



## Installation and operating instructions

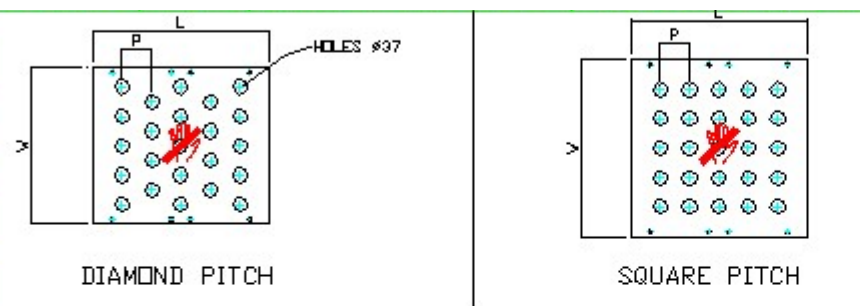
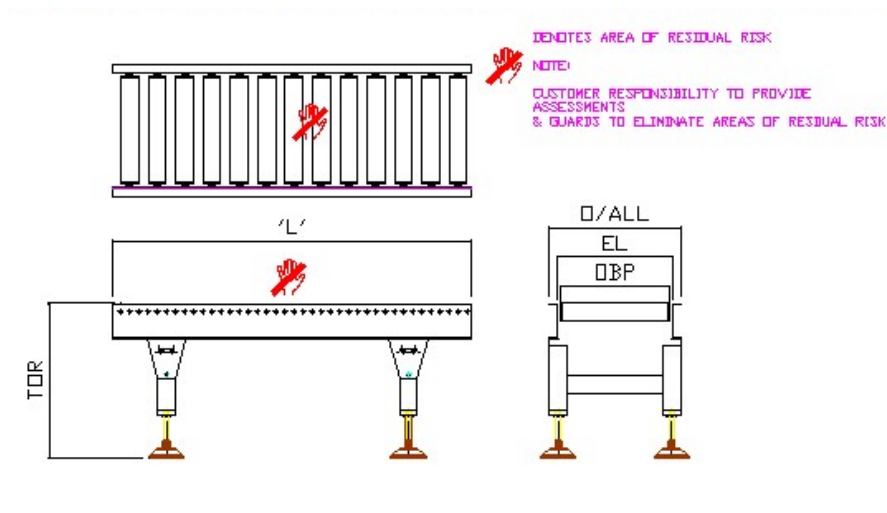
Gravity roller conveyors

Ball Tables

24V DC Driven roller conveyors

Safety note: A relevant risk assessment and safe working method, must be carried out by the customer prior to use. This manual contains important safety information regarding your conveyor

**DO NOT OPERATE BEFORE READING THIS MANUAL  
KEEP IN A SAFE PLACE—DO NOT DISCARD  
IMPORTANT SAFETY INFORMATION ENCLOSED**

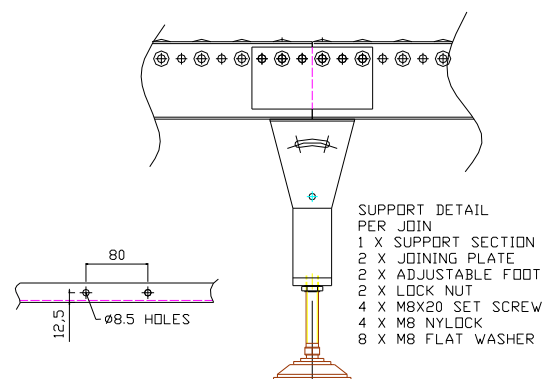


MOUNT TOP PLATE ONTO STANDARD 2.5 THK SIDEFRAME (pairs)  
ALL BALL TABLES OVER 550 WIDE MUST HAVE RE-ENFORING BARS WELDED IN UNDERNEATH,

SUPPLIED ON 3M MAX PALLET FOR CUSTOMER ASSEMBLY & CONSIDERING  
INDOTES AREA OF RESIDUAL RISK

NOTE:

CUSTOMER RESPONSIBILITY TO PROVIDE ASSESSMENTS & GUARDS TO ELIMINATE AREAS OF RESIDUAL RISK



# Conveyor Training

Prior to operation, a process risk assessment should be carried out and a safe working procedure adopted. Followed by training of operators and maintenance people along with any person exposed to this machine.

## **IOSH Working safely: 1 day (aimed at all employees)**

To enable individuals to reduce the risk of accidents and incidents at work.

To help them apply sound-working principles of Health & Safety effectively.

To enable trainees to demonstrate their competencies in successfully completing a practical & written exam, to the performance criteria specified by IOSH.

Content: Health & Safety at Work, Hazards & Risks, Common Hazards at Work, Risk & Risk control,

Positive Safety Behaviour, Safe System at Work, Common Hazards

## **IOSH Managing safely: 5 days (aimed at managers) (Also available as an online course)**

To enable delegates to apply sound health and safety principles to the management of health and safety at work.

To enable delegates to become competent and demonstrate this by successfully completing a practical and written exam to the performance criteria specified by IOSH.

To build up an in-depth awareness of health and safety practices, its implementation and the legal aspects and how to apply it in their workplace.

To understand health and safety risk, its assessment and the use of accident investigation and prevention.

## **Additional Training**

We would always recommend application specific training for your staff prior to using any conveyor or automation item. This would normally also include manual handling techniques and use of PPE. When using, loading and unloading conveyors correct manual handling techniques should be used. We would also recommend as part of your training, you highlight any areas of residual risk, (and guard if required) and ensure they do not go underneath a moving conveyor.

**NEVER USE OR ALLOW OPERATORS  
TO USE CONVEYOR EQUIPMENT  
WITHOUT CORRECT SAFETY  
TRAINING**



# Assembly and installation

## Assembly

The conveyor is supplied pre assembled - if 3m or under or part assembled if over 3m, at the customers site, assembly has to be completed by the customer and then erected and connected.

- Wind the locking nut onto the adjustable foot of castor and wind the foot into the leg
- Ensure all conveyor fixings are tight
- Set the conveyor to the required height using the adjustable feet and use the locking nuts to secure them - Use a spirit level for this task
- If using adjustable feet, secure the conveyor to the ground, with the relevant fixing kit, ensuring the frames are not warped.
- When aligning the conveyor ensure, ensure there is no contact between moving parts.

## WARNING



### **Risk of injuries due to incorrect assembly**

- A risk assessment and method statement must be carried out prior to final assembly and installation.
  - Assembly must be carried out by competent and qualified personnel in accordance with the relevant safety instructions.
  - Carefully assembly all connections, eg cables, hoses and pipes and check they are corrected correctly
- 
- After conveyor installation, make sure passageways are clear. If conveyors are to be crossed, put in walkways
  - When integrating conveyor into a system or a process, a risk assessment must be carried out for the conveyor to reach conformity, Always consider possible danger zones including areas where crushing and cuts can occur.
  - PPE and Safe working practices should also be adopted

## Electrical Installation



## **DANGER**

### **Danger of death due to live cable ends!**

- Electrical installation should only be carried out by qualified / competent electrical personnel
  - Disconnect from power supply
  - Observe the minimum bending and wear
- 
- Power is to be supplied to the conveyor by relevant plug or direct into a control panel
  - Always check cable for damage
  - Connect motor in accordance with EN-IEC 60204-1 - refer to motor card wiring detail. Supplied as a addition to this manual.

**Initial Start up** - *To be carried out by competent persons*

## **WARNING**



### **Risk of injuries due to incorrect handling**

- Check risk assessment, method statement and safe working procedure have been carried out.
- Check any electrical connections and protective equipment
- Ensure all unauthorised / untrained personnel are removed from the area
- Wear appropriate PPE (To include safety shoes and suitable gloves)

## **Operation**

### **Prior to each operation**

- Check the conveyor for signs of visual damage. Pay special attention to rollers and support stands
- Ensure that all safety equipment is functioning properly
- Make sure only authorised and trained personnel are in the conveyor work area
- Ensure the work area is clear from obstruction and is tidy
- Provide instructions and monitor, loading, unloading and operation of the conveyor
- Ensure all staff using the conveyor are wearing appropriate PPE including safety shoes and appropriate gloves.

## **WARNING**



### **Rotating parts!**

Crushing and serious injury due to being caught and pulled into the conveyor

- **Do not remove any guarding**
  - **Never wear loose clothes and tie long hair back**
  - **Keep hands and body parts away from moving parts**
  - **Follow safe working practice when using conveyors**
  - **Always wear appropriate PPE for the task in hand**
- 
- **If goods become trapped within the conveyor, do not just pull the object, find out why and how the jam has occurred**

### **Procedure for accidents or malfunctioning**

- Stop the conveyor and isolate area
- Accident - Apply first aid and call emergency services
- Inform a specialist (A specialist must eliminate the fault)
- Only restart after the conveyor has been deemed safe by a specialist

## **Disposal**

- Adhere to the manufacturers disposal documents when disposing of oil, recycle parts if possible.

### **Environmental - considerations**

- Turn off the power to the conveyor when not in use
- Ensure waste oils, belts etc are disposed of in accordance to regulations

## Conveyor Safety

### Basic Safety instructions



The conveyor was generally safe to operate at time of delivery, however dangers may still arise during use. A safe working practice, risk assessments must be carried out by the user covering all aspects of use within the incorporated system, process or machine. All staff to be properly trained in all aspects and all relevant PPE Supplied

- Danger of personal injury or death for operators and others
- Adverse effects on the conveyor and other items

Non adherence to the information in these instructions can result in life threatening injury.

### Intended use

Gravity roller conveyors, Driven roller 24V & ball tables are intended for incorporation in a wide range of industrial systems, machines to transport unit loads

Do not exceed the conveyor limits, if unsure contact your conveyor supplier

### Incorrect Use

The conveyor is not intended to transport, people and some powered items

### Specialists

Specialists are people who have knowledge of conveyor items and understand the instructions, and have the ability to carry out work professionally whilst observing regulations

### Electricians

Electricians must be able to assess and recognise possible dangers when performing tasks, due to training, experience and knowledge of regulations.

Motor card wiring diagrams are supplied with the conveyor - dependent on motor supply used.

## Conveyor Safety

### Dangers



The following dangers are some of the various dangers which may occur when operating, maintaining or cleaning the conveyor.

### Safety Equipment

- Only carry out maintenance when the conveyor is switched off and measures taken so it cannot be started
- Organise additional measures to restrict access to the conveyor
- Never remove any guarding whilst the machine is running.
- Regularly inspect safety equipment and barriers
- Always wear PPE that is in good condition

### Electricity

- Never reach into a live machine

### Rotating parts - Rollers

- Never wear loose clothing
- Never wear jewellery
- If long hair - tie hair back and wear a hair net

### Work environment

- Keep work area tidy and clear of obstruction
- Wear safety shoes + other site minimum PPE including gloves
- Monitor work practice

### Malfunctioning

- Inspect the conveyor for damage
- Be aware of any smoke or unusual noises, (Isolate at mains and seek advise)
- Clean up any oil spills
- Do not climb on the conveyor
- If Objects get jammed - Do not just pull - Isolated the conveyor and find cause of jam

### Maintenance

- Carry out maintenance regularly
- Only use original spare parts

### Incorporation

Danger zones can arise when integrating the conveyor into a system, machine or process. These danger zones are not covered in these instructions. These must be analysed during final assembly and installation and first start up. *Safe working practices and relevant training and PPE should be given to personnel.*

*If necessary, implement and add further constructional methods*



# Conveyor Safety

## PPE



Spaceguard recommends staff to be trained, and well maintained PPE worn as appropriate. PPE should be checked daily prior to use.

## SAFETY SHOES



Spaceguard recommends all staff working around conveyor equipment to wear safety shoes. Specific type should depend on application, please take suitable advise from health and safety consultants.



**TYPE OF SIGN TO BE DISPLAYED**

## Conveyor Safety

### PPE



Spaceguard recommends staff to be trained, and well maintained PPE worn as appropriate. PPE should be checked daily prior to use.

### NOISE

The level at which employers must provide hearing protection and hearing protection zones is now 85 decibels (daily or weekly average exposure) and the level at which employers must assess the risk to workers' health and provide them with information and training is now 80 decibels. There is also an exposure limit value of 87 decibels, taking account of any reduction in exposure provided by hearing protection, above which workers must not be exposed. From HSE website

#### Ear protection options



##### Headband comfort ear defenders

For reduction of upto 30db

##### Foam disposable ear plugs

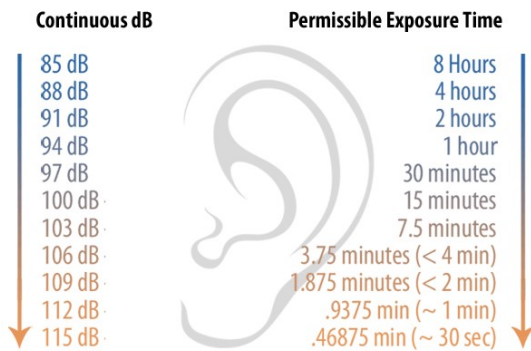


For reduction of upto 25db

##### Banded ear plugs



For reduction of upto 20db



TYPE OF SIGN TO BE DISPLAYED

## Conveyor Safety

### PPE



Spaceguard recommends staff to be trained, and well maintained PPE worn as appropriate. PPE should be checked daily prior to use.

### EYE Protection

#### **Safety Glasses with impact lenses.**



A suitable pair for task should be used. Spaceguard recommends. Advise should be taken from a health and safety consultant.

#### **Safety Goggles with impact lenses.**



A suitable pair for task should be used. Spaceguard recommends. Advise should be taken from a health and safety consultant. More used with high speed particles

#### **Full face visor with impact lenses.**



A suitable pair for task should be used. Spaceguard recommends. Advise should be taken from a health and safety consultant. More used with high speed particles and liquid splashes.



**TYPE OF SIGN TO BE DISPLAYED**

# Conveyor Safety

 <p>Do Not Climb, Sit, Stand, Walk, Ride, or Touch the Conveyor at Any Time</p>	 <p>Do Not Perform Maintenance on Conveyor Until Electrical, Air, Hydraulic and Gravity Energy Sources Have Been Locked Out and Blocked</p>	 <p>Operate Equipment Only With All Approved Covers and Guards in Place</p>
 <p>Do Not Load a Stopped Conveyor or Overload a Running Conveyor</p>	 <p>Ensure That All Personnel Are Clear of Equipment Before Starting</p>	 <p>Allow Only Authorized Personnel To Operate or Maintain Material Handling Equipment</p>
 <p>Do Not Modify or Misuse Conveyor Controls</p>	 <p>Keep Clothing, Body Parts and Hair Away from Conveyors</p>	 <p>Remove Trash, Paperwork and Other Debris Only When Power is Locked Out</p>
 <p>Ensure That ALL Controls and Pull Cords are Visible and Accessible</p>	 <p>Know the Location and Function of All Stop and Start Controls</p>	 <p>Report All Unsafe Conditions</p>

POST IN PROMINENT AREA

## Transport, movement and storage

The conveyors will be delivered generally on a pallet, secured with strapping and heat shrunk. On the pallet, there will be the conveyor items, supports, fixings etc along with a incorporation paperwork and drum motor wiring.

### Transport and movement

#### CAUTION



Risk of injuries due to incorrect transport

- Transport must be carried out by qualified and authorised personnel.

- Ensure people are not in danger - lift zone
- Ensure pallet and conveyors are lifted and moved safely, we would recommend due to the size and nature of the items moved a specific risk assessment and safe working procedure should be carried out and adopted.
- Wear appropriate PPE

### Delivery

- Prior to signing from the carrier the pallet must be inspected for damage. Notify the driver, by writing on their paperwork as damaged and contact your supplier. The carrier must be notified at time of delivery, to prevent any claims being refused.

### Storage

#### WARNING



Risk of injuries due to incorrect Storage

- Do not stack conveyors on top of each other
- Do not place other objects on the conveyor
- Ensure conveyor is safely positioned prior to leaving it
- If the conveyor is not to be used straight away, protect from moisture and dust.

## Electrical Installation

### DANGER



#### **Danger of death due to live cable ends!**

- Electrical installation should only be carried out by qualified / competent electrical personnel
  - Disconnect from power supply
  - Observe the minimum bending and wear
- 
- Power is to be supplied to the panel by relevant isolated plug or direct into a control panel through an isolator
  - Always check cable for damage
  - Connect motor in accordance with EN-IEC 60204-1 - refer to motor card wiring pages for wiring information

### WARNING



#### **Risk of injuries due to incorrect assembly**

- A risk assessment and method statement must be carried out prior to final assembly and installation.
- Assembly must be carried out by competent and qualified personnel in accordance with the relevant safety instructions.
- Carefully assembly all connections, eg cables, hoses and pipes and check they are corrected correctly



### Notice

#### **Risk of injuries or death due to incorrect assembly**

- Always ensure panels and electrical items are correctly earth bonded.
- Earth bonding and testing must be carried out by competent and qualified personnel in accordance with the relevant safety instructions, prior to putting this panel into service.

# אמריקאים

### Daily checks by nominated operator

- Conveyor Maintenance - To be carried out by suitable qualified person - weekly**

- Conveyor maintenance should be carried out on a regular basis by a competent person, Contact us to ascertain service interval for your product.

We would always recommend the stocking of spare parts which minimises down time on conveyors, in the event of a part failure.

Costing and accurate delivery details, available on request

[illegible]

Conveyor Number: \_\_\_\_\_

Conveyor Maintenance check list. Please fill out date and sign once work complete

[illegible]



## Manufacturers declaration

According to EC Machinery Directive 2006/42/EC

The manufacturer

Spaceguard Limited

Bergen Way, Hull, UK

Hereby declares that the conveyor module described

- Gravity roller conveyor, 24V roller conveyor & Ball table
- Serial numbers between: 10616 - 15000

Is not a ready to use machine according to the EC machinery directive and therefore does not fully comply with the requirements of this directive.

Initial start up of these conveyor modules is not permitted until conformity of the entire machine / system / process in which they are installed has been declared via the EC machinery directive!

Applied EC directives

Machinery directive 2006/42/EC  
Low voltage directive 2014/35/EU  
EMC Directive 2004/108/EC

Applied harmonised standards

EB ISO 12100 Pt 1 & Pt2  
EN 294 Safety of machinery to prevent danger zones been reached  
EN 349 Safety of machinery, minimum distances to avoid crushing  
EN 60204-1

A handwritten signature in black ink, appearing to be 'NE' followed by a stylized surname.

Neil Ellerby  
Director  
29/06/2016

## Declaration of EC Conformity

According to the guidelines of the council for adjustment of the legal stipulations for the member states: 2006/42/EC

The manufacturer

**Spaceguard Limited**

Bergen Way, Hull, UK

Hereby certify that the conveyor module described belt

- Gravity roller conveyor / Roller conveyor 24V conveyor / Ball table
- Serial numbers between: 10616 - 13000

**Complies with all the relevant provisions of the EC Machinery directive and the national laws and regulations adopting this directive. Any modifications to the machine will render this declaration null and void.**

Applied EC directives

Machinery directive 2006/42/EC  
Low voltage directive 2014/35/EU  
EMC Directive 2014/30/EU

With reference to:

EB ISO 12100  
EN 30204-1-2006+A1:2009 Electrical equipment of machines  
EN 619: 2002 Continuous handling systems and equipment  
EN 294 Safety of machinery to prevent danger zones been reached  
EN 349 Safety of machinery, minimum distances to avoid crushing  
EN 60204-1

A handwritten signature in blue ink, consisting of stylized, overlapping loops and a horizontal line at the end.

On behalf of Spaceguard limited

Director