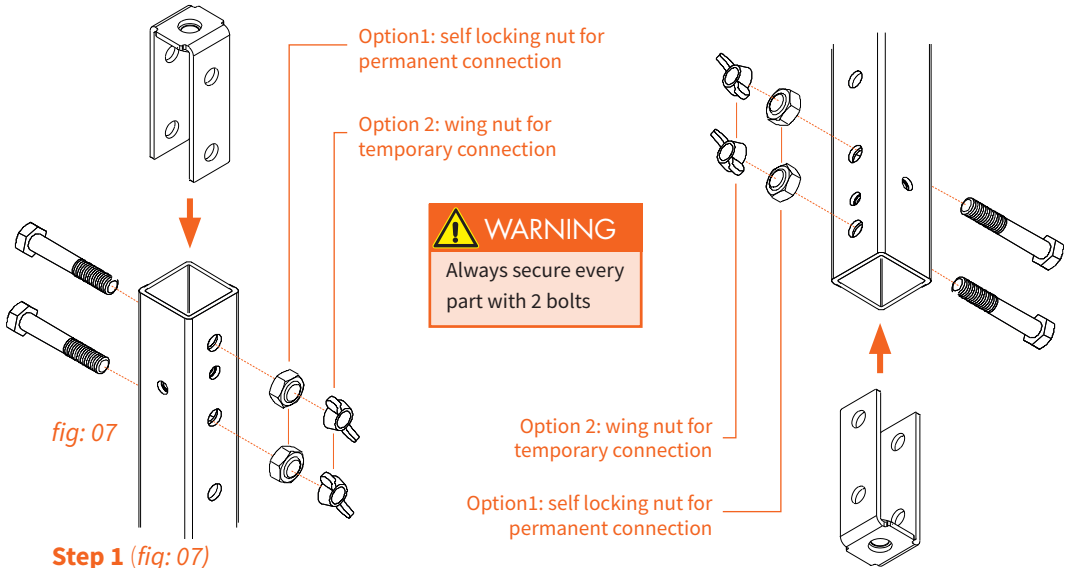
fig: 07

### Step 3

Connect Safety set (provided with all Freedom hangers) by using a bolt. You can use the safety eye instead of the wingnut. (fig: 07)



## 7.3 ASSEMBLY INSTRUCTIONS NUTPLATE SET



### Step 1 (fig: 07)

The nut plate set is used to connect a clamp or coupler directly to the length profile. In case of assembling a “Single rigger” connect two Nutplate sets, at the top and bottom of the profile. When assembling a “Down rigger”, connect the Nut plate set at the top of the profiles.

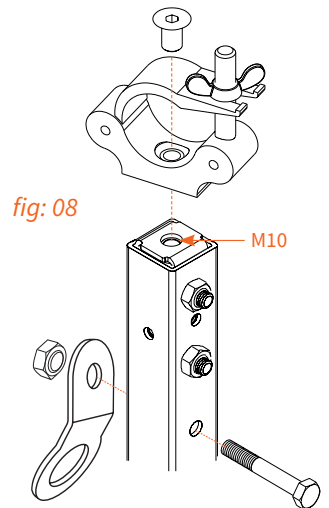
### Step 2 (fig: 08)

Connect the clamp or coupler (not included) to the nut plate set, make sure a clamp or coupler is used with appropriate Safety factor for the intended use. Tighten with a torque wrench.

### Step 3 (fig: 08)

Connect a Safety set (provided with all Freedom nutplate sets) at the top by using a bolt.

Choose your nuts depending on the use, permanent (option 1) or temporary (option 2). Tighten the self-locking nuts in such a way that three threads of the bolt are visible from the nut.



### **! WARNING**

Always use the Freedom safety set (provided ) to secure your load and secure the connection between the FMRS and the supporting structure with a secondary safety device e.g. a safety cable.

#### Step 4

Check if all fixing components are tightened correctly before applying the load.

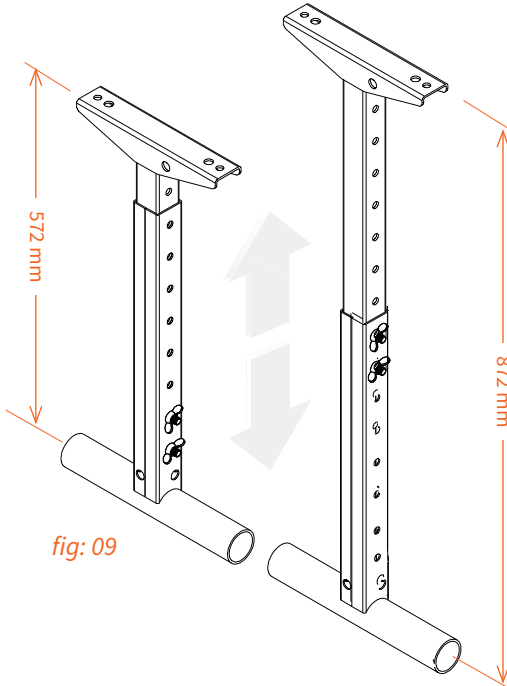
#### Step 5

Attach the load symmetrical to the bottom part of the FMRS.

### 7.4 ASSEMBLY INSTRUCTIONS DROP ARM SET

#### Step 1

Choose which length the Drop arm needs to be. If you want to use the basic Drop Arm, between 572 and 872 mm (fig: 09), continue with Step 2. If you need to expand the Drop arm using the length profiles (fig: 11) and Coupler set RIPFZK10, please follow the assembly instructions in chapter 5.1.



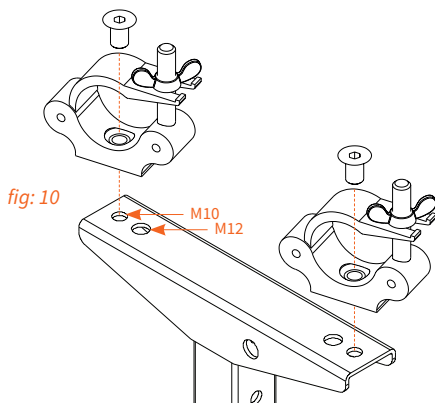
#### Step 2 (fig: 09)

Step 2: Slide the top part into the bottom part to the desired height. Secure the sides together with the screw set provided with the bottom side.



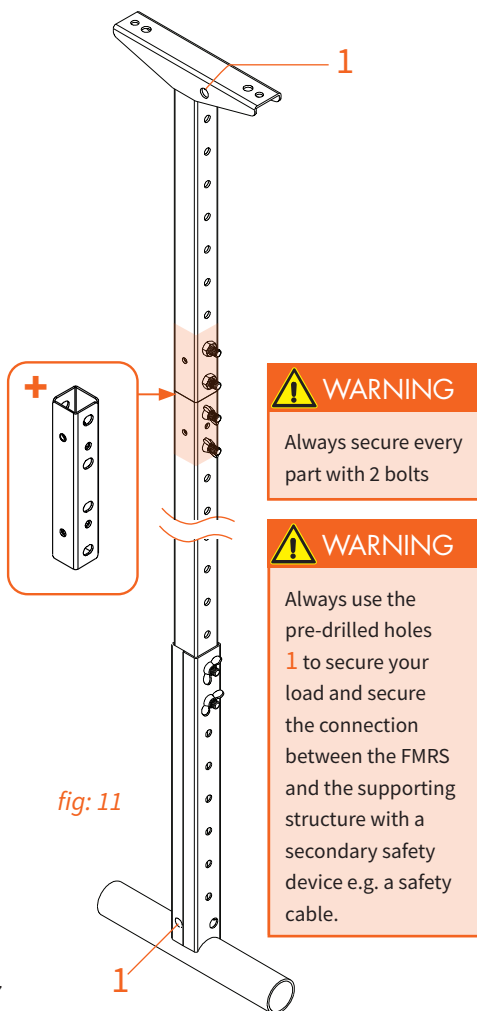
### Step 3 (fig: 10)

Connect the clamp or coupler (not included) to the nut plate set, tighten with a torque setting of 25Nm.



### Step 4 (fig: 11)

Use the safety eyes **1** in the Drop Arm to secure your load.



## 7.5 ASSEMBLY INSTRUCTIONS FLOOR RACK

### WARNING

- Do not use the Freedom Floor Rack outside.
- Make sure no horizontal forces, like wind, are acting on the system.

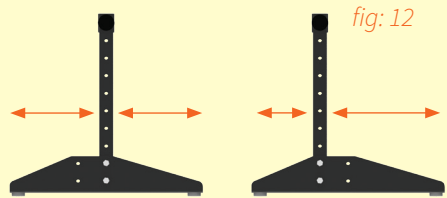
### Step 1 (fig: 12)

Before you assemble the floor rack you need to know which kind of fixture you will hang in the system.

### CAUTION

Choose how you want to position (symmetrically or asymmetrically) the Freedom profile in the support base.

Make sure the point of gravity of the applied load is in the centre of the Freedom support base.



### Step 2 (fig: 13)

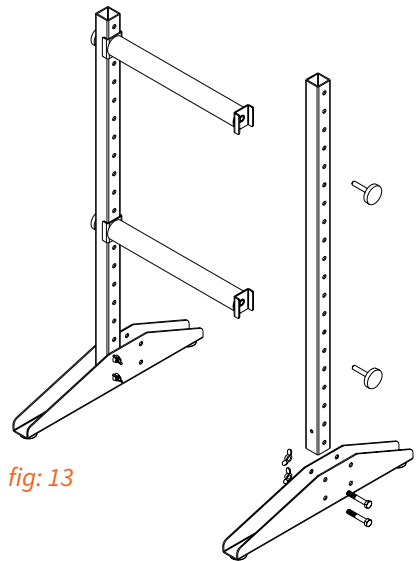
Assemble the hangers on to the length profiles, please follow the assembly instructions in chapter 5.2.

### CAUTION

Always use a minimum of two hangers in a Floor rack.

### Step 3 (fig: 13)

Connect the length profiles on to the support base. Tighten the self-locking nuts in such a way that three threads of the bolt are visible from the nut.



## 8. DISASSEMBLY INSTRUCTIONS

Follow chapter 5, 5.1 and 5.2 in reverse for disassembly of the FMRS.

## 9. STORAGE

- The FMRS must be stored in a dry, non-aggressive environment.
- Make sure the parts cannot bend.
- Lay down flat for storage or transport. Only store or transport upright when using an appropriate storage frame / rack / flight case.
- Avoid vibrations. Rubbing parts can cause excessive wear and tear.

## 10. MAINTENANCE

### SAFETY INSTRUCTIONS

**The FMRS hardly needs 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 FMRS 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 1 x per year. In case of doubt contact Admiral Staging.**

- Check all components for damage and corrosion. Damaged and corroded parts shall be rejected and taken out of service.
- 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.

### CAUTION

**When replacing, only use genuine Admiral Staging components.  
Check chapter 4 for replacement parts.**

## 11. WARRANTY

- For a period of 12 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 Staging distributors warehouses.
- The guarantee-period begins with the day of the delivery, proven by a purchase receipt like an invoice or delivery note or their copies.
- The guarantee is only applicable for new equipment.
- The guarantee 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 guarantee will be invalid when other parts than the original Admiral Staging parts have been used or modifications of our design have been made by third parties.
- Guarantee repairs do not renew nor extend the guarantee-period.
- In case of a claim that falls under the guarantee, e.g. a malfunction or spare part requirements please contact your point of sale or Admiral Staging.
- The manufacturer is not liable for indirect consequential damage and financial loss.
- The manufacturer shall not be liable for any changes made to the FMRS parts nor for any damage resulting from such changes.

## 12. CECERTIFICATE



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

#### **Rolight Theatertechniek**

Josink Kolkweg 10  
7545 PR Enschede  
The Netherlands

Herewith declares that :

#### **Admiral Freedom Modular rigging system, all codes starting with: R1PF\*\*\*\***

- is in compliance with the Machinery Directive 2006/42/EEC annex II
- the following harmonized standards have been applied (or parts/clauses of):  
EN 12100-1-2010, EN 1999, EN 1993
- the following national technical standards and specifications have been used  
(or parts/clauses of): German DGUV 17-18, German DGUV 215-313, DIN 15922:2018,  
EN 754 all parts, EN 755 all parts, EN 515, EN 573, EN 10204:2004

Enschede , The Netherlands 03 Februar 2020

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



**Rolight**

Vakmanschap in de entertainmentbranche

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