



USER MANUAL

**C TRACK FESTOON SYSTEM
FOR AIR HOSES AND CABLE**

**Installation
Operation
Maintenance
Parts**

Instructions for the Safe Installation & Use of Air Hose Trolleys for Festoon system

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Warranty

Every effort has been made to ensure that this quality product from **red rooster** reaches you in good condition. However in the event that any damage has arisen in transit please notify us immediately. In the event that any faulty materials or workmanship should arise within TWELVE MONTHS of purchase, please contact your dealer to arrange to have the goods returned to Red Rooster together with the details of the fault.

Red Rooster general conditions of sale clause 5 & 7 apply.

Introduction

Handling Instructions:

Before installation check that parts supplied are as per the delivery note or drawing.
Check no damage has occurred in transit
Read the installation instructions before commencing installation.

Tools required:

Tape measure, spanners, access platform / scaffold or steps.

General Information

Cable carrier loop systems are designed for the support and conveyance of power cables and hoses on overhead cranes, runway beams, and swing jib cranes.

The design of such systems requires the following information;

1. The type of hose or cable, number of cables or hoses, outside diameter or thickness and width for flat form cables.
2. Maximum height available for a cable loop or the area to the side for a coil of hose.
3. Length of trolley travel.
4. Maximum ambush (closed up) length available
5. Speed of trolley and duty cycle.
6. Cable hose length

ATEX Systems

Name Plates

The type plate gives important information which must be retained. Track serial number, Type, Year of manufacture, and the manufacturer or agents name and address.

ATEX – Explosive Protection

When an ATEX 'C' Track festoon System is supplied an ATEX type plate will be fitted.

The normal ATEX rating for 'C' track festoon systems is Group II 2 GD

This is based on European ATEX Directive 94/9/EC (ATEX 95)

CERTIFICATION

ATEX Systems are supplied with an ATEX certificate of Incorporation where required.

Instructions for Safe Installation & Use

Checks Before Use:

These checks should be carried out during installation and on a frequent and regular basis thereafter. Thoroughly examine the equipment prior to installation to ensure that no damage has occurred during transit.

Never use damaged parts

Do not side load the trolleys

Check the trolleys and formers are secure

Check end stops are fitted

Check the hoist-trolley pushes the hose trolley along the beam

Festoon Trolley Checks

The contents of this section are designed for the guidance of personnel using festoon system:

- Ensure that the Air Hose is set at even distances between the trolleys to allow movement of the air line. With the supports and trolleys spaced as per the instructions.
- Ensure the Runway Beam is fitted with adequate end stops, to stop the hose trolleys.
- Ensure the trolleys and air line run smoothly along the track and the hose is not overstretched at the far end of the beam.
- Ensure that trolleys stored in the ambush cannot be pushed against the end stop by the trolley.

Safe Operation

- Test run the equipment prior to operation and ensure the hose does not snag obstructions
- Ensure that only authorised personnel operate this equipment.
- Confirm replacement parts are of the same design
- Ensure that the runway beam or swing jib to which the Hose Trolleys are installed, is of proven design, adequate strength, and meets the statutory requirements.
- Stand clear of the load when lifting or lowering, and ensure that the point which you are standing is secure.
- Ensure that other personnel cannot enter the immediate area where the lift is taking place.
- Never leave a suspended load unattended.
- Ensure that the control length is adequate to allow the operator to stand away from the load in a position to see the load at all stages of the lift.
- If you suspect that the equipment is defective or is developing a fault, stop the lifting operation immediately. Make the area safe by returning the load to a rest position, but if this is not possible the area should be cordoned off, and the advice of your Superior or Safety Officer sought.

Assembly & Installation

The Galvanised steel track (M101) comes in 3, 4, and 6 mtr lengths with 3 mtrs being the standard length. Stainless Steel track (S101) only comes in 3 mtr lengths.

- Clear the area under the crane or runway beam where the 'C' Track is to be fitted.
- Confirm / decide on which side of the beam the 'C' Track is to be fitted
- Confirm how the 'C' Track is to be supported. Suspension brackets clamped to the top of the beam, horizontal or vertical brackets, or bolt on supports.
- Arrange suitable access to be able to fit the brackets, track and fittings.
- The most common way to support the track is by using suspension brackets (M101/30) fitted to the top flange of the beam with the (M101/20) girder clamps. The brackets should be spaced every 1.5 mtrs with the first bracket being positioned 200 mm from the end of the beam.
- Fitting the first support 200 mm from the end of the beam ensures that the track joint (M101/2) is within 200 to 300 mm of a support.
- Measure out the beam and fit the track supports then slide the 'C' track sections into place.
- Fit the joint sleeve and then the next track section continuing along the beam, the last section may need to be cut to length.
- Then go back and measure from the centre of the beam to the centre of the track so that it runs parallel with the beam. For dual systems they run either side of the beam.
- Next tighten up bolts on the joints and track supports.
- Fit the end stop (M101/6) at the far end of the track.
- Slide the trolleys (there are several types of PVC and steel trolleys) on to the track so there are enough to be 1.5 mtrs apart when fully extended.
- Then fit the cable end clamp to the track.
- Next pull out the coil of air hose along the beam length and then lift up the top of each loop of hose to be connected on to the trolleys by the swivel adaptor and round cable former. Repeat this along hose and then even up the coil of hoses and tighten the round cable former clamps.
- With larger diameter hoses endless slings replace the formers by capturing the hose in a loop of the sling and are clamped or connected on to the trolley.
- With flat form cables the (M101/8P OR 8SS) trolleys are used.
- Clamp the hose into the cable / hose end clamp.
- Check the trolley movement by pulling the hose to the full extent then back into the storage area (ambush).
- If required fit a towing arm (M101/25) to the trolley to engage with the towing trolley (M101/9ST). This would be the first trolley in the line.
- Connect the air / electric supply to the hoist and trolley then connect to the power supply.
- Next function test the system by operating the trolley to pull out the towing trolley and other trolleys.
- Then reverse the powered trolley and push the track trolleys back to the storage area. At this point check there is enough room to store all the trolleys / air hose in the area so that the hoist has the movement required but does not push the trolleys against the end clamp.
- For curved beams the 'C' Track should have been bent to suit the curve on the inside of the runway beam. When fitting a system with a bent track the curved sections should be fitted first and then the straight sections connected on to the curved track

With curved tracks and longer straight tracks the trolleys should be connected by short wire or chain slings to assist them to travel around the corner. Extra trolleys can also be fitted at the curved section to cut down the distance between trolleys for the section that goes around the curved track.

Maintenance

Carry out the following:

At the time of the annual or six monthly inspection of the hoist and trolley the festoon system should also be checked.

- Check movement of festoon
- Check for damaged or worn parts
- Check all parts are secure
- Check the air hose and cables for damage
- Check hose and cable connections

Specials:

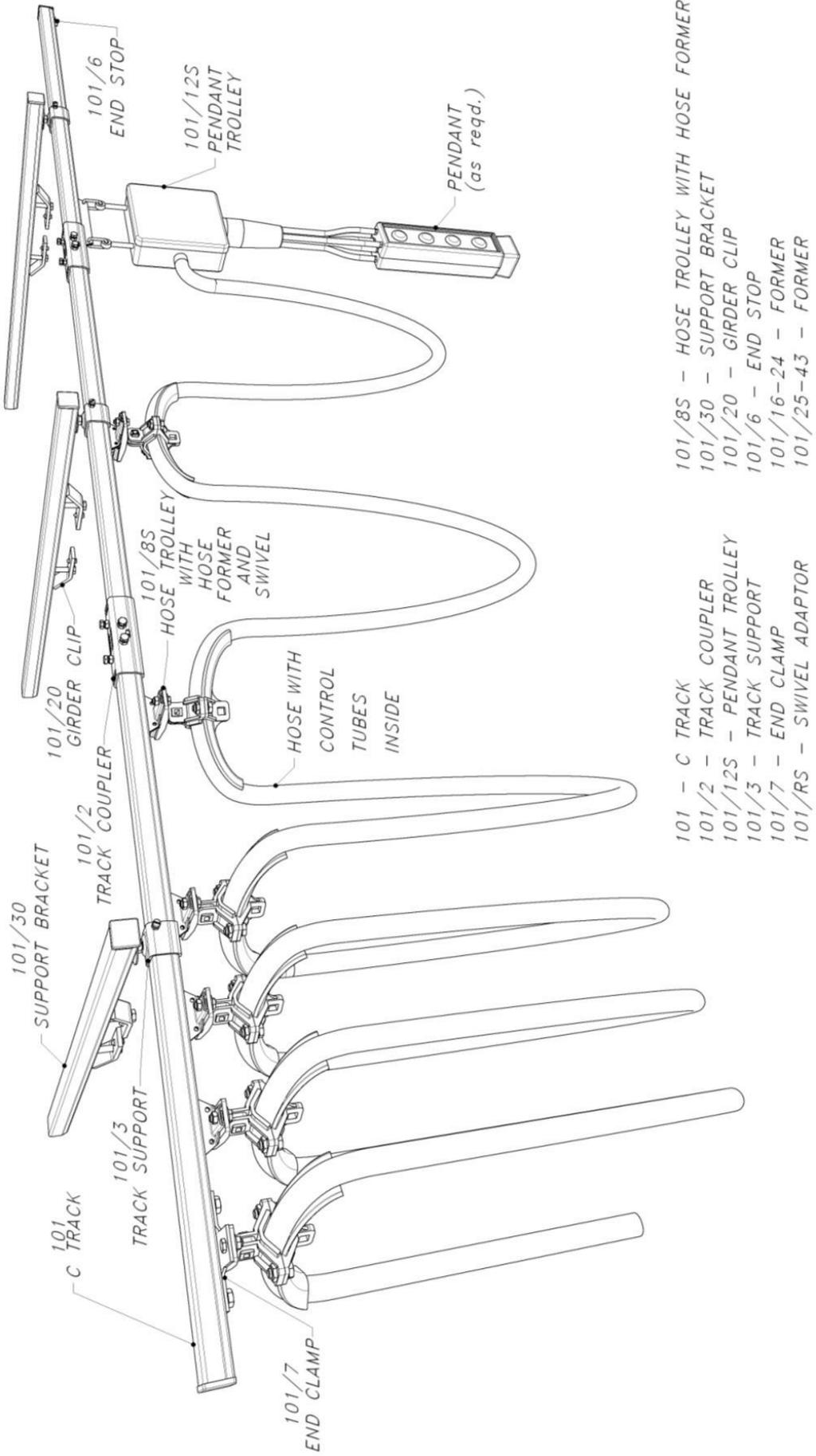
- As standard the 'C' Track systems are supplied as a single track for the power supply to the hoist and trolley. A dual system with a track on the opposite side of the beam for an independent pendant control, can be supplied along with a mobile pendant box (M101/12) with the control pendant suspended from the control box.
- Curved runway beams will require a drawing of the beam so that the track can be bent to the required radius to suit the beam.
- Any obstructions at the side of the runway should be advised so the system can be altered if possible to take account of site conditions.
- Stainless Steel 'C' track systems can be used for corrosion resistance or for ATEX protection
- ATEX systems are fitted with a grounding strap
- Stainless Steel system part numbers are similar to the Galvanised system but start (S101)

ATEX Systems for Air Hoses

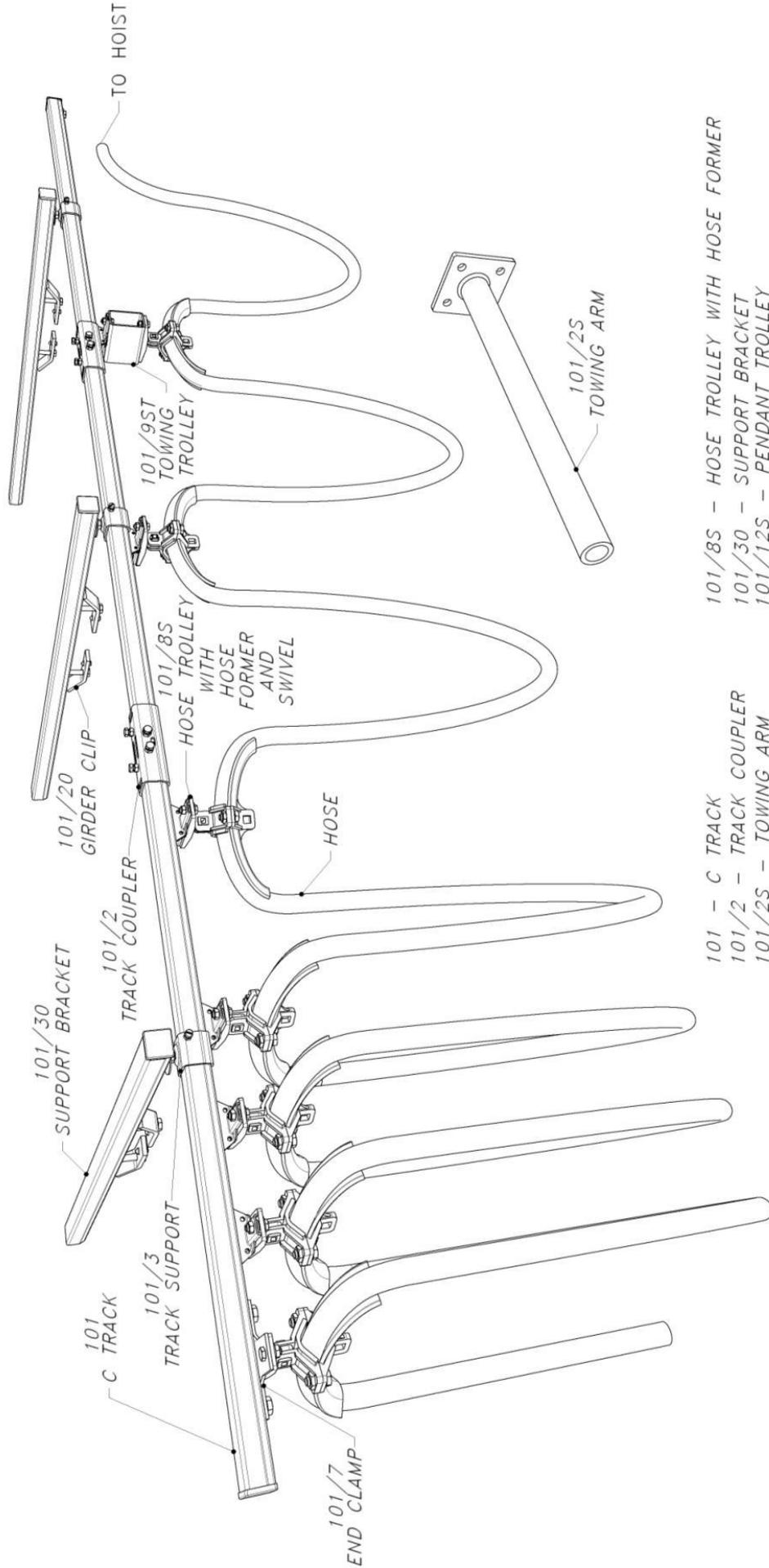
- Installation is not permitted in areas classed as Class 1 Mining and mine gas or category 'M'
- Installation is not permitted in areas Class II category 1
- Installation is permitted in Class II Category 2 areas (Gas Zone 1 / Dust Zone 21)
- ATEX designation Ex II 2 GD
- Air hoses should be anti-static.
- Trolley speed should not exceed 60 meters per minute

PARTS LIST & DRAWINGS

Typical C-Track Festoon System & Components For an Independent Pendant



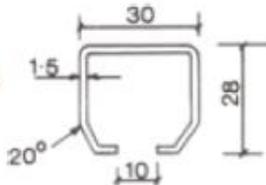
Typical C-Track Festoon System & Components For an Air Supply Hose



- | | | |
|-----------|---|-------------------------------|
| 101 | - | C TRACK |
| 101/2 | - | TRACK COUPLER |
| 101/2S | - | TOWING ARM |
| 101/3 | - | TRACK SUPPORT |
| 101/6 | - | END STOP |
| 101/7 | - | END CLAMP |
| 101/RS | - | SWIVEL |
| 101/8S | - | HOSE TROLLEY WITH HOSE FORMER |
| 101/30 | - | SUPPORT BRACKET |
| 101/12S | - | PENDANT TROLLEY |
| 101/20 | - | GIRDER CLIP |
| 101/9ST | - | TOWING TROLLEY |
| 101/16-24 | - | FORMER |
| 101/25-43 | - | FORMER |

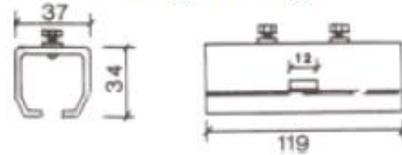
M101 - TRACK SECTION

Galvanised Steel.
Standard lengths 3,4
and 6 metres.
Weight 1kg/mtr.



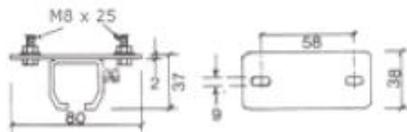
M101/2 - JOINT SLEEVE

Zinc Passivated Steel.
Self aligning.
Weight 0.3kg



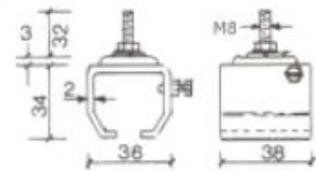
M101/3 - HORIZONTAL SUPPORT

Zinc Passivated Steel. C/W M8 nuts and
bolts every 1.5mtrs max.
Weight 0.25kg



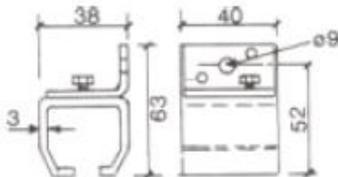
M101/4 - SINGLE BOLT SUPPORT

Zinc Passivated
Steel. C/W M8
nuts and bolts
every 1.5mtrs
max.
Weight 0.15kg



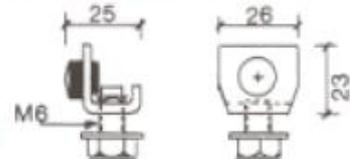
M101/5 - VERTICAL SUPPORT

Zinc Passivated
Steel.
Required every
1.5mtrs max.
Weight 0.20kg



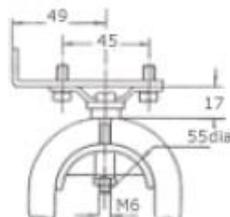
M101/6 - END STOP

Galvanised
Steel.
Rubber buffer.
Weight 0.10kg



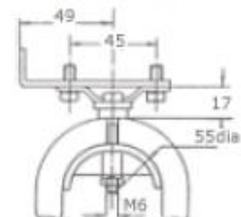
M101/7 - CABLE END CLAMP

Galvanised Steel.
Body PVC Cable
Former.
Weight 0.25kg



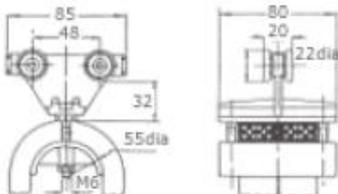
M101/7S - CABLE END CLAMP

Galvanised Steel.
Body and Cable
Former.
Weight 0.26kg



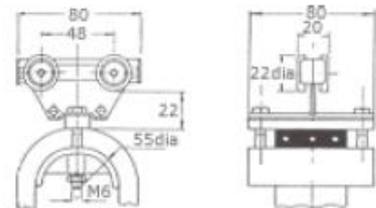
M101/8PVC - CABLE TROLLEY

PVC body and
cable formers,
PVC wheels on
steel shaft.
Weight 0.25kg



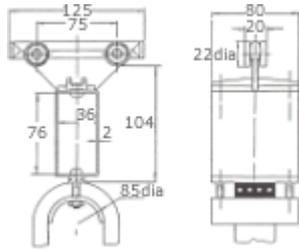
M101/8S - CABLE TROLLEY

Galvanised
steel.
Bearing,
body and
PVC cable
former.
Weight
0.26kg

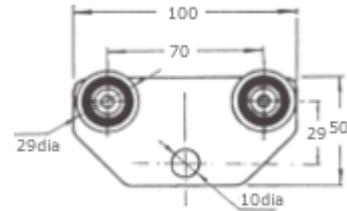


M101/9ALT - TOWING TROLLEY

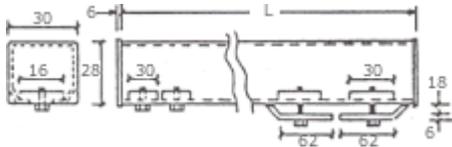
Aluminum body.
Galvanised steel bearings and cable former.
Weight 0.45kg


M101/10 - CABLE TROLLEY

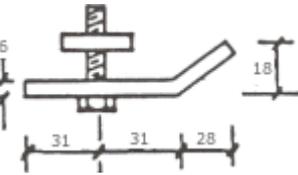
Galvanised steel bearings and body.
Weight 0.22kg


M101/30 - SUSPENSION BRACKETS

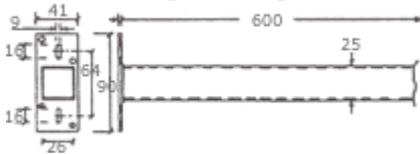
Galvanised steel track, girder clamps and nuts & bolts.
Weight 0.40kg


M101/20 - GIRDER CLAMPS

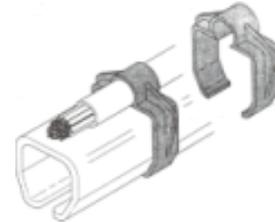
Galvanised Steel body, bolt and nut.
Weight 0.20kg


M101/25 - TOWING ARMS

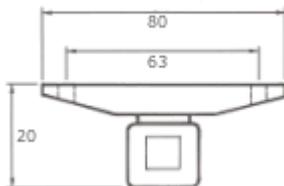
Galvanised steel.
Weight 0.75kgs.


M101/22 - CABLE CLIP

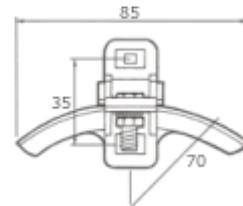
Glass filled nylon.
Max dia cable 13dia
Weight 0.04kg


M101/RS - SWIVEL ADAPTOR

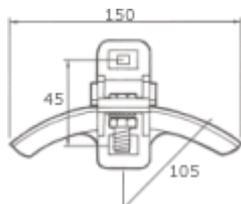
Polyamide body and rotating pin.
Weight 0.07kg


M101/R8-15 - ROUND CABLE CLIP

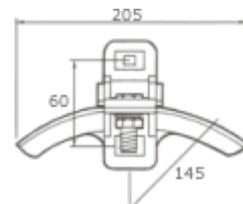
Polyamide plastic to suit 8-15dia hoses or cable c/w securing plug.
Weight 0.03kg


M101/16-24 - ROUND CABLE CLIP

Polyamide plastic to suit 16-24dia hoses or cable c/w securing plug
Weight 0.05kg

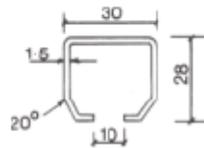

M101/R25-43 - ROUND CABLE CLIP

Polyamide plastic to suit 25-43dia hoses or cable c/w securing plug.
Weight 0.11kg



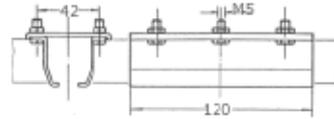
S101 - STAINLESS STEEL TRACK SECTION

Standard length
3mtr.
Weight 1kg/mtr



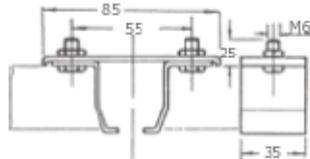
S101/2 - JOINT SLEEVE

3 piece stainless steel body nuts and bolts.
Weight 0.22kg



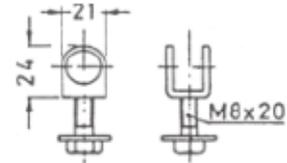
S101/3 - HORIZONTAL SUPPORT

3 piece stainless steel support brackets, nuts and bolts.
Weight 0.17kg



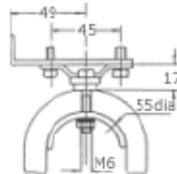
S101/6 - END STOP

Stainless steel body, nut and bolt.
Weight 0.10kg



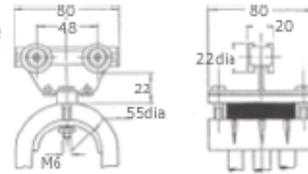
S101/7 - END CABLE CLAMP

Stainless steel body and cable former.
Weight 0.20kg



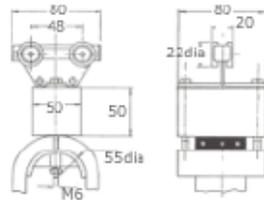
S101/8 - CABLE TROLLEY

Stainless steel body and cable former. SS bearings with neoprene seals.
Weight 0.28kg



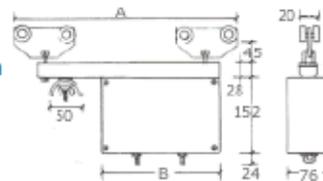
S101/9 - TOWING TROLLEY

Stainless steel body and cable former. SS bearings with neoprene seals.
Weight 0.45kg



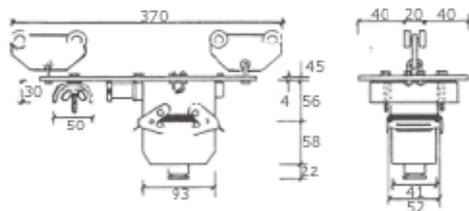
S101/12 - MOBILE PENDANT BOX

Stainless steel trolleys and body with PVC terminal box.
Weight 2.50kg



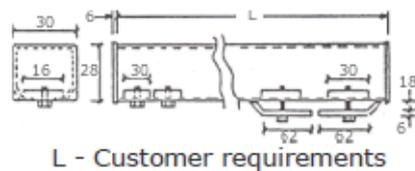
S101/16-2 - MOBILE PLUG AND SOCKET

Stainless steel trolley, power cable mounting plate and alloy plug & socket.
Weight 2.25kg



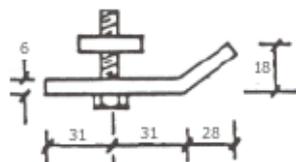
S101/30 - SUSPENSION BRACKET

Stainless steel track and fitting.
Weight 1.40kg



S101/20 - GIRDER CLAMP

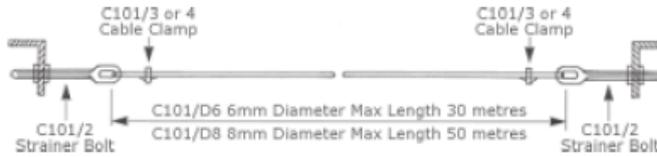
Stainless steel body, nut and bolt.
Weight 0.20kg



L - Customer requirements

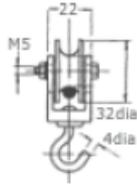
S101 - STAINLESS STEEL TRACK SECTION

PVC coated galvanised steel wire in 6mm or 8mm diameter. Galvanised steel wire cable, clamp and strainer bolt



C101/5 - HOOK SUSPENSION TROLLEY

PVC body and wheel, Galvanised steel hook. Weight 0.30kg



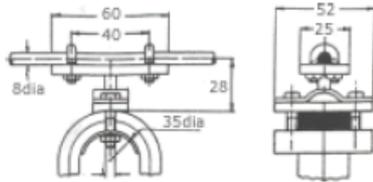
C101/11 - LEATHER HANGER

Galvanised Steel Hook. Leather Strap. Weight 0.30kg



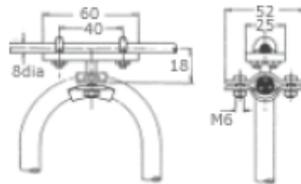
C101/7F - FLAT CABLE END CLAMP

Galvanised steel body and cable former. Weight 0.13kg



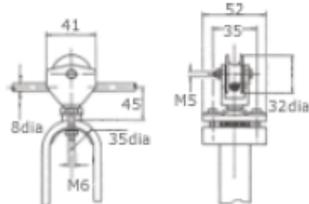
C101/7R - ROUND CABLE END CLAMP

Galvanised steel body and cable former. Weight 0.13kg



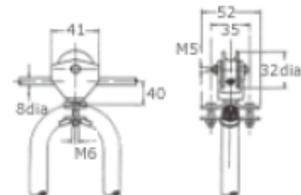
C101/8F - FLAT CABLE TROLLEY

PVC body and wheel galvanised steel cable former. Weight 0.075kg



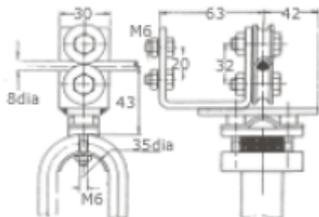
C101/8R - ROUND CABLE TROLLEY

PVC body and wheel galvanised steel cable former. Weight 0.080kg



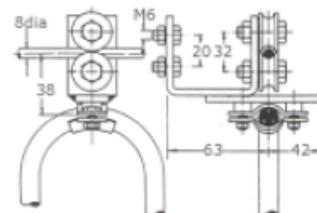
C101/9F - FLAT CABLE TOW TROLLEY

PVC wheels galvanised steel arm and cable former. Weight 0.25kg



C101/9R - ROUND CABLE TOW TROLLEY

PVC wheels galvanised steel arm and cable former. Weight 0.25kg



USEFUL CONVERSION INFORMATION

Known Unit	Multiply By	To Get
PRESSURE:		
Pounds per Square Inch (psi)	0.0703	Kg per Square Centimetre
Pounds per Square Inch (psi)	6.897	Kilopascals
Pounds per Square Inch (psi)	0.07	Bar
Kg per Square Centimetre	14.226	Pounds per Square Inch (psi)
Bar	14.503	Pounds per Square Inch (psi)
Atmosphere	14.695	Pounds per Square Inch (psi)
Pounds per Square Inch (psi)	0.6080	Atmosphere
Pounds per Square Inch (psi)	0.6984	Bar
FLOW:		
Cubic foot per minute (cfm)	0.02832	Cubic metres per minute (m ³ /min)
Cubic foot per minute (cfm)	1.699	Cubic metres per hour (m ³ /h)
Cubic foot per minute (cfm)	0.4719	Litre per second (l/sec)
Cubic foot per minute (cfm)	28.3168	Litre per minute (l/min)
Cubic foot per minute (cfm)	1699	Litre per hour (l/hour)
Litre per second (l/sec)	2.118	Cubic foot per minute (cfm)
Litre per second (l/sec)	127.1328	Cubic foot per hour (cfh)
Litre per second (l/sec)	60.00	Litre per minute (l/min)
Litre per second (l/sec)	3600	Litre per hour (l/hour)
Litre per second (l/sec)	0.001	Cubic metre per second (m ³ /sec)
Litre per second (l/sec)	0.06	Cubic metre per minute (m ³ /min)
Litre per second (l/sec)	3.6	Cubic metre per hour (m ³ /hour)
Cubic metre per minute (m ³ /min)	16.6666	Litre per second (l/sec)
Cubic metre per minute (m ³ /min)	35.3146	Cubic foot per minute (cfm)



Head Office:

Nauta House
The Meadows
Oldmeldrum
Aberdeenshire
Scotland AB51 0EZ
Tel +44 (0) 1651 872101
Fax +44 (0) 1651 871405

Depot:

Unit 36,
Kelvin Way Trading Estate
Kelvin Way
West Bromwich
England B70 7TP
Tel +44 (0) 121 525 4162
Fax +44 (0) 121 580 4161

General Sales Email: sales@rriuk.com
